NIAGARA SPRINGS
Wildlife Management Area

Management Plan
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Idaho Department of Fish and Game
Magic Valley Region
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TABLE OF CONTENTS

LIST OF FIGURES

EXECUTIVE SUMMARY

The Niagara Springs Wildlife Management Area (NSWMA) was purchased with Federal and license funds by the Idaho Department of Fish and Game (Department) in 1972. Eight adjacent islands were acquired previously in 1971 from the Bureau of Land Management (BLM). An additional parcel was obtained in 1973. NSWMA was purchased to provide 976 acres of habitat for waterfowl and upland game production and public use.

Prior to the Department's tenure, the area had multiple owners ranging from dairy farmers to cattle ranchers. The native uplands were in poor condition and the riparian zone and canyon rim were threatened by domestic development. Current Department land practices focus on providing breeding and wintering habitat for waterfowl and upland gamebirds. Current public uses include hunting of waterfowl, upland and big game, sport shooting unprotected species, and fishing. Non-consumptive activities include dog field trials, horseback riding, bird watching, exercising, and sight seeing. NSWMA has a wild trout fishery sustained by natural reproduction in the canal fed by Niagara Springs. The canal provides water for several artificial ponds and for irrigation of upland habitat. The North Side Canal Company has been working with the Department to establish an artificial wetland to clean irrigation return water to the Snake River and provide wildlife habitat.

There are few access points to the Snake River in the Magic Valley because of the steep slopes of the canyon walls. NSWMA provides public access to 3.5 miles of the Snake River. As more public use is prohibited from surrounding private property, undeveloped public land becomes more important. Undeveloped land is also important for local wildlife. Therefore, NSWMA is a valuable parcel of land that needs special management for the future.

This plan provides direction for the Department to manage NSWMA for wildlife production and public use. This plan provides a brief history of the area, a description of the flora and fauna, current habitat conditions and important issues. No controversial issues were generated by public scoping so no alternatives were developed. A management plan is presented based on prioritized goals with specific objectives and detailed strategies. Management goals include 1) Provide optimal quality and diverse habitat for wildlife, and 2) Provide optimal public recreational activity without adversely impacting wildlife.

MISSION STATEMENT

Provide a biologically diverse landscape at Niagara Springs Wildlife Management Area that supports a wide variety of wildlife species. The area will also provide public access for multiple outdoor recreational activities that do not adversely impact fish and wildlife populations or affect the stability of the landscape.

CHAPTER ONE - PLANNING ISSUES AND MANAGEMENT REQUIREMENTS

INTRODUCTION

The 976 acre NSWMA is located 6.5 miles south of Wendell, Idaho, in southern Gooding County and lies along the north bank of the Snake River (Figure 1). The area is 0.5 miles wide and 3.5 miles long. It is bounded on the north by private agricultural land and a 40 acre Bureau of Land Management (BLM) Wildlife Habitat Area; the east by a private fish hatchery; the south by the Snake River; and on the west by an Idaho Department of Transportation's (ITD) constructed wetland mitigation site. The northern portion of NSWMA is dominated by shrub/steppe habitat along the flat top of the canyon rim. The canyon rim is about 320 ft. above the Snake River and drops down a shear cliff to the talus slope below. The base of the talus slope tapers into a flat mixture of irrigated pastures, shrub/steppe habitat, melon gravel rock formations, and eventually to the riparian zone along the north shore of the river. Several islands in the Snake River adjacent to NSWMA also provide riparian habitat. Boulder Rapids is a prominent part of this stretch of the middle Snake River.

NSWMA was purchased to provide hunting and fishing opportunity, access to the Snake River, and provide habitat to support a variety of wildlife. NSWMA is open to public use. The soil on NSWMA is very sandy and highly errodable and is not suitable for off-road vehicle traffic.

PURPOSE OF THE PLAN

The purpose of this plan is to provide background information about NSWMA and to guide the Department in future management. This plan will provide a fiscally adaptive management approach. Deviations from the current management activities will be based on a priority of importance of the particular activity or service and how it relates to the overall mission NSWMA.

DESIRED FUTURE CONDITION

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

1. A biologically diverse landscape managed to sustain a wide a variety of wildlife species at optimal population levels.
2. Efficient and full use of water rights to maximize benefit for wildlife.
3. Elimination of noxious and undesirable weeds.
4. Optimal human recreational minimizing impacts to the landscape and wildlife populations.

Figure 1. Map of Niagara Springs Wildlife Management Area.

PLANNING PROCESS

Two public open houses were held in the Magic Valley April 3-4, 1996. Input received directed the writing of a draft management plan. This draft plan underwent internal review and was released to the public at 5 open houses February 8-12, 1999. The plan received final edits and was approved by the Regional Supervisor. The plan will now be implemented.

ORGANIZATION OF PLAN

This management plan includes 4 chapters and supporting appendices.

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

Chapter Two: Provides an overview of the historical and current management, physical description, and status of the area.

Chapter Three: Identifies issues generated from the public and from internal Department review.

Chapter Four: Presents strategies to accomplish objectives for each prioritized goal.

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 (IDFG 1991). The following are excerpts from this plan pertaining to management of Department lands:

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

This plan will look at habitat condition in both the long and short-term context. The Department has a responsibility to manage its lands for wildlife production and use and if possible, for recreational opportunities. The Department will also control noxious weeds.

Requirements Relative to Funding

Funds to operate NSWMA are derived from the sale of general hunting and fishing licenses and from the United States Fish and Wildlife Services (USFS) Federal Aid funds. Federal funds must be used for restoration, conservation, and enhancement of wild birds and wild mammals, and the provisions for public use of and benefits from these resources (Federal Aid Handbook).

State general license funds must be used to help meet the mission and policies of the Commission as stated in *Idaho Code* 36-103(b). This code section states: *All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed.* General license funds are used to provide a Fee-In-Lieu-of-Tax (*Idaho Code* 63-602) to Gooding County and fire protection payments (*Idaho Code* 36-114) for NSWMA. A payment of $2,119.52 was made in 1998.

Deed Restrictions

A majority of NSWMA (934.59 acres, 95%) was purchased with moneys from the Land and Water Conservation Fund (LWCF). Provisions under this Federal funding program mandate the property meet Federal accessibility guidelines, have adequate maintenance, LWCF signing, and the land properly managed for outdoor recreation.

Regulations

The Department has published proclamations governing public use of all Department lands and access areas. Regulations cover motor vehicle access, fires, woodcutting, fireworks, dog use, firearm use, and other land use activities and recreational opportunities. Gooding County also has ordinance No. 14 prohibiting the discharge of firearms into the canyon from the canyon rim.

LIFE SPAN OF PLAN

This plan will be revised and updated, in whole or in part, as necessary to meet resource management objectives.

PURPOSE OF WILDLIFE MANAGEMENT AREAS

Background

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

Management Goals

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

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

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

Species Management Plan Requirements

This plan coincides with the Magic Valley Region's species management plans for Big Game Management Unit 53. A short-range weapon season occurs on NSWMA to control deer populations that depredate the orchards on the south side of the Snake River, across from the area. Goose grazing pastures are also managed to reduce depredation downstream on agricultural fields and golf courses adjacent to the Snake River.

CHAPTER TWO - EXISTING MANAGEMENT CONDITION

CULTURAL HISTORY

Little is known of the first humans that occupied the area now known as NSWMA. The Snake River Valley was occupied as early as 11,000 to 14,500 years ago (Meyers Engineering Company 1991). Previously identified materials in the general vicinity appear to relate to pre-Clovis; Folsom; and Early (Bitterroot), Middle, and Late Archaic cultural periods. NSWMA is within the former territory of the Middle Snake Shoshone. Some artifacts were found along the shore of the Snake River by previous owners of the parcel and also in agricultural fields on the area. Unfortunately, few artifacts remain at NSWMA as evidence of the first inhabitants.

Little is known about the early European settlement of the area. Local residents claim the original access through the canyon was a stagecoach crossing the Snake River, downstream from Boulder Rapids. The grade is still visible on both sides of the canyon (Figure 1 Historical Road) and was later used by landowners to move cattle to and from the canyon.

The most documented information about the early settlement of the area is of James H. Mays (former U.S. Congressman) who settled on the site in 1911. He built the lava rock house from 1913 to 1916 that is still standing on the site today (Figure 1 WMA Workshop) and was placed on the National Register of Historical Places in 1993. Mays developed the landscape for a dairy, orchards, trout farm, and irrigated croplands.

The property has been owned by several people before the Department acquired it for $375,000 from Floyd Langford with LWCF (Appendix I) in 1972. Previously, 8 nearby islands (19.39 acres) in the Snake River were purchased for $67.35 from the BLM in 1971. An additional portion of canyon rim and cliffs (21.8 acres) were given to the Department in 1973 by Lester Bornt. A total of 976 acres are currently owned by the Department.

Several major developments have occurred on the area since the Department's acquisition (Appendix II) and have included: removal of cross fences, removal of cattle grazing, rehabilitation of dryland habitat, construction of ponds, renovation of irrigation systems, release of wild turkeys, erection of artificial nesting structures, installation of fish-friendly irrigation structures, and planting of woody cover and annual food plots.

PHYSICAL DESCRIPTION

Climate

The nearest weather station is in Hagerman 15 miles away in the Snake River canyon. The average daily maximum temperature is 66.6^{o}F and minimum is 35.7^{o}F ranging from 104^{o}F to -25^{o}F for records 1982-1990 (Abramovich et. al. 1998). Average annual precipitation is 10.94 in. with most falling in late-winter and early-spring. The frost free growing season is 110 - 140

days.

Soils

The soils of NSWMA are characterized as fine sandy loam to fine loamy sand with depths over 60 in. (personal communication with Gooding Natural Resources Conservation Service). The soil is very permeable with low water holding capacity. The soils are severely vulnerable to water and wind erosion. The soil is low in fertility except where an overstory of trees has deposited organic matter. There are three soil types on the basaltic plain of the canyon rim (Quincy fine sand, Jestrick-Fathom fine sands complex, Tickeska-Minveno-Taunton complex) with 61 in., 38 in., and 31 in. depths to basalt rock, respectively. Two soils comprise the talus slope escarpment (Rubbleland-Calciorthids complex, Tupper extremely bouldery fine sandy loam) with slopes of 20-65% and 2-8%, respectively and both having soil depths greater than 60 in.. Fluvaquents-Histic Haplaquolls complex comprise spring areas and drainage ways with a depth of greater than 60 in. At the toe of the basalt escarpments, Fathom loamy fine sand reaches depths greater than 60 in. The rest of the soils in the canyon bottom land all reach depths of 60 in. (Bahem very fine sandy loam, Fathom loamy fine sand, Fathom-Taunton complex).

Topography

NSWMA has a split-level topography. The upper level is the flat rim area at a 3300 to 3400 ft. elevation. The lower level, separated from the upper level by an approximately 200 ft. shear basalt cliff/ talus slope, is at 2950 to 3050 ft. elevation. Approximately 4 miles of the Snake River flows past NSWMA.

Geology

NSWMA 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 30,000 years ago, the Snake River was flooded by the Pleistocene Lake Bonneville at an estimated 15 million cfs flow and an estimated 600 cubic miles of water. Rock and lava material tumbled through the canyon and deposited in slack water areas. The polished boulders or "melon gravel" upwards of 10 ft. in diameter are common on NSWMA today. Boulder Rapids is named after the melon gravel field left in the river.

Geographical Location

NSWMA is located on the southern most portion of Gooding County 6.5 miles south of Wendell, Idaho. The Department's Bordewick and Cedar Draw Access sites provide boat access from Twin Falls County (Figure 1).

NATURAL RESOURCES

The NSWMA is characterized by 661 acres of shrub/steppe community, 170 acres of irrigated cover, 14 acres of irrigated goose pasture, 75 acres of riparian zone, 29 acres of seasonal artificial ponds, 19 acres of Snake River islands, and 8 acres of perennial artificial ponds. These cover types support a wide variety of animal and plant life. The islands have increased in size since they were purchased due to sediment deposition on the downstream parts of the islands.

Wildlife

No formal wildlife inventory has been conducted on NSWMA. Species lists have been acquired through incidental observations by Department personnel and interested public (Appendix III). An effort was made in 1993 to inventory summer use by birds. Waterfowl brood counts were conducted until the mid-1990s.

NSWMA provides habitat for one big game animal, the mule deer (*Odocoileus hemionus)*. Other mammal game species include coyote (*Canas latrans*), muskrat (*Ondatra zibethica*), mountain cottontail rabbit (*Sylvilagus nuttalli*), Eastern fox squirrel (*Sciurus niger*), and red fox (*Vulpes fulva*). Unprotected species include yellow-bellied marmot (*Marmota flaviventris*), striped skunk (*Mephitis mephitis*), and porcupine (*Erethizon dorsatum*). Little is known about small mammals on the area but the kangaroo rat (*Dipodomys spp.*), voles (*Lagurus spp.*), and house mouse (*Mus musculus*) have been observed.

Upland gamebird species on NSWMA include ring-necked pheasant (*Phasianus colchicus*), California quail (*Callipepla californica*), gray partridge (*Perdix perdix*), mourning dove (*Zenaida macroura*), and common snipe (*Capella gallinago*). On very rare occasions, chukar partridge (*Alectoris chukar*) and sage grouse (*Centrocercus urophasianus*) have been seen on the canyon rim and associated shrub/steppe habitat, respectively. Twenty wild turkeys (*Meleagris gallopavo*), released in 1982, have not sustained a viable population and have not been seen for several years.

Waterfowl are the primary game species hunted by the majority of the users at NSWMA. Canada geese (*Branta canadensis*), mallard (*Anas platyrhynchos*), Northern pintail (*A. acuta*), gadwall (*A. strepera*), American widgeon (*A. americana*), green-wing teal (*A. crecca*), cinnamon teal (*A. cyanoptera*), and wood duck (*Aix sponsa*) have been harvested on the area.

The riparian zones along the canal and shoreline of the Snake River provides habitat for a variety of song birds. Most common are white-crowned sparrow (*Zonotrichia leucophrys*), barn swallow (*Hirundo rustica*), and dark-eyed junco (*Junco hyemalis*). Canyon wren (*Catherpes mexicanus*) and rock wren (*Salpinctes obsoletus*) are common on the talus slope at the base of the canyon rim. The red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*) also commonly nest on the area. The prairie falcon (*Falco mexicanus*) and golden eagle (*Aquila chrysaetos*) have nested on the basalt cliffs. The newly constructed J-8 drain pond system (Figure 1) has attracted several shorebird species including American avocet (*Recurvirostra americana*), Caspian tern (*Sterna caspia*), black-necked stilt (*Himantopus mexicanus*), and

several sandpipers.

Little is known about the reptile and amphibian life on NSWMA. Incidental observations of reptiles includes; western whiptail lizard (*Cnemidophorns tigris*), side-blotched lizard (*Uta stansburiana*), gopher snake (*Pituophis catenifer*), racer (*Coluber constrictor*) and western terrestrial garter snake (*Thamnophis elegans*). Pacific chorus (*Pseudacris regilla*) and bullfrogs (*Rana catesbeiana*) are common in the perennial ponds. Great Basin spadefoot (*Spea intermontana*) have also been seen as tadpoles.

Fisheries

A wild rainbow trout (*Oncorhynchus mykiss*) fishery exists on NSWMA with a year-round 2 fish bag limit implemented in 1994. The trout spawn in the irrigation canal fed by Niagara Springs. Spawning typically occurs during February and March. After spawning, adults return to the artificial perennial ponds. The fishery is isolated from the Snake River. Outflow from the perennial ponds soaks through a cattail (*Typha* spp.) marsh prohibiting mixing of stock with the Snake River. Niagara Springs is also blocked by water development structures thereby prohibiting stock from entering the springs via the Snake River. Some egress from the springs may occur. Therefore, the trout fishery relies on recruitment from the springs and canal to sustain its population. A spawning enhancement project was conducted in 1990 by the Magic Valley Fly Fishers club. Gravel beds, rock structures, and willow cuttings were installed.

The last population estimate conducted by the Department was in 1991. Approximately 1,000 fish were estimated in the upper perennial pond and about 400 for the lower pond. Several erosion events have increased the sediment level in the canal since this estimate but it appears the spawning beds in the faster current areas have remained undamaged. Trout stock from the canal and local hatcheries have been released into the house pond on an irregular basis. This pond is a closed system fed with spring water via the pipe irrigation system and has no natural reproduction occurring.

Vegetation

Vegetation cover types can be classified into 4 general categories; the shrub/steppe, irrigated, riparian, and wetland/pond cover types.

Shrub/Steppe Cover Type

This cover type is a mixture of native and introduced dryland species. The dominant species include: four-wing saltbush (*Atriplex canescens*), basin big sagebrush (*Artemisia tridentata tridentata*), spiny hopsage (*Grayia spinosa*), rabbitbrush (*Crysothamnus* spp.), immigrant forage kochia (*Kochia prostrata*), Indian ricegrass (*Orysopsis hymenoides*), streambank wheatgrass (*Agropyron riparium*), Sandberg bluegrass (*Poa sandbergii*), sand dropseed (*Sporobolus cryptandrus*), cheatgrass brome (*Bromus tectorum*), crested wheatgrass (*Agropyron cristatum*), purple aster (*Machaerantha canescens*), penstemon (*Penstemon* spp.), and tumble mustard (*Sisymbrium altissimum*).

Irrigated Cover Type

This cover type is a mixture of nesting cover, goose grazing pastures, annual food plots, and shelterbelts. All are artificially irrigated with water rights from Niagara Springs and J8 drain.

Irrigated nesting habitat includes tall (*Agropyron elongatum*) and intermediate wheatgrass (*A. intermedium*), quackgrass (*A. repens*), and alfalfa (*Medicago savita*). One 3.5 acre irrigated goose grazing pasture is dominated by Kentucky bluegrass (*Poa pratensis*), crested wheatgrass, and orchard grass (*Dactylis glomerata*). One 5.9 acre goose pasture is planted annually to winter wheat. Seven food plots (8.5 acres total) are planted annually to a dwarf corn (*Maize* spp.) and proso white millet (*Panicum miliaceum*). The 6 shelterbelts have a mixture of Rocky Mountain juniper (*Juniperus scopulorum*), Siberian peashrub (*Caragana arborescens*), Wood's rose (*Rosa woodsii*), Peking cotoneaster (*Cotoneaster acutifolia*), Nanking cherry (*Prunus tomentosa*), silver leafed buffaloberry (*Shepherdia argentea*), and skunkbrush sumac (*Rhus trilobata*). Three shrub thickets have mixtures of silver leafed buffaloberry, skunkbrush sumace, Nanking cherry, Siberian peashrub, and Wood's rose.

Riparian Cover Type

The riparian zones along the river, spring seeps, and irrigation canal have a mixture of Russian olive (*Elaegnus angustifolia*), coyote willow (*Salix exigua*), peach-leaf willow (*S. amygdlaoides*), cottonwood (*Populus trichocarpa*), black locust (*Robinia pseudoacacia*), river birch (*Betula nigra*), reed canarygrass (*Phalaris arundinacea*), Woods rose, goldenrod (*Solidago* spp.), dock (*Rumex* spp.), skunkbrush sumac, golden currant (*Ribes aereum*), scouringrush (*Equisetum hyemale*), bulrush (*Scirpus* spp.), sedges (*Carex* spp.), rushes (*Juncus* spp.), and cattail. There are lombardy poplars (*Populus nigra*) on irrigated field edges.

Wetland/Pond Cover Type

All the ponds on NSWMA are artificial and are either spring fed via an irrigation canal from Niagara Springs or from wastewater via the J-8 irrigation drain (Figure 1). The ponds are dominated by bulrush, cattails, sedges and rushes. Duck potato (*Sagittaria spp.*), bulrush, cattail, and spikerush (*Eleochraris parvula)* are also pioneering the J-8 ponds.

Noxious weeds include Canada thistle (*Cirsium arvense*), Scotch thistle (*Onopordum acanthium*), musk thistle (*Carduus nutans*), puncturevine (*Tribulus terrestris*), field bindweed (*Convolvulus arensis*), and purple loosestrife (*Lythrum salicaria*). Other undesireable weeds include bull thistle (*Cirsium vulgare*), Russian thistle (*Salsola iberica*), stinging nettle (*Urtica dioica*), bitter nightshade (*Solanum dulcamara*), common mallow (*Malva neglecta*), kochia (*Kochia scoparia*), common cocklebur (*Xanthium strumarium*), and sandbur (*Cenchrus longispinus*).

THREATENED AND ENDANGERED SPECIES

No threatened or endangered species are known to reside on NSWMA. Peregrine falcon (*Falco peregrinus*) habitat is available on the shear basalt cliff running the length of the area but none have been observed. Bald eagles (*Haliaeetus leucocephalus*) have been seen flying the Snake River and occasionally perching on the cottonwood trees along the riverbank but none have

nested on the area. Trumpeter swans (*Olor buccinator*) have rarely been seen flying along the river during migration. White-faced ibis (*Plegadif chihi*) have been seen feeding in the new J-8 ponds.

PUBLIC USE

No formal survey of public use of NSWMA has been conducted. Previous management plans have reported estimates from incidental field observations. The last Department management plan (IDFG 1985) estimated 2,880 (35%) annual user days for sightseeing, 1,500 (18%) for waterfowl hunting, 720 (9%) for hiking, 400 (5%) for educational/scientific, 300 (4%) for yellow bellied marmot shooting, 208 (3%) for horseback riding, 200 (2%) for wildlife observation, 180 (2%) for upland game hunting, 10 (<1%) for photography, and 1,825 (22%) for other activities. Incidental user observations during regular working hours were started during the summer of 1998. Since then, 20 users were observed at NSWMA with 35% of the users hunting, 25% were viewing wildlife, 20% were horseback riding, 10% were exercising, and 10% were fishing.

The Rocky Mountain Griffon Club and South Idaho Houndsmen Association file permits to hold their annual dog field trials at NSWMA during the last weekend in March and first weekend in April. The Department also issues free wood cutting permits for downed trees that are blocking roads or disrupting irrigation activities. The Cache Peak Backcountry Horsemen also hold an annual spring ride on the area during April. No permit is required but their activity is permitted on a courtesy notification basis. All of these groups provide their own portable toilets for their events. A local boy scout group also holds an occasional overnight campout on the lawn of the administrative building but only courtesy notification is required. In 1998, 3 Wendell High School mathematics classes held an orienteering activity for students to familiarize themselves with compasses and map reading.

PHYSICAL IMPROVEMENTS

A boundary fence exists along the north side of the area adjacent to grazed farmland west of the county road. There are barrier fences with walk through styles at 2 parking lots. Two Department foot bridges and one vehicle bridge provide access across the canal. Several non-Department canal crossings include fallen trees and wooden planks placed by recreationists. Metal pipe gates and barb wire gates block maintenance roads from unauthorized motor vehicle use. No toilets are available to the public. One abandoned non-traditional pit toilet exists near the workshop. A bulletin board is present at the main entrance road and is posted with restrictions and stocked with maps of the area. There are 3 administrative buildings used for temporary office space, workshop, and storage. The irrigation system consists of one 2 mile long canal, over 4,000 ft. of steel and poly vinyl coated mainline, several hook and latch and ball and socket handlines, three wheel lines, one water powered mini-center pivot, one 200 ft. gated pipe, and 6 portable gun sprinklers.

There is approximately 5 miles of roads are maintained on the area, of which 2.5 miles are

available for public motorized vehicle use. There are 6 dikes impounding 37 acres for 7 artificial ponds. There are 29 acres of seasonal ponds that are wet during the irrigation season (April-October) and 8 acres of perennial ponds.

MANAGEMENT AGREEMENTS

The Department has a 1996 agreement with the North Side Canal Company (NSCC) for the development of a constructed wetland on NSWMA. The purpose of this project is to filter irrigation water in the J8 drain before it returns to the Snake River and to provide wildlife habitat. NSCC has provided labor, machinery, and engineering for this project while the Department has provided the labor and costs for seeding the dikes and installing wetland plants.

The Department has a three-way agreement with Idaho Power Company and Rim View Trout Company for the use of the waters of Niagara Springs. An agreement was signed in 1993 to partition the waters among the three beneficial users according to a specific amount, benefit, and season of use. The Department is restricted to the flow rates shown in Appendix IV. The Department is also bound by the Idaho Department of Water Resources (IDWR) and *Idaho Code* S 42-701 to measure diverted waters as part of the Basin 36 Water Measurement Order of 1994.

WATER RIGHTS

The Department has two water rights for NSWMA (Appendix IV). An agreement of use is followed for diverting water from Niagara Springs on the east end of NSWMA. Before a 1992 Water Adjudication Hearing, the Department had a 32 cubic ft. per second (cfs) year-around water right with a 1912 priority date. It was determined by the Adjudication Court that beneficial use had changed since the purchase of the land in 1972 by the Department, because the water was no longer being used for winter livestock grazing. Beneficial use for trout propagation, domestic use, and agricultural crops were still being met and a flow rate of 11 cfs was ordered. The later Niagara Springs agreement of 1993 determined the maximum flow rate to be 10 cfs. The Department also has a 2.44 cfs water right for J8 spill water on the west end of the area.

CHAPTER THREE - ISSUES, CONCERNS, AND OPPORTUNITIES

There has been little controversy regarding the management at NSWMA. Most issues are generated by Department personnel from field contacts with the public and also from within the Department concerning the welfare wildlife populations.

ISSUE IDENTIFICATION

Public Issues

Two public open houses were held in the Magic Valley on April 3 and 4, 1996, in Burley and Gooding, respectively. There were few comments directed specifically towards the management of NSWMA. The following are a summarization of the written comments received:

- Continue current trapping permit level, open up to otter trapping - one comment.
- 1996 muskrat harvest was excessive, likes to see the muskrats - one comment.
- Implement size limits on trout to protect larger fish in the ponds - one comment.
- Maintain natural looking landscape, likes to walk with family on area - one comment.
- Restrict vehicle use, make people walk to ponds, keep west gate closed - one comment.
- Continue wild trout regulation - two comments.

In addition to these comments, waterfowl hunters have expressed a strong desire to keep the west gate open throughout the hunting season. They enjoy the opportunity to drive to the river.

Five additional public open houses were held February 8-12 at Fairfield, Burley, Hailey, Gooding, and Twin Falls. Eight requests were made for printed copies of the draft plan. One comment was received in return. This comment stated two butterfies, saytr comma (*Polygonia satyrus*) and Milbert's tortoiseshell (*Nymphalis milberti*) both occur on NSWMA and require stinging nettle as larval food.

Department Issues

The following issues have been developed by the current manager and past managers of NSWMA.

Habitat Rehabilitation

Several cover types on the area need rehabilitation. Some irrigated nesting cover has become decadent and needs replanting with desirable grass and forb species to provide optimum nesting habitat for upland birds and waterfowl. The shrub/steppe cover is dominated by cheatgrass which creates a fire hazard for the desirable sagebrush overstory.

The shelterbelts were originally planted with Siberian peashrub and Peking cotoneaster. These species have not performed well on the area and also are not as desirable as other more native species. These plants should be replaced with skunkbrush sumac, golden currant, and Wood's rose.

Every spring, Russian thistle are dislodged by wind storms and obstruct the canal. The weed jams block fish passage and also back water up potentially causing a breach of the canal and severe soil erosion. The weeds are pulled to the side of the canal and allowed to dry, then burned in place. Approximately one work week is needed every spring to clean debris from the canal. The weeds grow along the basalt talus slopes and between irrigated habitat. Eliminating Russian thistle would allow more time for other activities. Widespread use of biological control agents is needed for Russian thistle reduction.

Russian olives are gradually invading wetlands, dikes, and riparian zones. They have the potential of dominating more desirable habitat thus reducing habitat diversity (Knopf and Olson 1984). Olives are also becoming established on pond dikes, threatening the stability of the earthen structures. Well established groves along the irrigation canal and spring seeps are too large to remove without causing severe soil erosion. Therefore, these populations should be left but all others should be eliminated.

Public Use and Access

Dog Trials: A Griffon Dog Field trial occurs during the last weekend in March. This date was originally during April. Back dating the hatch for waterfowl prompted the removal of April field trials. It was estimated that mallards started nesting during the first week of April. Dogs are restricted to being on a leash or at heel from April 1 through August 15 to protect nesting and brood rearing gamebirds and waterfowl.

The Rocky Mountain Griffon Club competes with the South Idaho Houndsmen Association dog field trial for this last weekend in March. During the last two years, the groups were reluctant to have their dog trials earlier than the last weekend in March because of unfavorable weather. To compromise the conflict, the Houndsmen were allowed to have their trial during the first weekend in April. The rationale behind this decision was the hound trial is more of a straight line trial on trails and edges of cover and does not meander through nesting cover like the Griffon trial. Therefore, the hound trial does not appear to disturb ground nesting waterfowl. The Griffon trial originally was restricted to fields furthest from the riverbank. The assumption is most nesting occurs adjacent to the river. During recent Griffon trials, though, the test has attracted more owners and the club has expanded tests closer to the river to accommodate the increase of participants.

The issue is whether or not the dog field trials conform to the season originally mandated by the Department (dog trials prohibited October 1 through July 31). It is unknown what impact the current dates or current level of participation is having on nesting or nest initiation by waterfowl. Upland gamebirds do not typically start nesting until late April so are probably not affected by the dog trials. Dog trial hosts desire the cooler weather in spring rather than the hot temperatures of summer. Before the dates are changed, a scientific study should be conducted to determine

any significant impacts to waterfowl production.

Trapping: The current controlled trapping season for one trapper relieves competition and allows one person to have a quality trapping experience. More muskrats than mink are harvested (Table 1).

Table 1. Mink and muskrat harvest at Niagara Springs Wildlife Management Area, 1996-1999.

Season	Mink	Muskrat
1996	6	161
1997	2	136
1998	3	98
1999	1	3

The harvest for the 1998 season was low due to the influenced of high river flows. The trapper in 1999 only operated 7 traps for 2 days. Whether or not the overall level of trapping is causing damage to the population is unknown. It appears current levels of harvest are being sustained with the one trapper regulation and this system should be continued.

Roads: Within the canyon, only the main loop road is open year-round for motorized public use (Figure 1). The west gate is closed to unauthorized motor vehicle use after the waterfowl hunting season closes in January and reopened the weekend before the waterfowl season starts in September. All other roads within the canyon are closed to unauthorized motorized vehicle use year-round. The roads are only open to the participants of the dog field trials during the trials and then closed when completed. The permit fur trapper is granted a key to the west gate during the trapping season but keeps the gate closed to the general public while trapping. The trapper is restricted, though, to the same roads open for the waterfowl hunting season. All of these restrictions are in place to minimize off road habitat damage, vandalism, refuse dumping, illegal tree cutting, disturbance of nesting wildlife, to promote a quality hunting experience, and reduce wildfires. These restrictions should be continued.

Prior to 1999, occasionally a vehicle would become stuck on the side of the single lane roads when attempting to avoid oncoming traffic. Strategically placed turnouts would have provided a safer situation for the two-way traffic and reduce damage to habitat. During construction of a new pond in the J-8 wetland project, the NSCC widened the roads to allow access for their cement mixers. Therefore, this road hazard no longer exists.

During winter rain-on-snow events and spring thunderstorms, the Niagara Springs grade (maintained by the West Point Highway District) funnels water down the entrance road eroding it and washing the soil into the canal. This has the potential of covering trout eggs with silt and destroying an entire year's production. A bypass culvert should be installed to adequately funnel

the runoff to a grass waterway as part of the irrigated nesting cover immediately adjacent to the roads.

On top of the canyon rim, the J-8 canal right-of-way road and the primitive roads are open year-round. The historic road is not passable with motorized vehicles because of fallen boulders and should not be opened. The primitive road dead ends on the east side and does not connect with the Niagara Springs Grade. Occasionally, recreationists have exited the primitive road by cutting the boundary fence paralleling the county road. An official exit/entrance should not be constructed because this is a dangerous corner of the grade. Vehicles ascending the grade are blind to any traffic on top of the rim at the corner. Signs should be installed notifying the public of the dead end on the primitive road and the barb wire fence repaired.

Sanitation: Currently, there is no garbage services provided for the public. Some waterfowl hunters occasionally provide garbage cans at the farthest west parking lot. Also, no toilets are available at the parking lots. Human waste has been found in wooded areas near the parking lots. A vault toilet should be provided on the west parking lot and one at the main entrance parking lot. Large dumpsters should not be installed because they would be quickly used by people not recreating on the WMA. The policy of not providing garbage services should be continued. Users should be encouraged to "pack out" their refuse.

Fishery

Another population estimate is needed to determine the trend of rainbow trout in the canal and pond system fed by Niagara Springs. This estimate should be done at least once every 5 years to monitor the effectiveness of the two fish limit.

The upper 1983 pond (Figure 1) fed by Niagara Springs water also appears to becoming shallower because of sediment delivery from the canal. Several erosion events have occurred up-slope from the canal and have deposited sediments into the water system. It should be determined if this shallow water is affecting the trout migration into the canal for spawning. The canal flow has been reduced as a result of the water rights battle of 1992. It should be determined if this has affected recruitment. Gravel beds should be installed in fast flowing stretches to enhance recruitment if needed. Artificial structures could also be installed to increase water velocity to create sediment free stretches of the canal to promote additional spawning habitat.

Budgetary

Personnel: Prior to 1992 (Appendix II), an 8 month technician was available at NSWMA and shared with Hagerman WMA. This position provided needed noxious weed control both early and late in the growing season. Irrigation was started on time and continued until the end of the irrigation season. Roads were also maintained on a timely basis. Currently, one temporary technician is available for 3 months during the summer at NSWMA. Consequently, early and late weed control is not done, irrigation is reduced to a shorter period, roads are left unmaintained longer, and the habitat biologist is drawn away from other critical duties within the habitat district to accomplish NSWMA field work. When financially possible, the 8 month technician

position should be reinstated.

Operating: Due to budgetary constraints, management of NSWMA is affected in the following ways:

- Few rehabilitation or development projects have been undertaken to maximize the production of quality wildlife habitat on the area.
- Noxious weeds are being minimally maintained.
- Undesirable weeds have invaded several food plots and have not been properly controlled.
- The irrigation delivery system has not been sufficiently repaired and has failed to provide a reliable supply of water for habitat production due to the aged steel pipe portions.
- The Mays house is no longer suitable for occupancy. The plumbing is no longer functioning and the foundation is continuing to fail.
- Vandalism and theft is increasing because no one is residing at the house.
- The canal bridge to the headquarters is no longer suitable for county fire equipment or other heavy loads and should be replaced.

Sharing of equipment in a timely manner has become increasingly more difficult among the WMAs in the Magic Valley Region since the acquisition of the Big Cottonwood WMA in 1993 and the increased work at fishing access areas by the Regional Utility Craftsman. A tractor is needed specifically for NSWMA. Food plots are being planted too late to control puncturevine and sandbur by shading. The goose pasture is not mowed frequently enough to provide optimum use by Canada geese during the summer.

FINDING OF NO SIGNIFICANT IMPACT

The issues generated by the public and from within the Department were determined by the planning team to not be significant enough to warrant a detailed analysis of alternatives. It was decided the current management strategies for reaching the desired future condition of NSWMA would be continued. The desired future condition can only be achieved, though, if adequate funding is available. More services cannot feasibly be provided with less funding.

CHAPTER FOUR - MANAGEMENT DIRECTION

The ultimate goal of the management for NSWMA is to attain the desired future condition (see page 3). Attaining the desired future condition is influenced by sufficient operating funds, an adequate seasonal labor force, and work priorities of the district habitat biologist. Work plans and statements of work accomplished are submitted annually to the Federal Government for NSWMA and the Niagara Springs Habitat District (Appendix V). These plans and statements are a way of documenting the work accomplished at NSWMA. Issues generated by the public and Department were incorporated into the management goals, objectives and strategies.

MANAGEMENT GOALS

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

1. Provide optimal quality and diverse habitat for wildlife.
2. Provide optimal public recreational activity without adversely impacting wildlife.

MANAGEMENT OBJECTIVES AND STRATEGIES

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

I. Goal: Provide optimal quality and diverse habitat for wildlife.

A. Objective: Maintain and enhance 184 acres of irrigated cover.

Strategies:

1. Replace entire steel irrigation delivery system.
2. Replant 7 corn food plots (8.5 acres total) annually.
3. Rehabilitate a 53 acres of degraded nesting cover by reseeding, fertilization, and/or prescribed burning by 2004.
4. Replant winter wheat goose grazing pasture (5.9 acres) annually and replant degraded portions of grass pasture (3.5 acres) by 2000.
5. Maintain travel lanes annually to goose pastures from river edge.
6. Replace vacant portions of shelterbelts and replace poor growing species with native species adapted to the area by 2004.
7. Develop 4 new irrigated shrub thickets by 2004.

B. Objective: Control noxious and undesirable weeds.

Strategies:

1. Conduct annual spring, summer, and fall spot spraying for noxious weeds.
2. Plant food plots early (before June) to shade out late growing sandbur and puncturevine.
3. Release biological control agents for purple loosestrife, Russian thistle, and Canada thistle by 2001.

C. Objective: Maintain and enhance artificial nesting structures annually.

Strategies:

1. Maintain 20 goose platforms, monitor use, and adjust locations for optimum use.
2. Maintain 40 wood duck boxes and monitor use.
3. Maintain 7 American kestrel boxes and monitor use.
4. Install one bat nursery box by 2001 and monitor use.
5. Maintain 6 mallard nesting cylinders and monitor use.

D. Objective: Maintain and enhance 37 ac of constructed ponds.

Strategies:

1. Plant emergent vegetation in J-8 ponds for wildlife habitat and water filtration by 2000.
2. Remove Russian olives from dikes by 2000.

E. Objective: Maintain and enhance 94 acres of riparian cover and Snake River islands.

Strategies:

1. Remove invading Russian olives by 2004.
2. Create brush piles for upland game with removed olive trees.

F. Objective: Maintain and enhance 661 acres of shrub/steppe cover.

Strategies:

1. Accurately map acreage and rehabilitate cheatgrass dominated habitat with native species by 2010.
2. Develop greenstrips to reduce threat of wildfires spreading through sagebrush by 2010.

II. Goal: Provide optimal public recreational opportunity without adversely impacting wildlife.

A. Objective: Provide optimal hunting opportunity.

Strategies:

1. Open west gate one week before waterfowl season starts and close one week after the season ends.
2. Monitor hunter use and opinions annually.

B. Objective: Provide optimal fishing opportunity.

Strategies:

1. Maintain year-round 2 fish/day fishing season.
2. Install fishing dock in house pond by 2000.
3. Stock house pond annually.
4. Monitor trout populations and recruitment every 5 years starting in 1999.
5. Enhance spawning habitat if recruitment is not at desirable levels.

C. Objective: Provide optimal trapping opportunity.

Strategies:

1. Limit trapping permits to one trapper.
2. Provide permit trapper with key to west gate during trapping season.

D. Objective: Provide optimal motorized access and facilities.

Strategies:

1. Maintain roads and parking lots for safe use annually.
2. Maintain current road closures to promote quality hunting experiences.
3. Install a culvert to eliminate erosion of entrance road by 2000.
4. Install outhouse vault toilets at the west and entrance parking lots by 2004.

E. Objective: Provide optimal non-consumptive recreational and educational opportunity.

Strategies:

1. Maintain current restrictions for 2 dog trials.
2. Provide brochures of NSWMA at entrance.
3. Provide educational tours upon request.
4. Develop a bird checklist brochure and provide at entrance by 2000.

5. Study impacts of dog trials on nesting waterfowl by 2004.

LITERATURE CITED

Abramovich R., Molnau M., and Craine K. 1998. Climates of Idaho. University of Idaho Cooperative Extension System College of Agriculture. 216pp.

Idaho Department of Fish and Game. 1985. Region 4 1986-1990 Idaho Department of Fish and Game wildlife management area plans. Idaho Dept. of Fish and Game. Jerome, ID. 100 pp.

Idaho Department of Fish and Game. 1991. A vision for the future, Idaho Dept. of Fish and Game policy plan, 1990-2005. Idaho Dept. of Fish and Game. Boise, ID. 33pp.

Kopf, F. L., and T. E. Olson. 1984. Naturalization of Russian-olive: Implications to Rocky Mountain wildlife. Wildl. Soc. Bull. 12:289-298.

Meyers Engineering Company, P. A. 1991. Draft application for license for the Boulder Rapids hydroelectric project. FERC No. 10772

APPENDIX I

LAND ACQUIREMENT FOR NIAGARA SPRINGS WMA

Funds	*Conveyance*	*Date Aquired*	*Aquired From*	*Cost*	*Acres*
None	Quitclaim Deed	3/27/73	Lester A. Bornt	$0	21.8

T9S, R15E, BM*
Sec. 3, that part of NW¼SW¼ lying S of N rim of Snake River Canyon;
Sec. 4, that part of NE¼SE¼ lying S of N rim of Snake River Canyon.

LWCF	Warranty Deed	10/3/72	Floyd Langford	$375,000	934.59

T9S, R15E, Boise Meridian (BM)
Sec. 3, S½SW¼
Sec. 4, SW¼NW¼ and Lots 5, 6, 7, 8, 9, 10, and 11;
Sec. 5, SE¼NE¼ and Lots 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, and 21;
Sec. 6, Lots 7, 8, 14, 15, 17, and 18;
Sec. 8, Lot 3;
Sec. 9, Lots 1, 6, and 10;
Sec. 10, Lots 3, 4, and 11 and those portions of Lots 1, 2, and 10 lying N of and W of the following lines: BEGINNING at a point marked and known as Idaho Power Co. stone which point is 950.6 ft. S of and 427.9 ft. W of the NE corner of said Sec. 10, thence N 0°1'9" W 191.12 ft. to a metal pin which pin is the TRUE PLACE OF BEGINNING, thence N 84°02'30" W 704.29 ft. to a metal pin, thence S 0°30'51" W 311.89 ft. to a rebar pin, thence S to the Snake River; and excepting from said Lot 1, the E 427.9 ft. thereof.

IDFG	Patent	2/23/71	BLM	$67.35	19.39

T9S, R15E, BM.
Sec. 10, Lot 14 (Island "A" 6.06 acres)
Sec. 9, Lot 15 (Island "B" 1.78 acres)
Lot 16 (Island "C" 2.65 acres)
Sec. 6, Lot 21 (Island "D" 2.41 acres)
Lot 22 (Island "E" 2.47 acres)
Lot 23 (Island "F" 4.02 acres, three islands on quadrangle maps)

Note: These 8 islands were originally purchased along with other islands now designated as the Snake River Islands WHA (27.63 acres) for a total of 47.02 acres of islands for the $67.35 total price paid to the BLM

APPENDIX II

MAJOR DEVELOPMENTS AND OCCURRENCES AT NIAGARA SPRINGS WMA

1971	Purchased 8 islands (19.39 acres) from BLM.
1972	Purchased 934.59 acres from Floyd Langford.
1973	Obtained 21.8 acres from Lester Bornt.
1979	Installed portable center pivot to irrigate 77 acres of upland habitat in exchange for grazing.
	Installed 20 Canada goose nest platforms.
1980	Agricultural Research Services constructed 2 sediment ponds (1.8 acres) to treat J-8 drain water.
1982	Released 20 Rio Grande wild turkeys.
1983	Constructed 2 earthen dikes for 8.1 acres of surface water in exchange for farming under pivot.
	Installed 38 wood duck nest boxes.
1988	Planted 5 shelterbelts.
1989	Re-seeded 3 fields (37 acres) for irrigated nesting habitat.
	Installed larger pipe to allow fish passage out of upper 1983 pond to canal.
1990	Magic Valley Fly Fishers installed gravel beds, rock structures and willows in inlet to upper pond.
1991	Conducted wild trout population estimate in ponds.
	Conducted waterfowl banding study and brood production surveys.
	Boulder Rapids hydroelectric project proposed.
	Break in canal repaired downstream from 1983 ponds.
	Installed 6 artificial mallard nesting cylinders.
1992	Re-seeded 2 fields (20.5 acres) for irrigated nesting habitat.
	Replanted dead trees in shelterbelts
	Planted two new shrub belts and converted 1.5 acres of nesting cover to a food plot.
	Improved foot bridge across canal at milk house parking lot.
	Conducted waterfowl banding study and brood production surveys.
	Temporary help at one 8 month and five 3 month positions.
	Constructed new parking area at entrance loop road.

1993 Lost 11 cfs of water rights for Niagara Springs water, canal dry beyond 1983 ponds.

Department adopts habitat district organization of lands personnel.

Installed fish ladder made of gravel bags to allow fish passage past waterfall in canal.

Created new food plot on south side of 1983 lower pond.

Temporary help reduced to one 8 month and three 3 month positions.

Installed 21 new wood duck boxes on islands and 10 to mainland.

Conducted summer use surveys of birds.

Conducted waterfowl banding study and survey of brood production.

Snow meltwater washes sand into dried up section of canal down from 1983 ponds.

Wildflower patch planted.

1994 Converted 20.2 acres of nesting cover to goose pasture.

Two fish limit regulation implemented.

Opened travel lanes to goose pastures along river bank by removing Russian olives.

Installed 2 floating islands constructed by Eagle Scout to 1983 ponds.

Released Canada thistle weevils for noxious weed control along canal.

Planted 3,000 bitterbrush bare root stock for deer winter browse.

Pivot safety system fails twice and is repaired once. Still awaiting repair in 1998.

1995 Released moths and weevils for Russian thistle and puncturevine control.

Temporary help reduced to one 8 month and one 3 month position.

Improved foot bridge crossing canal at milk house parking lot

Converted 3 shelterbelts to drip irrigation.

1996 Installed gated pipe to food plot on south side of ponds.

NSCC reconstructed and cleaned the sediment pond on J-8 drain and began construction of shallow pond and sediment basin on west pivot pad.

Released Canada thistle weevils to wetland below lower pond.

Conducted experimental seeding of Indian ricegrass to 2.3 acres of dryland dominated by cheatgrass.

Purchased used corn planter and broadcast seeder for food plots and goose pasture seedings.

Temporary help reduced to two, 3 month positions.

1997 Converted one shelterbelt to drip irrigation.

NSCC constructs 2 earthen dikes converting one goose pasture (8.3 acres), irrigated nesting cover (8.3 acres), and dryland (1.5 acres) to 2 shallow ponds and a sediment

basin on west pivot pad to filter J-8 canal waste water.

NSCC expands original 1980 sediment basin to 10.6 acres to treat entire volume of J-8 drain.

Dikes are planted to dryland grasses and forbs.

800 nursery stock hardstem bulrush planted in new shallow ponds.

Applied local dairy compost to food plots.

12 acres wildfire occurs on south side of 1983 ponds consuming cheatgrass stand.

Legislators tour J-8 drain constructed wetland project.

Converted one goose pasture (3.5 acres) back to nesting cover by not mowing.

1998 Wildfire area of previous summer reseeded to Indian ricegrass.

Planted ½ acre experimental perennial sorghum food plot on north side of canal.

Planted additional ½ acre corn/millet food plot adjacent to sorghum.

Sediment basin dikes planted to dryland grasses and forbs.

150 hardstem bulrush transplanted from ponds constructed in 1983 and planted in new

NSCC ponds as part of an Eagle Scout project.

Reconstructed entrance road twice due to mainline breaks and private horse trailer running over riser.

Burglary occurred in buildings and all hand tools, compressor, and chain saw stolen.

Constructed security cage and fortified door to safeguard tools in work shop.

Temporary time reduced to one 3 month position.

Installed new headgate at spring box of Niagara Springs.

NSCC constructs water delivery channel from lower sediment basin to north side of middle pivot for filter basin to be built later.

NSCC constructs new access road to west parking lot to bypass lower sediment basin dike.

1999 NSCC cleaned 80 cubic yards of bulrush tubers from sediment basin of The Nature Conservancy's 1,000 Springs Preserve constructed wetland project and places in lower ponds of J-8 project.

Department employees and volunteers plant the bulrush tubers by hand into the ponds.

NSCC constructs a 5.4 acre shallow basin on the north side of middle pivot pad to be used as a filter prior to the water entering the lower ponds.

APPENDIX III

WILDLIFE SPECIES LISTS FOR NIAGARA SPRINGS WMA

AVIAN SPECIES

Loons-Grebes
Common Loon
Western Grebe
Horned Grebe
Eared Grebe
Pied-billed Grebe

Pelicans-Cormorants
American White Pelican
Double-crested Cormorant

Herons-Ibises-Cranes
American Bittern
Black-crowned Night-Heron
Cattle Egret
Snowy Egret
Great Blue Heron
White-faced Ibis
Sandhill Crane

Swans-Geese-Ducks
Tundra Swan
Trumpeter Swan
Greater White-fronted Goose
Snow Goose
Ross's Goose
Canada Goose
Mallard
Gadwall
Green-winged Teal
American Wigeon
Northern Pintail
Northern Shoveler
Blue-winged Teal
Cinnamon Teal
Ruddy Duck
Wood Duck
Canvasback
Redhead
Ring-necked Duck
Greater Scaup
Lesser Scaup
Barrow's Goldeneye
Common Goldeneye
Bufflehead
Common Merganzer
Red-breasted Merganzer
Hooded Merganzer

Rails-Coots
Virginia Rail
Sora
American Coot

Avocets-Plovers
American Avocet
Black-necked Stilt
Snowy Plover
Semipalmated Plover
Killdeer
Black-bellied Plover

Sandpipers
Marbled Godwit
Long-billed Curlew
Willet
Greater Yellowlegs
Lesser Yellowlegs
Solitary Sandpiper
Spotted Sandpiper
Wilson's Phalarope
Log-billed Dowitcher
Common Snipe
Semipalmated Sandpiper
Western Sandpiper
Least Sandpiper
Baird's Sandpiper

Gulls-Terns
Franklin's Gull
Bonaparte's Gull
Ring-billed Gull
California Gull
Common Tern
Forster's Tern
Black Tern
Caspian Tern
Sabine's Gull
Glaucous Gull
Glaucous-winged Gull
Thayer's Gull
Herring Gull

Vulters-Eagles-Hawks-Falcons
Turkey Vulture
Golden Eagle
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk
Red-tailed Hawk
Swainson's Hawk
Rough-legged Hawk
Ferruginous Hawk
Osprey
American Kestrel
Prairie Falcon
Peregrine Falcon

Grouse
California Quail
Chukar
Gray Partridge
Ring-necked Pheasant
Sage Grouse
Wild Turkey

Doves-Cuckoos
Rock Dove
Mourning Dove

Owls
Barn Owl
Short-eared Owl
Long-eared Owl
Great Horned Owl
Western Screech-Owl
Northern Saw-whet Owl
Burrowing Owl

Nightjars-Swifts
Common Poorwill
Common Nighthawk
White-throated Swift

Hummingbirds-Kingfishers
Calliope Hummingbird
Rufous Hummingbird
Black Chinned Hummingbird
Broad Tailed Hummingbird
Belted Kingfisher

Woodpeckers
Northern Flicker
Lewis' Woodpecker
Red-naped Sapsucker
Downy Woodpecker
Hairy Woodpecker

Tyrant Flycathcers
Eastern Kingbird
Western Kingbird
Western Wood-Pewee
Say's Phoebe
Gray Flycatcher
Willow Flycatcher
Cordilleran Flycatcher

Larks-Swallows
Horned Lark
Tree Swallow
Violet-green Swallow
Bank Swallow
Northern Rough-winged Swallow
Cliff Swallow
Barn Swallow

Jays-Crows
Black-billed Magpie
American Crow
Common Raven

Chickadees-Bushtits
Black-capped Chickadee
Mountain Chickadee

Creepers-Nuthatches-Wrens
Brown Creeper
White-breasted Nuthatch
House Wren
Marsh Wren
Rock Wren
Canyon Wren
Winter Wren

Thrushes-Shrikes-Mimic Thrushes
Golden-crowned Kinglet
Ruby-crowned Kinglet
Western Bluebird
Mountain Bluebird
Townsend's Solitaire
Hermit Thrush
American Robin
Loggerhead Shrike
Northern Shrike
Gray Catbird
Sage Thrasher
Swainson's Thrush

Pipits-Dippers-Waxwings
American Pipit
American Dipper
Cedar Waxwing
Bohemian Waxwing

Starlings-Vireos-Warblers

European Starling
Red-eyed Vireo
Warbling Vireo
Cassin's Vireo
Plumbeous Vireo
Orange-crowned Warbler
Yellow-rumped Warbler
Yellow Warbler
Macgillivray's Warbler
Wilson's Warbler
Common Yellowthroat
Yellow-breasted Chat
American Redstart

Grosbeaks-Buntings-Sparrows
Black-headed Grosbeak
Lazuli Bunting
Rufous-sided Towhee
Vesper Sparrow
Savannah Sparrow
Song Sparrow
Lark Sparrow
Sage Sparrow
American Tree Sparrow
Chipping Sparrow
Brewer's Sparrow
Dark-eyed Junco
White-crowned Sparrow
Fox Sparrow
Snow Bunting
Lark Bunting
Harris Sparrow
White-throated Sparrow

Blackbirds-Orioles
Bobolink
Western Meadowlark
Yellow-headed Blackbird
Red-winged Blackbird
Brewer's Blackbird
Brown-headed Cowbird
Bullocks's Oriole
Western Tanager

Weavers-Finches
House Sparrow
American Goldfinch
Common Redpoll
Purple Finch
House Finch

Evening Grosbeak

MAMMALIAN SPECIES

Insect Eaters
Merriam Shrew
Northern Water Shrew
Vagrant Shrew

Bats
Little Brown Myotis
Long-eared Myotis
Small-footed Myotis
Western Pipistrelle
Western Big-eared Bat

Carnivores
Raccoon
Shortail Weasel
Longtail Weasel
Mink
River Otter
Badger
Spotted Skunk
Striped Skunk
Coyote
Red Fox

Rodents
Yellow-bellied Marmot
Townsend Ground Squirrel
Richardson Ground Squirrel
Least Chipmunk
Eastern Fox Squirrel
Northern Pocket Gopher
Little Pocket Mouse
Great Basin Pocket Mouse
Ord Kangaroo Rat
Great Basin Kangaroo Rat
Beaver
Western Harvest Mouse
Deer Mouse
Northern Grasshopper Mouse
Desert Wood Rat
Bushy-tailed Wood Rat
Sagebrush Vole
Muskrat
House Mouse
Western Jumping Mouse
Porcupine
Mountain Cottontail
Pygmy Rabbit

Deer
Mule Deer

AMPHIBIAN AND REPTILE SPECIES

Lizards
Western Whiptail Lizard
Side-blotched Lizard
Western Fence Lizard
Short-horned Lizard
Long-nosed Leopard Lizard
Sagebrush Lizard
Desert Horned Lizard

Snakes
Striped Whipsnake
Racer
Gopher Snake
Common Garter Snake
Western Terrestrial Garter Snake
Rubber Boa
Night Snake

Toads-Frogs
Great Basin Spadefoot Toad
Western Toad
Bull Frog

FISH SPECIES

Rainbow Trout

APPENDIX IV

WATER RIGHTS FOR NIAGARA SPRINGS WMA

License Number	*Flow (cfs)*	*Use Dates*	*Source*	*Priority Date*	*Use*
36-4020*	10	May-October	Niagara Springs	June 7, 1983	Wildlife
	7	November-February	Niagara Springs	March 15, 1912	Irrigation
	8	March-April	Niagara Springs	March 15, 1912	Domestic
36-7234	2.44	April-October	J-8 Spill	June 8, 1972	Irrigation

*The flow rate (cubic feet per second) varies among the priority dates shown for each use. For detailed flow rates for each priority date, please see Niagara Springs Agreement, September 30, 1993.

APPENDIX V

FEDERAL AID PROJECT STATEMENT AND PROGRESS REPORT

Niagara Springs Habitat District

NIAGARA SPRINGS WILDLIFE MANAGEMENT AREA

Management Priorities:

1. Upland Game Bird and Waterfowl Production
2. Hunting
3. Wintering Waterfowl
4. Fishing Access
5. Wildlife Appreciation

* Work performed and reported under Magic Valley Region Habitat Maintenance

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS[1]
		Planned	Actual	Planned	Actual	
UPLAND GAME BIRD AND WATERFOWL PRODUCTION						
Management Program - Provide high quality nesting habitat						
Irrigate grass/alfalfa habitat	1211	200 acres		*		Species benefitted: MALL, CITE, GADW, Pheasant, California Quail
Maintain Canada goose nesting platforms	1211	20 boxes		*		Species benefitted: CAGO
Maintain wood duck nest boxes	1211	200 boxes[2] 1 week		1,138		Species benefitted: WODU, Screech Owl, Am. Kestrel, Red Squirrel, Northern Flicker
Management Program - Maintain and improve habitat for upland game birds						
Irrigate and maintain woody cover	1211	9 plantings		*		Species benefitted: Pheasant, California Quail, Songbirds

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS[1]
		Planned	Actual	Planned	Actual	
HUNTING						
Management Program - Maintain and improve habitat to sustain and increase huntable populations						
Maintain food plots	1211	8 acres		*		Species benefitted: Pheasant, California Quail, Songbirds
Management Program - Maintain ponds, ditches, roads and trails for hunting						
Maintain water delivery systems to ponds	1211	2 mi. 1 week		*1,138		Species benefitted: MALL, WODU, Rainbow Trout, CAGO
Maintain water levels in ponds	1211	4 ponds		*		Species benefitted: MALL, WODU, Rainbow Trout, Osprey, Shorebirds, CAGO
Maintain roads for access	1211	5 mi.		*		Species benefitted:
WINTERING WATERFOWL						
Management Program – Develop and maintain habitat for wintering waterfowl						
Maintain water level in ponds	1211	4 ponds		*		Species benefitted: MALL, CAGO
Maintain grazing fields for waterfowl	1211	21 acres		*		Species benefitted: CAGO, AMWI, MALL
FISHING ACCESS						
Management Program – Maintain ponds, ditches, roads, and trails for fishing access						
Maintain impoundment dikes, ditches, and roads	1211	4 ponds, 5 mi. of roads and 2.5 mi. of canals and dikes		*		Species benefitted: Rainbow trout,

ACTIVITY	ACTIVITY CODE	UNITS OF WORK		COST		COMMENTS[1]
		Planned	Actual	Planned	Actual	
Manage water levels to maintain fish populations	1211	3 ponds, 1 canal (2mi.)		*		DJ Funding. Species benefitted: Rainbow Trout
WILDLIFE APPRECIATION						
Management Program – Provide educational opportunities						
Provide information tours upon request and brochure of the WMA	1630	1 week		1,138		Species benefitted:
Maintain access roads	1211	5 mi.		*		Species benefitted:
TECHNICAL ASSISTANCE						
Review of public projects	1710	7 weeks		7,966		Species benefitted: Upland Game
Assistance to private landowners	1720	12 weeks		13,656		Species benefitted: Upland Game
ADMINISTRATION						
Administration and Coordination						
Administer WMA, coordination with other agencies	1630	7 weeks		7,966		Species benefitted: Upland Game, Waterfowl, Watchable Wildlife
Develop planning documents, review and evaluate	1630	4 weeks		4,552		Species benefitted: Upland Game, Waterfowl, Watchable Wildlife
Maintain files and prepare administrative reports	1630	1 weeks		1,138		Species benefitted: Upland Game, Waterfowl, Watchable Wildlife
Other duties (as assigned)	1630	18 weeks		20,484		Species benefitted: Elk, Sage Grouse, Mule Deer

Total PR Funds[3]	$23,386
Total PR Contract With Overhead[3]	28,367
Other Funds	30,817
Grand Total	$59,187

[1] Species abbreviations: MALL = mallard, CITE = cinnamon teal, GADW = gadwall, CAGO = Canada geese, WODU = wood duck, AMWI = American wigeon

[2]Includes boxes on Snake River upstream from NSWMA boundary.

[3]Funds previously reported in Magic Valley - Regional Habitat Management.

NARRATIVE

The Niagara Springs Wildlife Management Area (NSWMA) is located in south-central Idaho along the north bank of the Snake River. The area is 0.5 mi. wide and 3.5 mi. long (957 acres) with an additional 22 acres on 8 islands. The area includes river bottom land and 400 ft. tall cliffs with talus slopes. The land is owned by the Idaho Department of Fish and Game and has 12 cfs of water rights for irrigation of 250 acres and 10 acres of 4 artificial ponds. Approximately 535 acres are native rangeland with 75 acres in riparian habitat.

Benefits:

The NSWMA produces 10-30 Canada goose broods and a minimum of 30 duck broods annually. Approximately 5,000 ducks and several hundred Canada geese winter on the area. The area provides year-round habitat for ring-necked pheasants, California quail, mule deer, wild turkey, Nuttall's cottontail rabbit, and yellow-bellied marmots. Several raptor species nest in the cliffs and songbirds are plentiful throughout the area. The area provides hunting and fishing opportunities and watchable wildlife viewing for the public. A wild rainbow trout fishery exists in the canal and artificial pond system.

Several biological control agents have been released to control puncture vine, Canada thistle, and Russian thistle. Purple loosestrife has been controlled by spot spraying with herbicides.

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