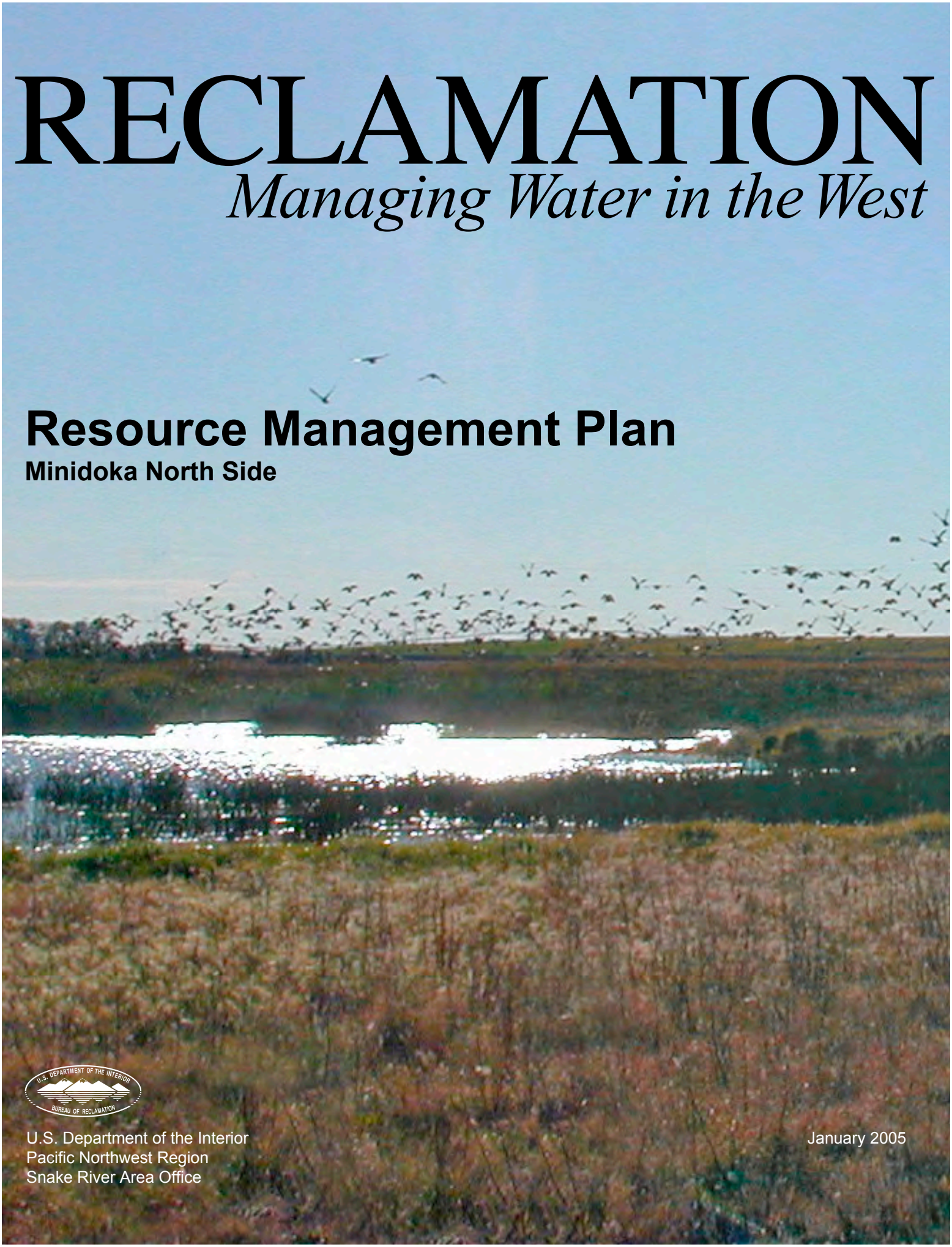
RECLAMATION

Managing Water in the West

Resource Management Plan

Minidoka North Side



U.S. Department of the Interior
Pacific Northwest Region
Snake River Area Office

January 2005

Minidoka North Side

Resource Management Plan

U.S. Department of the Interior
Bureau of Reclamation

Approved:

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11/17/2004
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This Resource Management Plan was prepared by EDAW, CH2M Hill, and JPA under contract for the Department of the Interior, Bureau of Reclamation, Pacific Northwest Region.

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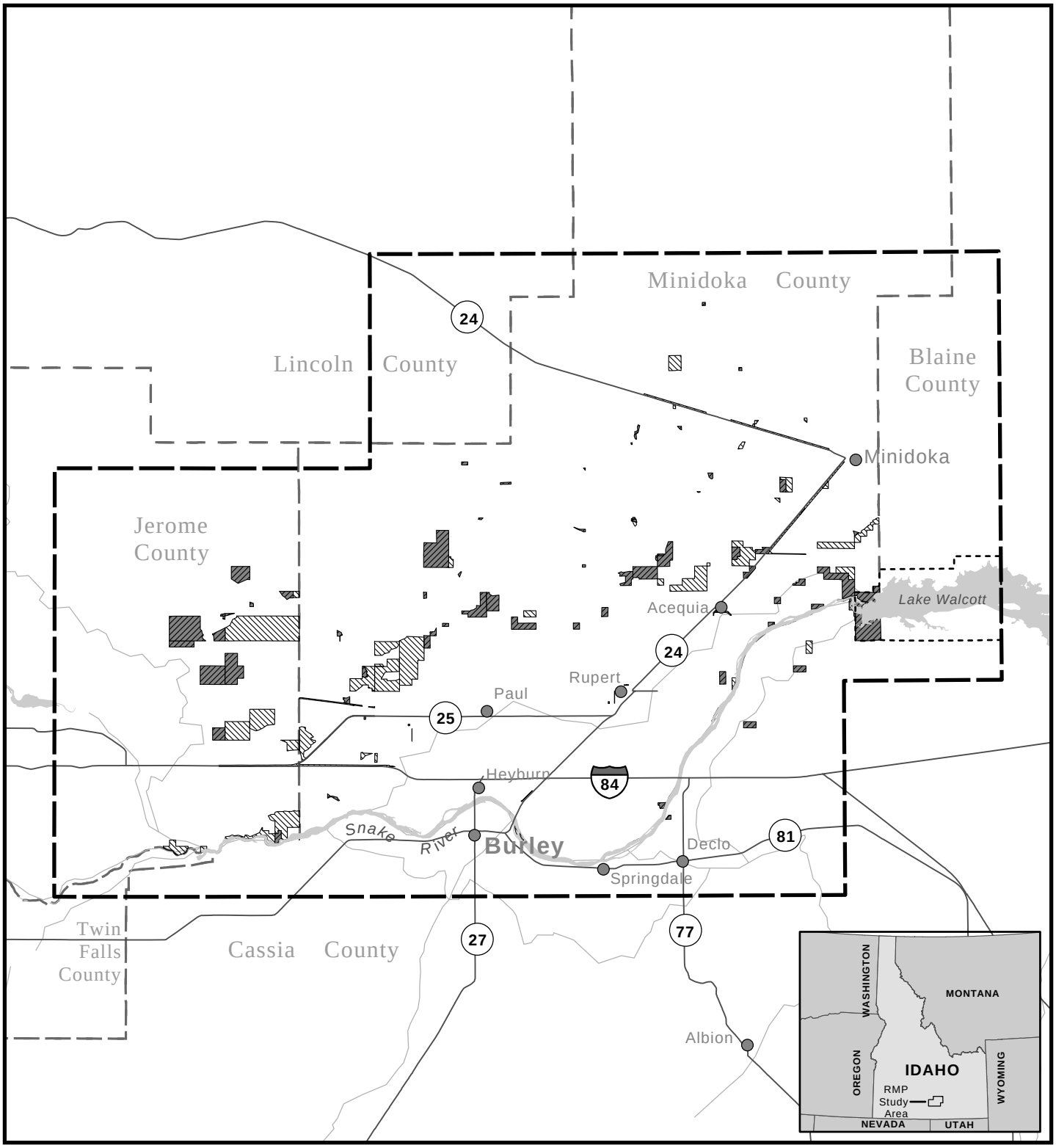

Legend

- Cities & Towns
- Major Roads
- Rivers & Streams
- Open Water
- Study Area Boundary
- Minidoka NWR Boundary

Reclamation Parcels

- Land to be Retained by Reclamation
- Lands to be Relinquished to BLM
- County Boundaries

0 1 2 3 4 5
Miles
1:360,000

Source: U.S.Bureau of Reclamation, EDAW Inc. 2004

Regional Location Map
Minidoka North Side Resource Management Plan

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ACRONYMS AND ABBREVIATIONS

A&B	A&B Irrigation District
AHWG	Ad Hoc Work Group
ARPA	Archeological Resources Protection Act
BID	Burley Irrigation District
BLM	Bureau of Land Management
BMP	Best Management Practice
B.P.	Before present
BPA	Bonneville Power Authority
CDC	Conservation Data Center
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FR	Federal Register
FWS	U.S. Fish and Wildlife Service
GIS	Geographic information system
IDFG	Idaho Department of Fish and Game
IDPR	Idaho Department of Parks and Recreation
IDWR	Idaho Department of Water Resources
IPM Plan	Integrated Pest Management Plan
ITAs	Indian Trust Assets
MBT Conventions	Migratory Bird Treaty Conventions
MID	Minidoka Irrigation District
N	nitrogen
NAGPRA	Native American Graves Protection and Repatriation Act
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_3	nitrate
NPDES	Natural Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NTU	nephelometric turbidity units
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
ORV	off-road vehicle
Reclamation	U.S. Bureau of Reclamation
RMP	Resource Management Plan
RV	recreational vehicle
SCIIDC	South-Central Idaho Interagency Dispatch Center
SHPO	State Historic Preservation Office
SR	State Route
TCP	Traditional cultural property
TKN	Total Kjeldahl nitrogen
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service

Chapter 1

Introduction

1.1 RMP Program and Policy

The Pacific Northwest Region of the Bureau of Reclamation (Reclamation) is conducting a multi-year program to prepare a Resource Management Plan (RMP) for each of its major facilities. This program is guided by Federal legislation and policies to ensure that Federal lands are managed to serve a wide range of public purposes. RMP preparation is specifically authorized in Title 28 of Public Law 102-575. It is also an outcome of *Assessment '87*, a Reclamation study that examined the future direction of its programs. This study established a broad framework for moving forward into the 21st century, with increased emphasis on the improved management of projects and the protection of the environment. Each RMP is intended to provide the management framework needed to balance the development, use, and protection of Reclamation lands and their associated natural, cultural, and recreational resources. It is Reclamation's blueprint for future resource management decisions to guide Reclamation, managing partners, and agency cooperators, as well as inform the public about the resource management policies and actions to be implemented over the life of the RMP.

Reclamation's resource management policy is to provide a broad level of stewardship to ensure and encourage resource protection, conservation, and multiple use, as appropriate. Management practices and principles established in this RMP, in accordance with existing Federal laws, regulations, and policies, provide for the protection of fish, wildlife, and other natural resources; cultural resources; public health and safety; and applicable uses of Reclamation lands and water areas, public access, and outdoor recreation.

1.2 Purpose and Scope of the Plan

The Minidoka North Side (MNS or Minidoka) RMP is a 15-year plan to provide management direction for lands and facilities under Reclamation's jurisdiction. This RMP is needed to address Reclamation's future management of the 119 separate parcels (approximately 17,700 acres) that make up the Minidoka North Side area, and are spread out over approximately 527,000 acres. Reclamation obtained the majority of these parcels at the beginning of the 20th century. The parcels were either acquired or withdrawn from the public land base specifically for Reclamation's irrigation projects. Now, however, it is apparent that not all of the parcels are required for operation and maintenance of the irrigation projects. In the long term, many of these parcels are likely to be relinquished – that is, put back in public land status and managed by the U.S. Bureau of Land Management (BLM). Approximately 46 percent of the parcels will remain under Reclamation's jurisdiction. The RMP addresses management of the existing land base (all 119 parcels), including interim management for parcels that are no longer

needed for Project purposes and long-term management for the parcels to be retained.

In this document, the entire area is collectively referred to as the "RMP Study Area." The Study Area includes Reclamation lands, as well as those surrounding the MNS parcels (see Regional Location Map).

Through implementation of the RMP, Reclamation aims to balance competing and conflicting demands for differing uses and to maximize compatibility with surrounding land uses, while affording an appropriate level of resource protection and enhancement.

Over the course of implementing the RMP, it will be reviewed, reevaluated, and revised (if necessary) in cooperation with all involved agencies and Tribes to reflect changing conditions and management objectives. If a proposed modification to the RMP would significantly affect area resources or public use, opportunities for public involvement will be provided. The RMP will be reviewed at the end of its 15-year life.

In addition to this introductory chapter, the RMP contains the five main chapters, summarized below.

Chapter 2 summarizes the relevant natural, cultural, and socioeconomic resources in the Study Area. The resource inventory describes existing conditions and lays the framework for identifying suitable resources for a variety of land and water uses, as well as sensitive resources that require special protection, enhancement, or restoration.

Chapter 3 summarizes existing land use and management. The range of existing land uses is described and existing land use agreements identified. These include: Project facilities and general operations (i.e., Minidoka Dam and Lake Walcott); agreements, easements and permits; encroachments; public facilities, utilities and services; recreational uses; and access.

Chapter 4 provides a detailed description of the RMP planning process, including the public involvement program and input received through newsbrief response forms, meetings/workshops, and agency consultation. This chapter also describes Reclamation's efforts regarding its responsibilities to the affected Tribes. All of this information helped identify the range of issues and concerns, establish goals and objectives, identify the range of alternative plans for study, and modify the Preferred Alternative, which ultimately became this RMP.

Chapter 5 is the core of the RMP and provides a detailed description of the Goals, Objectives, and Management Actions associated with the plan. The Goals, Objectives, and Management Actions are organized according to the six themes that follow: (1) land use and management; (2) natural resources; (3) cultural resources; (4) Indian sacred sites; (5) Indian Trust Assets; and (6) recreation and access.

Chapter 6 presents the implementation program associated with the Management Actions set forth in Chapter 5. This includes a description of program phasing, related actions, priorities, and responsible entities, as well as the process involved with amending and updating the plan.

1.3 Location and Description of the RMP Study Area

The Minidoka North Side RMP Study Area is located in parts of Minidoka, Cassia, Jerome, Lincoln, and Blaine counties, Idaho. The Study Area includes Minidoka Dam and 119 scattered land parcels, covering approximately 17,700 acres. The immediate Study Area includes the three counties where all of Reclamation's parcels are located—i.e., Minidoka, Cassia, and Jerome Counties.

1.4 Project Summary

Minidoka Dam was Reclamation's first Project in Idaho, with construction completed in 1906. The United States Congress designated its Project authorization to include irrigation and power generation. The Gravity Division and the North Side Pumping Division of the Minidoka Project were designed primarily to provide irrigation to the new communities of Heyburn, Paul, Acequia, and Rupert. The dam and powerplant were listed on the National Register of Historic Places (National Register) in 1974.

At the time the Project was initiated, large tracts of public land were withdrawn and transferred to Reclamation for homestead entry purposes and for the construction of Project facilities. Most of the Minidoka North Side Study Area lands were originally included in the North Side Extension Division, and were expected to become private irrigated farmland. However, because of economic conditions and water shortages, these lands were never developed. A portion of these remaining lands and land in the Minidoka Irrigation District (MID) are used for Project purposes. These parcels, many of which have trespass issues or other unauthorized uses, are scattered throughout the RMP Study Area among BLM and privately owned lands.

Minidoka Dam impounds Lake Walcott, one of five reservoirs associated within the larger Minidoka Project on the Snake River (see Photo 1-1). Lake Walcott State Park is located on Reclamation property adjacent to the lake, and Reclamation has closely coordinated this RMP effort with Idaho Department of Parks and Recreation (IDPR) for future planning related to park lands. The U.S. Fish and Wildlife Service (FWS) manages the reservoir water surface and lands on the adjacent Minidoka National Wildlife Refuge (NWR). Unlike Lake Walcott State Park, the Minidoka NWR is considered outside the RMP Study Area. President Theodore Roosevelt designated this 25,000-acre area as the Minidoka NWR in 1909. Other lands in the vicinity are owned or managed by the Bureau of Land Management (BLM) and private individuals and entities that use the land primarily for agriculture. A&B Irrigation District (A&B), formerly the North Side Pumping Division, and the MID, formerly the Gravity Division, operate and maintain the irrigation water system on these properties.

Due to recent water supply concerns which have been heightened by continuing drought and ground water depletions, a number of water user entities have expressed interest in studying whether it might be cost-effective to raise the dam/spillway by one to five feet in conjunction with rehabilitation efforts. A 5 foot raise could provide an additional 50,000 acre feet of storage. Raising the water surface elevation would not only alter the shore line around Lake Walcott, but could also expand or modify resource management activities. However, possible benefits of a dam raise could include: additional storage for irrigation or flow augmentation purposes; increased head for power generation; improved irrigation deliveries; additional seepage for groundwater recharge; and/or improved operational flexibility for operation of the Upper Snake system.

Photo 1-1. Aerial view of Minidoka Dam, powerplant, and operation facilities, with Lake Walcott above and the Snake River below.

This proposal is not part of the RMP, however, if it is pursued through legislation, Reclamation may be asked to formally study the

feasibility of this project and evaluate the effects and cost-effectiveness of the proposal. Additional representative information about the dam raise alternatives is being gathered so stakeholders can make informed decisions about their interest in, and potential support for, future project involvement.

1.5 Overview of Public Involvement, Agency, and Tribal Coordination

Reclamation conducted an extensive public involvement program as part of the RMP planning process to ensure representation and participation by all those interested in the future of the Minidoka North Side lands. To achieve full representation, the program was designed to reach a user population that was dispersed over a broad geographical area, representing diverse points of view, and enthusiastic in participating in the RMP planning process.

The public involvement program consisted of four primary elements: (a) four newsbriefs mailed to agencies, Tribes, elected officials, organizations, media, and individuals; (b) three public meetings/workshops; (c) seven meetings with a group formed as part of the RMP planning process to represent key stakeholders (including agencies, Tribes, and interest groups in the area); and (d) a public web site providing access to newsbriefs, draft materials, and meeting announcements. These elements, as well as additional agency and Tribal consultation efforts, are discussed in further detail in Chapter 4.

Chapter 2

Existing Conditions

2.1 Climate

The climate in the RMP area is semiarid with cold winters and hot, dry summers. Annual precipitation averages about 10 to 12 inches, with snowfall averaging 30 inches. Most precipitation falls during the fall, winter, and spring. Summer rainfall is quite low, but some precipitation falls each month. About 24 thunderstorms occur each year and most occur in the summer. Winters are relatively mild for the elevation, with average winter temperatures varying from 15 to 25°F. Temperatures below 0°F occur for very short periods. Summer temperatures vary considerably from day to day, but most days are cloudless and warm and the nights are cool. Daily temperatures average in the mid-60s to mid-80s during the summer, and the frost-free period ranges from 100 to 120 days. The prevailing winds average 10 miles per hour from the southwest.

2.2 Air Quality

Air quality is monitored by the Idaho Department of Environmental Quality and the results are stored in a U.S. Environmental Protection Agency (EPA) database. Areas with persistent air quality problems are noted in the database as "nonattainment" areas. There are no nonattainment areas recorded by EPA in the RMP Study Area. Power County, just east of the RMP area, is a nonattainment area for particulate matter less than 10 microns in size (PM10), which typically results from airborne dust. Blowing dust is a concern in the RMP area throughout the year during windy conditions, and especially during dry years.

2.3 Topography and Geology

At Lake Walcott, the Snake River flows from east to west (see Figure 2.3-1). The terrain surrounding the reservoir and throughout the project area is generally flat (see Photo 2-1). The Snake River in southeastern Idaho lies approximately on the boundary between the Snake River plain, which is part of the Columbia Lava Plateau physiographic province, and the Basin and Range province. The mountainous areas south of the Snake River are composed of various Precambrian rocks and Paleozoic marine sedimentary rocks. The Snake River Plain north of the Snake River (and on which the RMP area is located) is composed chiefly of Quaternary basalt with interbedded sediments.

The entire Minidoka North Side RMP Study area is underlain by the Quaternary Snake River Basalt formation. This basalt bedrock formation was scoured into scablands about 15,000 years ago by the Lake Bonneville flood.

Photo 2-1. Minidoka North Side parcels are located on areas distinguished by mostly flat topography as shown in this typical landscape view.

This scabland terrain is seen on the north side of Lake Walcott in the rugged topography with a relief of several meters, exposed rock, and isolated sediment-covered areas (see Photo 2-2). Overlying the bedrock are sediments deposited by the Bonneville Flood, including sand, silt, and gravel. Much of this sediment lies in a mantle of windblown loess and sand throughout the RMP area.

2.4 Soils

Soils in the RMP Study Area have formed under shrub and grassland vegetation types. Underlying parent materials consist of irregular topographic basalt flows, as well as alluvial and eolian deposits. Alluvial deposits are gradually formed along a river through deposition of sediments. Eolian deposits are wind deposited materials, frequently formed as a result of volcanic eruptions.

Most soils are deep to very deep and are formed on level to gently sloping ground, although rock outcrops and shallow soils are found throughout the RMP Study Area. Specifically, soils in the RMP Study Area vary from silt loam and fine sandy loam deposited by wind over basalt to silty clay loam deposited on low alluvial terraces. Subsurface materials range from fine sands to very stony sandy loam. Basalt is the predominant subsurface material.

Certain soils have weakly cemented calcium or silica hardpans of varying thickness at the 12- to 36-inch depth. Scattered areas of high water tables, and salinity-affected soils, can be found north of the Snake River in the southern part of the RMP Study Area. There is a moderate risk of wind and water erosion from certain soils, although this problem is not widespread. Shrink-swell potential is moderate in some soils.

2.4.1 Soil Considerations for Wetland Development

Many of the parcels listed for potential wetland development in Table 2.4-1 are quite large and include more than one soil type, as well as variations within a particular type. Additionally, specific locations for potential wetland development have not been identified. Therefore, additional site-specific information regarding site suitability for wetland development will need to be evaluated on a case by case basis once specific locations are identified.

Photo 2-2. Large basalt rock outcropping known as the “Cinder Pit.”

Insert Figure 2.3-1.

Back of Figure 2.3-1.

Table 2.4-1. Soil Characteristics of Potential Wetland Creation Locations in the Minidoka North Side RMP Study Area.

Parcel Number	Soil Survey	Dominant Soil Series	Soil Constraints/Opportunities	Other Constraints/ Opportunities
724-2-W	Minidoka Area	Sluka Silt Loam, 1-4% slopes	5-18% clay will not hold water well; hardpan at 20-40 inches; low gravel content	
821-2-W	Jerome County	Power Silt Loam, 1-4% slopes	15-30% clay enhances water holding capacity; low gravel content	
822-1-W	Minidoka Area	Power-McCain Complex, 1-4% slopes	McCain part of complex has shallow depth to bedrock	
825-4-W	Minidoka Area	Portneuf Silt Loam, 1-4% slopes	6-13% clay will not hold water well	
	Minidoka Area	Sluka Silt Loam, 1-4% slopes	5-18% clay will not hold water well; hardpan at 20-40 inches; low gravel content	
921-12-W	Jerome County	Chiara Silt Loam, 1-8% slopes	<10% clay will not hold water; hardpan at 10-20 inches	
	Jerome County	Dolman Silt Loam, 1-4% slopes	<15% clay will not hold water; hardpan at 20-40 inches	
	Jerome County	Barrymore-Starbuck Complex, 1-4% slopes	Shallow (18-25 inches to bedrock)	
921-13-W	Jerome County	Chiara Silt Loam, 1-8% slopes	<10% clay will not hold water; hardpan at 10-20 inches	
	Jerome County	Dolman Silt Loam, 1-4% slopes	<15% clay will not hold water; hardpan at 20-40 inches	
	Jerome County	Barrymore-Starbuck Complex, 1-4% slopes	Shallow (18-25 inches to bedrock)	
	Jerome County	Tulch Silt Loam, 0-2% slopes	10-30% clay is variable relative to water holding	
921-5-W	Jerome County	Chiara Silt Loam, 1-8% slopes	<10% clay will not hold water; hardpan at 10-20 inches	
	Jerome County	Sluka Silt Loam, 1-4% slopes	5-18% clay will not hold water well; hardpan at 20-40 inches; low gravel content	
922-3-W	Minidoka Area	Bahem Silt Loam, 4-8% slopes	10-18% clay is variable relative to water holding capacity; low gravel content	
	Minidoka Area	Pocatello Silt Loam, 12-30% slopes		May get too steep
925-6-W	Minidoka Area	Gravel Pits		May already have water table established
	Minidoka Area	Tindahay Sandy Loam, 0-1% slopes	Predominately sandy soils greater than 23 inches in depth; will not hold water	
921-6-W	Jerome County	Sluka Silt Loam, 1-4%slopes	5-18% clay will not hold water well; hardpan at 20-40 inches; low gravel content	
1022-6-W	Minidoka Area	Pocatello Silt Loam, 12-30% slopes		Need to identify vetch when it flowers; may get too steep

Source: Compilation of data from Natural Resource Conservation Service (NRCS) 1975, 1994, and 1998 by CH2M HILL.

Various soil characteristics affect the difficulty with which wetlands can be created on a particular parcel. These characteristics include soil texture (relative percentages of sand, silt, and clay), prevalence of coarse fragments (rock, stone, and gravel); and presence of restrictive layers in the soil profile (hardpans or clay lenses). Characteristics conducive to wetlands creation include a high percentage of clay and silt, none to very few coarse fragments, and a clay lens deep in the soil profile. Physical limitations, such as steep slopes, may limit potential wetland development. Table 2.4-1 lists the potential wetland creation sites and known soil or physical constraints (if any) associated with the sites.

2.5 Water Resources and Hydrology

The only natural surface waters that occur within or adjacent to the boundaries of the Minidoka North Side RMP Study Area are the Snake River and Lake Walcott, formed by Minidoka Dam on the Snake River. However, these surface waters are not included in the RMP. Therefore, they are only briefly discussed.

2.5.1 Surface Waters

The Snake River lies in the southerly portion of the RMP Study Area. Reclamation's Minidoka Dam is located at the east end of the RMP Study Area. It is a diversion and storage structure that impounds Lake Walcott (see Photo 2-3). The Main North Side Canal, which serves the lands of the MID, heads at Minidoka Dam.

The Snake River Plain lacks a well-defined stream drainage pattern because of its youthful stage of geologic development, its limited precipitation, and its gentle slopes.

Photo 2-3. Lake Walcott as seen from the State Park.

As a result, the RMP Study Area has some enclosed drainage basins—relatively shallow depressions with no natural drainage outlets. The Snake River is the primary river of southern Idaho and its waters are diverted for irrigation on lands within the RMP Study Area boundary. Man-made surface waters include irrigation canals, return flow drains, and drain-water wetlands.

2.5.2 Groundwater

The Snake River Plain aquifer lies beneath the RMP Study Area and encompasses an area of about 10,800 square miles, extending from St. Anthony to Bliss, Idaho, a distance of 180 miles. The aquifer averages about 60 miles wide.

The Snake River Plain consists of a thick series of basalt flows under the northern part of the RMP Study Area and basalt flows interbedded with large amounts of fine-grained lake sediments to the south. The aquifer is fed by seepage from streams that enter or cross the plain, underflow from tributary valleys, seepage from irrigation, and from precipitation on the plain and bordering foothills. Discharge from the aquifer occurs as spring flows concentrated near the upper end of American Falls Reservoir and at Thousand Springs near the

lower end of the aquifer and as groundwater pumpage for domestic, municipal, and irrigation supplies.

Data obtained from the Idaho Department of Water Resources (IDWR) indicates that the depth of groundwater below ground surface for wells in the RMP Study Area ranges from less than 10 feet to 400 feet. Depth to groundwater will likely be more shallow than indicated by well head values because of the perched water table. Perched water tables are irregular mounds in the regional water table that are often created through irrigation. Water yields from deep wells range from a high of several thousand gallons per minute per foot of drawdown in the predominantly basalt aquifer to the north to lows of less than 100 gallons per minute per foot of drawdown in the less permeable sediment-basalt aquifer to the south.

2.6 Water Quality and Contaminants

The land surface of the Snake River Plain in the RMP Study Area is flat to gently rolling, with smooth benches and small knolls. While the Snake River itself is deeply incised, the land area nearby often lacks well defined stream drainage patterns and has many local catchments formed within the landscape. As a result, relatively shallow depressions with no natural drainage outlets act as closed basins for low to moderate storm events.

In 1991, EPA designated the Snake River Plain Aquifer as a sole source of drinking water under the Federal Safe Drinking Water Act. The EPA designation of the eastern Snake River Plain Aquifer as a sole source of drinking water has resulted in increasingly more stringent water quality standards.

All of the water diverted to the MID from the Snake River is delivered through a network of canals and laterals that are predominantly gravity fed (see Photo 2-4). Occasionally, pumps are used in the MID to lift surface water from a canal or drain where it enters a new lateral for distribution. A&B gets most of its water from wells (Unit B). The A&B has a limited canal system in the far southwest end of the district where it pumps water from the Snake River (Unit A).

Photo 2-4. Irrigation canals on one of the Minidoka North Side parcels.

Because of the lack of natural surface drainage outlets to the Snake River and constraints associated with drainage into the southern portions of the MID, most drainage return flows and storm water from Unit B are disposed of through injection wells that pass water directly into the underlying groundwater aquifer. There are 78 injection wells within A&B, of which 27 are still active. Within the MID, there are 5 injection wells, of which at least 2 are still active (see Photo 2-5).

In 1973, IDWR, through a grant from EPA, conducted an investigation to evaluate the impact of injection wells on the water quality of the Snake River Plain aquifer. A study site was selected in the A&B irrigation district where the basalt formations represented typical geologic conditions at injection well sites.

Photo 2-5. Injection well used to force return flows and storm water back into the aquifer.

Study results indicated that discharge to the injection wells was not symmetrical in the recharge zone, and the extent of the water in this zone became larger during each successive discharge sequence. This indicated that the discharge water in the receiving zone rapidly moves laterally into the receiving system. Groundwater flow in the upper receiving system moved through fractures and channels in the overlying basalt after the discharge zone had become saturated.

Purification of the discharged water moving both laterally through the recharge zone and vertically through the underlying basalt was limited. Bacterial levels within the recharge zone of both the deep perched water zone and the confined aquifer were similar to those of the discharged water. Turbidity, however, was reduced as the discharge water percolated downward through the basalt formations.

The quality of return flows is highly variable, depending on its source, method and rate of application, amount of fertilizer added, and other factors (Seitz 1977). In general, dissolved solids are increased because of leaching of minerals from the soil and from application of fertilizers. Nutrient concentrations are generally significantly higher in irrigation waste water than in the applied water. Bacteria concentrations are also significantly higher.

Drain water quality for six drain locations within A&B is summarized on Table 2.6-1. Overall, the drain water quality within A&B is generally good considering that this water is not intended for primary human contact; the data is not unexpected for agricultural drain water. Suspended sediments are within normal limits. Nitrogen values within H Drain are higher than other drain locations and all were high compared to water quality standards. Bacteria levels were also substantially higher than water quality standards, especially within the D Drain.

Drain water quality for six drains within MID is summarized on Table 2.6-2. Drain data are summarized from upstream to downstream discharges into the Snake River. Overall, the drain water quality within MID is good. Bacteria and suspended sediments are all within normal limits. Total phosphorus and turbidity values are relatively low and are actually better than expected for irrigation drain flows. Nitrogen values within the D-4 Drain are higher than other drain locations and all were high compared to water quality standards. Again, drain water is not intended for primary human contact. Phosphorous levels were also higher substantially than water quality standards, especially in the D-3 and D-4 drains. But this, too, was expected for agricultural drain water. No data was evaluated for the Southside Canal within MID.

Recent data (1996 to 2001) within MID suggest that concentrations of nitrate/nitrogen dioxide (NO3/NO2), fecal coliform bacteria, and total coliform bacteria are generally lower than those found in the Minidoka North Side Pumping Division from 1981 to 1992, which is summarized in Table 2.6-3. Fecal coliform bacteria

Table 2.6-1. A&B Irrigation District Drain Water Quality.

Location and Analysis Method	Sample ID	NO3/NO2 mg/L	Fecal Coliform ct/100mL	Totals ct/100mL	E. coli ct/100mL	Suspended Solids mg/L
D-Drain						
average	26AD724 D-drain	2.02	2,126	4,638	—	4
median	26AD724 D-drain	2.03	700	1,120	—	4
max	26AD724 D-drain	2.53	15,100	39,000	—	7
min	26AD724 D-drain	1.65	2	20	—	1
F-Drain						
average	F-drn end infl to Cap@Hwly Weir	0.90	287	468	39	12
median	F-drn end infl to Cap@Hwly Weir	0.75	160	370	28	5
max	F-drn end infl to Cap@Hwly Weir	2.41	1,060	1,600	90	60
min	F-drn end infl to Cap@Hwly Weir	0.07	30	70	10	<1
average	F-drain below Cemetery Pond	2.94	257	755	—	34
median	F-drain below Cemetery Pond	2.94	257	755	—	34
max	F-drain below Cemetery Pond	3.97	1,060	3,000	0	93
min	F-drain below Cemetery Pond	2.13	16	20	0	4
H-Drain						
average	Infl to drn WLL5AD923ON Hdrn	5.03	918	1,210	—	9
median	Infl to drn WLL5AD923ON Hdrn	5.02	600	960	—	4
max	Infl to drn WLL5AD923ON Hdrn	5.36	2,200	2,300	—	33
min	Infl to drn WLL5AD923ON Hdrn	< 0.01	30	70	—	2
average	Goyne Sump S10 T9 R23	0.02	957	1,148	—	4
median	Goyne Sump S10 T9 R23	0.02	957	1,148	—	4

Table 2.6-1. A&B Irrigation District Drain Water Quality.

Location and Analysis Method	Sample ID	NO3/NO2 mg/L	Fecal Coliform ct/100mL	Totals ct/100mL	E. coli ct/100mL	Suspended Solids mg/L
max	Goyne Sump S10 T9 R23	0.05	3,200	3,600	—	11
min	Goyne Sump S10 T9 R23	< 0.01	14	50	< 2	< 1
E-Drain						
average	Edrn@Edrn Stlngpnd nr rd clvrt	3.35	448	767	245	9
median	Edrn@Edrn Stlngpnd nr rd clvrt	3.35	448	767	245	9
max	Edrn@Edrn Stlngpnd nr rd clvrt	4.21	2,400	2,600	430	20
min	Edrn@Edrn Stlngpnd nr rd clvrt	2.38	12	70	16	<1
ALL DRAINS 1999-2001						
average		2.04	713	1,284	95	10
median		2.48	524	863	137	5
max		5.36	15,100	39,000	430	93
min		0.07	2	20	0	1

Source: Compilation of available data by CH2M HILL.

Table 2.6-2. Minidoka Irrigation District Drain Water Quality.

Sample ID	Analysis Method	NO3/NO2 mg/L	Ortho-P mg/L	T-Phos mg/L	NH3 mg/L	TKN mg/L	Fecal ct/100mL	Totals ct/100mL	Suspended Solids mg/L	Turbidity NTU
D-3 d/s A1 Canal	average	2.43	0.08	0.10	0.05	0.40	201	392	3	2
D-3 d/s A1 Canal	median	2.42	0.08	0.11	0.04	0.39	120	240	2	2
D-3 d/s A1 Canal	max	5.01	0.22	0.24	0.27	0.78	1100	1900	8	4
D-3 d/s A1 Canal	min	0.83	0.01	0.03	< 0.01	0.16	10	22	< 1	< 1
D-4 1/4 Mi u/s Snake River	average	4.80	0.09	0.11	0.03	0.46	203	680	6	2
D-4 1/4 Mi u/s Snake River	median	4.70	0.08	0.10	0.03	0.46	136	320	4	2
D-4 1/4 Mi u/s Snake River	max	7.98	0.26	0.28	0.09	0.75	900	5800	44	6
D-4 1/4 Mi u/s Snake River	min	1.20	0.01	0.03	< 0.01	0.19	10	62	< 1	< 1
D-16 nr old MID Flume	average	0.93	0.03	0.06	0.07	0.47	121	449	5	2
D-16 nr old MID Flume	median	0.88	0.03	0.06	0.06	0.47	90	305	3	2
	max	1.84	0.11	0.13	0.17	0.84	640	1250	50	5
D-16 nr old MID Flume	min	0.24	0.00	0.01	0.01	0.14	10	40	< 1	< 1
D-6	average	0.48	0.05	0.07	0.06	0.41	196	427	3	2
D-6	median	0.46	0.05	0.07	0.03	0.38	89	290	3	2
D-6	max	1.36	0.11	0.14	0.41	0.75	2200	> 2000	6	3
D-6	min	0.03	0.00	0.02	< 0.01	0.26	12	60	< 1	< 1
D-12A	average	1.99	0.04	0.10	0.09	0.65	154	400	8	3
D-12A	median	2.02	0.03	0.10	0.07	0.72	85	250	7	3
D-12A	max	3.03	0.12	0.18	0.36	1.29	1100	> 2000	42	10
D-12A	min	1.05	0.01	0.04	< 0.01	0.08	12	24	1	< 1
Main Drain 1/4 Mi u/s Snake R	average	0.32	0.04	0.10	0.06	0.59	263	636	34	11

Table 2.6-2. Minidoka Irrigation District Drain Water Quality.

Sample ID	Analysis Method	NO3/NO2 mg/L	Ortho-P mg/L	T-Phos mg/L	NH3 mg/L	TKN mg/L	Fecal ct/100mL	Totals ct/100mL	Suspended Solids mg/L	Turbidity NTU
Main Drain 1/4 Mi u/s Snake R	median	0.30	0.04	0.08	0.04	0.57	220	520	14	6
Main Drain 1/4 Mi u/s Snake R	max	0.79	0.14	0.31	0.16	1.80	1100	2300	264	61
Main Drain 1/4 Mi u/s Snake R	min	0.05	0.01	0.02	< 0.01	0.28	20	60	< 1	2
ALL DRAINS 1996-2001	average	1.58	0.05	0.09	0.06	0.49	169	441	10	4
	median	0.88	0.04	0.08	0.04	0.46	90	290	4	2
	max	7.98	0.26	0.31	0.41	1.80	2200	5800	264	61
	min	0.01	0.00	0.01	0.01	0.08	10	2	1	2

Note: Ortho-P = Ortho-Phosphorous; T-Phos = Total Phosphorous; NH_3 = Ammonia; TKN = Total Kjeldahl Nitrogen; NTU = nephelometric turbidity units

Source: Compilation of available data by CH2M HILL.

Table 2.6-3. Water Quality Characteristics of Drainwater on the Minidoka North Side Pumping Division (1981-1992).

Parameter[1]	Standards/Criteria			Drainwater Concentrations		
	Drinking Water	Aquatic Life[2]	Irrigation Water[3]	No. of Samples	Range	Mean[4]
Electrical Conductivity (µS/cm)	—	—	750[5]	1021	6—1079	638
Turbidity (FTU)	—	—	—	1127	1—1400	66
Nitrate + Nitrate -N (mg/L)	10	—	—	986	0.1—10.0	2.0
Arsenic, Total	50	850	100	41	1—20	6
Boron	—	—	750	43	20—580	188
Cadmium, Total	5	3.9	10	77	<1—<2	1
Chromium, Total	100	16	100	77	<1—<26	6
Copper, Total	1000	18	200	77	<1—<28	6
Iron, Total	3000[6]	—	5000	77	60—20,300	2930
Lead, Total	15	82	5000	77	1—23	7
Lithium, Total	—	—	75	73	25—85	44
Manganese, Total	50[6]	—	200	77	2—645	100
Mercury, Total	2	2.4	—	78	<0.2—1.0	0.24
Selenium, Total	50	20	20	37	<1—2	2
Zinc, Total	5000	120	2000	77	1—132	30
Total Coliform Bacteria (counts/100 mL)	<1	—	—	888	5—34,000	1843
Fecal Coliform Bacteria (counts/100 mL)	<1	—	4000	888	<2—9,000	251

[1]Units are micrograms/liter except where noted: mS/cm = microsiemens per centimeter; mg/L = milligrams per liter; NTU = Nephelometric Turbidity Units; mL = milliliters
[2]EPA aquatic life criteria used by U.S. Fish and Wildlife Service in the 1991 Minidoka North Side Contaminants Assessment
[3]Adapted from Water Quality Criteria for Agriculture, Environmental Protection Agency (1972)
[4]Mean of samples exceeding detection limits
[5]Problems for sensitive crops such as beans
[6]Secondary standards

Source: Reclamation 1993.

concentrations in A&B are higher than MID. No significant concentrations of nitrates or trace elements have been found to date.

Results of drain water monitoring indicate that return flows entering project injection wells commonly exceed the Safe Drinking Water Act maximum contaminant level for coliform bacteria and turbidity. Because of the generally poor biological and physical quality of irrigation return flows, continued injection of untreated wastewater could potentially impact points of diversion for domestic use in the project area, and could contribute to contamination of the Snake River Plain Aquifer.

As noted, Reclamation has historically injected these drain waters back into the shallow groundwater aquifer. However, concerns over contamination of this aquifer with poor quality water have led to efforts to close the injection wells. In order to get rid of the irrigation runoff, Reclamation and the irrigation districts have constructed a series of artificial wetlands; the main purpose of which is to allow and facilitate evaporation and evapotranspiration of irrigation drain water. Secondary benefits of the constructed wetlands include wildlife habitat and potential water quality improvement.

In 1992, a research and demonstration project to evaluate the use of wetland systems for irrigation drainwater management was initiated at the end of the H Main Drain under Reclamation's wetlands program. Preliminary study results based on 2 years of monitoring by Reclamation indicated a net decrease in suspended solids. There are currently 11 drain water wetlands totaling about 218 acres and ranging in size from about 5 to 44 acres. Consolidation of injection wells and the construction of evaporation wetlands have allowed 51 injection wells to become inactive or capped, leaving 27 in operation in 2003 within A&B. The intent is to close all drain wells by the end of calendar year 2006.

2.7 Vegetation

Historically, the vegetation on uplands within and surrounding the RMP Study Area consisted of shrub-steppe habitat (Tisdale and Hironaka 1981). Shrub-steppe habitats in western North America are characterized by woody, mid-height shrubs, perennial bunchgrasses, and forbs (Daubenmire 1978, Dealy et al. 1981, Tisdale and Hironaka 1981, Short 1986). Periodic drought, extreme temperatures, wind, poor soil stability, and only fair soil quality (Wiens and Dyer 1975, Short 1986) create a stressful environment for biotic communities. The original shrub-steppe vegetation of the RMP Study Area was dominated by big sagebrush (Artemisia tridentata) with an understory of native perennial grasses and forbs, consisting mainly of bluebunch wheatgrass (*Agropyron/ Pseudoroegneria spicatum*), Sandberg's bluegrass (*Poa secunda*), needlegrasses (*Stipa* spp.), lupine (*Lupinus* spp.), Indian paintbrush (*Castilleja* spp.), and penstemon (*Penstemon* spp.) (Hironaka et al. 1983) (See Photo 2-6). As shown on Figure 2.7-1, most of the original

Photo 2-6. Portion of a parcel made up of mainly good shrub-steppe habitat.

Insert Figure 2.7-1.

Back of Figure 2.7-1.

bunchgrass-sagebrush communities in the vicinity of the RMP Study Area have been replaced by irrigated agriculture and pasture or are dominated by exotic species that have become established as a result of human disturbance, livestock grazing, and a higher fire frequency compared to pre-European settlement.

Currently, most of the lands within the RMP Study Area have been converted to irrigated agriculture. Remaining native vegetation exists primarily on RMP Study Area parcels that are interspersed within farmland. The western-most Reclamation parcels have the most remaining native sagebrush-grassland with native understory species of bunchgrasses and forbs (see Photo 2-7), while the eastern parcels generally have had more disturbance and are dominated by rabbitbrush (*Chrysothamnus* spp.) and cheatgrass (*Bromus tectorum*) (see Photo 2-8). In some areas, protection from fire, coupled with heavy and prolonged livestock grazing, have resulted in sagebrush stands with an impoverished understory. With forb and grass depletion, biodiversity values are lost and the ability to withstand weed invasion decreases as well. Therefore, many sagebrush stands have an understory of exotic annuals dominated by cheatgrass. Cheatgrass enables a regime of frequent fires, which removes sagebrush cover and perpetuates cheatgrass dominance on these sites. Five major vegetation cover types were identified in the Study Area during vegetation mapping conducted in 2002 (Table 2.7-1, Current Vegetation on Minidoka North Side Parcels):

- Sagebrush or shrub-steppe
- Grasslands
- Wetlands
- Playas
- Forested areas

Photo 2-7. Rock outcropping surrounded by sagebrush and bunchgrasses.

Photo 2-8. Many of the parcels show signs of degradation as typified in this photo (e.g., ORV use, over-grazing, and noxious weeds).

The shrub-steppe cover type on the west side of the RMP Study Area is dominated by big sagebrush. Rabbitbrush is scattered throughout all sites but is dominant mostly on the eastern parcels. Several internally drained basins contain silver sagebrush (*Artemisia cana*) as the dominant shrub, with lesser amounts of three-tip sagebrush (*A. tripartita*). These sites tend to have a sparse understory. There are also scattered stands of winterfat *(Ceratoides lanata*), which is rarely observed in this geographic region. Sites that have been protected from livestock grazing for several years and have not burned recently contain a variety of native grasses and forbs mixed with cheatgrass. These sites are typical of the shrub-steppe that are in relatively good

range condition. Some of the native plants found in these areas are Sandberg's bluegrass, squirreltail (*Sitanion hystrix*), bluebunch wheatgrass, western wheatgrass (*Agropyron smithii*), basin wildrye (*Elymus cinereus*), needlegrass, Indian ricegrass (*Oryzopsis hymenoides*.), lupine, penstemon, phlox (*Phlox hoodii*), paintbrush, death camas (*Zigadenus* spp.), larkspur (*Delphinium* spp.), and gooseberryleaf globemallow (*Sphaeralcea grossulariifolia*) (see Photo 2-9).

Wooded areas are defined by the presence of trees, whether native or invasive. The native species, Rocky mountain juniper (*Juniperus scopulorum*), is only found in a few areas along the Snake River.

Photo 2-9. Lupine, globe mallow, and bunch grasses.

Russian olive (*Elaeagnus angustifolia*), an aggressive exotic tree that displaces native species, is taking on a dominant role along the water's edge of most of the wooded parcels along the Snake River.

Table 2.7-1. Current Vegetation on Reclamation Parcels in the Minidoka North Side RMP Study Area.

Cover Type	Existing Habitat Value[a]	Approximate Total Acres (Hectares)
Sagebrush Habitat		
Sagebrush: Low Cover (<25% sagebrush cover and <60 cm tall)	Medium	400 (162)
Sagebrush: Medium-Low Cover (<25% sagebrush cover and >60 cm tall)	Medium	2,251 (911)
Sagebrush: Medium Cover (>25% sagebrush cover and <60 cm tall)	Medium-High	2 (1)
Sagebrush: High Cover (>25% sagebrush cover and >60 cm tall)	High	2,082 (843)
Grasslands		
Annual Grassland	None	7,054 (2,855)
Crested Wheat Grasslands	Low	842 (341)
Perennial Grassland	Low-Medium	876 (342)
Agriculture	None	864 (350)
Wetland	Low-High	321 (130)
Disturbed	None	91 (37)
Playas	Low	1 (<1)
Wooded	Medium-High	30 (12)
Unsurveyed	Unknown[b]	2,892 (1,207)
Total Acres (Ha)		17,706 (7,165)

[a]Based upon amount and number of native species present and amount of canopy structural diversity. [b]Generally, unsurveyed parcels likely have low habitat value because they are small and subject to disturbance and weed invasion

Source: Vegetation mapping conducted by CH2M HILL in 2002.

Disturbed areas were dominated by either the non-native grasses listed under grassland (Table 2.7-1) or by non-native forbs. Forbs on disturbed sites include tumble mustard (*Sisymbrium altissimum*), bur buttercup (*Ranunculus testiculatus*), prickly lettuce (*Lactuca serriola*), goatsbeard (*Tragopogon* spp.), and pepperweed (*Lepidium perfoliatum*). These weedy and exotic forbs also are typical of the herbaceous cover found on disturbed areas.

The annual grassland cover type is dominated by cheatgrass with few forbs or other grasses. The cheatgrass-dominated areas are a result of increased fire frequency depressing the competitive ability of native vegetation. Some areas designated as grasslands were seeded with the non-native perennial grass crested wheatgrass (*Agropyron cristatum*). These areas were distinguished from native perennial grasslands dominated by native grass species because they lack structural diversity and have few, if any, forbs or other plant species that would make them as valuable to wildlife as the native perennial grassland species. Basin wildrye, a large native bunchgrass, occurs in limited areas on wetter sites such as the lower ends of irrigated fields and adjacent to irrigation canals.

Irrigation of RMP Study Area lands results in irrigation drain water that must be disposed. Reclamation and the irrigation districts have constructed a series of artificial wetlands, to dispose of irrigation runoff (see Photo 2-10). There are 11 drain water wetlands, totaling about 218 acres and ranging in size from about 5 to 44 acres. Other wetlands on the RMP Study Area are generally small, scattered, and usually associated with irrigation water runoff. In addition to the drain water wetlands, these other wetlands cover slightly more than 100 acres. Three wetland types are present: scrub shrub, emergent, and open water (Cowardin et al. 1979). Scrub shrub wetlands are dominated primarily by willows (*Salix* spp.). Emergent wetlands are dominated by cattails (*Typha* spp.) and bulrush (*Scirpus* spp.). The open water wetlands include stock ponds and drain water areas with no wetland vegetation.

Playas are unique natural areas where water collects temporarily following larger rain events. However, the water does not remain long enough to support wetland plants. There are several playas within some sagebrush-dominated parcels on the western side of the RMP Study Area.

Photo 2-10. Typical artificially constructed wetland.

These playas are very rare, contain an uncommonly seen plant, combleaf (*Polyctenium fremontii*), and often contain large areas of soil covered by a cryptogramic or biological soil crust, consisting of cyanobacteria, green algae, lichens, mosses, and/or microfungi. Such crusts protect the soil surface from wind and water erosion by binding the soil surface together and also facilitate rain water percolation into the upper soil horizon.

Agricultural lands are comprised mostly of row crops, small grains, and hay. The primary irrigated crops are alfalfa, beans, corn, peas, potatoes, small grains, and sugar beets.

2.7.1 Weed Infestations

Weeds are an important issue across all land uses and cover types. Their presence on agricultural land can decrease harvest potential and increase the cost of farming. Their presence in areas with native plant cover decreases habitat values. Weed species are especially dominant where ground disturbance has occurred and along roads. Some areas are relatively weed free, especially on the larger western parcels where native species dominate and human-related disturbance within the parcels is relatively low. Cheatgrass is the most widespread weed. Bur buttercup is also ubiquitous on most areas with any sort of disturbance. Other weeds that are most often encountered are Canada thistle (*Circium arvense*), bull thistle (*Circium vulgare*), tumble mustard, bulbous bluegrass (*Poa bulbosa*), and kochia (*Kochia scoparia*).

2.7.2 Rare and Sensitive Species

Rare and sensitive species listed by the FWS as occurring in one or more of the counties in which the RMP Study Area occurs and that may be present in the Study Area are listed in Table 2.7-2. Expected presence in the Study Area is based on habitat suitability, known distribution, Idaho Conservation Data Center (CDC) information, and published literature.

2.8 Wildlife

In 1989, the FWS completed a study of wildlife and wildlife habitat on a portion of Reclamation withdrawn lands in the Minidoka North Side RMP Study Area (FWS 1989). The study was conducted to prepare a wildlife habitat management plan for parcels within the proposed Minidoka North Side Extension project. That project was not completed. However, data collected on the Reclamation parcels in the RMP Study Area provide the most comprehensive discussion of wildlife and wildlife habitat for the RMP Study Area. Information presented in that report (FWS 1989) was supplemented with information from Reclamation and IDFG biologists, Reclamation GIS files, published and unpublished literature, Idaho CDC data, and observations by CH2M HILL biologists. The FWS (1989) study focused on 73 of the 113 withdrawn parcels. There are only a few major habitat types on the parcels and within each type there is little variation, suggesting that the results of the FWS study broadly apply to all of the withdrawn lands and the surrounding agricultural lands. Information from FWS (1989) has been updated in those instances where more current data are available.

Table 2.7-2. Rare and Sensitive Plant Species Listed by FWS for Counties in RMP Study Area.

Species	Potential Occurrence by County[a]			Known Status in RMP Area
	CAS	JER	MIN	
Goose Creek milkvetch *(Astragalus anserinus)*	X			Barren slopes with substrate of white volcanic sand. Unlikely in the RMP area.
Davis' wavewing *(Cymopterus davisii)*	X			Alpine and subalpine slopes, ridges, and summits with calcareous or dolomitic soils. Not expected in the RMP area.
Idaho penstemon *(Penstemon idahoensis)*	X			Utah juniper, bitterbrush and bluebunch wheatgrass with volcanic outcrops. Possible, but unlikely in the RMP area.

[a]Counties: CAS=Cassia; JER=Jerome; MIN=Minidoka

Source: Compilation of on habitat suitability, Idaho CDC information, and published literature by CH2M HILL.

Historically, the vast Snake River Plain, on which the RMP Study Area is located, was covered by shrub/steppe vegetation dominated by sagebrush and a wide variety of bunch grasses and forbs. Habitat value of the original shrub/steppe for wildlife has been substantially reduced and degraded by agricultural and related development, which eliminated most of the original habitat and fragmented much of what remains within predominantly agricultural areas. Remaining habitats have been further degraded by grazing and noxious weed invasion.

While the Reclamation parcels have been fragmented and degraded as described, they do represent the only remnants of native vegetation within a much larger area of irrigated lands served by the Minidoka project, and thus, those parcels that support native vegetation still do have value for wildlife. The highest wildlife habitat values are generally associated with the largest parcels supporting native vegetation. The parcels also provide virtually the only permanent cover for wildlife over a large expanse.

Wildlife using the RMP Study Area lands are generally restricted to species tolerant of the interspersed sagebrush cropland habitat. Removal of native vegetation and plant structural diversity, through overgrazing and fire, has reduced the abundance and diversity of wildlife (Kindschy 1978, McAdoo and Klebenow 1979, Ryder 1980). Reclamation ended grazing on most of the parcels in 1998, allowing some recovery of native grasses and forbs. However, no quantitative studies or inventories to document vegetation changes on these lands have been conducted.

Big game species on the project area include a few mule deer (*Odocoileus hemionus*) and pronghorn (*Antilocarpa americana*). Some mule deer are resident and others are migrant. In recent years, the number of migrant mule deer has increased to a few hundred deer during severe winters. Fires occurring north of the project area have destroyed winter range, apparently forcing mule deer south onto the Minidoka North Side area (FWS 1985). The loss of native shrublands from fire and past conversion to agriculture has reduced and degraded mule deer winter range, resulting in increased depredations on private lands (FWS 1985, Reclamation 1986).

Large fur bearing mammals occurring in upland parts of the Study Area include coyote (*Canis latrans*), red fox (*Vulves vulpes*), badger (*Taxidea taxus*), and striped skunk (*Mephitis mephitis*). Raccoons (*Procyo lotor*), muskrats (*Ondatra zibethica*), long tailed weasels (*Mustela frenata*), and mink (*Mustela vison*) occur on parcels along the Snake River or those containing larger wetlands or canals. Small mammals common to the area include black tailed jackrabbits (*Lepus californicus*), montane voles (*Microtus montanus*), and deer mice (*Peromyscus maniculatus*).

Some of the conspicuous nongame birds breeding on parcels with native vegetation include common nighthawks (*Chordeiles minor*), western kingbirds (*Tyrannus verticalis*), sage thrashers (*Oreoscoptes montanus*), loggerhead shrikes (*Lanius ludovicianus*), and Brewer's sparrows (*Spizella breweri*).

More than 230 species of birds have been observed at the Minidoka NWR since 1950, according to FWS (2002). The more common breeding raptors are northern harrier *(Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and burrowing owl (*Athene cunicularia*). Less common raptors that are present during migration or summer include prairie falcon (*F. mexicanus*),

Swainson's hawk (*B. swainsoni*), ferruginous hawk (*B. regalis*), turkey vulture (*Cathartes aura*), short eared owl (*Asio flammeus*), and great horned owl (*Bubo virginianus*). The most abundant wintering raptors are the rough legged hawk (*Buteo lagopus*), red tailed hawk, and prairie falcon. Northern goshawks (*Accipiter gentilis*), may be present in the winter, especially near the Snake River, and golden eagles (*Aquila chrysaetos*) may also be present during winter.

As discussed in Section 2.7, Vegetation, Reclamation and the irrigation districts have constructed a series of artificial wetlands; the main purpose of which is to facilitate evaporation and evapotranspiration of irrigation drain water. There are 11 drain water wetlands totaling about 218 acres and ranging in size from about 5 to 44 acres. Other wetlands on the RMP Study Area are generally small, scattered, and usually associated with irrigation water runoff. In addition to the drain water wetlands, these other wetlands cover slightly more than 100 acres. Vegetation cover associated with these drain water wetlands varies considerably. The larger drain water wetlands provide the most valuable wildlife habitat.

The larger wetlands provide feeding and resting habitat for migrating waterfowl as well as some nesting habitat (see Photo 2-11). No surveys have been conducted to document wildlife use. However, it is likely that several of the species that are common to abundant at the Minidoka NWR would also use the larger drain water wetlands at times. The Minidoka NWR bird lists (FWS 2002 and 1989) indicate that the waterfowl species most likely to use Study Area wetlands and nearby grain fields include mallards (*Anas platyrhynchos*), gadwalls (*A. strepera*), and cinnamon teal (*A. cyanoptera*). Fewer numbers of redheads (*Aythya americana*), ruddy ducks (*Oxyura jamaicensis*), pintails (*Anas acuta*), American wigeon (*Anas americana*) and northern shovelers (*Anas clypeata*) breed in the refuge area and may occasionally use drain water wetlands. Wintering waterfowl include Canada geese (*Branta canadensis*), mallards, pintails, gadwalls, American wigeon, northern shovelers, and green winged teal (*Anas crecca*). Tundra swans (*Cygnus columbianus*) forage in grain fields in relatively low numbers during migration.

Photo 2-11. Waterfowl take flight from one of the larger artificially constructed wetlands.

Great blue herons (*Ardea herodias*), American avocets (*Recurvirosta americana*), long billed curlews (*Numenius americanus*), killdeer (*Charadrius vociferous*), and other shorebirds would also be expected to use the larger wetlands, as would red-winged blackbirds (*Agelaius phoeniceous*).

Historically, Minidoka County had some of the highest densities of pheasants in Idaho (Thomas 1985, FWS 1985). The pheasants reached peak densities between 1955 and 1965. The increase in grain production—in combination with weedy areas along canals, roadside vegetation, spoil areas, and interspersion of remaining sagebrush lands—created excellent habitat for pheasants (Reclamation 1986). In recent years, however, pheasants have declined

drastically (Rybarczyk and Connelly 1985). Much of the decline is due to loss of permanent and carry-over wintering and nesting habitat that resulted from changes in farming practices. Conversion of rangelands to agriculture, and more efficient and intensive farming, has resulted in larger farms, loss of roadside cover, removal of riparian vegetation, increased use of herbicides and insecticides, and burning of fence rows and ditch banks. Croplands are usually fallow during fall and winter, making waste grain unavailable as a pheasant food source. In addition to clean farming practices, human-caused and wild fires have converted sagebrush to annual grasslands, destroying valuable winter and escape cover for pheasants.

In addition to pheasants, other upland game species in the Study Area include gray partridge (*Perdix perdix*), mourning dove (*Zenaida macroura*), Nuttall's cottontail (*Sylvilagus nuttallii*).

Amphibians and reptiles expected to occur include long toed salamanders (*Ambystoma macrodactylum*), Pacific treefrogs (*Hyla regilla*), western chorus frogs (*Pseudacris triseriata*), longnose leopard lizards (*Gambelia wislizenii*), side blotched lizard (*Uta stansburiana*), racers (*Coluber constrictor*), gopher snakes (*Pituophis melanoleucus*), garter snakes (*Thamnophis* spp.), and western rattlesnakes (*Crotalus viridis*).

The Snake River immediately downstream of Minidoka Dam is included in the RMP Study Area. Most of the wildlife species noted as using wetlands and river side parcels would be expected in this area. In addition, white pelicans (*Pelicanus erythrohynchus*) and several species of gulls use the area just below the dam during the summer.

Executive Order 13186 defines the responsibilities of Federal agencies to protect migratory birds under the four Migratory Bird Treaties (MBT Conventions) to which the United States is a signatory. Most birds in North America are considered migratory under one or more of the MBT Conventions. The Executive Order mandates that all Federal agencies cooperate with the FWS to increase awareness and protection of the nation's migratory bird resources. Each agency is required to develop an MOU with FWS stating how it intends to cooperate. Reclamation is in the process of finalizing an MOU with FWS, which includes provisions for analyzing Reclamation's effect on migratory birds.

2.8.1 Rare and Sensitive Species

Rare and sensitive species listed by the FWS as occurring in one or more of the counties in which the RMP Study Area occurs and that may be present in the Study Area are listed in Table 2.8-1. Expected presence in the Study Area is based on habitat suitability, occurrence in similar habitats at the nearby Minidoka NWR, and published literature including Groves et al. (1997). Other rare or sensitive species listed by the FWS for these counties, but that are not expected to occur in the RMP Study Area, are not included in Table 2.8-1. With few exceptions, there are no data regarding the occurrence of rare and sensitive species or their habitats on Reclamation parcels.

Table 2.8-1. Rare and Sensitive Wildlife Species Listed by FWS for Counties in RMP Study Area Containing Reclamation Parcels.

Species	Potential Occurrence by County[a]			Known Status in RMP Area
	CAS	JER	MIN	
Mammals				
Yuma myotis *(Myotis yumanensis)*				Often associated with water, ranges throughout southern Idaho. Likely near the Snake River and possible drain water wetlands.
Long-eared myotis *(Myotis evotis)*	X			More common in forested areas but may be present in riparian habitat along the Snake River
Western small-footed myotis *(Myotis ciliolabrum)*	X			Occurs in arid areas especially associated with cliffs; this habitat occurs on some of the western parcels along the Snake River
Townsend's big-eared bat *(Corynorhinus townsendii)*	X			Occurs throughout southern Idaho in shrub/steppe, among other habitats. Suitable habitat on larger parcels of native habitat.
Birds				
Columbian sharp-tailed grouse *(Tympanuchus phasianellus)*				Not likely in the RMP parcels but there has been a lek on the Minidoka NWR just east of the RMP Study Area since 1998.
Greater sage-grouse *(Centocercus urophasianus)*	X	X	X	Sign observed at one of the western parcels and suitable, but not high quality habitat present
Trumpeter swan *(Cygnus buccinator)*	X		X	Occasional at Minidoka NWR so possible, though rare, on larger Study Area drain water wetlands
Northern goshawk *(Accipiter gentilis)*	X			Present along the Snake River, especially during winter and migration. Expected along the Snake River parcels with trees.
Ferruginous hawk *(Buteo regalis)*	X			Suitable foraging habitat present on the Study Area and on the Minidoka NWR
Black tern *(Chlidonias niger)*	X			Migrates through the Minidoka NWR for a brief period in September, so could occur at the larger drain water wetlands. Has not nested at the Minidoka NWR and is unlikely to nest at the drain water wetlands because of limited habitat.
Long-billed curlew *(Numenius americanus)*	X	X	X	Likely present, and may nest, especially near larger wetland areas
Western burrowing owl *(Speotyto cunicularia hypugaea)*	X			May be present, uncommon on the Minidoka NWR
Invertebrates				
Idaho Dunes tiger beetle *(Cicindela arenicola)*			X	Known to be present on at least one parcel

Table 2.8-1. Rare and Sensitive Wildlife Species Listed by FWS for Counties in RMP Study Area Containing Reclamation Parcels.

Species	Potential Occurrence by County[a]			Known Status in RMP Area
	CAS	JER	MIN	
Amphibians and Reptiles				
Northern leopard frog *(Rana pipiens)*	X	X	X	Likely present near wetlands and along the Snake River; fairly common around Lake Walcott.
Common garter snake *(Thamnophis sirtalis)*	X	X	X	Likely present along the Snake River, canals and drains, and drain water wetlands
Short-horned lizard *(Phrynosoma douglassi)*	X	X	X	Likely present on some larger parcels with native vegetation; have been observed by FWS on the Minidoka NWR.

[a]Counties: CAS=Cassia; JER=Jerome; MIN=Minidoka
Source: Compilation of available data by CH2M HILL.

2.9 Aquatic Biology

The Snake River below Minidoka Dam near Burley is predominantly a good quality fishery when water conditions are optimal (Personal Communication, Doug Megargle, May 29, 2003). The fishery is directly affected by seasonally fluctuating water levels and flows, and its quality typically deteriorates during dry periods. Poor water quality conditions are predominantly caused by irrigation return flows, high water temperatures, and algal blooms (ibid.). Water quality issues are exacerbated during periods of minimal flow.

The fishery is important to some and contains trophy size trout, but is generally considered to be a moderate use area for sport fishing (ibid.). Trout and bass are the main game species present in the Snake River below Minidoka Dam and fishing is permitted all year. Although some parts of the Snake River are stocked, this reach supports a self-sustaining trout population and is not supplemented (ibid.). This trout population is often affected by fluctuating water levels and flows, thriving during good water years and declining during dry periods (ibid.). Trout species found in this area include rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), cutthroat trout (*Oncorhynchus clarki*), and rainbow trout—cutthroat trout hybrids (IDFG 2001).

Warm water game fish species present in this area of the Snake River include largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), bluegill (*Lepomis macrochirus*), brown bullhead (*Ameiurus nebulosus*), channel catfish (*Ictalurus punctatus*), and yellow perch (*Perca flavescens*) (IDFG 2001). The bass population, which is also self-sustaining, is more successful at maintaining itself and is less affected by poor quality water conditions than the trout population.

The only aquatic habitat present on the Study Area parcels are the drain water wetlands created to evaporate irrigation drain water. These are temporary in nature and only exist when there is excess irrigation drain water. The temporary nature of these wetlands prevents their use by all aquatic species except perhaps a few frogs and aquatic insects.

2.9.1 Rare and Sensitive Species

No state sensitive fish or other aquatic species were identified as occurring within

the Snake River immediately below Minidoka Dam (IDFG 2003 and FWS 2003a) and none occur on any of the parcels. Three snail species listed as Federally threatened or endangered and occurring within Minidoka and Cassia Counties are addressed in Section 2.10, Threatened, Endangered, Candidate, and Proposed Species.

2.10 Threatened, Endangered, Candidate, and Proposed Species

The RMP Study Area is located within parts of four counties. This area also includes a limited number of plant communities and cover types, compared to the wide variety of these present in the four counties. Topographic variation within the RMP Study Area is also limited compared to that of these four counties. The FWS web site for Idaho (FWS 2003a) lists all of the listed, proposed, and candidate species for each of the counties. These species are listed in Table 2.10-1, along with information regarding the species' known or expected status within the RMP Study Area. Species that are known or expected to occur in the Study Area or that occur near the Study Area are discussed below. Threatened and endangered species, listed by the ESA, along with candidate and proposed species that do not occur in the Study Area, are only discussed in Table 2.10-1. Expected presence in the Study Area is based on habitat suitability, occurrence in similar habitats at the nearby Minidoka NWR, and published literature including Groves et al. (1997).

2.10.1 Wildlife

Bald Eagle

Bald eagles were listed as endangered on March 11, 1967 (32 Federal Register [FR] 4001). The recovery of the species allowed a reclassification to threatened on July 12, 1995 (60 FR 35999-36010). Bald eagles are closely associated with lakes and large rivers in open areas, forests, and mountains. They nest near open water in late-successional forest with many perches or nest sites, and low levels of human disturbance (McGarigal 1988, Wright and Escano 1986). The nest site is usually within one quarter to 1 mile of open water with less than 5 percent of the shore developed within 1 mile. Perches are generally at the edge of forest stands, near foraging areas, or near the nest tree and have panoramic views of surrounding areas. They need large trees along rivers with good visibility, preferably snags, for perching. Protected deep ravines with large trees are often used as night roosts. Critical winter habitat is located near food sources, such as lakes, rivers, and uplands with big game winter range. These sites have adequate perch sites and sheltered roost sites. Human activity may be a major factor limiting bald eagle distribution on wintering habitats (Steenhof 1976).

One pair of bald eagles nest on the Minidoka NWR (Personal Communication, Steve Bouffard, June 16, 2003). There are typically 10 to 20 bald eagles along the Snake river within the refuge during the winter until the water freezes. When the reservoir freezes, the eagles at the west end of the reservoir move downstream below the dam, where they continue to feed on waterfowl and fish. They generally roost in large cottonwoods. Bald eagles would not be expected to use any of the parcels that are

Table 2.10-1. Threatened and Endangered Species, Proposed Species, Candidate Species, and Species Petitioned for ESA Listing for Counties in RMP Study Area Containing Reclamation Parcels.

Species[a]	Potential Occurrence by County[b]			Expected or Known Status in RMP Area
	CAS	JER	MIN	
Listed Species				
Mammals				
Canada lynx (LT) *(Lynx canadensis)*	X			No suitable habitat present in RMP area or on adjacent lands
Gray wolf (XN) *(Canis lupus)*	X	X	X	No suitable habitat present in RMP area or on adjacent lands
Birds				
Bald eagle (LT) *(Haliaeetus leucocephalus)*	X	X	X	Present along the Snake River especially during winter and spring migration; no known nests in the RMP Study Area
Invertebrates				
Bliss Rapids snail (LT) *(Taylorconcha serpenticola)*	X	X	X	Occurs downstream of RMP Study Area reach of the Snake River—see text
Snake River physa snail (LE) *(Physa natricina)*	X	X	X	Occurs downstream of RMP Study Area reach of the Snake River—see text
Utah valvata (LE) *(Valvata utahensis)*	X	X	X	Possible, though not expected in RMP Study Area reach of the Snake River—see text.
Fish				
Bull trout (LT) *(Salvelinus confluentus)*				Not present in the Study Area reach of the Snake River
Plants				
Ute ladies'-tresses (LT) *(Spiranthes diluvialis)*	X	X	X	Not expected to occur on RMP lands that are not adjacent to the Snake River because these wetlands did not exist before project implementation and were created as a result of the project and irrigation. Wetlands on the few parcels along the Snake River have a low potential for Ute ladies'-tresses.
Proposed/Candidate Species				
Birds				
Yellow-billed cuckoo (C) *(Coccyzus americanus oxidentalis)*	X	X	X	Suitable riparian habitat may exist along the Snake River
Amphibians				
Spotted frog (*Rana luteiventris)*	X	X	X	Does not occur in this portion of southern Idaho (Groves et al. 1997)

Table 2.10-1. Threatened and Endangered Species, Proposed Species, Candidate Species, and Species Petitioned for ESA Listing for Counties in RMP Study Area Containing Reclamation Parcels.

Species[a]	Potential Occurrence by County[b]			Expected or Known Status in RMP Area
	CAS	JER	MIN	
Mammals				
Pygmy rabbit (PE) *(Brachylagus idahoensis)*	X	X	X	Possibly seen on one of the parcels. Pygmy rabbits, active burrows, and fresh sign observed on two parcels in 2003. Suitable habitat may be present on several other parcels.
Plants				
Christ's paintbrush (*Castilleja christii*)	X			This rare paintbrush covers approximately 200 acres near the summit of Mount Harrison on the Sawtooth National Forest. This is the only known population in the world (Moseley 1996). It does not occur in the RMP Study Area.

[a]Species: C = Candidate; P= Proposed for listing by FWS; LE = Listed endangered; LT = Listed threatened; XN = Experimental/non-essential population; PE Petitioned for listing under ESA
[b]Counties: CAS=Cassia; JER=Jerome; MIN=Minidoka

Source: FWS 2003 and compilation of available data by CH2M HILL.

not located immediately adjacent to the Snake River. Parcels along the river would only be used if there are large trees suitable for perching and if these trees are located near areas that support suitable and accessible prey species including fish or waterfowl.

Yellow-billed Cuckoo

A petition to list this species was filed in 1998. The petitioners stated that "habitat loss, overgrazing, tamarisk invasion of riparian areas, river management, logging, and pesticides have caused declines in yellow-billed cuckoo." In the 90-day finding published on February 17, 2000 (FR 65[33]: 8104 8107), FWS indicated that these factors may have caused loss, degradation, and fragmentation of riparian habitat in the western United States, and that loss of wintering habitat may be adversely affecting the cuckoo. The yellow-billed cuckoo has status as a Candidate species for protection under the ESA. In July 2001, FWS announced a 12-month finding for a petition to list the yellow-billed cuckoo as threatened or endangered in the western United States. As of June, 2003, this species continues to have Candidate status (67 FR 4065740679).

This secretive bird is a neotropical species that breeds in North America and winters primarily south of the U.S.-Mexico border. Cuckoos may go unnoticed because they are slow-moving and prefer dense vegetation. In the West, they favor areas with a dense understory of willow (Salix spp.) combined with mature cottonwoods (Populus spp.) and generally within 100 meters of slow or standing water (Gaines 1974; Gaines 1977; Gaines and Laymon 1984). They appear to be dependent on the combination of a dense willow understory for nesting and a cottonwood overstory for foraging. The yellow-billed cuckoo is also known to use non-riparian, dense woody vegetation at times but these habitats are not preferred (Finch 1992; DeGraff et al. 1991). It feeds on insects, mostly caterpillars, but also beetles, fall webworms, cicadas, and fruit (especially berries). Populations seem to fluctuate dramatically in response to fluctuations in caterpillar abundance. These

fluctuations are erratic, but not necessarily cyclic (Kingery 1981).

Most Idaho records are of isolated, non-breeding individuals (FWS 1985). Although occasional reports of this bird are noted, including several birds at Lawyers Creek in Lewis County in 1979 and six at Cartier Wildlife Management Area in 1980, no nesting attempts or young have been observed and breeding populations of yellow-billed cuckoos in Idaho are believed to be extirpated (Reese and Melquist 1985). Suitable habitat for the cuckoo exists in the more dense riparian stands along the Snake River within the RMP reach, some of which may occur on a few of the parcels bordering the river. None of the upland parcels provide suitable cuckoo habitat.

Pygmy Rabbit

The FWS was petitioned to list the pygmy rabbit as a threatened or endangered species throughout its range on April 14, 2003. Pygmy rabbits are uniquely dependent on sagebrush, which comprises up to 99 percent of its winter diet. It is one of only two North American rabbits that digs its own burrows. It is a strict sagebrush obligate, inhabiting sagebrush dominated habitats in the Intermountain Region and Great Basin. The historical range of the pygmy rabbit encompassed more than 100 million acres in 8 western states, including Idaho. Pygmy rabbits are one of a very few species, including pronghorn antelope and sage grouse, that can ingest large amounts of sagebrush leaves laden with terpenoids without major digestive disturbances and death (White et al. 1982, Katzner 1994).

This combination of small body size, specialized feeding strategies, and unique habitat requirements are unusual among leporids. Pygmy rabbits have the greatest surface area to volume ratio (and thus heat loss) of any rabbit species in their known geographic range and endure harsh climatic extremes characterized by cold winters and dry summers where drought is common (Katzner 1994).

The pygmy rabbit is an extreme habitat specialist at all levels, from the landscape level to placement of burrows and use of surrounding areas (Gabler 1997, Heady 1998, Heady et al. 2001). It is closely associated with native sagebrush stands, including clumps of tall dense sagebrush coupled with deep loose textured soils for burrow construction. Herbaceous vegetation is also important to pygmy rabbits (Lyman 1991), which augment their sagebrush diet with forbs and grasses. Pygmy rabbits choose tall dense sagebrush for their burrows. Wisdom et al. (2000) assumed that this vegetation cover, which provides protection from predators, is important and that areas of bare ground would be avoided. Burrows are typically occupied by one individual that has particular feeding use areas. It is found in aggregations or colonies in areas of suitable habitat.

Pygmy rabbits are slow and vulnerable to predators in open areas. They elude predators by maneuvering in dense shrub cover (66 FR 231). Big sagebrush provides both essential year-round food and critical protection from predation. Habitat fragmentation readily isolates populations, as disruptions in sage brush cover and open areas provide barriers to dispersal. The pygmy rabbit has very limited dispersal abilities and is reluctant to cross open areas, amplifying the effects of fragmentation.

A possible pygmy rabbit sighting was noted by CH2M HILL biologists on one of the Reclamation parcels during vegetation mapping in the fall of 2002. Pygmy rabbits, active burrows, and fresh sign were seen at two locations on one of the larger parcels in

the western third of the Study Area during surveys conducted by a Reclamation biologist in 2003. Habitat on some of the larger Reclamation parcels that support predominantly native vegetation may also be suitable for pygmy rabbits but has not been searched. As noted above, movement across agricultural or cheatgrass areas between parcels of suitable habitat is unlikely. Therefore, any larger parcels that contain occupied or suitable habitat is very important to pygmy rabbits. Pygmy rabbits present on the parcels would likely be isolated from other Reclamation parcels or larger blocks of suitable habitat on BLM lands to the west and north.

2.10.2 Fish and Other Aquatic Species

No Federally-listed proposed, candidate, threatened or endangered fish species were identified as occurring within the Snake River immediately below Minidoka Dam (IDFG 2003 and FWS 2003a).

Three snail species are listed as Federally threatened or endangered and occur within Minidoka and Cassia Counties. The listed species include the Bliss Rapids snail (*Taylorconcha serpenticola*), Federally threatened; the Utah valvata snail (*Valvata utahensis*), Federally endangered; and the Snake River physa snail (*Physa natricina*), Federally threatened (FWS 2003b). Remnant snail populations inhabit a small fraction of their historical range, and mostly exist near springs and other high quality water areas of the Middle Snake River with free-flowing, cool water. In 1992, the FWS reported known and suspected Utah valvata snail populations near Lake Walcott and near Burley, respectively, and suspected Snake River physa populations near Lake Walcott (Reclamation 1998a). More recent distribution estimates described in the FWS Snake River Aquatic Species Recovery Plan (1995) and by the FWS (2003b) for each of the identified snail species are as follows:

- Bliss Rapids snail—Found in the main stem of the Snake River from King Hill to Banbury Springs, Idaho, well downstream of the RMP Study Area, and in several unpolluted springs adjacent to the Snake River, including Thousand Springs, Banbury Springs, Box Canyon Spring, and Niagra Springs.

- Snake River physa snail—Found only at a few main stem Snake River locations, mostly in the Hagerman and King Hill reaches, which are also well downstream of the Study Area, with possibly a third colony immediately downstream of Minidoka Dam where live specimens were collected in 1987.

- Utah valvata snail—Found only in a few springs and mainstem sites from American Falls Reservoir to the Hagerman Valley, Idaho, including immediately downstream and upstream (in Lake Walcott) of Minidoka Dam, which includes the Study Area reach of the Snake River.

These three snail species are typically associated with free-flowing, cool water environments, which have been greatly modified in the Snake River (FWS 1995). However, as noted above, both the Utah valvata snail and Snake River physa snail are reported to occur immediately downstream of Minidoka Dam (FWS 1995), while the Utah valvata snail is reported to occur throughout Lake Walcott, which is not considered cool or free-flowing water according to the FWS. The snails are vulnerable to continued adverse habitat modification and deteriorating water quality from one or more of the following:

hydroelectric development, peak-loading effects from existing hydroelectric project operations, water withdrawal and diversions, water pollution, and inadequate government regulatory mechanisms (Reclamation 1998a).

2.10.3 Plants

Ute Ladies'-tresses Orchid

The Ute ladies'-tresses orchid (*Spiranthes diluvialis*) is the only Federally protected plant species that may occur in or near the Snake River in the RMP Study Area. It typically occupies floodplains and wet meadows with little overhanging shrub or tree canopy. Wetland and riparian habitats such as springs, wet meadows, and point bars within river meanders are potential habitat. Ute ladies'-tresses orchids have been found in southeast Idaho and eastern Washington and may occur in suitable habitats between these locations. The most suitable potential tress habitat would occur in riparian communities along the Snake River. Wetlands within the Minidoka North Side area that are not adjacent to the Snake River would probably not be considered as potential habitat because these areas were only developed recently. No searches for this species have been conducted on Reclamation lands.

2.11 Cultural Resources

Evidence of human occupation in south-central Idaho dates as early as 14,500 years before the present (B.P.). The three major prehistoric cultural periods that have been identified for southeastern Idaho also apply to south central Idaho:

- Early Prehistoric Period (15,000 to 7,500 B.P.)
- Middle Prehistoric Period (7,400 to 1,300 B.P.)
- Late Prehistoric Period (1,300 to 150 B.P.)

These periods reflect a shift over time from a highly mobile lifestyle involving hunting and gathering (such as seeds, roots, mammals, and fish), to reduced mobility and intensified use of certain highly productive resources (such as camas and salmon). Many archaeological sites near the Minidoka North Side RMP Study Area have yielded diagnostic artifacts, indicating that the Study Area was occupied or used during all three prehistoric periods.

The Study Area is within the Snake River Basin, which was traditionally used by the Shoshone and Bannock Tribes for gathering plants for food and medicine, hunting, fishing, trading, and for ceremonial purposes. The Shoshone and Bannock Tribes of the Fort Hall Reservation, Idaho, represent two linguistically distinct populations of people. The length of time these tribes have occupied southern Idaho is a subject of long-standing debate among scholars. Subsistence practices and lifestyles were similar to other Great Basin cultural groups. Because the environment could not sustain large populations, people moved from one resource to the next, relying on a wide variety of resources, including roots, berries, nuts, marmots, squirrels, rabbits, insects, large game, and fish. By the time of the earliest Euroamerican contact in the early 1800s, the Shoshone and Bannock Tribes had acquired the horse, making it easier to procure bison and other resources, and to trade.

The earliest Euroamericans in south-central Idaho came to develop the fur trade, to convert the Native Americans, or to explore and survey the region. The major east-west

travel route of these early explorers passed through the (now) Minidoka North Side RMP Study Area along the Snake River. Portions of the route later became the Oregon Trail, first used by emigrants in 1841. Settlement of south-central Idaho began in the 1870s, mainly associated with the expansion of Mormon communities out of Utah. The arrival of the railroad in the early 1880s was crucial to the development of southeastern Idaho, with several Union Pacific branch lines created in what is now the Study Area. Agriculture served as the primary economic activity in late 19th and early 20th centuries, and irrigation systems were of signal importance to that development. In 1894, Congress passed the Carey Act to encourage state and private cooperation in developing irrigated agriculture, and 8 years later it created the Reclamation Service to federalize irrigation in the west. One of the earliest Federal reclamation projects in Idaho, the Minidoka Project of 1904, provided for the construction of Minidoka Dam in 1904 to 1906, and other dams in the region, as well as thousands of miles of canals, laterals, and drains.

Indian relationships with Euroamericans deteriorated as the number of emigrants and settlers increased in the middle and late 1800s. Treaties with the United States Government in 1863 and 1868, and establishment of the Fort Hall Reservation in 1867, confined the Shoshone-Bannock and opened the area for Euroamerican settlement. Continuing hostilities, however, led to military action by the U.S. Government, including the Bannock War of 1878. Following the Bannock War, Congress reduced the area of the Fort Hall Reservation several times.

A total of 132 cultural resource sites (including isolates) within the boundaries of the Minidoka North Side Study Area have previously been filed on forms at the Idaho State Historic Preservation Office (SHPO). The sites include 47 archaeological sites, 78 historic structures or features, and 7 sites of undetermined chronology or affiliation. Other cultural resource sites have been identified but not formally recorded within the boundaries of the Study Area. Those sites are not included in this count of cultural resource sites.

Most of the archaeological sites are deposits of prehistoric artifacts, usually obsidian, ignimbrite, and cryptocrystalline silicate (chert, jasper, or chalcedony) flakes produced in tool manufacture. Sometimes these artifacts are found in association with other stone tools (for example, bifaces, hammerstones, scrapers, and metates), pieces of animal bone, or ceramic potsherds. Prehistoric site types in the Study Area include open sites (lithic scatters), rock shelters, and stacked rock features (including cairns, possible hunting blinds, and wall structures of undetermined function). Diverse cultural activities and widespread use of the project area in prehistoric times is reflected in the range of site types, site location/environmental association, and variability in site size. Excavations at archaeological sites near the Minidoka North Side Study Area (but not in the Study Area) contain cultural deposits that provide circumstantial evidence for intensive prehistoric use of the Study Area over time.

The historic period sites recorded in the Study Area represent a wide variety of resources related to transportation (ferries, roads, bridges, and railroads), irrigation (dams, canals, and buildings), gold mining (placer mines), and residential activities (town sites, a work camp, trash scatters and dumps, buildings, foundations, and a cemetery).

A Class I inventory of existing information for the Minidoka North Side RMP Study Area characterizes lands administered by Reclamation as rich in cultural and paleontological resources. Of the cultural sites known in the Study Area, those listed in Table 2.11-1 are considered eligible for the National Register of Historic Places (National Register). These sites (as well as other sites that remain to be identified and evaluated for the National Register) have the potential to address research questions or to offer vital information about the prehistoric or historic use of the Study Area.

Tribal members are reluctant to provide specific information about locations where traditional artistic, economic, or other cultural practices were conducted within the Study Area. However, certain natural resources within the Study Area are still used by Shoshone-Bannock Tribal members, although access to these resources has been restricted by historical and modern development, especially development related to irrigation and agriculture. Resources identified include round rocks found near the river for use in sweats and other ceremonies; pine nuts, chokecherries, sagebrush and roots used for food, medicine, and trading; animals such as deer and groundhog used for food and clothing; and fish, especially from the Snake River, for food.

The potential for encountering fossils in the Minidoka North Side Study Area is high in areas of Snake River alluvium (sands, gravels, and lake beds). All of the vertebrate fossils found to date on or near the Study Area were discovered during construction of the Minidoka Dam and gravel quarrying along the Snake River. These well-preserved fossils include many classic extinct animals from the late Pleistocene, including camels, musk ox, horses, mammoth, and ground sloth. Well-preserved paleontological faunas could also occur in some basalt flows on the northern margin of the Study Area.

2.12 Indian Sacred Sites

Sacred sites are defined in EO 13007 as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian Tribe, or an Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion..." Under EO 13007, Federal land managing agencies must accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites.

No information on specific sacred properties or locations within the Minidoka North Side Study Area has been provided by tribes. Nevertheless, certain ceremonial activities and practices with possible sacred or religious components continue to occur in the RMP Study Area. Within the Study Area, for example, Shoshone-Bannock tribal members collect rocks for ceremonial purposes. Various natural and physical features that may be present on the Study Area landscape—such as foothills, buttes, springs, lakes, and rivers—derive their sacredness and power from a natural undisturbed state. In addition, certain cultural sites may be regarded as sacred to tribes, including, for example, burial places, petroglyph and pictograph sites, important travel routes, and battle or massacre sites, among others.

Table 2.11-1. Cultural Sites that are Eligible for the National Register of Historic Places.

Identification Number	Description	Identification Number	Description
10CA630	prehistoric lithic scatter	00-078	historic “North Side Canal”
10CA653	historic “H” Canal	10MA19	historic dump
10CA654	historic “J” Canal	10MA20	historic dump
10CA655	historic “G” Canal	10MA21	historic dump
10CA862	historic “Oregon Trail” South Side Alternate	10MA24	historic dump
10CA873	historic “Milner Lowlift Canal”	10MA27	historic dump
10JE47	prehistoric rock shelter—ARPA Site	10MA33	prehistoric lithic scatter
10JE54	prehistoric lithic scatter—”Twin Lakes Site”	10MA41	prehistoric lithic scatter
10JE57	historic dump	10MA44	prehistoric lithic scatter
10JE59	historic “Stage Road”	10MA49	historic camp—”Walcott Park”
10JE60	prehistoric lithic scatter—”Duck Rock Site”	10MA144	historic “Oregon Short Line”
10JE62	prehistoric lithic scatter—”Dike 3 Site”	67-554	historic “Minidoka Dam and Powerplant”
10JE77	prehistoric lithic scatter	10TF463	historic “Oregon Trail”
10JE79	prehistoric lithic scatter	10TF1105	historic “Milner”
10JE81	prehistoric lithic scatter	10TF1106	historic/prehistoric multi-component—”Alveolus Site”
10JE82	prehistoric lithic scatter	10TF1135	historic “Oregon Trail at West Milner”
10JE113	prehistoric lithic scatter	10TF1279	historic “Milner Lowlift Canal”
10JE146	historic “Oregon Short Line”	10TF1280	historic “Twin Falls Main Canal”
01-1302	historic “Sprague House”	83-772	historic “Milner Dam”

Source: Compilation of data from Reclamation cultural resources reports, including Ozbun et al. 2000.

2.13 Indian Trust Assets

ITAs are legal interests in property held in trust by the United States for Indian tribes or individuals. The Secretary of the Interior, acting as the trustee, holds many assets in trust for Indian tribes or Indian individuals. Examples of things that may be trust assets are lands, minerals, hunting and fishing rights and water rights. While most ITAs are on-reservation, they may also be found off-reservation.

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or Indian individuals by treaties, statues, and executive orders. These are sometimes further interpreted through court decisions and regulations.

The Shoshone-Bannock Tribes, a Federally recognized Tribe located at the Fort Hall Indian Reservation in southeastern Idaho, have trust assets both on- and off-reservation. The Fort Bridger Treaty was signed and agreed to by the Bannock and Shoshone headman on July 3, 1868. The treaty states in Article 4 that members of the Shoshone-Bannock Tribe "…shall have the right to hunt on the unoccupied lands of the United States..."

The Tribes believe their right extends to the right to fish. The Fort Bridger Treaty for the Shoshone-Bannock has been interpreted in the case of State of Idaho v. Tinno, an off-reservation fishing case in Idaho. The Idaho Supreme Court determined that the Shoshone word for "hunt" also included to "fish." Under Tinno, the Court affirmed that the Tribal members' right to take fish off-reservation pursuant to the Fort Bridger Treaty (Shoshone-Bannock Tribes 1994).

The Nez Perce Tribe is a Federally recognized Tribe of the Nez Perce Reservation in northern Idaho. The United States and the Tribes entered into three treaties (Treaty of 1855, Treaty of 1863, and Treaty of 1868) and one agreement (Agreement of 1893). The rights of the Nez Perce Tribes include the right to hunt, gather, and graze livestock on open and unclaimed lands, and the right to fish in all usual and accustomed places (Nez Perce Tribe 1995).

The Northwestern Band of the Shoshone Indians, a Federally recognized Tribe without a reservation, possess treaty protected hunting and fishing rights which may be exercised on unoccupied lands within the area acquired by the United States pursuant to the 1868 Treaty of Fort Bridger. No opinion is expressed as to which areas maybe regarded as "unoccupied lands."

Other Federally recognized Tribes that do not have off-reservation ITAs, may however have cultural and religious interests in the areas being considered in the RMP. These interests may be protected under historic preservation laws and NAGPRA. See Sections 2.11, Cultural Resources, and 2.12, Indian Sacred Sites, for a discussion of other Tribal interests.

2.14 Socioeconomics

Most of the Reclamation parcels are found in Minidoka County, although some of the largest parcels are located in Jerome County. Eight parcels are also located in Cassia County. This region includes the communities of Burley, Heyburn, Paul, Acequia, Rupert, Minidoka, and Declo. Distribution of Reclamation lands by jurisdiction, area, and parcel is presented in Table 2.14-1.

Table 2.14-1. Minidoka North Side Land Distribution Summary.

County	Parcels	% of Total	Acres	% of Total
Minidoka	92	77.31	9,732.8	55.05
Jerome	19	15.97	6,598.5	37.32
Cassia	8	6.72	1,348.4	7.63
Total	**119**	**100**	**17,679.7**	**100**

Source: U.S. Bureau of Reclamation GIS Data.

2.14.1 Economy and Employment

The region's economy is largely dependant on farming and food processing. Dominant commodities include potatoes, sugar beets, beans, corn, grains, dairies, and others. A number of large food processors convert these to commodities such as sugar, frozen french fries, and cheese. Together, Minidoka, Jerome, and Cassia Counties contribute approximately two-thirds of the region's labor force. In 2003, both Minidoka and Cassia Counties had unemployment rates significantly higher than the surrounding region or the state of Idaho, while Jerome County's unemployment rate was just slightly above the regional average. Labor force and unemployment data are summarized in Table 2.14-2.

The state of Idaho has traditionally lagged behind the national average in terms of both per capita income and income growth. Likewise, the three-county area surrounding the Study Area tended to lag behind the state in terms of per capita income, even though income growth exceeded the State's. In 1979, Minidoka and Jerome Counties had roughly comparable per capita incomes trailing behind Cassia County's. Jerome and Cassia Counties now have comparable per capita incomes with the State, however Minidoka County continues to trail its two neighbors. Changing per capita income is compared in Table 2.14-3.

2.14.2 Population and Demographics

Together, the three counties comprising the Study Area contribute 4.6 percent of the state's population. However, if recent trends continue, this percentage will decline, because the average population growth in Idaho has easily outpaced even the fastest growing of the three counties (Jerome) and greatly exceeded the slowest (Minidoka).

Table 2.14-2. 2003 Annual Average Labor Force and Employment Summary.

Area	Civilian Labor Force	Unemployment	% Unemployment	Total Employment
Minidoka County	9,709	802	8.3	8,907
Jerome County	10,114	416	4.1	9,698
Cassia County	9,935	659	6.6	9,276
Magic Valley LMA	54,248	2,173	4.0	52,075
State of Idaho	692,552	37,447	5.4	655,104

Source: Idaho Department of Labor, 2004.

Although relatively diverse, all three counties are dominated ethnically by white persons. Other than this majority, the only considerable ethnic group is persons of Hispanic or Latino origin who comprise more than one-fourth of Minidoka County's population and substantial segments of the other two counties as well. Census data from 2000 are presented for the three counties and the state of Idaho in Table 2.14-4.

Table 2.14-3. Comparative Per Capita Income Summary.

Per Capita Income	1979	1984	1989	1994	1998	2002	% Change from 1998
Minidoka County	$6,107	$8,553	$12,114	$15,054	$16,669	$19,664	18.0
Jerome County	$6,087	$9,346	$14,083	$17,349	$22,702	$24,787	9.2
Cassia County	$6,707	$10,535	$14,736	$16,538	$19,923	$24,324	22.1
State of Idaho	$7,894	$11,069	$14,803	$18,846	$22,079	$25,476	15.4
United States	$9,230	$13,824	$18,566	$22,581	$27,203	$30,906	13.6

Source: Idaho Department of Labor 2004.

Table 2.14-4. Comparative Demographic Data Summary.

Population Data	Minidoka County	Jerome County	Cassia County	State of Idaho
Population 2003	19,349	18,913	21,610	1,366,332
Population, percent change, April 1, 2000 to July 1, 2003	-41%	3.1%	0.9%	5.6%
Population, 2000	20,174	18,342	21,416	1,293,953
Population, percent change, 1990 to 2000	4.2%	21.2%	9.6%	28.5%
White persons, percent, 2000 (a)	78.1%	87.0%	84.7%	91.0%
Persons reporting some other race, percent, 2000 (a)	17.8%	9.8%	12.1%	4.2%
Persons reporting two or more races, percent, 2000	2.5%	1.9%	1.9%	2.0%
Persons of Hispanic or Latino origin, percent, 2000 (b)	25.5%	17.2%	18.7%	7.9%
Median household income, 1999 model-based estimate	$32,021	$34,696	$33,322	$37,572
Persons below poverty, percent, 1999 model-based estimate	14.8%	13.9%	13.6%	13.0%
Children below poverty, percent, 1997 model-based estimate	20.6%	20.5%	20.4%	17.3%

(a) Includes persons reporting only one race
(b) Hispanics may be of any race, so also are included in applicable race categories
Source: U.S. Census Bureau 2004.

Chapter 3

Existing Land Use and Management

3.1 Land Use and Management

This RMP addresses 119 individual parcels comprised of about 17,700 acres of land. Most of this land was originally withdrawn from BLM holdings and a small portion was acquired or purchased from individual landowners. These lands were either acquired or withdrawn for the Minidoka Project during the early 20th century when the MID was developed. During the 1950s, the A&B Irrigation District was created on previously withdrawn lands (see Figure 3.1-1).

Water is diverted from the north side of Lake Walcott into the North Side Canal, a gravity canal and lateral system operated by MID. This system, called the Minidoka project Gravity Division, was constructed by Reclamation in 1905 and serves 72,000 acres of land in the vicinity of Rupert, Idaho. Reclamation began construction on the North Side Pumping Division of the Minidoka project in 1948. It consists of approximately 77,000 acres of irrigable lands that have been withdrawn by Reclamation, of which 62,000 acres (Unit B) are irrigated by pumping groundwater from deep wells, and 15,000 acres (Unit A) by pumping from the Snake River. A&B operates the North Side Pumping Division.

Operation and maintenance of the respective systems were taken over by MID in 1917 and by A&B in 1966. Construction costs of the systems are reimbursed to Reclamation through long term debt repayment by the irrigation districts.

The lands addressed by this RMP are scattered throughout a rural agricultural setting near the communities of Rupert, Paul, Heyburn, Minidoka, Acequia, Declo, and Burley. Most of the lands are undeveloped. There are currently some uses occurring on these lands such as wetland development and drain runoff for the irrigation districts, wildlife enhancements, municipal sewage treatment, grazing, and agriculture, as well as a variety of unauthorized uses such as ORV use, encroachments, and dumping.

Reclamation also has lands that it manages below Minidoka Dam on the Snake River that are addressed in the RMP. Some of these lands are within the Minidoka Wildlife Refuge. The area is known for good fishing and both sides of the river are frequently used by local anglers (see Photo 3-1).

The majority of the parcels were originally withdrawn from the public domain for the North Side Pumping Division, and were to become private lands irrigated by A&B as part of the North Side Pumping Division Extension Plan (Extension Plan). The Extension Plan was developed in 1984, and was to be authorized by Congress. Land was to be set aside for new irrigation development, wildlife habitat tracts, and

Photo 3-1. The area of Snake River below Minidoka Dam is known for good fishing opportunities.

municipal purposes. This Extension Plan was never finalized and sent through Congress because of a critical groundwater shortage in the area. The remainder of the parcels that were not under the Extension Plan have been withdrawn or acquired by Reclamation over the years for project purposes such as gravel removal, material sites, ponding areas for drainwater cleanup, and other purposes.

3.1.1 Project Facilities

Minidoka Dam and Lake Walcott

Minidoka Dam is a multi-purpose structure providing irrigation, power production, flood control, recreation, and fish and wildlife conservation for the lower portion of the Minidoka project (see Photo 3-2). The dam is located on the main stem of the Snake River, 11 miles northeast of Rupert, Idaho. It is an earth and rockfill structure constructed, operated, and maintained by Reclamation.

North Side Canal

Water is diverted on the north side of Minidoka Dam into the North Side Canal, a gravity canal and lateral system serving 72,000 acres of land called the Gravity

Photo 3-2. Minidoka power plant and associated facilities.

Photo 3-3. Control gates located on one of the many irrigation canals.

Division, in the vicinity of Rupert, Idaho. The 8-mile canal is operated by MID and has an initial capacity of 1,700 cubic feet per second (see Photo 3-3).

South Side Canal

Water is diverted on the south side of Lake Walcott near the left abutment of Minidoka Dam into the South Side Canal system, operated by Burley Irrigation District (BID) which includes three large pumping plants. Each plant lifts the water about 30 feet, for a total lift of about 90 feet. The system, known as the South Side Pumping Division, serves 48,000 acres adjacent to Burley and Declo. The canal is 13 miles long and has an initial capacity of 1,325 cubic feet per second.

Title to the South Side Canal, as well as all rights-of-way, pumping plants, canals,

Insert Figure 3.1-1

Back of Figure 3.1-1

laterals, drains, transmission lines, and appurtenant facilities, were transferred to the BID (the operating agency for the South Side Pumping Division) on February 24, 2000.

3.1.2 Land Management

IDFG Wildlife Management

As described earlier, Reclamation manages about 17,700 acres in the RMP Study Area, divided among 119 parcels. Under the Extension Plan, a portion of these lands were set aside for wildlife purposes, primarily upland habitat. This acreage originally included 34 of the 119 parcels. Portions of 39 other parcels were also included. These lands were to be managed according to three separate contracts between Reclamation and IDFG. The first of the IDFG contracts (#14 06-100-5429) was dated March 15, 1966, included two parcels, and encompassed approximately 60 acres. This 25-year contract expired in 1991 and was not renewed; however, two other contracts are still active, containing a total of 3,406.04 acres. Contract No. 0-07-10-L0388 is for 1,019.24 acres and will expire September 23, 2005. Contract No. 6-07-10-L791 is for 2,386.8 acres and will expire on November 1, 2011. Under the terms of the contracts, the IDFG-managed lands are open to the public and IDFG is responsible for law enforcement and weed control. The contracts also authorize IDFG to construct site improvements such as roads, trails, and other infrastructure. In addition, IDFG issued farm cooperative agreements on some of these lands that permitted some agricultural practices in exchange for habitat improvements. These agreements expired approximately 10 years ago and were never reissued. Resource constraints have limited IDFG's ability to implement many of the provisions of the contracts, but IDFG is still considered an informal partner in the management of these lands.

Lake Walcott State Park

Lake Walcott State Park, which is adjacent to Lake Walcott and Minidoka Dam and within the Minidoka National Wildlife Refuge, is a Reclamation-developed public recreation site with boating, day use and camping facilities. Reclamation has a lease agreement with IDPR to administer the 140-acre Lake Walcott State Park for public recreation. IDPR assumed responsibility for operation and maintenance of recreation facilities at the park constructed by either Reclamation or IDPR per the lease agreement. The term of the lease agreement is 20 years, from the effective date of July 1, 1996, through June 30, 2016, and is subject to additional terms listed in the lease agreement. Some maintenance services at the park are performed through an agreement with IDPR by Idaho Youth Ranch. Historically, the park has received a great deal of local support in terms of cost sharing and volunteer services for construction of park projects and serves as the primary local park for Minidoka and Cassia Counties and the community of Rupert.

National Wildlife Refuge

The Minidoka National Wildlife Refuge is managed by FWS subject to an MOU signed between the two agencies on April 23, 1964. FWS management includes the water surface of Lake Walcott and most lands adjacent to the lake with the exception of the State Park and Reclamation Zone surrounding Minidoka Dam. Part of the Refuge is open to public hunting and fishing. FWS does not currently have a refuge management plan in place; however, there are management objectives established. A management plan is scheduled for completion in the near future.

Reclamation Zone

Reclamation has retained exclusive management of an area immediately upstream and downstream of the Minidoka Dam for operations, maintenance, and security purposes.

3.1.3 Easements and Leases

Transferred Works

Although ownership was retained by the United States (Reclamation), responsibility for care operation, and maintenance of various property and facilities associated with project purposes was transferred to the irrigation districts for continued operation of the irrigation systems. Examples of transferred works include irrigation facilities such as pumps, wells, pumping plants, and laterals as well as ditch rider's homes, vehicles, and tools transferred by Reclamation to A&B on March 1, 1966.

Agriculture and Grazing

Farming and grazing has been authorized on many of the parcels over the years. Reclamation currently administers nine such leases on 2,162 acres. Six agricultural leases total 196 acres, while three grazing leases total 1,966 acres (two dry for 1,918 acres and one irrigated for 48 acres). The term of each lease is 1 year with the option to extend four successive additional periods of 1 year each. Agricultural leases issued in 2003 cannot be extended beyond February 28, 2008. Whether future leasing will occur would be determined at that time. Agricultural leases require soil protection by mandatory rotation of cover crops and planting of grasses on all cultivated acreage at the end of any lease that is not reissued. Many of the terms and conditions of agricultural leases are similar to those governing the grazing leases except the rental charges are substantially higher for agriculture leases. Rather than protecting the resource through crop rotation, grazing leases limit animal unit months (AUMs) as well as the specific time period during which grazing is permitted.

Six grazing leases on the A&B totaling 2,343 acres were terminated in 1995. In addition, two agricultural leases totaling 23.5 acres were terminated in 2002 as a result of water issues raised in the State's adjudication process. One additional agricultural lease on 4.8 acres was terminated February 28, 2004.

Current farming and grazing leases are summarized in Table 3.1-1.

Apiary Sites Special Land Use Permit

In addition to agriculture and grazing leases, Reclamation issued special use permits to two permittees to maintain honey bee colonies on three Reclamation parcels within the RMP Study Area: 922-5-W, 824-6-W, and 1021-6-W. The permits restrict the use to 80 colonies per 100-foot by 100-foot site.

Cooperative Wildlife Habitat Development Agreements

Some farming has occurred on Reclamation lands as a result of cooperative agreements issued by IDFG on some of the lands IDFG was contracted to manage. Farm Cooperative Agreements were arrangements between IDFG and neighboring farmers that allowed the farmers to use portions of the IDFG-managed property for crop production in exchange for habitat improvements. Under this type of development, selected portions of tracts were farmed by the adjacent land owner and an equal number of acres were planted with irrigated nesting cover for upland game birds. Food patches and shelterbelts may also have been developed where possible. In cases where the farmer was agreeable, portions of privately-owned unusable farmland may have been improved and included in the agreement (Reclamation Lease File).

Table 3.1-1. Agriculture and Grazing Lease Summary.

Parcel	Use	Acres	Contract Number
925-8-W	Grazing (dry)	80	0-07-14-LA351
921-7-W	Grazing (dry)	1838	7-07-14-LA261
922-6-W	Grazing (irrigated)	48.3	3-07-14-LA419
825-14-W	Agriculture	35.3	3-07-14-LA410
921-1-W	Agriculture	42.4	3-07-14-LA416
724-1-W	Agriculture	9.5	3-07-14-LA417
824-7-W	Agriculture	67.9	3-07-14-LA418
821-2-W	Agriculture	38.4	3-07-14-LA420
921-1-W	Agriculture	3	3-07-14-LA422

Source: U.S. Bureau of Reclamation Lease File, 2003.

These agreements expired approximately ten years ago and were never reissued.

Municipal and Industrial Uses

A number of Reclamation parcels have been, or are currently, in use for municipal and industrial purposes. Several examples of these are described below.

The City of Rupert has an agreement with Reclamation to use four tracts totaling 600 acres of Reclamation land to spread treated waste water from the City's sewage treatment ponds. This lease was initiated on May 1, 1989, for one year, and has been renewed on an annual basis. Only 160 of these acres, located on Parcel 824-11-W, are receiving waste water. This wastewater is disposed of using a pivot irrigation system; the irrigated land being cropped by City lessees. The remaining 440 acres have never been cropped, nor had waste water applied, but are needed to facilitate expanded treatment capacity. Reclamation is currently working with the City of Rupert and BLM to transfer the 600 acres to City ownership.

A small portion of Parcel 824-8-W has been used by Minidoka County as a repository for fill and other material for road building through an informal agreement with Reclamation. Several other Reclamation parcels are also used for storage of similar materials such as Parcel 921-11-W and 824 8-W. Some of these uses are informally authorized and some are not, and they will need to be formalized or addressed as an unauthorized use. In addition, portions of Parcel 923-1-W was formerly used as a County Landfill.

3.1.4 Adjacent Land Uses

Use of lands adjoining Reclamation parcels within the Study Area were manually inventoried using aerial photography. Nearly all adjacent lands were determined to be used for agricultural purposes or left vacant with potential grazing use. Since most lands bordering Reclamation parcels are located within the boundaries of irrigation districts, most of these parcels are currently used for irrigated agriculture. Likewise, lands bordering Reclamation parcels located on the borders of or outside the irrigation districts are in either non-irrigated agricultural use or appear to be vacant. Since it is difficult to determine from aerial photography if a non-farmed parcel is being

grazed, these parcels were simply classified "vacant/grazing." Other applicable land use classifications for adjacent lands include urban, residential, and municipal/industrial. In addition, Reclamation parcels bordering the Snake River were also identified accordingly. Table 3.1-2 summarizes adjacent land uses. This data is fairly general, with emphasis on dominant land use patterns.

The inventory also identified adjoining Reclamation parcels: 40 of the 119 parcels inventoried, or 35 percent of the total, share at least one property line with another Reclamation parcel.

3.1.5 Unauthorized Land Uses

The majority of Reclamation parcels are unmarked, unused for project operations, and are not being farmed or grazed. A variety of uses that have not been authorized occur on these lands, ranging from agricultural encroachments to illegal dumping and ORV use.

Agricultural Encroachments

The most common unauthorized land use occurring on Reclamation lands is agricultural encroachment by neighboring farms. This typically results from squaring-up agricultural fields for wheel-line irrigation systems and changing field boundaries to allow use of pivot systems. Most of the agricultural encroachments are believed to be in current irrigated agricultural use but some are now idle because the use of pivots creates empty field corners. A total of 147 agricultural encroachments have been identified by Reclamation, affecting 70 Reclamation parcels. More than half of all Reclamation parcels are encroached upon by neighboring agricultural uses. Most are affected by only one small encroachment, although multiple encroachments are not uncommon. One parcel has 12 individual encroachments totaling nearly as many acres and another parcel has 3 with a combined acreage of over 29 acres. In total, agricultural encroachments are estimated to use 394.2 acres of Reclamation land as summarized in Table 3.1-3. Reclamation is developing a plan/procedure to be used regarding each unauthorized use. Initial contacts with encroaching parties began in the fall of 2004.

Other Types of Unauthorized Use

A number of other types of unauthorized use also occur or have occurred in the past on Reclamation lands. Reclamation has identified 32 separate sites, containing 61.3 acres on some 25 Reclamation parcels; however, other unauthorized uses are likely. Unauthorized uses include dumping, ORV use, target practice/shooting sites, material storage, apiary sites, and other uses.

Table 3.1-2. Adjacent Land Use Summary.

Use Classification	%	Notes
Irrigated Agriculture	58.0	Includes green farms and fields with visible irrigation equipment
Dry Agriculture	3.7	May include some formerly irrigated parcels
Vacant/Grazing	18.6	Mostly vacant parcels but grazing may occur on some.
Residential	0.6	Includes concentrations of housing
Municipal/Industrial	0.4	Includes gravel extraction sites
Urban	4.5	Includes mix of high density development
Mixed	8.0	This includes a mixture of the above categories
Other	6.1	This includes parcels bordering the Snake River and unidentified land uses

Source: Land Use inventory based on Reclamation GIS data, 2003.

Table 3.1-3. Summary of Known Agriculture Encroachments by Reclamation Parcel[1].

Parcel ID	Number of Encroachments	Unauthorized Acreage	Parcel ID	Number of Encroachments	Unauthorized Acreage
1021-1-W	2	11.9	825-13-W	1	1.3
1021-2-W	10	7.2	825-15-W	1	1.2
1022-3-W	1	3.8	825-1-W	1	6.9
1022-4-W	3	3.9	825-2-W	7	17.2
1022-5-W	1	9.6	825-3-W	1	0.4
1022-6-W	1	1.0	825-4-W	2	4.0
724-2-W	2	5.2	825-7-W	1	0.9
724-3-W	3	4.6	825-8-W	5	9.3
724-5-W	1	0.1	825-9-W	4	12.1
725-1-W	1	5.7	921-10-W	1	10.2
725-2-W	1	0.1	921-11-W	4	6.4
725-3-W	2	3.5	921-13-W	1	1.8
725-4-W	1	1.7	921-3-W	1	2.6
725-5-W	12	11.8	921-6-W	3	4.3
821-2-W	3	29.3	921-7-W	2	17.4
822-1-W	1	2.5	921-8-W	2	9.9
823-1-W	2	0.6	921-9-W	1	1.1
823-2-W	1	0.8	922-12-W	1	0.9
823-3-W	1	1.1	922-13-A	1	4.1
823-4-W	1	1.5	922-15-A	1	0.7
823-5-W	1	5.7	922-1-W	1	0.9
823-6-W	2	3.9	922-2-W	1	4.1
823-7-W	1	3.9	922-4-W	1	4.7
823-8-W	1	0.5	922-6-W	8	25.8
824-12-W	1	1.1	922-8-W	1	3.8
824-13-A	1	9.4	922-9-W	1	0.7
824-14-A	1	5.0	923-2-W	3	22.3
824-2-W	1	8.0	923-3-W	4	20.0
824-3-W	1	0.1	924-1-W	5	3.3
824-6-W	2	0.5	924-2-W	1	0.2
824-8-W	4	23.8	924-4-W	2	3.0
824-9-W	1	3.5	925-10-W	1	0.6
825-10-W	5	7.1	925-3-W	2	2.2
825-11-A	1	2.7	925-8-W	1	1.5
825-12-W	1	6.9	**Total:**	**147**	**394.2**

[1]The number of encroachments and associated acreages continues to change. The data shown here represent the numbers and acreage at one specific point in time.

*Source: Land Use inventory based on Reclamation GIS data, 2003***.**

After agricultural encroachment, the most common unauthorized use has traditionally been illegal dumping. Piles of field rock remaining from when the land was cleared, or broken concrete from former irrigation system components, have been dumped in many of these parcels over the years. On some sites, illegally dumped material has also contained solid waste. The most notable example of this can be seen on Parcel 825 15 W, illustrated in Photo 3-4. Unauthorized tree cutting has also taken place on this site. Target practice and shooting are other unauthorized uses that commonly occur on some parcels, such as portions of Parcels 824-8-W and 1022-5-W. Unauthorized ORV use also occurs on many parcels including those on Parcel 824-8-W, shown in Photo 3-5.

Reclamation, in cooperation with the Bonneville Power Administration, does have a crime witness program in place (see Photo 3-6). This program affords a person reporting a crime (e.g., illegal dumping) anonymity and a cash reward if it leads to the arrest and conviction of the party responsible for the crime. See Appendix E for further information related to this program. However, this program has been underutilized in the past.

Reclamation addressed the unauthorized dumping problem on 9 of the dump sites by contracting to have these sites cleaned up in

Photo 3-4. Illegally dumped materials.

Photo 3-5. Photo showing ORV damage (and agricultural encroachment in top left corner of photo).

Photo 3-6. Copy of a brochure containing information regarding Reclamation's Crime Witness program.

2003/2004. These sites ranged from older trash dumping areas to areas where dumping continues to occur and included both "highly visible" and "remote" sites. Material removed included residential trash, abandoned vehicles and farm equipment, old appliances, fencing materials, and damaged irrigation equipment. During the 2003/2004 clean up effort, 192 tons of illegally dumped material was removed at a cost to the taxpayers of $127,500.

Rock and concrete were not included in cleanup sites completed in 2003/2004. Future cleanup contracts will consider removal and/or burial of rock and concrete at selected sites. The cleanup effort reflected Reclamation's intent to better manage its lands and provide better public education regarding where Reclamation lands are and that continued dumping is not acceptable. As part of this effort "No Dumping" signs have been placed in the fall of 2004 at all sites were cleanup has already occurred and at sites where dumping presently exists.

Non-agricultural encroachments are summarized in Table 3.1-4.

3.2 Recreation and Access

Recreation is an important use of Federal and private lands in the Study Area, often tied to roads and accessible water bodies. The primary water bodies in the Study Area are the Snake River and Lake Walcott (see Photo 3-7). Much of the property along the river corridor is privately owned, with public access points concentrated at Lake Walcott. Several recreation facilities are located within the Study Area vicinity.

Many of these facilities are associated with the Snake River and provide similar recreation opportunities, such as camping, boating, picnicking, swimming, and fishing, as those found at facilities within the Study Area. Recreation providers in the region include IDPR, BLM, IDFG, Idaho Power, Inc., and various local agencies.

Table 3.1-4. Summary Of Non-Agriculture Encroachments by Reclamation Parcel.

Parcel ID	Number of Encroachments	Unauthorized Acreage	Parcel ID	Number of Encroachments	Unauthorized Acreage
1021-2-W	3	0.8	825-3-W	1	3.2
1021-5-W	1	18.2	825-5-W	1	0.3
1021-6-W	1	1.1	825-8-W	1	5.7
1023-1-W	2	0.1	921-11-W	1	3.2
1024-1-W	1	0.1	921-13-W	1	3.9
1024-2-W	1	0.7	921-1-W	2	3.5
823-7-W	1	2.1	922-10-W	1	0.9
824-3-W	1	0.1	922-11-W	1	0.6
825-13-W	1	1.8	923-4-W	1	1.2
825-14-W	1	0.3	924-1-W	1	0.2
825-15-W	3	6.2	925-2-W	2	3.2
825-2-W	2	2.2	925-8-W	1	1.8
			Total	**32**	**61.3**

Source: Land Use inventory based on GIS data supplied by U.S. Bureau of Reclamation, 2003.

Photo 3-7. Lake Walcott and distant mountains as seen from the State Park.

3.2.1 Recreation Activities within the Study Area Boundary

Numerous land- and water-based recreation activities occur in the region, including fishing, hunting, wildlife viewing, camping, day use (such as picnicking and swimming), boating, trail use, ORV use, skiing, and snowmobiling. Table 3.2-1 provides an overview of the more typical recreation activities known to occur on specific Reclamation parcels in the Study Area.

Table 3.2-1. Recreation Activities on Specific Reclamation Parcels in the Study Area.

Parcel Number/Name	Recreation Activities						
	Fishing	Hunting	ORV Use[1]	Wildlife Viewing	Target Practice[1]	River Access	Camping[2]
824-7-W/E Pond		x		x			
922-6-W		x			x		
923-4-W		x	x				
925-4-W[3]	x					x	x
1022-5-W		x			x		
824-8-W/F-Drain		x			x		
825-8-W		x					
825-16-A							
D-5 Drain	x	x				x	
925-9-W	x	x				x	
925-1-W		x					x
925-5-A							x
1021-5-W	x	x				x	
1024-1-W	x	x				x	
1022-5-W (Cinder Pit)		x			x		

[1]Unless specifically opened for such use, ORV use and concentrated target practice/shooting ranges are unauthorized activities on Reclamation lands

[2]The only designated camping area is on Parcel 925-1-W. All other camping is on an ad-hoc basis.

[3]Camping is not allowed on the Minidoka NWR portion of this parcel; however, ad hoc camping does occur in the area of Bishop's Hole.

Source: Reclamation 2002.

Fishing access is an important component of the outdoor recreation experience at parcels along the Snake River. IDFG maintains three Sportsman Access Areas in the Study Area: Peterson Island, near the town of Declo; Minidoka Pond, east of Heyburn; and Ponderosa Pond, just north of Burley. Each of these areas provides parking, a boat dock, and fishing access. There is an accessible fishing dock at Minidoka Pond (IDFG 2002). In addition to these established fishing access sites, several of the Reclamation parcels along the Snake River are currently serving as informal river access sites (see Table 3.2-1). Bishop's Hole is one of the most popular of these sites (see Photo 3-8). This area receives regular use throughout the year by anglers and for other day use activities (picnicking, wildlife viewing, etc.). Until recently, it was the location of the largest Eastern cottonwood in the United States. Unfortunately, in August 2002 it suffered major damage requiring removal of the downed tree (see Photos 3-9 and 3-10).

Camping is allowed on BLM land, and dispersed camping occurs on much of the Federal land in the Study Area. In addition, camping is allowed at most of the Sportsman Access Sites maintained by IDFG. Camping is a popular activity in several areas just downstream of Minidoka Dam, particularly on holiday weekends (see Table 3.2-1). Camping in these areas is potentially hazardous, because large fluctuations in water flow occur with little or no warning.

Photo 3-8. Bishop's Hole, located just downstream of Minidoka Dam, is a popular fishing site and day use area.

Photo 3-9. A "before" photo of the *Record Tree* (previously the largest Eastern cottonwood in the U.S.) taken in October 2001.

Photo 3-10. An "after" photo of the same tree taken a week after incurring major damage (August 2002).

Hunting is a popular activity in the Study Area and occurs on nearly all of the

Reclamation parcels. Exceptions include Lake Walcott State Park, parcels near dam facilities, parcels where firearms are specifically prohibited, urban parcels, and very small parcels. Primary hunting activities include waterfowl and upland game birds. Much of the hunting activity on Reclamation parcels is generally focused around constructed wetland areas as a result of the concentration of waterfowl. Hunting is also allowed on IDFG access sites and is a popular activity on BLM land near Lake Walcott (Personal Communication, A. Crump, Recreation Technician, BLM Burley Field Office, June 3, 2002). Intermittent target practice and shooting occur in the Study Area (see Table 3.2-1); however, concentrated target practice and shooting ranges are prohibited on Reclamation lands unless specifically permitted for such use. Because of safety concerns, a portion of parcel 824-8-W was closed to firearms and vehicles by the A&B Irrigation District. In addition, Reclamation has worked closely with Minidoka County in developing an ordinance (Minidoka County Ordinance No. 96-3) that prohibits the discharge of firearms, and subsequently target practice/shooting on parcel 1024-1-W. This ordinance is posted at parcel 1024-1-W. Reclamation also recently closed the Cinder Pit (parcel 1022-5-W) to target practice and shooting due to safety concerns.

ORV use is occurring in the Study Area; however, unless specifically opened for such use, ORV use is prohibited on Reclamation lands. At this time, no Reclamation parcels within the Study Area are open to ORV use.

3.2.2 Recreation Facilities

Few developed recreation facilities occur on Reclamation lands in the RMP Study Area. Exceptions include Lake Walcott State Park and Minidoka National Wildlife Refuge.

Lake Walcott State Park

Lake Walcott State Park is located at the northwest end of Lake Walcott, 11 miles northeast of Rupert, accessed from State Highway 24. Dating from the earliest days of the Minidoka Project, the park was developed somewhat informally in response to various needs and policies of Reclamation. The park area nearest the dam first served as a construction camp for the dam, and later uses included housing camps for Reclamation employees and Civilian Conservation Corps enrollees. While Reclamation officially named the area "Walcott Park" in 1912, it was not developed for public recreational purposes until the 1930s. Much of the site development in the park, including the rock walls still visible today, was completed by the Civilian Conservation Corps (see Photo 3-11). A formal master plan was developed for the park in 1938, yet funding cutbacks and the disbandment of the Civilian Conservation Corps limited the improvements made at the park. Although closed to the public during World War II, the popularity and use of Walcott Park grew steadily once open again in the 1950s. The park was briefly under the jurisdiction of the FWS in the mid-1960s and became a state park in 1996 (Reclamation 1998b).

Photo 3-11. Walls built by the Civilian Conservation Corps during the early part of the 20th century.

The park is open year round; however, the camping season extends from May 1 through October 1. Lake Walcott State Park is the only developed park on the reservoir and the only place where camping is allowed. The entire park, managed by IDPR for Reclamation, is situated within the Minidoka National Wildlife Refuge and the refuge headquarters building is located within the park. The 140-acre park is in a quiet, grassy setting with many large, mature shade trees. Activities include camping, fishing, boating, waterskiing, bird watching, basketball, horseshoes, and picnicking. The park also has an 18-hole disc (Frisbee™) golf course that serves as the venue each April for the Lake Walcott Open disc golf tournament. Wading and beach swimming are not allowed at Lake Walcott State Park.

The park is generally divided into three separate use areas: day use, camping, and boating. The day use area is on the west end, the camping is approximately in the middle, and the boat launch is on the east end of the park. Paved trails wind throughout the park and provide foot access and some waterfront trails to each of the different use areas and to Minidoka Dam (see Photo 3-12). There is also a dirt hiking trail that leaves the park near the boat ramp and follows the shoreline for approximately 1.5 miles. The park provides extensive picnicking opportunities, with five picnic shelters and approximately 200 individual picnic sites. The day use area also provides an interpretive kiosk that provides historical information about the local area and the construction of Minidoka Dam.

Photo 3-12. Pathways connect various areas within the park.

The park has four camping areas, one for recreational vehicles (RVs) and three separate tent areas. The RV area provides 23 sites with water and electric hook-ups, including one site for a campground host (see Photo 3-13). The three separate tent areas each accommodate approximately eight tent sites. Each tent area has a small parking area adjacent to it, as the tent areas are for walk-in camping only.

Photos 3-13. RV campsite at Lake Walcott State Park.

Additional camping opportunities have recently been made available with the addition of two new camper cabins. Each of these wood cabins is approximately 200 square feet, and is located to the west of the RV camping area adjacent to the upper parking lot. Each cabin has a deck facing Lake Walcott, electrical outlets, heating and air conditioning, and outdoor water spigots. Paved trails provide pedestrian access to the restrooms, parking lot, and other trails throughout the park. Each cabin has a maximum occupancy of five; however, the maximum accessible occupancy is three. Each cabin has a bunk bed and futon couch. Use of the cabins is from May 1 through October 1. The cost to rent these cabins is

approximately $41.00 ($35.00 for cabin, $4.00 entrance fee, plus appropriate taxes).

Boat ramps are open at Lake Walcott State Park from April 1 through September 30. A two-lane concrete boat ramp with approximately 60 parking spaces is located at the east end of the park (see Photo 3-14). Approximately 5 miles of shoreline are available for year-round bank fishing; however, fishing is not allowed from the boat dock. Available species include rainbow trout, largemouth bass, and yellow perch.

A number of special events are held in the park throughout the year. These events do not require a permit; however, the group hosting the event must contact the park office in advance. Popular group events include family reunions, company picnics, and group camping. Specific special events held at the park include a disc golf tournament, the Reclamation-sponsored "Catch a Special Thrill" event, and high school cross-country running meets.

The park provides a no-fee shower building with four showers. The shower building is located in the RV area, although it is open to all campers. There are a total of seven restroom buildings scattered throughout the park. The restrooms and showers are open only during the camping season and remain closed throughout the winter. There is an RV dump station located in the park; however, it is currently closed because of high phosphate content in recent water samples. As an alternative, RV users can use a nearby dump station approximately 10 miles west of the park along Highway 24. User fees in 2004 were $18/night for RVs and $12/night for tents. The park also charges a Motorized Vehicle Entrance Fee of $4 for any non-camping visit; however, an Annual State Park Passport ($25 in 2004) allows unlimited day use. New in 2004, the Motorized Vehicle Entrance Fee was not waived for campers; that is, campers were charged the fee in addition to the overnight camping fee. Also new in 2004, state sales tax was added to all entrance fees.

Photo 3-14. The two boat ramps located at the east end of the park.

Maintenance in the park is performed by a crew of four seasonal maintenance workers. In addition, volunteers from organizations such as Boy Scouts and Idaho Youth Ranch help maintain the park. Security in the park is provided by the park ranger and a seasonal employee who stays in the campground during the summer and acts as a camp host. In addition, firefighters from two local fire districts (East End and North End Fire Districts) act as volunteer security personnel during busy weekends.

Minidoka National Wildlife Refuge

Minidoka NWR, managed by FWS, includes about 80 miles of shoreline around Lake Walcott, stretching about 25 miles upstream from Minidoka Dam. About half of the refuge's 20,699 acres is open water and wetlands (FWS 2001). The diversity of habitats at Minidoka NWR supports a wide variety of birds and mammals. While the refuge is open to visitors year-round, public access may be limited in certain places throughout the year to protect wildlife. Designated recreation areas within the

refuge include public hunting land areas, public hunting water areas, boat fishing areas, and Lake Walcott State Park (see Photo 3-15). Fishing from boats on Lake Walcott is permitted from April 1 through September 30. Fishing from shore is permitted year-round in accordance with state fishing regulations. Motorized vehicles are permitted only on designated roads and several hunter parking areas are provided. Improved access roads are closed to vehicles January 15 to September 20; however, foot access is allowed at any time throughout the refuge. There are two boat ramps in the refuge, one at Lake Walcott State Park and the other just downstream of Tule Island. Wading and beach swimming are not allowed within the refuge and camping is allowed only within Lake Walcott State Park.

Photo 3-15. Interpretive sign at the State Park describing wildlife values within the adjacent Minidoka NWR.

3.2.3 Visitor Profile and Use Levels

In 2000, a survey of recreation users at Lake Walcott State Park was administered with a sample size of 197 (IDPR, EDAW 2000). Limited survey data are also available from visitor surveys conducted by IDPR in 1999, 2000, and 2001. Results from each survey provide information regarding visitor profiles and perceptions of the park and its facilities. The results of these completed surveys are the basis for the visitor information presented below. It should be noted, however, that in each of the 3 years for which the IDPR survey data are available, the sample size was quite small (ranging from 13 to 36 completed surveys). Therefore, these data are not statistically significant, but do provide an overall idea of general use and visitation patterns.

The 2000 survey provided information regarding the location of the primary residence of visitors. Eighty-four percent of respondents were from Idaho. The majority of visitors were from Minidoka County (37 percent) and Cassia County (30 percent). These numbers indicate that Walcott State Park primarily serves visitors from the immediate area.

The survey asked respondents to indicate all of the types of recreation activities they participated in while visiting Walcott State Park. Picnicking was the activity most participated in by park users, followed by rest/relaxing, sightseeing, other activities, fishing, and numerous other activities (see Table 3.2-2).

Overall, visitors perceive few problems with capacity and conflict in the area. Several questions related to social capacity were

Table 3.2-2. Primary Activities at Lake Walcott State Park.

Activity	Respondents (percent)
Picnicking	66
Rest/relaxing	28
Sightseeing	18
Other activities	17
Fishing	16
Wildlife observation	10
Hiking	10
Waterskiing	10
Camping	9
Swimming*	8
Powerboating	6
Sightseeing	5

*Although swimming is not allowed at Lake Walcott, survey respondents noted that it is an activity that some of them participate in.

Source: IDPR, EDAW 2000

included in the survey to determine how visitors felt about crowding at the park. Nearly 4 out of 10 respondents (38 percent) indicated problems with disruptive behavior by others as "a big problem." This value may indicate that high use levels could be creating conditions that lead to conflicts among visitors. Such conflicts, however, do not apparently significantly detract from visitors' overall satisfaction with their visit to the park. Almost all survey respondents (94 percent) indicated that they were either "extremely satisfied" or "somewhat satisfied" with their visit to Walcott State Park.

3.2.4 Access

Access to the scattered parcels in the Minidoka North Side RMP Study Area is primarily by secondary, rural roads. Main roads are shown on the Regional Location Map at the beginning of this document. Interstate 84 (I-84) runs east and west through the RMP Study Area. East of the Study Area, I-84 turns to the south towards Ogden, Utah. I-86 continues east to American Falls and Pocatello, Idaho. I-84 and I-86 follow the Snake River and link the major population centers of southern Idaho, including Boise, Twin Falls, and Pocatello. The communities of Burley and Heyburn are located immediately adjacent to and south of I-84, and Rupert and Paul lie further to the north. Four freeway exits serve the Study Area communities. The Study Area also contains two-lane state routes. The rural roads in the RMP Study Area generally follow a grid system, except where diverted around such features as canals, railroad tracks, and the Snake River. The roads are numbered north and south parallel to Baseline Road, roughly following State Route (SR) 25, and east and west parallel to Meridian Road.

Dirt, two-track roads traverse many of the Reclamation parcels in the Minidoka North Side RMP area (see Photo 3-16). Some are used to access Reclamation facilities. Most have been created by public use over many years and some result from trespass and ORV use (see Photo 3-17). Table 3.2-3 shows the number of roads in each parcel in terms of the parcel size, as identified from low level aerial photographs. This qualitative analysis, based on review of 100 parcels in aerial photos, indicates that 95 percent of the parcels contain roads. All but four of the small-sized parcels and one of the medium-sized parcels contain roads.

Photo 3-16. Typical two-track dirt road.

Photo 3-17. Extensive damage caused by ORVs from overland travel off one of the many two-track dirt roads.

Table 3.2-3. Dirt Roads Through Parcels as Related to Parcel Size.

	Road Frequency				
Parcel Size	**High: More than 5 roads on parcel**	**Medium: 3 to 4 roads on parcel**	**Low: 1 or 2 roads on parcel**	**None: No roads in parcel**	**Total Parcels of Each Size**
Small: Less than 160 acres or 1/4 section	8	18	53	4	**83**
Medium: 1/4 section to 1 section	6	1	2	1	**10**
Large: Greater than 1 section	4	2	1	0	**7**
Total Parcels of Each Road Frequency	**18**	**21**	**56**	**5**	**100**

Note: Linear parcels that follow canals and roads are not included

Source: Compilation of available GIS data and aerial photography by CH2M HILL.

Of the seven large parcels reviewed (greater than 1 section, or 1 square mile), all contained roads and more than half contained more than five roads. Likewise, more than half of the 10 medium-sized parcels ranging from 1/4 section to 1 section in size contained more than 5 roads per parcel. Only one medium-sized parcel did not contain roads. Small parcels, those less than 160 acres, were often physically too small to contain many roads. However, nearly 10 percent of those small parcels contained more than five roads. Approximately 22 percent contained three or four roads, and 64 percent contained one or two roads.

3.3 Public Services and Utilities

3.3.1 Emergency Fire Suppression Services

Wildland fires are common in the Study Area, typically resulting from accidental ignition (such as cigarettes, vehicle exhaust systems, and lightning strikes), as well as the intentional burning of adjacent cropland. The combination of fire and overgrazing has reduced the amount of native cover (sagebrush, forbs, and grasses) and facilitated the invasion of cheatgrass. An annual invasive species, cheatgrass dries early in the season becoming highly flammable, increasing the incidence and facilitating the spread of wildland fires (FWS 1989).

Wildland fire suppression is coordinated by the South-Central Idaho Interagency Dispatch Center (SCHC), a cooperative arrangement between BLM, Reclamation, FWS, U.S. Forest Service (USFS), National Park Service (NPS), and the State of Idaho. The primary function of the SCHC is to provide cost effective and timely responses to wildland fire incidents primarily through initial attack using the closest available forces, regardless of jurisdiction. BLM is the major provider of fire suppression services, providing staffing and equipment for initial fire attack and full suppression.

A typical response to a wildland fire includes two small engines, each staffed by 2 to 3 person crews, a larger engine with five personnel, a single-engine aerial tanker and a helicopter (Personal Communication, Mike Aoi, June 6, 2002). The closest BLM fire station to the Study Area is in Burley. This station maintains four small engines and one large engine. A BLM fire response helicopter is based in Jerome and two single engine tankers are based at the Twin Falls Airport (Personal Communication, Mike Aoi, June 6, 2002).

Reclamation and BLM have a long-standing (since 1955) relationship for wildland fire

suppression. The agencies have an agreement that authorizes BLM to provide wildland fire suppression activities on certain withdrawn and acquired lands under Reclamation's jurisdiction in the region. Most of the lands within the Study Area are provided coverage through this agreement.

Fires occurring at Lake Walcott State Park and Minidoka Dam are the responsibility of the East End Fire Department, which is co-located with the City of Rupert Fire and Rescue Department. The East End Fire Department consists of four units including a 3,500 gallon tanker, a 1,000 gallon foam unit, a 1,000-gallon pumper, and a quick response unit staffed by 20 volunteer fire fighters. The City of Rupert Fire and Rescue Department has responsibility for confined space and high angle rescues occurring at the Lake Walcott State Park and Minidoka Dam. Response time to Lake Walcott State Park and Minidoka Dam is estimated to be 10 to 15 minutes. There have not been any emergencies at Lake Walcott State Park and Minidoka Dam that required response by either fire department in recent memory (Personal Communication, Larry Pool, August 15, 2002).

The East End Fire Department is a division of the Minidoka County Fire Protection District, consisting of four fire stations in Minidoka County. The Minidoka County Fire Protection District has had a mutual aid agreement with BLM since 1966 facilitating coordinated fire response throughout the Study Area (Personal Communication, Larry Pool, August 15, 2002). BLM does not provide structural fire suppression services.

The FWS provides wildland fire suppression activities for those lands within the Study Area located within the NWR, but not including Lake Walcott State Park or the Minidoka Dam site. Those lands are included in the FWS Wildland Fire Management Plan for the Southeast Idaho National Wildlife Refuge Complex, 2001.

3.3.2 Law Enforcement

The majority of the Study Area is located within an area patrolled by the Minidoka Sheriff's Office. This agency is staffed by 38 sworn officers who patrol the area on a four-shift rotation. The area is patrolled by 17 patrols, each cruiser operated by a single officer. In addition, the Minidoka Sheriff's Office patrols the waters of the Snake River between the Minidoka Dam and the Milner Dam as well as the western part of Lake Walcott. The Cassia County Sheriff's Department patrols Reclamation parcels located in Cassia County. They provide 24-hour scheduled coverage by 27 sworn officers, including 5 resident deputies plus an additional 10 volunteer reserves.

Currently, no formal agreement exists between the Minidoka and Cassia County Sheriff's Offices and Reclamation; however, the patrol area does include Reclamation lands. Principal law enforcement concerns relevant to Reclamation include illegal dumping, unauthorized ORV and firearm use, vandalism, and drug interdiction. The water patrol, which uses both personal watercraft and boats, also enforces the State's boating laws and provides law enforcement on behalf of Jerome and Blaine counties (Personal Communication, Dan Kindig, May 29, 2002). The Minidoka Sheriff's Office has expressed interest in increased access to the river for patrol purposes through Reclamation property. Cassia County Sheriff's Department patrols Bishop's Hole at least once daily for illegal camping, dumping, and other concerns (Personal Communication, Cary Bristol, June 21, 2003).

3.3.3 Water Supply

Irrigation

The major water agencies within the Study Area are A&B and MID. Both irrigation districts supply irrigation water to the majority of farms located within district boundaries. Their resources and coverage are described in Section 3.1, Land Use.

Water Rights

In the state of Idaho, water rights within the borders of A&B and MID are delivered to individual farm units. In most cases, the farm unit is irrigated with water obtained from the irrigation district through exercise of the water right obtained under a repayment contract with Reclamation. Reclamation holds title to these water rights for the beneficial use of the water users who entered into repayment contracts. In contrast to private lands within the irrigation district boundaries, most Reclamation parcels do not hold water rights. As a result, these parcels cannot legally be irrigated with project water unless a water right (and associated construction, operation, and maintenance costs) can be transferred from another parcel, which is a legally and administratively cumbersome process, and therefore highly unusual. Urban parcels within the irrigation district that are no longer farmed provide a possible source for additional water rights.

Domestic Water

Domestic water used by residents of rural parts of the Study Area, including inhabitants of Reclamation parcels, depend on well water drawn from the Snake River Plain Aquifer, the sole-source aquifer for the region.

3.3.4 Wastewater Treatment and Irrigation Nutrient Management

Irrigation Return Flow

Irrigation return flow is drained from farm land through a series of drains. Historically, most of the return flow from MID returned to the Snake River while most A&B return flow was discharged back into the aquifer using injection wells. Reclamation has strongly supported discontinuing this practice to protect water quality. Irrigation return flow is described in Section 2.6, Water Quality and Contaminants.

Domestic Sewage

Wastewater is collected by municipal sewage collection and treatment systems operated by all the jurisdictions in the Study Area. These serve both residential and industrial waste water generators. Outside of local city limits, residents rely on septic systems for wastewater treatment, including homes on Reclamation lands occupied by A&B employees (Personal Communication, Dan Temple, June 6, 2002). The City of Rupert relies on land leased from Reclamation for disposal of wastewater. Rupert uses an irrigation pivot to spray wastewater on private farm fields and one 160-acre farm located on Reclamation parcel 824-11-W to dispose of municipal and industrial wastewater. As this facility nears its 3.5 million gallon per day capacity, Rupert will need to expand its facilities to another site. The new facilities may recycle the wastewater for municipal irrigation, reducing the need for irrigation water and land for storage lagoons during the summer (Personal Communication, Richard Castro, August 14, 2002). Rupert's current plans include doubling its existing two irrigation pivots to four within the next 4 years, depending on population growth (Personal Communication, David Joyce, June 22, 2003).

Chapter 4

The RMP Planning Process

4.1 Overview

This chapter summarizes the principal factors that most influenced development of the Minidoka North Side RMP (as illustrated in Figure 4.1-1). These factors were identified through the following two fundamental processes:

1. Review and analysis of regional and Study Area resource inventory data, and current land use and management practices; and Federal laws and Reclamation policies and authorities (see Appendix B).

2. A public involvement program and agency and Tribal consultation focused on feedback and input from public meetings/workshops, newsbriefs, Ad Hoc Work Group (AHWG) meetings, and other meetings and communications.

A detailed Problem Statement defining the major opportunities, constraints, and planning issues was developed based on input from the processes listed above (see Appendix C).

Table 4.1-1 lists the primary issues of concern raised in the first public meeting and through written comment in response to the first newsbriefs, AHWG meetings, and agency and stakeholder meetings. These issues are described in detail in the Problem Statement contained in Appendix C. While not all issues of concern are listed in Table 4.1-1, the Problem Statement provides a comprehensive review and understanding of all of the issues,

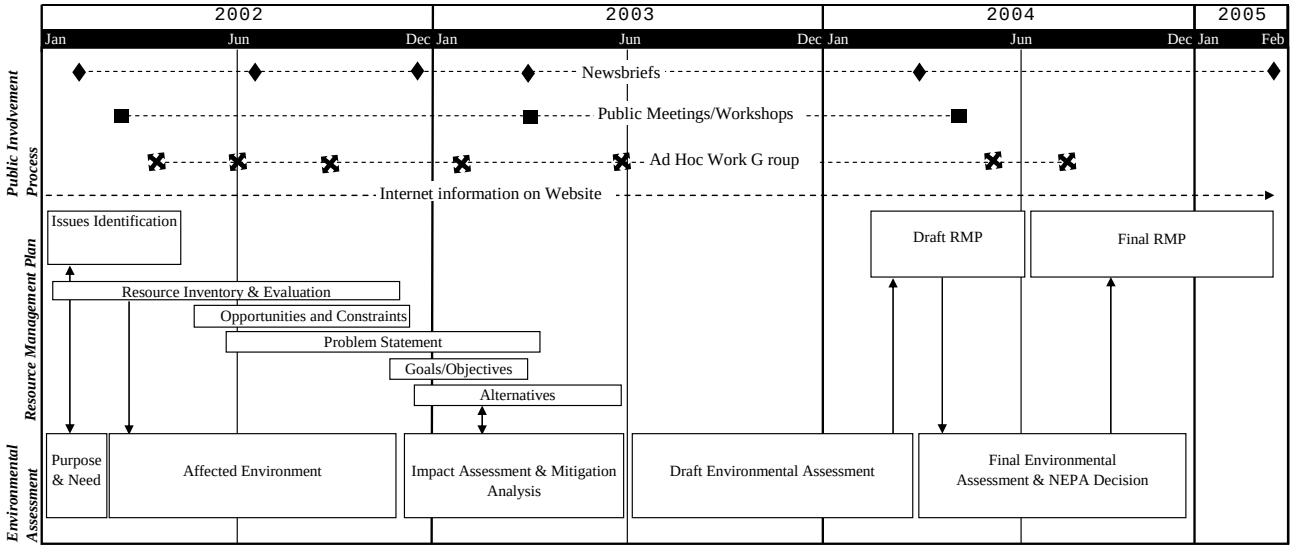

Figure 4.1-1: RMP planning process and RMP schedule.

needs, and opportunities (including all relevant perspectives) that are addressed by the RMP.

The Problem Statement was also used to guide development of the RMP Goals and Objectives, which are the foundation upon which alternative Management Actions were developed (described in detail in Chapter 5). The range of alternatives was reviewed by the public and the Ad Hoc Work Group. The alternatives were also identified and analyzed in the Draft Environmental Assessment (EA) for the Minidoka NS RMP to investigate potential environmental effects (Reclamation 2004).

Letters of comment on the Draft EA were received from two state agencies, one irrigation district, and one Federal agency. The Preferred Alternative was overwhelmingly supported by all four entities providing input on the Draft EA.

4.2 Public Involvement Program

Reclamation initiated a public involvement program in February 2002 and continued it throughout the planning process to support development of the RMP (see Figure 4.1-1). The program included: (a) six newsbriefs; (b) three public meetings/workshops; (c) seven meetings with the AHWG representing key agencies, organizations, Tribes, and stakeholders in the RMP Study Area; and (d) a project website providing information to the public and a forum in which to comment on the process. Each of these program components is described in further detail below.

4.2.1 Newsbriefs

The first newsbrief was mailed in February 2002 to about 200 individuals, organizations, and Tribes. It explained the RMP planning process, announced the project schedule, introduced the team members, and provided a mail-in response form for submitting issues and initial comments on the management and facilities in the Study Area. This information was used to help lay the foundation for the Problem Statement and subsequently form the Goals and Objectives for the RMP.

In July 2002, the results of the mail-in response form and the issues raised at the first public meeting were summarized in a second newsbrief. These issues were listed in a table and categorized by issue type (natural and cultural resources; recreation, land use and general management). Newsbrief #2 also listed the membership of the Ad Hoc Work Group, as well as provided a summary of the resource inventory conducted for the Minidoka NS parcels.

The third newsbrief was mailed in December 2003, and provided an update of the AHWG process and the Problem Statement compiled from the public outreach efforts. The forth newsbrief was mailed in February 2003 and provided a summary of the RMP Draft Goals and Objectives, the draft alternatives, and announced the second public meeting/workshop. The fifth newsbrief, mailed out in April 2004, announced the availability of the Draft EA for public and agency review and announced the time, location, and date of the third (and final) public meeting/workshop.

The sixth and final newsbrief was mailed in January 2005 to announce the RMP and Final EA. It also summarized comments received on the Draft EA and provided an overview of the RMP, including implementation.

Table 4.1-1. Primary Issues of Concern Identified During the Initial RMP Phase, Based on Public Input.

Overarching Concerns
• Maintain a view of the "big picture," i.e., look beyond a tract-by-tract perspective to include area/regional needs & opportunities.
• Consider area economic development in management decisions.
• Availability of water and water rights.
Land Status
• Keep lands needed for Project purposes in Reclamation's jurisdiction.
• Define criteria for Project purposes.
• Support Irrigation District needs as a first priority.
• Dispose of lands not needed for Project purposes.
• Give preferences to adjoining owners in land sales or exchanges.
• Expand agricultural and grazing lease opportunities on Reclamation lands.
• Protect Reclamation Zone at Minidoka Dam.
• Keep all lands in Reclamation jurisdiction—do not relinquish to BLM.
• Allow exchanges/sales to "square up" farm units.
Natural Resources
• Inventory vegetation and wildlife resources on Reclamation lands.
• Identify parcels with high resource value and restrict other uses.
• Reduce impacts from ORV use, fire, weeds, dumping, and trespass.
• Protect wetlands and sensitive species.
• Explore opportunities with farmers for cooperative wildlife habitat/farming.
• Coordinate efforts for weed/insect control (e.g., BLM/Reclamation).
• Water quality management & protection, including recharge of aquifer.
Recreation
• Provide more recreation opportunities, such as interpretation/education opportunities for cultural resources and wildlife viewing.
• Promote economic benefits through recreation.
• Examine expanded use opportunities at the State Park.
• Protect public access to the river.
• Manage current unauthorized camping, examine potential for allowing/providing camping outside of State Park.
Enforcement
• Prevent illegal dumping, ORV use, and vandalism on Reclamation lands.
• Address trespass and encroachment on Reclamation lands.
• Protect public safety.
• Need for boundary signage and/or fencing.
• Need to control fires—fire management.
Coordination
• Conduct government-to-government consultation with affected Tribes.
• Define relationships with other agencies (e.g., FWS, Idaho Fish and Game [IDFG], Irrigation Districts, BLM, Counties).
Cultural Resources
• Reclamation will meet its responsibilities under Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended.
• Comply with Federal laws related to Tribes and cultural resources (e.g., Native American Graves Protection and Repatriation Act [NAGPRA]).
• Need to protect historic cultural sites (e.g., Oregon Trail).
• Need to protect archaeological resources.
Indian Trust Assets (ITAs)
• Keep all lands in Federal ownership for protection of ITAs.

4.2.2 Public Meetings

The first public meeting/workshop was held on March 6, 2002 in Burley, Idaho. The purpose of this meeting was to conduct public scoping of the issues in the Minidoka North Side Study Area. Approximately 25 people attended the meeting. Reclamation provided information about the RMP planning process, then the participants broke into small work groups to discuss important issues and opportunities the RMP should address.

The second public meeting was held in Burley a year later on March 20, 2003. Approximately 10 people attended the meeting. In the interim, the Reclamation Planning Team had conducted additional research and surveys on the parcels, and had drafted an initial set of alternatives. The purpose of this meeting was to determine what alternative management concepts the public supported and why. This information was used to help refine the alternatives that were described and assessed in the Draft EA.

The third and final public meeting/workshop was held in Burley on April 22, 2004. Ten people signed in for the meeting. Its primary purpose was to solicit comments on the Draft EA. This meeting followed a similar format to the previous two meetings, beginning with presentation of the alternatives. Attendees could then ask questions of the RMP team members at stations that emphasized particular portions of the plan.

4.2.3 Ad Hoc Work Group

The Ad Hoc Work Group met seven times: in April, June, and August 2002, February and May 2003, and May and July of 2004. As part of the June 2002 meeting, the group spent a day touring the RMP Study Area and becoming more familiar with site-specific issues.

The 21 members brought a wide variety of viewpoints, and, although some were able to participate more than others, the group was of considerable assistance in the alternatives development process. The Preferred Alternative, and ultimately this plan, were arrived at through Ad Hoc Work Group discussions, public comments from the second and third public meetings, and the recommendations of agency scientists and planners. The entities represented in the Ad Hoc Work Group are listed in Table 4.2-1.

At the first meeting, the group was introduced to the planning process and asked to identify their issues of concern (see Photo 4-1). This information was recorded and used to help draft the Problem Statement. At the second meeting, an overview of the resource inventory was presented, focusing on potential opportunities and constraints. The Team also presented and took initial comments on the draft Problem Statement. In conjunction with the second meeting, the AHWG took part in a tour of the RMP Study Area (see Photos 4-2 and 4-3).

Table 4.2-1. Agencies, Tribes, and Organizations Represented on the Ad Hoc Work Group.

- A&B Irrigation District
- Adjacent Property Owners (2)
- Bureau of Land Management
- Cassia County Commission
- Cassia County Sheriff's Office
- City of Rupert City Council
- Idaho Department of Fish & Game, Region 4
- Idaho State Parks and Recreation
- Jerome County Commission
- Local Business Interest
- Minidoka County Commission
- Minidoka County Historical Society
- Minidoka County Sheriff's Office
- Minidoka County Weed Control
- Minidoka Irrigation District
- Natural Resource Conservation Service
- Pheasants Forever
- Shoshone-Bannock Tribes
- Shoshone-Paiute Tribes
- U.S. Fish and Wildlife Service, Minidoka Wildlife Refuge

Photo 4-1. Reclamation presentation to the AHWG on various parcel information.

Photo 4-2. The AHWG discussing concerns related to the Bishop's Hole area under the *Record Tree.*

Photo 4-3. The AHWG observing wildlife and overall conditions of one of the constructed wetlands.

The primary intent of the third meeting was to finalize the Problem Statement and gather AHWG comments related to developing the Draft Goals and Objectives. The primary purposes of the fourth meeting were to describe and get feedback on the Draft Goals and Objectives, and receive feedback on a preliminary set of draft alternatives. The fifth meeting was used to summarize and get feedback on the draft EA alternatives.

The sixth meeting was held two weeks after the third public meeting with the main purpose of getting comments on the Draft EA, in particular the Preferred Alternative. Input received on the Draft EA was summarized and presented at the seventh and final meeting. However, the main purpose of this meeting was to present and receive feedback on the RMP management actions and Implementation Program.

4.2.4 World Wide Web

A Minidoka North Side RMP web site was set up on Reclamation's Pacific Northwest (PN) Region's homepage and updated regularly to provide relevant information to the public. Newsbriefs, contact names/addresses, draft materials, the draft and final versions of the EA, and meeting announcements were posted on this website. The site also provided a forum for individuals to provide comments on the RMP planning process.

4.3 Tribal Consultation

4.3.1 Overview of Government-to-Government Consultation with Tribes

Reclamation provided information regarding the RMP process through meetings and letters to the Fort Hall Business Council of the Shoshone-Bannock Tribes, the Tribal Council of the Shoshone-Paiute Tribes, the Tribal Council of the Northwestern Band of the Shoshone Nation, the Natural Resources Committee of

the Nez Perce Tribe, and the Tribal Council of the Burns Paiute Tribe.

The Draft EA was distributed to representatives from the above Tribes. No comments on the Draft EA were received from the Tribes.

4.3.2 National Historic Preservation Act Requirements

The National Historic Preservation Act of 1966 (NHPA) (as amended through 1992) requires agencies to consult with Indian Tribes if a proposed Federal action may affect properties to which the Tribes attach religious or cultural significance. The implementing regulations of the NHPA, 36 CFR 800, address procedures for consultation in more detail. Reclamation complied with these requirements in preparing the RMP.

4.3.3 Indian Trust Assets

Indian Trust Assets are legal interests in property held in trust by the United States for Indian Tribes or individuals. The Secretary of the Interior, acting as the trustee, holds many assets in trust for Indian Tribes or Indian individuals. Examples of trust assets include lands, minerals, hunting and fishing rights, and water rights. While most ITAs are on-reservation, they may also be found off-reservation.

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes or Indian individuals by treaties, statutes, and executive orders. These are sometimes further interpreted through court decisions and regulations.

4.3.4 Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian Tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion...."

Reclamation informed the Shoshone-Bannock Tribes and the Shoshone-Paiute Tribes about the RMP and requested that they inform Reclamation if they were aware of Indian sacred sites within the Study Area. The notification and consultation processes were coordinated with the NHPA consultation process. No information on sacred sites was received from the Tribes.

4.3.5 Other Laws and Regulations

The relationship between Federal agencies and sovereign Tribes is defined by several laws and regulations addressing the requirement of Federal agencies to notify or consult with Native American groups or otherwise consider their interests when planning and implementing Federal undertakings. Among these are the following (also see Appendix B, Legal Mandates):

- National Environmental Policy Act (NEPA)
- American Indian Religious Freedom Act
- Archaeological Resources Protection Act
- Native American Graves Protection and Repatriation Act
- Executive Order 12875, Enhancing the Intergovernmental Partnership
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Presidential Memorandum: Government-to-Government Relations with Native American Tribal Governments.
- Executive Order 13007, Indian Sacred Sites

- Executive Order 13175 of November 6, 2000, Consultation and Coordination with Indian Tribal Governments (EO 13175 revokes EO 13084 issued May 14, 1998).

4.4 Agency Coordination

Reclamation consulted with several Federal and local agencies throughout the RMP process to gather valuable input and to meet regulatory requirements. This coordination was integrated with the public involvement process.

The evaluation of endangered species contained in the EA serves as Reclamation's biological assessment as required under the ESA. It evaluates impacts on listed species and those proposed for listing, including the Ute ladies'-tresses orchid, bald eagle, yellow-billed cuckoo, pygmy rabbit, and three snail species. Reclamation has determined that the Preferred Alternative will have no affect on these species and is therefore not required to formally consult with the FWS. As a result, Reclamation does not need concurrence from FWS.

Chapter 5

Resource Management

5.1 Introduction

This chapter describes Reclamation's decisions regarding strategies that will guide use and management of Reclamation's lands over the next 15 years. Some background on Reclamation's approach, authorities, and policies is provided for each of the primary categories; these are followed by specific Goals, Objectives, and Management Actions. Specific guidelines and procedures are provided for management as needed. Figure 5.1-1 shows which lands are slated to be retained by Reclamation and which ones will be relinquished to BLM, as well as other pertinent information. This figure also serves as an index to Appendix F, which provides more detail on these data in the form of enlarged maps of the area. See Appendix D for an explanation of the laws and policies related to Reclamation's authority to retain and relinquish lands. In all, approximately 9,607 acres are slated to be relinquished to BLM, while approximately 8,202 acres will be retained by Reclamation (including Lake Walcott State Park [140 acres]).

5.2 Goals, Objectives, and Management Actions

Management Actions are specific tasks intended to guide Reclamation management and staff, as well as managing partners, in the activities required to properly manage Reclamation lands. They were derived from the Goals and Objectives developed over the course of preparing the RMP and associated EA. Guidelines and standards provide additional direction and clarification for selected Management Actions, where needed.

Management Actions are intended to be implemented over the next 15 years and are included here because they are considered the most appropriate actions for managing these lands. Inclusion of these actions is dependent on funding. Following are the six primary categories and associated subcategories described in this chapter:

- Land Use and Management (Section 5.2.1);
- Natural Resources (Section 5.2.2);
- Cultural Resources (Section 5.2.3);
- Indian Sacred Sites (Section 5.2.4);
- Indian Trust Assets (Section 5.2.5); and
- Recreation and Access (Section 5.2.6).

5.2.1 Land Use and Management (LUM)

Reclamation's general land use approach is to: (1) manage the lands in a manner consistent with Federal laws and regulations, and the principles of good stewardship to accomplish Project purposes and serve the public interest; (2) seek opportunities for coordinated and cooperative land use planning with other Federal, State, and local agencies; and (3) develop RMPs that best support the public interest, preserve and enhance environmental quality, and are compatible with project purposes and needs. As part of this approach, Reclamation strives to maintain a current inventory of all land holdings and uses.

Normally, law enforcement services on Reclamation lands are provided through contract and agreements with local partners. Enforcement efforts are required to address trespass and encroachment; willful damage or destruction of facilities, lands, or resources; and dumping on Reclamation lands.

Trespass and unauthorized use, when allowed to continue, deprive the public of their rightful use and enjoyment of the public lands. Willful damage or destruction of facilities, lands, or resources could endanger the public, prevent provision of project services, and destroy valuable natural and cultural resources, as well as cost money to repair. Prohibited acts on Federal land include: (1) constructing, placing, or maintaining any kind of road, trail, structure, fence, enclosure, communication equipment, pump, well, or other improvement without a permit; (2) extracting materials or other resources without a permit; (3) damage or destruction of facilities or structures, including abandoned buildings; and (4) excavation, collection, or removal of archeological or historical artifacts. Reclamation's general approach is to facilitate and ensure the proper use of land resources consistent with the requirements of law and BMPs. The primary management emphasis is to provide the public as a whole non-exclusive use of Federal lands while still protecting environmental values and natural and cultural resources.

It is also Reclamation's approach to clear, and keep clear, all lands from trespasses and unauthorized uses. In resolving trespass or unauthorized use issues, priority is given to those trespasses that are not in the best public interest, are not compatible with the primary uses of the land, or that have caused or are causing damage to significant environmental values or natural or cultural resources. Unauthorized uses and trespasses are best resolved before they become well established. When a violation does occur, Reclamation's first priority is to negotiate a solution to resolve the violation. In the event such negotiations fail, Reclamation will take actions necessary to protect the public interest and project lands, including legal action through the courts.

GOAL LUM 1: Ensure that Project purposes are not restricted or impacted as a result of other uses and activities.

Objective LUM 1.1: For safety and security reasons, require that Minidoka Dam and the security area surrounding the dam remain closed to public access.

Management Actions

LUM 1.1.1: Describe and show both the Reclamation Zone and the specific areas closed to public access for security purposes on publicly distributed materials and signage.

Insert Figure 5.1-1.

11x17

Back of Figure 5.1-1.

11x17

LUM 1.1.2: Notify the public through appropriate means if the closed area around the dam is modified.

Objective LUM 1.2: Protect access to and use of material extraction sites on Reclamation lands to allow for the continued extraction and/or storage of sand, gravel, and rock for the purpose of Irrigation District and Reclamation construction activities.

Management Actions

LUM 1.2.1: Consider the extraction/ storage of sand, gravel, and rock on Reclamation parcels on a case-by-case basis where it does not conflict with other Reclamation needs or priority natural and cultural values.

LUM 1.2.2: Ensure that responsible parties implement all applicable Best Management Practices in the course of extracting/storing materials from Reclamation parcels.

Objective LUM 1.3: Ensure that easements and crossing agreements issued to private and public entities do not interfere with Project operation and maintenance.

Management Actions

LUM 1.3.1: Consult with Irrigation Districts or managing partners prior to issuance of easements and crossing agreements (see Reclamation Manual LND 08-01, paragraphs 3.H and 4.F).

Objective LUM 1.4: Address and resolve unauthorized access-related conflicts pertaining to Reclamation operations and maintenance roads (see Reclamation Manual LND 08-01, paragraphs 3.H).

Management Actions

LUM 1.4.1: Provide signage as appropriate to limit access on operations and maintenance roads.

LUM 1.4.2: Enforce operations and maintenance road access restrictions through periodic monitoring and follow through related to the prosecution of violators.

LUM 1.4.3: Work with local agencies to ensure operations and maintenance roads are not identified as access to private property.

Objective LUM 1.5: Ensure that Reclamation facilities are not impacted by new construction (e.g., stormwater runoff, relocations, and crossings).

Management Actions

LUM 1.5.1: Provide counties/cities with applicable Reclamation facility, property, and mapping information (i.e., lot splits) in an effort to coordinate working with their planning, zoning, and permitting processes.

GOAL LUM 2: Provide direction on the use or disposal of Reclamation property.

Objective LUM 2.1: Within authorities and compatible with Project purposes, natural and cultural resource protection, and land management needs, allow suitable parcels to be transferred or disposed (see Reclamation Manual LND 08-02).

Management Actions

LUM 2.1.1: Follow Reclamation policy and criteria provided in Appendix D (Authorities & Methods for Disposing of Minidoka North Side Lands) for parcels

determined suitable for transfer or disposal.

Objective LUM 2.2: Consider leasing Reclamation parcels for grazing or agricultural uses where appropriate.

Management Actions

LUM 2.2.1: Develop prescriptions and lease limitations on parcels considered for grazing.

LUM 2.2.2: Consider new grazing leases on designated parcels that do not affect operations and maintenance, and are based on protection and/or improvement of natural and cultural resource values and water quality concerns.

LUM 2.2.3: Consider new agricultural leases only when they contribute to the closure of drain wells, where water rights are legally appropriated, and where there would be no impacts to natural and cultural resources.

GOAL LUM 3: Engage and work cooperatively with other agencies to manage resources, uses, and activities on appropriate Reclamation lands.

Objective LUM 3.1: Renegotiate formal Reclamation/IDFG agreements for IDFG management of specific parcels. [see NAT 1.7].

Management Actions

LUM 3.1.1: Work with IDFG to prepare overall vision and goals for managing appropriate Reclamation parcels and framework for a new management agreement.

LUM 3.1.2: Determine appropriate parcels, or portions of parcels to be managed by IDFG, and prepare management criteria and objectives for each specific parcel.

LUM 3.1.3: Perform annual implementation planning meetings and monitoring to see that management criteria are being followed and objectives are being met.

Objective LUM 3.2: Continue agreements and cooperative working relationships with Idaho Department of Parks and Recreation (IDPR) and U.S. Fish and Wildlife Service (FWS) for the management of Lake Walcott State Park and Minidoka National Wildlife Refuge (respectively), and where appropriate and feasible on other nearby Reclamation lands. [see REC 1.1 and 1.2]

Management Actions

LUM 3.2.1: Coordinate with IDPR in the preparation and implementation of a Historic Preservation and Maintenance Plan for Lake Walcott State Park outlining vegetation preservation/ protection, use areas, hardscape areas, and other pertinent park guidance.

LUM 3.2.2: Update the Reclamation/ IDPR agreement regarding IDPR's management of Lake Walcott State Park incorporating implementation of measures outlined in the park's Historic Preservation and Maintenance Plan. [see CUL 1.2.1 and REC 1.1.1]

LUM 3.2.3: Continue coordination efforts with FWS related to their management of Minidoka NWR, where needed.

LUM 3.2.4: Amend FWS and/or IDPR agreements to incorporate coordinating activities related to managing

Reclamation parcels adjacent to the refuge and park, if needed.

GOAL LUM 4: Ensure protection of the public, facilities, and public resource values on Reclamation lands and alleviate conflicts with adjacent lands.

Objective LUM 4.1: Pursue agreements with other Federal and local agencies as the primary enforcement entities to ensure an adequate level of law enforcement on Reclamation lands.

Management Actions

LUM 4.1.1: Prepare new law enforcement agreements with interested entities focused on enforcing laws and Reclamation policies to protect natural and cultural resources and provide for security and public safety on Reclamation lands.

LUM 4.1.2: Define and incorporate specific law enforcement needs and purposes into agreements with other entities providing law enforcement services on Reclamation lands.

LUM 4.1.3: Monitor law enforcement activities and changing needs over time to adjust purpose and priorities for providing law enforcement on Reclamation lands.

LUM 4.1.4: Provide funding for law enforcement of Reclamation lands.

Objective LUM 4.2: Investigate and implement means of more efficiently and effectively improving law enforcement on Reclamation lands.

Management Actions

LUM 4.2.1: Work with counties to pass ordinances aimed at improving law enforcement on Reclamation lands.

LUM 4.2.2: Seek adjacent landowner and citizen participation in improving law enforcement on Reclamation lands.

LUM 4.2.3: Participate in Crime Witness program wherein rewards are offered for information leading to the arrest and conviction for illegal dumping, vandalism, theft, waste, fraud, or harm to Reclamation personnel (see Appendix E).

Objective LUM 4.3: Develop and implement a comprehensive wildland fire management plans as needed to address public safety-related concerns, as well as efforts that would enhance or protect the natural resource values of RMP lands. [see NAT 1.6]

Management Actions

LUM 4.3.1: See NAT 1.6.1.

LUM 4.3.2: Provide funding for fire-related activities on Reclamation lands, subject to appropriations.

Objective LUM 4.4: Eliminate existing trespass/encroachments on Reclamation lands (see Reclamation Manual LND P04).

Management Actions

LUM 4.4.1: Establish immediate, short- and long-term priorities for addressing trespass/encroachments on Reclamation lands.

LUM 4.4.2: Complete surveying of sites to determine the extent of trespasses/encroachments.

LUM 4.4.3: Update Reclamation's GIS database (and continue to revise as needed) incorporating surveys and other relevant information.

LUM 4.4.4: Increase enforcement activities related to trespass and unauthorized use of Reclamation lands, including notifications, fines, removal, etc.

LUM 4.4.5: Work with adjacent landowners to eliminate existing trespass/encroachments and rehabilitate lands, where appropriate.

LUM 4.4.6: Develop and implement a monitoring program aimed at preventing future trespasses/encroachments on Reclamation parcels.

LUM 4.4.7: Use the Crime Witness program to offer rewards to individuals who report unauthorized or illegal use of Reclamation lands, and which lead to arrest or levied fines. [see LUM 4.2.3]

Objective LUM 4.5: Implement measures to address unauthorized uses of Reclamation lands, including the clean up of trash dumps and monitoring to prevent future dumping.

Management Actions

LUM 4.5.1: Establish immediate, short- and long-term priorities for addressing dump sites on Reclamation lands, and issue contracts for cleanup as needed.

LUM 4.5.2: Complete surveying of sites to determine the extent of dump sites, specific problems associated with particular uses, and characterization of contents in an attempt to determine responsible party(ies).

LUM 4.5.3: Update Reclamation's GIS database (and continue to revise as needed) incorporating illegal dump sites and other relevant information.

LUM 4.5.4: Increase enforcement activities related to dump sites of Reclamation lands, including notifications, fines, removal, etc.

LUM 4.5.5: Work with the public to enlist and form a "watchdog" group aimed at catching perpetrators; include incentives such as rewards through participation in the Crime Witness program. [see LUM 4.2.3]

LUM 4.5.6: Develop and implement a monitoring program aimed at preventing future unauthorized uses on Reclamation parcels.

Objective LUM 4.6: Educate the public that all Reclamation lands are closed to ORV use (see 43 CFR Part 420). [see REC 2.1 related to preparation of an Access Management Plan]

Management Actions

LUM 4.6.1: Prepare and post signs at areas with past evidence of ORV use noting Reclamation's ORV regulation.

LUM 4.6.2: Post Reclamation's ORV regulation signs at appropriate locations on fences or at other boundary demarcations.

LUM 4.6.3: Describe Reclamation's ORV regulation in all appropriate future pamphlets, publications, public announcements.

Objective LUM 4.7: Ensure that siting and design of all new facilities, structures, roads, and trails on Reclamation lands maximize compatibility and integration with the open, rural environment and historic landscape of the surrounding area.

Management Actions

LUM 4.7.1: Design facilities to complement and be subordinate to the surrounding landscape wherever feasible.

LUM 4.7.2: Immediately revegetate disturbed areas resulting from any construction-related activities.

LUM 4.7.3: Preserve and protect all existing trees, shrubs, and other naturally occurring vegetation from construction operations and equipment except where clearing operations are required for permanent structures, approved construction roads, or excavation operations.

LUM 4.7.4: Design all maintenance yards, field offices, and staging areas to preserve trees, shrubs, and other vegetation wherever feasible.

Objective LUM 4.8: Minimize impacts on adjacent/surrounding lands resulting from land disturbing activities undertaken on Reclamation lands.

Management Actions

LUM 4.8.1: Monitor any land-disturbing activities on Reclamation lands to ensure minimal impacts to adjacent lands.

Objective LUM 4.9: Address and resolve unauthorized access-related conflicts pertaining to Reclamation lands.

Management Actions

LUM 4.9.1: Using Reclamation sign guidelines, post signs at areas with past evidence of access-related conflicts noting Reclamation's ownership and road restrictions.

LUM 4.9.2: Describe and show access-restricted roads in the Access Management Plan (see REC 2.2.1).

Objective LUM 4.10: Ensure that monitoring of agricultural and grazing activities is conducted to enforce compliance with lease terms.

Management Actions

LUM 4.10.1: Establish and implement grazing and agricultural lease monitoring schedules and protocols.

LUM 4.10.2: Perform reviews of each leased parcel as per monitoring schedule to ensure compliance with lease provisions and effect on lands for grazing, noting field observations from each visit.

Objective LUM 4.11: Prohibit concentrated shooting/target practice on Reclamation lands as required except as formally authorized by Reclamation policy (see Reclamation Manual ENV 02-07).

Management Actions

LUM 4.11.1: Post Reclamation's policy related to concentrated shooting/target practice on signs at appropriate locations, including on fences or at other boundary demarcations, and at areas with past evidence of concentrated shooting/target practice.

LUM 4.11.2: Describe Reclamation policy in all appropriate future pamphlets, publications, public announcements.

GOAL LUM 5: Provide informational, educational, and interpretive materials to increase public awareness of Reclamation boundaries, use restrictions, safety

concerns, natural and cultural resource values, and recreational opportunities.

Objective LUM 5.1: On all publicly distributed materials show the public closure area in the vicinity of Minidoka Dam, as appropriate.

Management Actions

LUM 5.1.1: Clearly mark the areas closed to the public in the vicinity of Minidoka Dam on pamphlets, signs, fences, and interpretive kiosks; provide a note stating that the boundaries of closed areas are subject to change.

Objective LUM 5.2: Using Reclamation's sign manual develop clear, consistent signage to guide public access to and the use of Reclamation lands.

Management Actions

LUM 5.2.1: Inventory existing signs and determine a prioritized list of additional sign needs.

LUM 5.2.2: Design, purchase, construct, and install signs as funding allows and according to the prioritized list.

Objective LUM 5.3: Improve public information/awareness of Reclamation lands through better on-the-ground boundary demarcation using signage, fencing, or other means as feasible and where necessary.

Management Actions

LUM 5.3.1: Inventory existing boundary fence and sign locations and determine a prioritized list of additional needs.

LUM 5.3.2: Install additional boundary signs and fencing as funding allows and according to the prioritized list.

Objective LUM 5.4: Coordinate with other agencies and entities to develop an educational interpretive program that incorporates illustrating the prehistoric, historic, and current land use practices, as well as natural features.

Management Actions

LUM 5.4.1: Work with Federal, State, and local agencies to prepare interpretive information for visitors to Lake Walcott State Park, Minidoka NWR, Bishop's Hole, and other appropriate locations.

GOAL LUM 6: Achieve timely implementation and coordination of RMP programs and projects.

Objective LUM 6.1: Maintain a clear phasing schedule and list of priorities for RMP implementation; and update on an annual basis.

Management Actions

LUM 6.1.1: Track and annually update progress on the Management Actions in the RMP implementation schedule.

LUM 6.1.2: Conduct annual meetings with managing partners to track progress in implementing the RMP and set priorities for the upcoming year.

Objective LUM 6.2: Seek Reclamation and managing partners (FWS, IDPR, IDFG, Counties, etc.) joint funding to implement applicable RMP actions according to the priority list and phasing schedule.

Management Actions

LUM 6.2.1: Pursue implementation through a variety of sources including, but not limited to:

- Title 28 cost share program for recreation enhancements, which allows a 50 percent Federal contribution to match a 50 percent non-Federal managing partner contribution (see Reclamation Manual LND 01-01, paragraph 2).
- Title 28 cost share program for fish and wildlife enhancement, improvement, and restoration projects, which allows a 75 percent Federal contribution to match a 25 percent non-Federal managing partner contribution (see Reclamation Manual LND 01-01, paragraph 2).
- Idaho State Waterway or Recreational Vehicle Grants.
- Land and Water Conservation Fund Grants.
- Other Federal, State, and local cost share and grant programs.

Objective LUM 6.3: Keep stakeholders, surrounding landowners, Tribes and the public informed regarding the status of implementing the RMP.

Management Actions

LUM 6.3.1: Provide news releases to the local media for major projects and accomplishments (e.g., trash removal, dump cleanup, new interpretive information, etc.). Post or provide implementation information for major actions at public sites.

5.2.2 Natural Resources (NAT)

Reclamation's approach to managing natural resources is to preserve and enhance native wildlife populations and their habitat in accordance with an approved land use or resource management plan and encourage its land-management partners to follow suit.

The principles in Public Law 89-72, Federal Water Projects Recreation Act of 1965, as amended by Title 28 of Public Law 102-575, will continue to be adhered to for fish and wildlife-related activities and management considerations. Basically, Title 28 states that if a non Federal public entity has agreed to manage fish and wildlife resources on Reclamation lands, Reclamation may share those costs for up to 75 percent of the total cost. IDFG has been Reclamation's non-Federal public entity managing partner for specific parcels within the RMP Study Area that warrant protection and/or enhancement related to habitat values, and will continue to be in the future.

In accordance with the Endangered Species Act (ESA) of 1973 (P.L. 93-205), Federal and Reclamation policies provide for the protection of plant and animal species that are currently in danger of extinction (endangered) or those that may become so in the foreseeable future. Section 7 of the ESA requires Federal agencies to conduct informal and formal consultations with the FWS on all proposed actions that may affect any Federally listed or candidate threatened or endangered species. This consultation process is designed to ensure that Federal activities will not jeopardize the continued existence of threatened or endangered species, or on designated areas (critical habitats) that are important in conserving these species.

Federal policy and Reclamation's approach also support the protection and "no net loss" of wetlands. In carrying out land

management responsibilities, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. Executive Order 11990 (Protection of Wetlands) states that agencies shall: "Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative."

Noxious weeds reduce the quantity and quality of forage and wildlife habitat, contaminate food stocks, and restrict waterways. Reclamation will strive to reduce, and eliminate if possible, noxious weeds on all of its lands and assist adjacent landowners (wherever possible) in their efforts at eradicating noxious weeds. It is Reclamation's approach to prepare and implement Integrated Pest Management (IPM) Plans for lands under its jurisdiction. Reclamation also works with local agencies under the guidance of the IPM Plan.

Reclamation's approach to managing soil resources and water quality focuses on reducing soil erosion from various sources or the improper use of hazardous materials. All development and/or Management Actions will consider and respond to this approach.

GOAL NAT 1: Protect, conserve, and as funding is available, enhance wildlife, vegetation, and habitat values on Reclamation lands.

Objective NAT 1.1: Avoid or minimize impacts of RMP actions on Federal and State designated species of special concern, including those Federally listed rare, threatened or endangered (see Reclamation Manual LND P03).

Management Actions

NAT 1.1.1: Comply with Federal Endangered Species Act regarding all pertinent activities by using existing and future information in adaptive management of Federally protected species and their habitat.

NAT 1.1.2: In addition to ESA-protected species, specifically protect State species of special concern, including Idaho Conservation Data Center category S2 and S3 plants and plant communities.

NAT 1.1.3: Conduct TES and rare species surveys as necessary, but prior to the start of construction or allowance of land use activities (e.g., grazing). Any established search protocols will be followed.

NAT 1.1.4: The priority for protection and recovery includes rare, threatened, and endangered species. Therefore, actions that have the potential of adversely affecting sensitive species would only be implemented after appropriate habitat evaluations followed by site clearances, if necessary, to assure that sensitive species and their habitats are not impacted and that recovery efforts are furthered. This would be a two step process through which it would first be determined if suitable habitat types for sensitive species are present in the vicinity of a proposed action. If suitable habitat is present, site clearances following established survey protocols would be conducted before actions are implemented.

Objective NAT 1.2: Protect and enhance resource values, of and for, native species

(plants and animals) on parcels or portions of parcels exhibiting mainly high quality habitat (where native vegetation is dominant).

Management Actions

NAT 1.2.1: Prioritize areas to be protected and enhanced using GIS data, aerial photography, and field verification.

NAT 1.2.2: Implement protection measures and enhancement techniques, such as: access/use restrictions, fencing, buffers and signage, and re-seeding disturbed lands to reduce weeds and establish native plantings.

NAT 1.2.3: Supplement wildland fire management funds to support protection and enhancement efforts.

NAT 1.2.4: Follow Best Management Practices listed below when engaging in activities that may affect native plant and animal species on Reclamation parcels.

NAT 1.2.4.1: Disturbed areas resulting from any construction will be aggressively revegetated.

NAT 1.2.4.2: To the maximum extent practicable, all native existing trees, shrubs, and other vegetation will be preserved and protected from construction operations and equipment except where clearing operations are required for permanent structures, approved construction roads, or excavation operations.

NAT 1.2.4.3: To the maximum extent practicable, all maintenance yards, field offices, and staging areas will be arranged to preserve trees, shrubs, and other vegetation.

NAT 1.2.4.4: Clearing will be restricted to that area needed for construction. In critical habitat areas including, but not limited to, wetlands and riparian areas, clearing may be restricted to only a few feet beyond the areas required for construction.

NAT 1.2.4.5: Stream corridors, wetlands, riparian areas, steep slopes, or other critical environmental areas will not be used for equipment or materials storage or stockpiling; construction staging or maintenance; field offices; hazardous material or fuel storage, handling, or transfer; or temporary access roads, in order to reduce environmental damage.

NAT 1.2.4.6: Excavated or graded materials will not be stockpiled or deposited on or within 100 feet of any steep slopes (defined by industry standards), wetlands, riparian areas, or stream banks (including seasonally active ephemeral streams without woody or herbaceous vegetation growing in the channel bottom), or on native vegetation.

NAT 1.2.4.7: To the maximum extent possible, staging areas, access roads, and other site disturbances will be located in disturbed areas, not in native or naturally occurring vegetation.

NAT 1.2.4.8: The width of all new temporary and permanent roads will be kept to the absolute minimum needed for safety, avoiding wetland and riparian areas where possible. Turnouts and staging areas will not be placed in wetlands.

NAT 1.2.4.9: Construction areas, including storage yards, will limit the amount of waste material and trash accumulations at all times.

NAT 1.2.4.10: All unused materials and trash will be removed from construction and storage sites during the final phase of work. All removed material will be placed in approved sanitary landfills or storage sites, and work areas will be left to conform to the natural landscape.

NAT 1.2.4.11: Upon completion of construction, any land disturbed outside the limits of reservoir pools, permanent roads, and other permanent facilities will be graded to provide proper drainage and blend with the natural contour of the land. Following grading, the disturbed areas will be revegetated using plants native to the area, suitable for the site conditions, and beneficial to wildlife.

NAT 1.2.4.12: Where applicable, Reclamation and contractors will consult with applicable agencies (IDFG, IDPR, NRCS, BLM) to determine the recommended plant species composition, seeding rates, and planting dates.

NAT 1.2.4.13: Native grasses, forbs, shrubs, and trees appropriate for site conditions and surrounding vegetation will be included on a plant list developed during site design. Species chosen for a site will be matched for site drainage, climate, shading, and resistance to erosion, soil type, slope, aspect, and vegetation management goals. Wetland and riparian species will be used in revegetating disturbed wetlands. Upland revegetation shall match the plant list to the site's soil type, topographic position, elevation, and surrounding communities. Local native species will be used in all areas that are not landscaped.

NAT 1.2.4.14: Where appropriate, construction activities that could impact native fish will be undertaken during non-spawning periods.

NAT 1.2.4.15: If native plant communities must be used for access roads or staging areas, site clearances at the appropriate time of year for the species involved will be conducted by qualified biologists to ensure sensitive species are not impacted. Any established search protocols will be followed.

Objective NAT 1.3: Conserve and restore pockets of native vegetation on portions of larger parcels exhibiting mainly non-native vegetation.

Management Actions

NAT 1.3.1: Prioritize pocket areas to be conserved and restored (e.g., GIS data, aerial photography, and field verification).

NAT 1.3.2: Implement conservation measures and restoration techniques, such as: access/use restrictions, fencing, buffers and signage, and re-seeding disturbed lands to reduce weeds and native plantings during appropriate times of the year.

Objective NAT 1.4: Protect, enhance, and/or create new wetland and riparian habitats on Reclamation lands in accordance with existing Federal regulations, Irrigation District needs, and wildlife habitat conservation objectives by pursuing partners

for wetland development and other appropriate means (see Reclamation Manual LND P03).

Management Actions

NAT 1.4.1: Continue to create wetlands which contribute to drain water management and that facilitate closure of groundwater injection wells on a case-by-case basis.

NAT 1.4.2: Work with other interested entities (IDFG, Ducks Unlimited) to improve/increase wetlands habitat value in conjunction with and when compatible with drain water management.

Objective NAT 1.5: Develop, and work with other agencies (BLM, IDFG, IDPR, and various county Weed Control Boards) to implement, an Integrated Pest Management (IPM) Plan for parcels within the RMP area, including: aquatic, terrestrial, and airborne noxious and invasive weed and pest problems (see Reclamation Manual ENV 01-01).

Management Actions

NAT 1.5.1: Develop an IPM plan that incorporates and implements an active weed control program with efforts focused on areas with high habitat values (especially along watercourses).

NAT 1.5.2: Incorporate and implement an active noxious/invasive species transfer identification and prevention program into the IPM Plan. The program will identify potential pathways for the transport of noxious/invasive species or their various parts (seedlings, cuttings, etc.).

NAT 1.5.3: Fund IPM Plan activities, including allocations for partnership agencies.

Objective NAT 1.6: Ensure development and implementation of a comprehensive wildland fire management plan or plans as needed. For example, implementation may include additional agreements related to wildland fire prevention, fuels management, suppression, and rehabilitation, in an effort to protect, restore, and enhance, the natural resource values of RMP lands, as well as public safety-related concerns.

Management Actions

NAT 1.6.1: As needed, prepare and implement a comprehensive wildland fire management plan(s) that incorporates the following elements, in keeping with the RMP objectives:

- Specify entity(ies) responsible for wildland fire suppression response on specific parcels or Fire Management Units which cover RMP lands.
- Establish goals, standards, objectives, and/or desired future conditions for wildland fire management and rehabilitation.
- Incorporate wildland fire management tools for managing fuels into land management activities, such as fire breaks and vegetation management.
- Develop possible long-term prescribed treatment proposals and options to meet land management objectives.

NAT 1.6.2: Fund wildland fire management plan activities, as appropriate, to meet RMP objectives.

NAT 1.6.3: As needed, enter into agreements with managing partners, adjacent land managers, and/or service providers to implement appropriate wildland fire management practices to meet RMP objectives.

Objective NAT 1.7: Work with IDFG to implement habitat protection, enhancement, and restoration activities on Reclamation lands managed jointly with IDFG. [see LUM 3.1]

Management Actions

NAT 1.7.1: See LUM 3.1.1 – 3.1.3

GOAL NAT 2: Protect water quality on all Reclamation lands.

Objective NAT 2.1: Where appropriate, coordinate with Irrigation Districts the use of appropriate parcels for drain water management purposes.

Objective NAT 2.2: Manage the use of fertilizers, herbicides, and pesticides on Reclamation lands, including those leased for agricultural purposes, in a manner that does not adversely affect water quality and is consistent with State and Federal laws. [see NAT 1.5]

Management Actions

NAT 2.2.1: See lease compliance actions LUM 4.10.1 – 4.1.0.3 related to agricultural leases.

Objective NAT 2.3: Minimize the potential for pollutants to enter wetlands and the Snake River from activities on Reclamation lands.

Management Actions

NAT 2.3.1: Follow Best Management Practices when engaging in activities that could result in pollutants being released from Reclamation parcels (note: BMPs do not apply to ongoing exempted agricultural activities), including those listed below.

NAT 2.3.1.1: All Federal and State laws related to control and abatement of water pollution will be complied with. All waste material and sewage from construction activities or Project-related features will be disposed of according to Federal and State pollution control regulations.

NAT 2.3.1.2: Construction contractors may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit as established under Public Law 92B500 and amended by the Clean Water Act (Public Law 95B217).

NAT 2.3.1.3: Construction specifications shall require construction methods that will prevent entrance or accidental spillage of pollutants into flowing or dry watercourses and underground water sources. Potential pollutants and wastes include refuse, garbage, cement, concrete, sewage effluent, industrial waste, oil and other petroleum products, aggregate processing tailings, mineral salts, drilling mud, and thermal pollution.

NAT 2.3.1.4: Eroded materials shall be prevented from entering streams or watercourses during dewatering activities associated with structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses.

NAT 2.3.1.5: Any construction wastewater discharged into surface waters will be essentially free of settling material. Water pumped from behind cofferdams and wastewater from aggregate processing, concrete batching, or other construction operations shall not enter streams or watercourses without water quality treatment. Turbidity control methods may include settling ponds; gravel-filter entrapment dikes; approved flocculating processes not harmful to fish or other aquatic life; recirculation systems for washing aggregates; or other approved methods.

NAT 2.3.1.6: Any riprap shall be free of contaminants and not contribute significantly to the turbidity of the reservoir.

NAT 2.3.1.7: Appropriate controls to reduce stormwater pollutant loads in post-construction site runoff shall be followed. The appropriate facilities shall be properly designed, installed, and maintained to provide water quality treatment for runoff originating from all recreational facilities.

Objective NAT 2.4: Provide adequate sanitation and waste management facilities at developed recreation sites (e.g., restrooms, trash containers, and RV dump stations, as appropriate) to protect water quality.

Management Actions

NAT 2.4.1: Follow Best Management Practices when regarding sanitation and waste management facilities, including those listed below.

NAT 2.4.1.1: All parking lots, boat ramps and associated areas shall be designed to promote efficient vehicle and boat traffic to prevent congestion and pollution.

NAT 2.4.1.2: Waste facilities shall be connected, whenever possible, to sanitary sewer systems instead of septic tanks to avoid water quality problems from failed tanks.

GOAL NAT 3: Control soil erosion in priority areas where it causes concern for water quality and damage to resources and facilities.

Objective NAT 3.1: Implement an effective erosion control program (standards, guidelines, and BMPs) in all construction activities and maintenance programs on Reclamation lands while considering program effects on other resources (natural, scenic, cultural).

Management Actions

NAT 3.1.1: Follow Best Management Practices when engaging in activities that may cause soil erosion on Reclamation parcels, including those listed below.

NAT 3.1.1.1: The design and construction of facilities will employ applicable recognized BMPs to prevent possible soil erosion and subsequent water quality impacts.

NAT 3.1.1.2: The planting of native grasses, forbs, trees, or shrubs beneficial to wildlife, or the placement of riprap, sand bags, sod, erosion mats, bale dikes, mulch, or excelsior blankets will be used to prevent and minimize erosion and siltation during construction and during the period needed to

reestablish permanent local native vegetative cover on disturbed sites located outside of landscaped areas. Appropriate landscaping plants and materials will be used for such purposes in landscaped areas.

NAT 3.1.1.3: Final erosion control and site restoration measures will be initiated as soon as a particular area is no longer needed for construction, stockpiling, or access. Clearing schedules will be arranged to minimize exposure of soils.

NAT 3.1.1.4: Cuts and fills for relocated and new roads will be sloped to facilitate revegetation.

NAT 3.1.1.5: Soil or rock stockpiles, excavated materials, or excess soil materials will not be placed near sensitive habitats, including water channels, wetlands, riparian areas, sites with rare and sensitive-plant species, and on native or naturally occurring vegetation, where they may erode into these habitats or be washed away by high water or storm runoff. Waste piles will be revegetated using suitable native species after they are shaped to provide a natural appearance.

NAT 3.1.2: Provide BMPs to contractors, managing partners, permit holders, and others conducting authorized construction activities; and require full compliance through inclusion and contract/permit specifications.

5.2.3 Cultural Resources (CUL)

Cultural resources are historic properties that reflect our Nation's heritage. Historic properties include prehistoric and historic archeological sites, buildings, traditional cultural properties (TCPs), and historically significant places that are eligible for inclusion in the National Register of Historic Places (National Register). TCPs are National Register-eligible properties that have special heritage value to contemporary communities (usually Indian communities) because of association with cultural practices or beliefs that are important in maintaining the cultural identify of that community.

Federal law requires Federal agencies to identify, evaluate, and appropriately manage National Register-eligible historic properties that are affected by their actions or are located on lands they administer. A list of these laws is provided in Appendix B. Agencies are required to assess resource significance, evaluate impacts on significant sites, and select resource management actions in consultation with the SHPO, the Advisory Council on Historic Preservation (the Advisory Council), and other affected or interested parties. Indian tribes must be consulted where cultural resources of concern to a tribe could be present, or where human burials or other Native American Graves Protection and Repatriation Act (NAGPRA) cultural items affiliated with a tribe could be affected by agency actions. Reclamation implements these laws using processes defined in regulations (particularly 36 CFR 800 for the National Historic Preservation Act [NHPA] and 45 CFR 10 for NAGPRA. Reclamation Manual LND 02-01 (Cultural Resource Management) directs the agency to implement cultural resource management actions in a positive manner that fulfills the spirit, as well as the letter, of the law.

The requirements of Federal law and Reclamation cultural resource management policy also apply to other parties who manage or use Reclamation lands under a permit, lease, use agreement, or other legal

instrument. Those parties are responsible for notifying Reclamation of proposed actions on those lands; implementing actions to identify and evaluate resources that could be affected by their use or action; and implementing actions to protect National Register-eligible resources or mitigating unavoidable effects to eligible sites resulting from their use or actions. Reclamation is responsible for defining the necessary identification, evaluation, and management or mitigation actions, and for ensuring that managing partners, lessees, and permittees observe these terms and conditions and act as responsible stewards of the resources on those lands.

Reclamation's policy is to avoid or minimize adverse effects to National Register-eligible historic properties whenever possible. If adverse effects are unavoidable, Reclamation typically mitigates the adverse effects through a site documentation or data recovery program that has been developed in consultation with the SHPO and other interested parties, and formalized through a memorandum of agreement. For impacted TCPs, Reclamation would work with affected Indian tribes to identify means to minimize impacts, and seek to mitigate damaging impacts when mitigation is possible.

The following Goals and Objectives outline actions that Reclamation has determined are necessary to meet the agency's cultural resource management responsibilities under the law. Reclamation will continue to use consultative processes defined in 36 CFR 800 to determine site eligibility, impacts from new actions or existing uses, and appropriate treatment.

Goal CUL 1: Seek to protect and preserve cultural resources, including prehistoric and historic-period archaeological sites and traditional cultural properties.

Objective CUL 1.1: In accordance with Section 106 of the National Historic Preservation Act (NHPA) seek to protect National Register-eligible sites from impacts from new undertakings.

Management Actions

CUL 1.1.1: Complete pedestrian archeological surveys when ground-disturbing actions are proposed in unsurveyed locations. Complete site evaluation actions to determine National Register eligibility to sites threatened by new actions, land use, or project operations, and address impacts to eligible sites.

CUL 1.1.2: Complete tribal consultations, as necessary, to determine if TCPs are present in areas of new ground-disturbing actions, or in or near focused use areas. If present, assess and address impacts from new actions or existing use.

CUL 1.1.3: If Indian tribes identify culturally important resources within new development areas, avoid adverse impacts to those resource locations when avoidance will accomplish broader agency responsibilities, is cost effective, and lies within Reclamation's authority.

CUL 1.1.4: In the event of discovery of human remains of Indian origin, complete protective actions and tribal notification and consultation actions per 43 CFR 10.

CUL 1.1.5: Design facilities to avoid or minimize cultural resource damage.

Objective CUL 1.2: In accordance with Section 110 of the NHPA implement proactive management of cultural resources, focusing on protecting identified resources from damage.

Management Actions

CUL 1.2.1: Include cultural resource protection strategies in IDPR Historic Preservation and Maintenance Plan. [see LUM 3.2.2 and REC 1.1.1]

Objective CUL 1.3: Increase awareness of cultural resources compliance and protection requirements among resource management partners.

Management Actions

CUL 1.3.1: Develop guidelines/ procedures and provide training for IDPR staff, IDFG staff, lease holders, and other managing partners to increase awareness of the NHPA and other cultural resource statutory requirements.

Objective CUL 1.4: With local partners provide opportunities for public education on area prehistory and history, including the importance of and requirements for protecting these resources.

Management Actions

CUL 1.4.1: Prepare and provide educational information about resource values and area history at appropriate locations (i.e., Lake Walcott State Park).

5.2.4 Indian Sacred Sites (ISS)

No Indian sacred sites have been identified on Reclamation lands within the Minidoka North Side RMP Study Area. Reclamation will avoid impacts to any Indian sacred sites if they are identified in the future.

***Goal ISS 1:* Comply with requirements of Executive Order 13007 (Indian Sacred Sites).**

Objective ISS 1.1: Seek to avoid damage to Indian sacred sites (when present and identified), when avoidance is consistent with accomplishing Reclamation's mission and larger public responsibilities.

Management Actions

ISS 1.1.1: Consult with Indian tribes when it appears that sacred sites might be present in areas of new ground-disturbance, or in locations where sacred sites might be damaged by existing public land uses. If present, seek to avoid damages and maintain access when implementing new actions.

Objective ISS 1.2: Provide for access by traditional religious practitioners to sacred sites, when consistent with mission.

Management Actions

ISS 1.2.1: Consult when it appears that sacred sites might be present in areas of focused public use. If present, seek to resolve impacts and maintain access.

5.2.5 Indian Trust Assets (ITA)

Goal ITA 1: Protect and conserve Indian Trust Assets as specified in applicable Secretarial Orders.

Objective ITA 1.1: Consult with appropriate tribes on actions that may affect Indian Trust Assets.

Management Actions

ITA 1.1.1: Use the NEPA process to assess potential impacts to ITAs that may exist.

5.2.6 Recreation and Access (REC)

Reclamation's approach to providing and maintaining public recreational opportunities, facilities, and interpretive programs is to work with non-Federal managing partners in accordance with an approved RMP. The RMP is intended to protect the health and safety of the users, protect land and water resources from environmental degradation, and protect cultural resources from damage. Recreation facilities under Reclamation jurisdiction will be operated and maintained in a safe and healthful manner and be universally accessible.

All new construction is required to be 100 percent accessible to persons with disabilities in accordance with current Federal accessibility standards. These standards include (but are not limited to) parking lots and spaces, access routes, camping sites, restrooms, concessions, entrance booths, trails, interpretive displays, and all signage.

The principles in Public Law 89-72, Federal Water Projects Recreation Act of 1965, as amended by Title 28 of Public Law 102-575, will continue to be adhered to for recreation-related development and management considerations. Basically, Title 28 states that if a non-Federal public entity has agreed to manage recreation on Reclamation lands, Reclamation may share development costs for up to 50 percent of the total cost.

Reclamation's non-Federal public entity managing partner at Lake Walcott State Park is IDPR, and will continue to be so in the future. All other parcels are managed by Reclamation, except for those specific parcels where IDFG has management jurisdiction related to wildlife resources. In lieu of a qualifying partner on parcels outside of the State Park, it is Reclamation's policy, where deemed necessary, to provide and maintain minimum basic facilities at recreation sites.

Where Reclamation lands may be directly managed by others for recreation purposes, Reclamation shall exercise oversight responsibility to ensure that those management entities fulfill all aspects of the approved RMP. All contractual agreements with these management entities must comply with Federal laws and regulations concerning natural and cultural resource protection.

Visitor information is an important management responsibility that is not readily apparent but instrumental in providing a quality recreation experience and contributing to an informed visitor. An informed public will help protect and enhance the unique recreational and environmental attributes of the area. It is Reclamation's approach to assist with the development of interpretive programs to educate the public on resources and to provide information to visitors to improve their experience in the area, as well as to increase their awareness of natural and cultural resource values and public health and safety protection.

GOAL REC 1: Work with IDPR and FWS in continuing to provide adequate facilities at Lake Walcott State Park and the surrounding area while affording the public a quality recreational experience consistent with natural and cultural resource objectives.

Objective REC 1.1: Coordinate with IDPR in development on any expansion plans to accommodate increased demand at Lake Walcott.

Management Actions

REC 1.1.1: Work with IDPR to prepare and implement a Historic Preservation and Maintenance Plan for the park outlining vegetation preservation/protection, use areas, hardscape areas, and other pertinent information and guidance.

Objective REC 1.2: Work with IDPR or other appropriate managing entity by establishing an agreement for the management of the Bishop's Hole site.

Management Actions

REC 1.2.1: Implement management strategies at Bishop's Hole to enhance the visitor experience and increase public safety and security, including providing minimum basic facilities (e.g., organized access and parking, accessible toilet facility) in coordination with the results and implementation of the spillway study (see Reclamation Manual LND P03 and PN 04-01).

REC 1.2.2: Increase management oversight at Bishop's Hole and surrounding area where ad hoc uses are occurring.

REC 1.2.3: Seek public non-Federal managing partner for management of the Bishop's Hole day use site.

REC 1.2.4: Monitor use and conditions and adjust access or use levels to protect resources.

Objective REC 1.3: Assess, and where appropriate support, viable concession services at the State Park and/or appropriate sites; with concession management to follow Reclamation's policy.

Management Actions

REC 1.3.1: Consider compatible concession/recreation permits on a case-by-case basis and authorize in compliance with Reclamation policy (see Reclamation Manual LND P-02 and LND 04-01).

Objective REC 1.4: Pursue enhancement of fishing access downstream of Minidoka Dam subject to security concerns.

Management Actions

REC 1.4.1: Explore opportunities with a managing partner to develop enhanced fishing access on parcels along the Snake River.

GOAL REC 2: Allow for dispersed recreational activities on Reclamation lands, consistent with Reclamation Project purposes, regulations, and natural and cultural resource objectives.

Objective REC 2.1: Prepare and conduct an access management plan in coordination with other affected agencies and managing partners to determine where and how vehicular access will be allowed on Reclamation lands.

Management Actions

REC 2.1.1: Develop and implement the following elements into an Access Management Plan for all Reclamation parcels:

- Signs
- Fencing of parcels and placement of barriers
- Maps and brochures showing areas of access and public education

interests, including open nearby BLM lands and regulations

- Established vehicle parking areas
- Criteria for which parcels continue to be allowed for public vehicular access
- Public information process (media announcements, informative meetings, etc.)
- Monitoring program

Objective REC 2.2: Continue to allow non-vehicular access on all parcels (except for those specifically closed for such use), and where appropriate improve opportunities with a non-Federal, public entity managing partner (i.e., hunting, fishing, and trapping).

Management Actions

REC 2.2.1: Monitor non-vehicular access and modify as necessary to protect resources.

Objective REC 2.3: Continue to allow ad hoc day use activities, and where appropriate, improve opportunities with a qualifying partner for non-consumptive recreational uses (e.g., nature appreciation, dispersed camping, wildlife watching, etc.) on suitable parcels.

Management Actions

REC 2.3.1: Actively seek a non-Federal managing partner to provide more active management and appropriate facilities at selected day use sites outside the park boundaries.

REC 2.3.2: Monitor ad hoc day use activities and modify as necessary to protect resources.

Objective REC 2.4: Where appropriate continue to allow ad hoc camping to occur consistent with natural and cultural resource objectives.

Management Actions

REC 2.4.1: Increase management oversight at areas where ad hoc camping is occurring to protect resources and avoid land use conflicts.

REC 2.4.2: Prohibit any developed camping outside of Lake Walcott State Park.

Objective REC 2.5: Pursue a relationship and work with a qualifying partner to develop feasible opportunities for developing and maintaining non-motorized recreational trails on appropriate parcels, including interpretive trails focused on natural and cultural resources, as well as tying into IDPR/FWS plans for additional trail development in the Lake Walcott area.

Management Actions

REC 2.5.1: Actively seek a non-Federal managing partner to provide more opportunities for developing and maintaining non-motorized recreational trails.

REC 2.5.2: Monitor trail use and modify as necessary to protect resources.

Chapter 6

Implementation Program

6.1 Introduction

The success of this RMP will ultimately be measured by the degree to which it is implemented. This chapter provides a framework necessary to follow through with the Goals and Objectives, and implement the Management Actions presented in Chapter 5. This chapter consists primarily of a series of tables (Tables 6.1-1 through 6.1-6, presented at the end of this Chapter) that reiterate, prioritize, establish sequencing, identify responsibility for implementation, and designate key funding for each Management Action. The purpose of these tables is to assist resource managers, staff, and managing partners in implementing specific actions required to achieve the RMP's Goals and Objectives. These tables also provide a convenient mechanism to track implementation progress on a regular (annual) basis over the 15-year life of the plan.

6.2 Implementation Components

It should be noted that implementation in general for the Minidoka North Side RMP is dependant on Federal funding and in many cases is also dependant on cost share requirements. The timing indicated in Tables 6.2-1 through 6.2-6 is an approximation only and will depend on the availability of Federal and non-Federal cost share funds. Implementation of the RMP is organized into a series of specific Management Actions for each of the issues associated with Land Use, Management; Natural Resources; Cultural Resources; Indian Sacred Sites; Indian Trust Assets; and Recreation and Access. The tables present a structure that addresses the key components of implementation. Each component is listed in a separate column in these tables and explained below.

6.2.1 Management Actions

Management Actions are specific action items intended to implement each Objective, consistent with Goals listed in Chapter 5. To avoid repetition with Chapter 5 in the tables, Management Actions are listed by number and a full description is provided.

6.2.2 Prioritization

Each Management Action is prioritized in a simple hierarchy ranging from "High" to "Low." High priority Management Actions are identified as critical to the success of this RMP. Management Actions identified as Medium priority are still considered important, but not critical. Low priority Management Actions are those that should be implemented if resources are available. Mandatory actions are listed as "Required" elements.

6.2.3 Related Management Actions

Other related or linked Management Actions for the same resource topic are identified in Column 3, as appropriate.

6.2.4 Timing and Sequencing

All Management Actions listed in the tables are intended to be implemented during the life of this 15-year plan. The timing column identifies the specific timeframe, by indicating which year the action is anticipated to commence. Management Actions to be implemented continuously, annually, or on an as-needed basis are also indicated.

6.2.5 Lead Agency

A single agency with lead responsibility for implementation of each Management Action is listed (underlined) in Column 5. Agencies playing support roles are also listed in this column (not underlined). In addition to Reclamation, responsible agencies include: IDFG, IDPR, Irrigation Districts, and others.

6.2.6 Funding

Column 6 lists anticipated sources of funding for each Management Action. For example, potential funding and authority for recreation planning, enhancement, and development is from Reclamation's Title 28 cost sharing program with its partnering agencies.

6.2.7 Monitoring

Plan implementers are expected to monitor implementation progress through the life of the RMP. This column describes the type and timing of each specific Management Action to be implemented (as appropriate and needed).

6.3 Amending and Updating the RMP

6.3.1 Amending Information in the RMP

The RMP will be reviewed and amended on an as-needed basis to reflect changing conditions, new information, and budgetary realities. Much of this is expected to occur in response to activities related to monitoring actions (e.g., water quality) and facilities development when it occurs (e.g., day use area improvements, trails development, etc.). Any major changes or amendments to the RMP would require additional public involvement and NEPA analysis.

6.3.2 Updating the RMP

This RMP has an intended life of 15 years. Therefore, a thorough review will be needed to the RMP around 2020. Plan updates or plan amendments can occur whenever conditions warrant. These will require NEPA analysis and ample opportunity for public involvement, and agency and Tribal coordination.

Table 6.2-1. Management Actions for Land Use & Management (LUM).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
Wildlife, Vegetation, and Habitat Management						
LUM 1.1.1: Describe and show both the Reclamation Zone and the specific areas closed to public access for security purposes on publicly distributed materials and signage.	H	LUM 1.1.2	2006	Reclamation	Reclamation	NA
LUM 1.1.2: Notify the public through appropriate means if the closed area around the dam is modified.	H	LUM 1.1.1	2006	Reclamation	Reclamation	NA
LUM 1.2.1: Consider the extraction/storage of sand, gravel, and rock on Reclamation parcels on a case-by-case basis where it does not conflict with other Reclamation needs or priority natural and cultural values.	L	LUM 1.2.2	As Requested	Reclamation	Reclamation/ Lessee	As per contract/ lease
LUM 1.2.2: Ensure that responsible parties implement all applicable Best Management Practices in the course of extracting/storing materials from Reclamation parcels.	R	LUM 1.2.1	Ongoing	Reclamation	Reclamation/ Lessee	As per contract/ lease
LUM 1.3.1: Consult with Irrigation Districts or managing partners prior to issuance of easements and crossing agreements (see Reclamation Manual LND 08-01, paragraphs 3.H and 4.F).	H		As Needed	Reclamation, Irrigation Districts	NA	NA
LUM 1.4.1: Provide signage as appropriate to limit access on operations and maintenance roads.	H	LUM 1.4.2, 1.4.3	Initiate Year 2005	Reclamation, Irrigation Districts	Reclamation/ Irrigation Districts	NA
LUM 1.4.2: Enforce operations and maintenance road access restrictions through periodic monitoring and follow through related to the prosecution of violators.	M	LUM 1.4.1, 1.4.3	2005	Reclamation, Irrigation Districts	Reclamation/ Irrigation Districts	Periodic
LUM 1.4.3: Work with local agencies to ensure operations and maintenance roads are not identified as access to private property	H	LUM 1.4.1, 1.4.2	Ongoing	Reclamation, Counties, Cities	NA	NA
LUM 1.5.1: Provide counties/cities with applicable Reclamation facility, property, and mapping information (i.e., lot splits) in an effort to coordinate working with their planning, zoning, and permitting processes.	H	LUM 1.5.2	Ongoing	Reclamation, Counties, Cities	NA	NA
LUM 2.1.1: Follow Reclamation policy and criteria provided in Appendix D (Authorities & Methods for Disposing of Minidoka North Side Lands) for parcels determined suitable for transfer or disposal	R		Ongoing	Reclamation	NA	NA
LUM 2.2.1: Develop prescriptions and lease limitations on parcels considered for grazing.	H	LUM 2.2.2	2005	Reclamation, BLM, NRCS	Reclamation	NA
LUM 2.2.2: Consider new grazing leases on designated parcels that do not affect operations and maintenance, and are based on protection and/or improvement of natural and cultural resource values and water quality concerns.	H	LUM 2.2.1	Initiate Year 2005	Reclamation	NA	NA

Table 6.2-1. Management Actions for Land Use & Management (LUM).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
LUM 2.2.3: Consider new agricultural leases only when they contribute to the closure of drain wells, where water rights are legally appropriated, and where there would be no impacts to natural and cultural resources.	L		As Needed	Reclamation	NA	NA
LUM 3.1.1: Work with IDFG to prepare overall vision and goals for managing appropriate Reclamation parcels and framework for a new management agreement.	H	LUM 3.1.2, 3.1.3	2005	Reclamation, IDFG	NA	NA
LUM 3.1.2: Determine appropriate parcels, or portions of parcels to be managed by IDFG, and prepare management criteria and objectives for each specific parcel.	H	LUM 3.1.1, 3.1.3	2005	Reclamation, IDFG	NA	NA
LUM 3.1.3: Perform annual implementation planning meetings and monitoring to see that management criteria are being followed and objectives are being met.	M	LUM 3.1.1, 3.1.2	Annual	Reclamation, IDFG	NA	Annual
LUM 3.2.1: Coordinate with IDPR in the preparation and implementation of a Historic Preservation and Maintenance Plan for Lake Walcott State Park outlining vegetation preservation/protection, use areas, hardscape areas, and other pertinent park guidance.	H	LUM 3.2.2	Initiate Year 2006	Reclamation, IDPR	NA	NA
LUM 3.2.2: Update the Reclamation/IDPR agreement regarding IDPR's management of Lake Walcott State Park incorporating implementation of measures outlined in the park's Historic Preservation and Maintenance Plan. [see CUL 1.2.1 and REC 1.1.1]	H	LUM 3.2.1	Following completion of LUM 3.2.1	Reclamation, IDPR	NA	NA
LUM 3.2.3: Continue coordination efforts with FWS related to their management of Minidoka NWR, where needed.	M	LUM 3.2.4	Ongoing	Reclamation, FWS	NA	NA
LUM 3.2.4: Amend FWS and/or IDPR agreements to incorporate coordinating activities related to managing Reclamation parcels adjacent to the refuge and park, if needed.	L	LUM 3.2.3	If Needed	Reclamation, FWS, IDPR	NA	NA
LUM 4.1.1: Prepare new law enforcement agreements with interested entities focused on enforcing laws and Reclamation policies to protect natural and cultural resources and provide for security and public safety on Reclamation lands.	H	LUM 4.1.2	2005	Reclamation, Others	Reclamation	NA
LUM 4.1.2: Define and incorporate specific law enforcement needs and purposes into agreements with other entities providing law enforcement services on Reclamation lands.	H	LUM 4.1.1	2005	Reclamation, Others	Reclamation	NA
LUM 4.1.3: Monitor law enforcement activities and changing needs over time to adjust purpose and priorities for providing law enforcement on Reclamation lands.	H	LUM 4.1.4	Ongoing	Reclamation	Reclamation	As Required
LUM 4.1.4: Provide funding for law enforcement of Reclamation lands	H	LUM 4.1.3, 4.5.4	Ongoing	Reclamation	Reclamation	NA

Table 6.2-1. Management Actions for Land Use & Management (LUM).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
LUM 4.2.1: Work with counties to pass ordinances aimed at improving law enforcement on Reclamation lands.	H	LUM 4.1.2, 4.1.3	Ongoing	Reclamation, Counties	NA	NA
LUM 4.2.2: Seek adjacent landowner and citizen participation in improving law enforcement on Reclamation lands.	H	LUM 4.4.2, 4.5.5	Ongoing	Reclamation, Others	NA	NA
LUM 4.2.3: Participate in Crime Witness program wherein rewards are offered for information leading to the arrest and conviction for illegal dumping, vandalism, theft, waste, fraud, or harm to Reclamation personnel (see Appendix E).	H	LUM 4.4.7, 4.5.5	Ongoing	BPA, Reclamation	BPA	NA
LUM 4.3.1: See NAT 1.6.1						
LUM 4.3.2: Provide funding for fire-related activities on Reclamation lands, subject to appropriations.	R		Ongoing	Reclamation	Reclamation	NA
LUM 4.4.1: Establish immediate, short- and long-term priorities for addressing trespass/encroachments on Reclamation lands.	H		Ongoing	Reclamation	NA	NA
LUM 4.4.2: Complete surveying of sites to determine the extent of trespasses/encroachments.	H	LUM 4.4.3, 4.5.2	Ongoing	Reclamation	NA	NA
LUM 4.4.3: Update Reclamation's GIS database (and continue to revise as needed) incorporating surveys and other relevant information.	H	LUM 4.4.2, 4.5.3	Ongoing	Reclamation	Reclamation	NA
LUM 4.4.4: Increase enforcement activities related to trespass and unauthorized use of Reclamation lands, including notifications, fines, removal, etc.	H	LUM 4.1.4, 4.2.1	Ongoing	Reclamation	Reclamation	NA
LUM 4.4.5: Work with adjacent landowners to eliminate existing trespass/encroachments and rehabilitate lands, where appropriate.	H	LUM 4.2.2, 4.5.5	Ongoing	Reclamation, Adjacent Landowners	Reclamation	NA
LUM 4.4.6: Develop and implement a monitoring program aimed at preventing future trespasses/encroachments on Reclamation parcels.	H		Ongoing	Reclamation	Reclamation	NA
LUM 4.4.7: Use the Crime Witness program to offer rewards to individuals who report unauthorized or illegal use of Reclamation lands, and which lead to arrest or levied fines.	M	LUM 4.2.3	Ongoing	BPA, Reclamation, Public	Reclamation	NA
LUM 4.5.1: Establish immediate, short- and long-term priorities for addressing dump sites on Reclamation lands, and issue contracts for cleanup as needed.	H		Ongoing	Reclamation	Reclamation	NA
LUM 4.5.2: Complete surveying of sites to determine the extent of dump sites, specific problems associated with particular uses, and characterization of contents in an attempt to determine responsible party(ies).	H	LUM 4.4.2, 4.5.3	Ongoing	Reclamation	Reclamation	NA

Table 6.2-1. Management Actions for Land Use & Management (LUM).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
LUM 4.5.3: Update Reclamation's GIS database (and continue to revise as needed) incorporating illegal dump sites and other relevant information.	H	LUM 4.4.2, 4.4.3	Ongoing	Reclamation	Reclamation	NA
LUM 4.5.4: Increase enforcement activities related to dump sites of Reclamation lands, including notifications, fines, removal, etc.	H	LUM 4.1.4	Ongoing	Reclamation	Reclamation	NA
LUM 4.5.5: Work with the public to enlist and form a "watchdog" group aimed at catching perpetrators; include incentives such as rewards through participation in the Crime Witness program. [see LUM 4.2.3]	H	LUM 4.2.2, 4.2.3, 4.4.5	Initiate Year 2005	Reclamation	Reclamation	NA
LUM 4.5.6: Develop and implement a monitoring program aimed at preventing future unauthorized uses on Reclamation parcels.	H	LUM 4.1.4	Ongoing	Reclamation	Reclamation	Periodic
LUM 4.6.1: Prepare and post signs at areas with past evidence of ORV use noting Reclamation's ORV regulation.	H		Initiate Year 2005	Reclamation, Irrigation Districts	Reclamation	Ongoing
LUM 4.6.2: Post Reclamation's ORV regulation signs at appropriate locations on fences or at other boundary demarcations.	H		Initiate Year 2005	Reclamation, Irrigation Districts	Reclamation	Ongoing
LUM 4.6.3: Describe Reclamation's ORV regulation in all appropriate future pamphlets, publications, public announcements.	H		As Needed	Reclamation	Reclamation	Ongoing
LUM 4.7.1: Design facilities to complement and be subordinate to the surrounding landscape wherever feasible.	R		As Needed	Reclamation	Reclamation	As per contract specs
LUM 4.7.2: Immediately revegetate disturbed areas resulting from any construction-related activities.	R		As Needed	Reclamation	Reclamation	As per contract specs
LUM 4.7.3: Preserve and protect all existing trees, shrubs, and other naturally occurring vegetation from construction operations and equipment except where clearing operations are required for permanent structures, approved construction roads, or excavation operations.	R		As Needed	Reclamation	Reclamation	As per contract specs
LUM 4.7.4: Design all maintenance yards, field offices, and staging areas to preserve trees, shrubs, and other vegetation wherever feasible.	R		As Needed	Reclamation	Reclamation	As per contract specs
LUM 4.8.1: Monitor any land disturbing activities on Reclamation lands to ensure minimal impacts to adjacent lands.	R		Ongoing	Reclamation	Reclamation	As Required
LUM 4.9.1: Using Reclamation sign guidelines, post signs at areas with past evidence of access-related conflicts noting Reclamation's ownership and road restrictions.	H		Ongoing	Reclamation	Reclamation	NA
LUM 4.9.2: Describe and show access-restricted roads in the Access Management Plan (see REC 2.2.1).	H		As Needed	Reclamation	Reclamation	NA

Table 6.2-1. Management Actions for Land Use & Management (LUM).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
LUM 4.10.1: Establish and implement grazing and agricultural lease monitoring schedules and protocols.	H		2006	Reclamation, Lessee	NA	NA
LUM 4.10.2: Perform reviews of each leased parcel as per monitoring schedule to ensure compliance with lease provisions and effect on lands for grazing, noting field observations from each visit.	H	LUM 4.10.1	2006	Reclamation, Lessee	Reclamation	Annual
LUM 4.11.1: Post Reclamation's policy related to concentrated shooting/target practice on signs at appropriate locations, including on fences or at other boundary demarcations, and at areas with past evidence of concentrated shooting/target practice.	H		Ongoing	Reclamation	NA	NA
LUM 4.11.2: Describe Reclamation policy in all appropriate future pamphlets, publications, public announcements.	H		As Needed	Reclamation	NA	NA
LUM 5.1.1: Clearly mark the areas closed to the public in the vicinity of Minidoka Dam on pamphlets, signs, fences, and interpretive kiosks; provide a note stating that the boundaries of closed areas are subject to change.	H	LUM 1.1.1	Ongoing	Reclamation	NA	NA
LUM 5.2.1: Inventory existing signs and determine a prioritized list of additional sign needs.	H	LUM 5.3.1	2005	Reclamation	NA	NA
LUM 5.2.2: Design, purchase, construct, and install signs as funding allows and according to the prioritized list.	H	LUM 5.2.1	2005	Reclamation	NA	NA
LUM 5.3.1: Inventory existing boundary fence and sign locations and determine a prioritized list of additional needs.	H	LUM 5.2.1	2005	Reclamation	NA	NA
LUM 5.3.2: Install additional boundary signs and fencing as funding allows and according to the prioritized list.	H	LUM 5.3.1	2005	Reclamation	NA	NA
LUM 5.4.1: Work with Federal, State, and local agencies to prepare interpretive information for visitors to Lake Walcott State Park, Minidoka NWR, Bishop's Hole, and other appropriate locations.	M		2006	Reclamation, IDPR, IDFG, FWS, Others	Reclamation, cost share with partners	NA
LUM 6.1.1: Track and annually update progress on the Management Actions in the RMP implementation schedule.	H		Annual	Reclamation	NA	Annual
LUM 6.1.2: Conduct annual meetings with managing partners to track progress in implementing the RMP and set priorities for the upcoming year	H		Annual	Reclamation, Managing Partners	NA	Annual

Table 6.2-1. Management Actions for Land Use & Management (LUM).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
LUM 6.2.1: Pursue implementation through a variety of sources including, but not limited to: • Title 28 cost share program for recreation enhancements, which allows a 50 percent Federal contribution to match a 50 percent non-Federal managing partner contribution (see Reclamation Manual LND 01-01, paragraph 2). • Title 28 cost share program for fish and wildlife enhancement, improvement, and restoration projects, which allows a 75 percent Federal contribution to match a 25 percent non-Federal managing partner contribution (see Reclamation Manual LND 01-01, paragraph 2). • Idaho State Waterway or Recreational Vehicle Grants. • Land and Water Conservation Fund Grants. • Other Federal, State, and local cost share and grant programs.	H		Ongoing	Reclamation, Others	Reclamation, cost share	NA
LUM 6.3.1: Provide news releases to the local media for major projects and accomplishments (e.g., trash removal, dump cleanup, new interpretive information, etc.). Post or provide implementation information for major actions at public sites.	H		As Needed	Reclamation	Reclamation	NA

NOTES:
- [1]Underline denotes primary responsibility.
- NA = Not applicable.

Table 6.2-2. Management Actions for Natural Resources (NAT).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
Land-Based Sites and Facilities						
NAT 1.1.1: Comply with Federal Endangered Species Act regarding all pertinent activities by using existing and future information in adaptive management of Federally protected species and their habitat.	R		As Needed	Reclamation	Reclamation	As Required
NAT 1.1.2: In addition to ESA-protected species, specifically protect State species of special concern, including Idaho Conservation Data Center category S2 and S3 plants and plant communities.	R		As Needed	Reclamation	Reclamation	As Required
NAT 1.1.3: Conduct TES and rare species surveys as necessary, but prior to the start of construction or allowance of land use activities (e.g., grazing). Any established search protocols will be followed.	R		As Needed	Reclamation	Reclamation	As Required

Table 6.2-2. Management Actions for Natural Resources (NAT).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
NAT 1.1.4: The priority for protection and recovery includes rare, threatened, and endangered species. Therefore, actions that have the potential of adversely affecting sensitive species would only be implemented after appropriate habitat evaluations followed by site clearances, if necessary, to assure that sensitive species and their habitats are not impacted and that recovery efforts are furthered. This would be a two step process through which it would first be determined if suitable habitat types for sensitive species are present in the vicinity of a proposed action. If suitable habitat is present, site clearances following established survey protocols would be conducted before actions are implemented.	R		As Needed	Reclamation	Reclamation	As Required
NAT 1.2.1: Prioritize areas to be protected and enhanced using GIS data, aerial photography, and field verification.	H	NAT 1.2.2	Initiate Year 2005	Reclamation, IDFG	Reclamation	NA
NAT 1.2.2: Implement protection measures and enhancement techniques, such as: access/use restrictions, fencing, buffers and signage, and re-seeding disturbed lands to reduce weeds and establish native plantings.	H	NAT 1.2.1	Ongoing	Reclamation, IDFG, BLM, Others	Reclamation	NA
NAT 1.2.3: Supplement wildland fire management funds to support protection and enhancement efforts.	M		Initiate Year 2007	Reclamation	Reclamation	NA
NAT 1.2.4: Follow listed Best Management Practices (see Chapter 5) when engaging in activities that may affect native plant and animal species on Reclamation parcels.	R		As Needed	Reclamation, Contractors	Reclamation	As per contract specs
NAT 1.3.1: Prioritize pocket areas to be conserved and restored (e.g., GIS data, aerial photography, and field verification).	H	NAT 1.3.2	2005	Reclamation, IDFG	Reclamation	NA
NAT 1.3.2: Implement conservation measures and restoration techniques, such as: access/use restrictions, fencing, buffers and signage, and re-seeding disturbed lands to reduce weeds and native plantings during appropriate times of the year.	M	NAT 1.3.1	Ongoing	Reclamation, IDFG, BLM, Others	75/25 cost share	As Required
NAT 1.4.1: Continue to create wetlands which contribute to drain water management and that facilitate closure of groundwater injection wells on a case-by-case basis.	H		Complete by 12/2006	Reclamation, A&B ID	Reclamation, A&B ID	As Needed
NAT 1.4.2: Work with other interested entities (IDFG, FWS, Ducks Unlimited) to improve/increase wetlands habitat value in conjunction with and when compatible with drain water management.	M		Ongoing	Reclamation, Partners	75/25 cost share	As Needed
NAT 1.5.1: Develop an IPM plan that incorporates and implements an active weed control program with efforts focused on areas with high habitat values (especially along watercourses).	R		Complete by 12/2006	Reclamation, Counties, BLM	Reclamation	Annual
NAT 1.5.2: Incorporate and implement an active noxious/invasive species transfer identification and prevention program into the IPM Plan. The program will identify potential pathways for the transport of noxious/invasive species or their various parts (seedlings, cuttings, etc.).	H		Ongoing	Reclamation, Counties, BLM	Reclamation	As Needed

Table 6.2-2. Management Actions for Natural Resources (NAT).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
NAT 1.5.3: Fund IPM Plan activities, including allocations for partnership agencies.	R		Annual	Reclamation, Counties	Reclamation	NA
NAT 1.6.1: Prepare and implement a comprehensive wildland fire management plan(s) that incorporates the following elements, in keeping with RMP objectives: • Specify entity(ies) responsible for wildland fire suppression response on specific parcels or Fire Management Units which cover RMP lands. • Establish goals, standards, objectives, and/or desired future conditions for wildland fire management and rehabilitation. • Incorporate wildland fire management tools for managing fuels into land management activities, such as fire breaks and vegetation management. • Develop possible long-term prescribed treatment proposals and options to meet land management objectives.	R		Complete by 12/2006	Reclamation, BLM	Reclamation	NA
NAT 1.6.2: Fund wildland fire management plan activities, as appropriate, to meet RMP objectives.	R	NAT 1.6.1	Annual	Reclamation, BLM	Reclamation	NA
NAT 1.6.3: As needed, enter into agreements with managing partners, adjacent land managers, and/or service providers to implement appropriate wildland fire management practices to meet RMP objectives.				Reclamation	Reclamation	NA
NAT 1.7.1: See LUM 3.1.1 – 3.1.3						
NAT 2.2.1: See lease compliance actions LUM 4.10.1 – 4.1.0.3 related to agricultural leases.	R		Ongoing	Reclamation, Lessees	Reclamation	As per schedule
NAT 2.3.1: Follow listed Best Management Practices (see Chapter 5) when engaging in activities that could result in pollutants being released from Reclamation parcels (note: BMPs do not apply to ongoing exempted agricultural activities).	R		Ongoing	Reclamation, Lessees	Reclamation	As per contract specs
NAT 2.4.1: Follow listed Best Management Practices (see Chapter 5) when regarding sanitation and waste management facilities.	R		Ongoing	Reclamation	Reclamation	As per contract specs
NAT 3.1.1: Follow listed Best Management Practices (see Chapter 5) when engaging in activities that may cause soil erosion on Reclamation parcels.	R		Ongoing	Reclamation	Reclamation	As per contract specs
NAT 3.1.2: Provide BMPs to contractors, managing partners, permit holders, and others conducting authorized construction activities; and require full compliance through inclusion and contract/permit specifications	R		Ongoing	Reclamation	Reclamation	As per contract specs

NOTES:
- [1]Underline denotes primary responsibility.
- NA = Not applicable.

Table 6.2-3. Management Actions for Cultural Resources (CUL).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
Land-Based Sites and Facilities						
CUL 1.1.1: Complete pedestrian archeological surveys when ground-disturbing actions are proposed in unsurveyed locations. Complete site evaluation actions to determine National Register eligibility to sites threatened by new actions, land use, or project operations, and address impacts to eligible sites.	R		Ongoing	Reclamation, SHPO, Tribes	Reclamation	NA
CUL 1.1.2: Complete tribal consultations, as necessary, to determine if TCPs are present in areas of new ground-disturbing actions, or in or near focused use areas. If present, assess and address impacts from new actions or existing use.	R		Ongoing	Reclamation, Tribes	Reclamation	NA
CUL 1.1.3: If Indian tribes identify culturally important resources within new development areas, avoid adverse impacts to those resource locations when avoidance will accomplish broader agency responsibilities, is cost effective, and lies within Reclamation's authority.	R		Ongoing	Reclamation, Tribes	Reclamation	NA
CUL 1.1.4: In the event of discovery of human remains of Indian origin, complete protective actions and tribal notification and consultation actions per 43 CFR 10.	R		Ongoing	Reclamation, Tribes	Reclamation	If Needed
CUL 1.1.5: Design facilities to avoid or minimize cultural resource damage.	R		Ongoing	Reclamation, SHPO, Tribes	Reclamation	Periodically
CUL 1.2.1: Include cultural resource protection strategies in the Reclamation/IDPR Historic Preservation and Maintenance Plan. [see LUM 3.2.2 and REC 1.1.1]	H		2006	Reclamation, SHPO, IDPR	Reclamation	NA
CUL 1.3.1: Develop guidelines/procedures and provide training for IDPR staff, IDFG staff, lease holders, and other managing partners to increase awareness of the NHPA and other cultural resource statutory requirements.	M		2007	Reclamation, IDPR,IDFG, Lessees	Reclamation	NA
CUL 1.4.1: Prepare and provide educational information about resource values and area history at appropriate locations (i.e., Lake Walcott State Park).	M		2008	Reclamation, IDPR, FWS	Reclamation	NA

NOTES:

- [1]Underline denotes primary responsibility.
- NA = Not applicable.

Table 6.2-4. Management Actions for Indian Sacred Sites (ISS).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
Land-Based Sites and Facilities						
ISS 1.1.1: Consult with Indian tribes when it appears that sacred sites might be present in areas of new ground-disturbance, or in locations where sacred sites might be damaged by existing public land uses. If present, seek to avoid damages and maintain access when implementing new actions.	R		Ongoing	Reclamation, Tribes	Reclamation	As per construction schedule
ISS 1.2.1: Consult when it appears that sacred sites might be present in areas of focused public use. If present, seek to resolve impacts and maintain access.	R		Ongoing	Reclamation, Tribes	Reclamation	As Needed

NOTES:
- [1]Underline denotes primary responsibility.
- NA = Not applicable.

Table 6.2-5. Management Actions for Indian Trust Assets (ITAs).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
Land-Based Sites and Facilities						
ITA 1.1.1: Use the NEPA process to assess potential future impacts to ITAs that may exist.	R		Ongoing	Reclamation, Tribes	NA	NA

NOTES:
- [1]Underline denotes primary responsibility.
- NA = Not applicable.

Table 6.2-6. Management Actions for Recreation and Access (REC).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
Land-Based Sites and Facilities						
REC 1.1.1: Work with IDPR to prepare and implement a Historic Preservation and Maintenance Plan for the park outlining vegetation preservation/protection, use areas, hardscape areas, and other pertinent information and guidance.	H		2006	Reclamation, SHPO	Reclamation	NA
REC 1.2.1: Implement management strategies at Bishop's Hole to enhance the visitor experience and increase public safety and security, including providing minimum basic facilities (e.g., organized access and parking, accessible toilet facility) in coordination with the results and implementation of the spillway study. [see Reclamation Manual LND P03 and PN04-01]	M		Initiate Year 2007	Reclamation	Reclamation	As Required
REC 1.2.2: Increase management oversight at Bishop's Hole and surrounding area where ad hoc uses are occurring	M		Ongoing	Reclamation, managing partner	Reclamation	Periodically
REC 1.2.3: Seek public non-Federal managing partner for management of the Bishop's Hole day use site.	M		Ongoing	Reclamation	NA	NA
REC 1.2.4: Monitor use and conditions and adjust access or use levels to protect resources.	M		Ongoing	Reclamation, managing partner	Cost share	Periodically
REC 1.3.1: Consider compatible concession/recreation permits on a case-by-case basis and authorize in compliance with Reclamation policy (see Reclamation Manual LND P-02 and LND 04-01).	L		As Needed	Reclamation, concessionaire	concessionaire	As per contract provisions
REC 1.4.1: Explore opportunities with a managing partner to develop enhanced fishing access on parcels along the Snake River.	M		Ongoing	Reclamation, IDFG, Counties	Cost share	NA
REC 2.1.1: Develop and implement the following elements into an Access Management Plan for all Reclamation parcels. • Signs • Fencing of parcels and placement of barriers • Maps and brochures showing areas of access and public education interests, including open nearby BLM lands and regulations • Established vehicle parking areas • Criteria for which parcels continue to be allowed for public vehicular access • Public information process (media announcements, informative meetings, etc.) • Monitoring program	H		2005	Reclamation, BLM, IDFG, Irrigation Districts, Counties	Reclamation	As per Access Management Plan
REC 2.2.1: Monitor non-vehicular access and modify as necessary to protect resources.	H		As Needed	Reclamation	Reclamation	Periodically
REC 2.3.1: Actively seek a non-Federal managing partner to provide more active management and appropriate facilities at selected day use sites outside the park boundaries.	M		Ongoing	Reclamation	NA	NA

Table 6.2-6. Management Actions for Recreation and Access (REC).

Action	Priority	Related Mgmt Actions	Timing/ Sequence	Lead Agency[1]	Funding	Monitoring
REC 2.3.2: Monitor ad hoc day use activities and modify as necessary to protect resources.	H		As Needed	Reclamation	Reclamation	Periodically
REC 2.4.1: Increase management oversight at areas where ad hoc camping is occurring to protect resources and avoid land use conflicts.	H		Ongoing	Reclamation	NA	NA
REC 2.4.2: Prohibit any developed camping outside Lake Walcott State Park	H		Ongoing	Reclamation	NA	NA
REC 2.5.1: Actively seek a non-Federal managing partner to provide more opportunities for developing and maintaining non-motorized recreational trails.	M		Ongoing	Reclamation	NA	NA
REC 2.5.2: Monitor trail use and modify as necessary to protect resources.	H		As Needed	Reclamation	Reclamation	Periodically

NOTES:

- [1]Underline denotes primary responsibility.
- NA = Not applicable.
- All new facilities, programs, and information will be designed in accordance with current standards for accessibility for persons with disabilities.

Chapter 7

Glossary of Terms

1890 Act reserved rights-of-way	Rights-of-way, for ditches or canals constructed by the authority of the United States, were reserved in all patents issued on public lands west of the 100th Meridian entered after August 30, 1890. (Patents are the initial conveyance of public lands from the United States.) These reserved rights-of-way can be exercised either by Confirmation Deed, Right-of-Way Notice, or through construction itself.
A&B Irrigation District	The North Side Pumping Division. A&B irrigates 77,000 acres to the north of the Gravity Division, in Minidoka and Jerome Counties. Unit A (15,000 acres) is served by pumping from the Snake River. Unit B (62,000 acres) is irrigated from deep wells which tap the Snake Plain aquifer. Reclamation constructed the project in the 1950s.
Accessibility	Providing participation in programs and use of facilities to persons with a disability. Disability is defined with respect to an individual: (1) a physical or mental impairment that substantially limits one or more of the major life activities of such an individual; (2) a record of such an impairment; or (3) being regarded as having such an impairment.
Acquired Lands	Lands which Reclamation has acquired by purchase, donation, exchange, or condemnation.
Acre-foot	Volume of water (43,560 cubic feet) that would cover 1 acre of land, 1 foot deep.
Action Alternative	A change in the current management approach.
Affected environment	Existing biological, physical, social, and economic conditions of an area subject to change, both directly and indirectly, as the result of a proposed human action. Also, the portion of an environmental document describing current environmental conditions.

Algae	Mostly aquatic single celled, colonial, or multicelled plants, containing chlorophyll and lacking stems, roots, and leaves.
Algal bloom	Rapid and flourishing growth of algae.
Alluvial	Pertaining to or composed of alluvium, or deposited by a stream or running water.
Alluvium	An accumulation of sediments deposited by streams or rivers.
Alternatives	Courses of action that may meet the objectives of a proposal at varying levels of accomplishment, including the most likely future conditions without the management plan or action.
Amphibian	Vertebrate animal that has a life stage in water and a life stage on land (for example, salamanders, frogs, and toads).
Aquatic	Living or growing in or on the water.
Archeology	Related to the study of human cultures through the recovery and analysis of their material relics.
Archeological site	A discrete location that provides physical evidence of past human use.
Artifact	A human-made object.
Artificial wetlands	Areas created to intentionally hold moisture or ponded water such that wetland vegetation (e.g., cattails, bulrush, sedges, willows) can establish, thus providing forage and shelter to numerous wildlife species and reducing sediment loads in the water.
Best Management Practices (BMPs)	Activities that are added to typical operation, construction, or maintenance efforts that help to protect environmental resources by avoiding or minimizing impacts of an action.
Burley Irrigation District (BID)	The South Side Pumping Division of the Minidoka Project. BID irrigates 48,000 acres, immediately south of the Snake River. Title to the U.S. facilities, lands, and interests in lands were transferred to BID on 2/24/00.
Community	A group of one or more interacting populations of plants and animals in a common spatial arrangement at a particular point in time.
Concentration	The density or amount of a substance in a solution (water quality).

Conservation measures	Similar to mitigation measures (defined below), conservation measures are actions taken to avoid impacts to species protected under the Endangered Species Act.
Cubic foot per second (cfs)	As a rate of streamflow, a cubic foot of water passing a reference section in 1 second of time. A measure of a moving volume of water.
Cultural resource	Cultural resources are historic and traditional properties that reflect our heritage.
Drainwater projects	Areas in which water is intentionally ponded such that injection of irrigation run-off water into the aquifer is reduced and, in some situations, lower water velocities allow sediment to precipitate out of the water column.
Drawdown	Lowering of a reservoir's water level; process of releasing reservoir storage.
Endangered species	A species or subspecies that is in danger of extinction throughout all or a significant portion of its range.
Eolian	Pertaining to sediment deposition by wind; such as loess and dune sand, or sedimentary structures such as wind-formed ripple marks. Erosion and deposition accomplished by the wind.
Ephemeral stream	A stream that flows only in direct response to precipitation, and thus discontinues its flow during dry seasons. Such flow is usually of short duration. Most of the dry washes of more arid regions may be classified as ephemeral streams.
Erosion	Refers to soil and the wearing away of the land surface by water, wind, ice, or other physical processes.
Eutrophic	A body of water with high nutrient levels.
Evapotranspiration	The amount of water that transpires through a plants' leaves, combined with the amount that evaporates from the soil in which it is growing.
Exotic species	A non-native species that is introduced into an area.
Facilities	Manmade structures.
Federal lands	Lands, or interests in lands (such as easements and rights-of-way), owned by the United States.

Fish and Game Tracts/Wildlife Tracts	Certain Extension lands which were designated as wildlife habitat areas. These lands are managed by the Idaho Department of Fish and Game under agreements with Reclamation. The goal is to protect and improve these lands for long-range wildlife use as escape and winter cover.
Fish and Wildlife Service Species of Concern	Species identified by the U.S. Fish and Wildlife Service for which further biological research and field study are needed to resolve these species' conservation status.
Forb	Herbaceous plant that is not a grass, sedge, or rush. Non-woody herbs and wildflowers are examples of forbs.
Grass	Herbaceous plants with jointed stems, slender sheathing leaves, and flowers borne in spikelets of bracts.
Habitat	Area where a plant or animal finds suitable living conditions.
Hydrologic	Pertaining to the quantity, quality, and timing of water.
Indian Sacred Sites	Defined in Executive Order 13007 as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."
Indian Trust Assets (ITAs)	Legal interests in property held in trust by the United States for Indian Tribes or individuals, such as lands, minerals, hunting and fishing rights, and water rights.
Injection wells	Some irrigation return flow from Unit B, the ground-water unit of the North Side Pumping Division is disposed of through injection wells which pass water directly underground into the Snake Plain aquifer. Injection wells are used because the area lacks natural surface drainage outlets. The North Side Pumping Division originally had 78 injection wells; about 27 of them are still in operation. These wells also provide drainage for stormwater runoff, which can amount to larger amounts of runoff than the Project irrigation return flows.
Intermittent streams	Streams that contain running water longer than ephemeral streams but not all year.
Juvenile	Young animal that has not reached reproductive age.

Migratory birds	Most birds in North America are considered to be migratory birds under one or more of the four international Migratory Bird Treaty Conventions to which the United States is a signatory. Under provisions of the Migratory Bird Treaty Acts, it is unlawful "by any means or manner to pursue, hunt, take, capture, or kill" any migratory birds except as permitted by regulations issued by the FWS.
Minidoka Irrigation District (MID)	The Gravity Division of the Minidoka Project. MID irrigates 72,000 acres to the south of the North Side Pumping Division. Reclamation constructed the Project starting in 1905.
Mitigation measures	Action taken to avoid, reduce the severity of, or eliminate an adverse impact. Mitigation can include one or more of the following: (1) avoiding impacts; (2) minimizing impacts by limiting the degree or magnitude of an action; (3) rectifying impacts by restoration, rehabilitation, or repair of the affected environment; (4) reducing or eliminating impacts over time; and (5) compensating for an unavoidable impact by replacing or providing substitute resources or environments to offset the loss.
National Register of Historic Places (NRHP)	A Federally maintained register of districts, sites, buildings, structures, and properties that meet the criteria of significance defined in 36 CFR 63.
Neotropical migrant	Birds that breed in North America and winter in tropical and subtropical America.
No Action Alternative	The outcome expected from a continuation of current management practices.
North Side Pumping Division	Constructed by Reclamation in the 1950s. Irrigates 77,000 acres. The Project is operated by the A&B Irrigation District.
North Side Pumping Division Extension Plan	A plan proposed in the 1980s for the management and use of the scattered tracts of dry Federal lands located in and adjacent to Reclamation's existing North Side Pumping Division. This plan included providing irrigation service to 9,400 acres of irrigable drylands (part of each tract would be managed for wildlife habitat by the new landowner), and improving and managing 5,590 acres of Federal lands for wildlife (Idaho Department of Fish and Game would manage these lands). In addition, other future land uses were recognized in the plan. This plan is now considered no longer economically feasible, mainly due to lack of water availability. The extension plan project was never Congressionally authorized.

Off-road vehicle (ORV) use	Reclamation lands are closed to ORV use, unless specifically opened.
Perennial	Plants that have a life cycle that lasts for more than 2 years.
Precipitation	Rain, sleet, and snow.
Preferred Alternative	The primary alternative considered by Reclamation for implementation following analysis in the Environmental Assessment. This analysis, along with public input, could alter management actions described in the Preferred Alternative. If this occurs, any changes would be documented in the Final Environmental Assessment.
Project facilities	Canals, laterals, drains, pumps, buildings, and etc. owned by the United States. *Note:* Title to Project facilities and lands remains in the United States until specific legislation is enacted to authorize relinquishment (regardless of who is responsible for care, operation and maintenance of the facilities).
Project purposes	Lands are withdrawn and acquired for authorized purposes of the specific Reclamation Project. These can include irrigation, flood control, recreation, and fish and wildlife.
Public involvement	The systematic provision for affected publics to be informed about and participate in Reclamation decision making. It centers around effective, open exchange and communication among the partners, agencies, organizations, and all the various affected publics.
Public lands	Public lands include only those Federal lands administered by the Bureau of Land Management (with the exception of lands located on the Outer Continental Shelf and lands held for the benefit of Indians, Aleuts, and Eskimos).
Qualifying partner	A non-Federal public entity managing partner that manages all or a portion of lands and/or facilities on Reclamation-owned lands.
Raptor	Any predatory bird, such as a falcon, eagle, hawk, or owl, that has feet with sharp talons or claws and a hooked beak.

Reclamation Project lands	Federal lands or interests in lands under the jurisdiction of the Bureau of Reclamation (Reclamation). Includes withdrawn lands, acquired lands, and 1890 Act reserved rights-of-way which have been exercised. *Note:* Reclamation Project Lands **are not** the same as public lands. Reclamation Project Lands were initially withdrawn, acquired or exercised for specific Project purposes, and are governed by different Federal land management laws and regulations than public lands. Public uses of Reclamation Project Lands can be suspended as necessary to protect Project Facilities, and Reclamation Project Lands are not open to off-road vehicles unless specifically opened for that use.
Reclamation zone	Area located immediately around the dam and administered by Reclamation.
Record Tree	This tree, formerly located at Bishop's Hole, holds the record for being the biggest Eastern Cottonwood in the United States. It broke apart during Spring 2002 because it was weak on the inside from old age.
Relinquishment	Notification to BLM by a Federal agency (like Reclamation) that specific withdrawn lands are no longer needed for Project purposes.
Reptile	Cold-blooded vertebrate of the class Reptilia, comprised of turtles, snakes, lizards, and crocodiles.
Reserved works	Those Project facilities for which the care, operation, and maintenance has been retained by the United States.
Resident	A wildlife species commonly found in an area during a particular season: summer, winter, or year round.
Resource topics	The components of the natural and human environment that could be affected by the alternatives, such as water quality, wildlife, socioeconomic, and cultural resources.
Resource Management Plan (RMP)	A 15-year plan developed by Reclamation to manage their lands and resources in the Study Area.
Restoration	An action by BLM that restores withdrawn land to the status of unreserved public lands subject to settlement, sale, location, or entry under some or all of the general land laws.

Revocation	The actual cancellation of a withdrawal by the Bureau of Land Management. Revocations do not necessarily open the land to settlement, sale, location, or entry under some or all of the general land laws.
Riparian	Of, on, or pertaining to the bank of a river, pond, or lake where soil moisture levels are higher than in surrounding uplands.
Runoff	That part of precipitation that contributes to streamflow, groundwater, lakes, or reservoir storage.
Sediment	Unconsolidated solid material that comes from weathering of rock and is carried by, suspended in, or deposited by water or wind.
Shrub	A woody perennial, smaller than a tree, usually with several stems.
Songbird	Small to medium-sized birds that perch and vocalize or “sing,” primarily during the breeding season.
Spawning	Laying eggs directly in water, especially in reference to fish.
Species	In taxonomy, a subdivision of a genus that (1) has a high degree of similarity, (2) is capable of interbreeding only within the species, and (3) shows persistent differences from members of allied species.
Steppe	A plain without trees (apart from near rivers and lakes), the same as a prairie. It may be semi-desert or covered with grass or shrubs, or both depending on the season.
Study Area	The area evaluated in this Environmental Assessment as being directly affected by potential management actions described in the Resource Management Plan.
Threatened species	Any species that has the potential of becoming endangered in the near future and is listed as a threatened species under the Endangered Species Act.
Total Maximum Daily Load (TMDL)	A TMDL is a pollution reduction plan that accounts for all pollutant sources to the water and determines how much each source is allowed to contribute. The basic premise is that if existing pollutant inputs (loads) from all sources are reduced to a specified level (the maximum daily load), and a margin of safety is added, then water quality goals will be achieved.

Traditional Cultural Property (TCP)	A site or resource that is eligible for inclusion in the *National Register of Historic Places* because of its association with cultural practices or beliefs of a living community.
Transferred works	Those Project facilities for which the care, operation, and maintenance has been transferred from the United States to the irrigation districts.
Water quality limited	A water body that exceeds water quality standards or does not support its designated beneficial use, such as cold water habitat or primary contact recreation.
Wetland habitat	Wildlife habitat associated with water less than 6 feet deep, with or without emergent and aquatic vegetation in wetlands.
Wetlands	Lands transitional between aquatic and terrestrial systems where the water table is usually at or near the land surface or the land is covered by shallow water. Often called marshes or wet meadows.
Withdrawn lands	Withholding of an area of public land from settlement, sale, location, or entry under some or all of the general land laws for the following purposes: (1) to limit activity under those laws in order to maintain other public values in the area; (2) to reserve the area for a particular public purpose or program, or (3) to transfer jurisdiction of the area from one Federal agency to another.

Chapter 8

Bibliography

8.1 Literature Cited

Cowardin, L. M. V. Carter, F. C. Golet, and E. T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* Office of Biological Services, Fish and Wildlife Services, U.S. Department of the Interior. Washington, D.C.

Daubenmire, R. 1978. *Plant geography*. Academic Press, New York.

Dealy, J. E., D. A. Leckenby, and D. M. Concannon. 1981. *Wildlife habitats in managed rangelands—The Great Basin of Southeastern Oregon: Plant communities and their importance to wildlife*. USDA Forest Serv. Gen. Tech. Rep. PNW-120.

EDAW, Inc. 2000. *Minidoka Visitor Survey*. Seattle, WA.

Finch, D. M. 1992. *Threatened, endangered, and vulnerable species of terrestrial vertebrates in the Rocky Mountain Region. USDA Forest Service*. GTR-RM-215.

FWS. See U.S. Fish and Wildlife Service.

Gabler, K. I. 1997. *Distribution and habitat requirements of the pygmy rabbit on the Idaho National Environmental and Engineering Laboratory*. M. S. Thesis. Department of Biology, Idaho State University, Pocatello, ID.

Gaines, D. 1974. *Distribution, density, and habitat requirements of the Yellow-billed Cuckoo in the Sacramento Valley: 1972-1973*. California Department of Fish and Game, Nongame Wildlife Investigations, W-54-R Progress Report.

Gaines, D. 1977. *Current status and habitat requirements of the Yellow-billed Cuckoo in California*: 1977 Endangered Wildlife Program, Nongame Wildlife Investigations, California Department of Fish and Game.

Gaines, D. and S. A. Laymon. 1984. Decline, status and preservation of the Yellow-billed Cuckoo in California. *Western Birds* 15:49- 80.

Groves, C. R., B. Butterfield, A Lippencott, B. Csuti, and J. M. Scott. 1997. *Atlas of Idaho's Wildlife; Integrating Gap Analysis and Natural Heritage Information*. Idaho Department of Fish and Game, Idaho Conservation Data Center. Boise, ID. 372pp.

Heady, L. T. 1998. *Home Range, habitat, and activity patterns of pygmy rabbits (Brachylagus idahoensis) in southeast Idaho*. M. S. Thesis. Idaho State University. Pocatello, ID. 72 pp.

Heady, L. T., K. I. Gabler and J. W. Laundre. 2001. *Habitat selection by pygmy rabbits in southeast Idaho*. BLM Technical Bulletin. No. 01-7.

Hironaka, M., M.A. Fosberg, and A.H. Winward. 1983. *Sagebrush-grass habitat types of southern Idaho*. Bull. No. 35. University of Idaho, Forest, Wildlife and Range Exper. Sta. Moscow, ID.

Idaho Department of Fish and Game (IDFG). 2001. *Fisheries Management Plan, 2001-2006*. Idaho Department of Fish and Game.

Idaho Department of Fish and Game. 2002. *Idaho Sportsman's Access Guide: A Guide to Idaho Department of Fish and Game Managed Access Areas*. IDFG and Sport Fish and Wildlife Restoration Program. Boise, ID.

Idaho Department of Fish and Game. 2003. Idaho Conservation Data Center. Available: http://www2.state.id.us/fishgame/info/cdc/cdc.htm (May 30, 2003).

Idaho Department of Recreation (IDPR). 1999. *Visitor Survey*. Idaho Outdoor Recreation Data Center. Boise, ID.

Idaho Department of Recreation. 2000. *Visitor Survey*. Idaho Outdoor Recreation Data Center. Boise, ID.

Idaho Department of Recreation. 2001. *Visitor Survey*. Idaho Outdoor Recreation Data Center. Boise, ID.

Idaho Statesman. 2003. *Simplot Plant is Winding Up Business*. http://www.idahostatesman.com/story/asp?ID=52866/ (March 25, 2004).

Katzner, T. E. 1994. *Winter ecology of the pygmy rabbit in Wyoming*. M. S. Thesis University of Wyoming. Laramie, WY. 124 pp.

Kindschy, R. R. 1978. *Rangeland management practices and bird habitat values*. Pages 66-69 in Proc. of the Workshop on Non-game Bird Habitat Management in the Coniferous Forests of the Western United States. USDA Forest Service Gen. Tech, Rpt. PNW-64.

Kingery, H. E. 1981. 1980: The year of the cuckoo. *C. F. O. Journal* 15(3):86-87.

Lyman, R. L. 1991. Late quaternary biogeography of the pygmy rabbit (*Brachylagus idahoensis*) in eastern Washington. *Journal of Mammalogy*. 72(1):110-117.

McAdoo, J. K. and D. A. Klebenow. 1978. *Native faunal relationships in sagebrush ecosystems. In the Sagebrush Ecosystem: A Symposium*. Utah State Univ., College of Nat. Resour. Logan, Utah. 50 pp.

McGarigal, K. 1988. *Human-eagle interactions on the lower Columbia River*. M.S. Thesis, Oregon State University, Corvallis, OR. 108 pp.

Moseley, R. K. 1996. *Christ's Indian Paintbrush (Castilleja christii) monitoring on the Sawtooth National Forest: Transect establishment and baseline data*. CDC, Idaho Department of Fish and Game. 25p.

Natural Resource Conservation Service (formerly Soil Conservation Service). 1975. *Soil Survey of Minidoka Area, Idaho: Parts of Minidoka, Blaine, and Lincoln Counties*. U.S. Department of Agriculture.

Natural Resource Conservation Service. 1994. *Soil Survey of Cassia County, Idaho, Eastern Part*. U.S. Department of Agriculture.

Natural Resource Conservation Service. 1998. *Soil Survey of Jerome County and Part of Twin Falls County, Idaho*. U.S. Department of Agriculture.

Nez Perce Tribe. 1995. Ensuring Our Future, Honoring Our Past.

Ozbun, T. L., B. J. Mills, et al. 2000. *Minidoka North Side Resource Management Plan Class I Cultural Resources Inventory*. Report No. 197. Prepared for Bureau of Reclamation, Snake River Area Office-West, Boise, Idaho, by Archaeological Investigations Northwest, Inc.

Reclamation. See U.S. Bureau of Reclamation.

Reese, K. P. and W. E. Melquist. 1985. *Distribution and status of 27 avian species of special concern in Idaho*. Idaho Natural Heritage Program, The Nature Conservancy.

Rybarczyk, W. B. and J. Connelly. 1985. *Upland game management plan 1986-1990*. Idaho Department of Fish and Game. 37 pp.

Ryder, R. A. 1980. *Effects of grazing on bird habitats*. Pages 51-66 in Prac. Management of Western Forests and Grasslands for Non-game Birds. USDA Forest Service Gen. Tech. Rpt. INT 86.

Seitz, H.R., LaSala, A.M., and Moreland, J.A., 1977, *Effects of drain wells on the ground-water quality of the western Snake Plain aquifer, Idaho*. U.S. Geological Survey Open-File Report 76-673, 34 p.

Short, H. L. 1986. Rangelands. Pp. 93-122 *in Inventory and monitoring of wildlife habitat* (A. Y. Cooperrider, R. J. Boyd and H. R. Stuart, eds). USDI Bureau Land Manag. Serv. Center. Denver, CO.

Shoshone-Bannock Tribes. 1994. *Treaty Right Seminar Pocatello, Idaho, May 18-20*. The Shoshone-Bannock Tribes Treaty Rights Seminar Planning Committee.

Steenhof, K. 1976. *Ecology of wintering bald eagles in southeastern South Dakota*. MS. Thesis, University of Missouri, Columbia, MO. 146 pp.

Thomas, A. E. 1985. *Cooperative wildlife management areas: Idaho Wildlife isolated tracts program*. Bureau of Land Management. Idaho State Office. Tech. Bull. 85-2.

Tisdale, E. W., and M. Hironaka. 1981. *The sagebrush-grass region: a review of the ecological literature*. For Wildl. Range Exp. Sta. Bull. 33. University of Idaho. Moscow, ID.

U.S. Bureau of Reclamation. 1986. North side pumping division extension, Idaho, Minidoka Project, Idaho-Wyoming. Planning Report – Draft Environmental Statement.

U.S. Bureau of Reclamation. 1993. Framework Plan for Drain Water Management.

U.S. Bureau of Reclamation. 1998a. Biological assessment – Bureau of Reclamation operations and maintenance in the Snake River Basin above Lower Granite Reservoir. Pacific Northwest Region. Boise, ID. 230 p.

U.S. Bureau of Reclamation. 1998b. *Historic American Buildings Survey, Walcott Park (HABS No. ID-103; Minidoka County, Idaho).* Prepared for Reclamation by Fraser Design and Hess Roise & Company.

U.S. Bureau of Reclamation. 2002. Authorities and Methods for Disposing of Minidoka North Side Lands.

U.S. Census Bureau. 2000. 2000 Census Quick facts. http://quickfacts.census.gov/qfd/states/16000.html (May 23, 2002).

U.S. Fish and Wildlife Service (FWS). 1985. Sensitive species management plan for the Western Yellow-billed Cuckoo. FWS, Region 1.

U.S. Fish and Wildlife Service. 1989. Wildlife Habitat Management Plan for Minidoka North Side Pumping Division Extension Project, Idaho. Prepared for U.S. Bureau of Reclamation and Idaho Department of Fish and Game.

U.S. Fish and Wildlife Service. 1995. Snake River Aquatic Species Recovery Plan. November 26, 1995.

U.S. Fish and Wildlife Service. 2001. Minidoka National Wildlife Refuge. Minidoka NWR Refuge Manager. Rupert, ID.

U.S. Fish and Wildlife Service. 2002. Minidoka National Wildlife Refuge: Watchable Wildlife. Minidoka National Wildlife Refuge. Rupert, Idaho.

U.S. Fish and Wildlife Service. 2003a. *Idaho Endangered, Threatened, Proposed, and Candidate Species by County*. Available: http://idahoes.fws.gov/county.

U.S. Fish and Wildlife Service. 2003b. *Idaho Endangered and Threatened Species Fact Sheets for Invertebrates*. Available: http://idahoes.fws.gov/Fact.

White, S. M., J. T. Flinders and B. L. Welch, 1982. Preference of pygmy rabbits (*Brachylagus idahoesis*) for various populations of big sagebrush (*Artemisia tridentata*). *Journal of Range Management*. 35:724-726.

Wiens, J. A., and M. I. Dyer. 1975. Rangeland avifaunas: their composition, energetics and role in the ecosystem. Pp. 146-182 *in Symposium on management of forest and range habitats for nongame birds*. USDA Forest Serv. Gen. Tech. Rep. WO-1.

Wisdom, M. J., R. S. Holthausen, B. C. Wales, [and others] 2000. *Source habitats for terrestrial vertebrates of focus in the interior Columbia basin: broad-scale trends and management implications*. Volumes 1 – 3. Gen. Tech. Rep. PNW-GTR-485. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 3 vol. (Quigley, Thomas M., tech. Ed.; Interior Columbia Basin Ecosystem Management Project: scientific assessment).

Wright, M. and R. E. F. Escano. 1986. *Montana bald eagle nesting habitat: a macro habitat description*. USDA Forest Service. Wildlife and Fish Habitat Relationship Program. Missoula, MT. 240 pp.

8.2 Personal Communications

Aoi, Mike, Assistant Fire Management Officer, Southern Idaho Interagency Fire Center, Shoshone Idaho, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA, June 6, 2002.

Bouffard, Steve, U.S. Fish and Wildlife Service, Telephone interview with Chuck Blair, Biologist, CH2M HILL, June 16, 2003.

Capt. Cary Bristol, Undersheriff, Cassia County Sheriff's Department, Burley, Idaho, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA. June 22, 2003.

Castro, Richard, Assistant Supervisor, City of Rupert Wastewater Treatment Plant, Rupert Idaho, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA, August 14, 2002.

Crump, A., Recreation Technician, BLM Burley Field Office, Burley, ID, Telephone interview with Christy Carr, Recreation Planner, EDAW, Inc. Seattle, WA, June 3, 2002.

Joyce, David, Wastewater Superintendent, City of Rupert, Rupert Idaho, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA. June 22, 2003.

Kindig, Dan, Lt., Minidoka County Sheriff's Office, Rupert Idaho, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA, May 29, 2002.

Megargle, Doug, Regional Fishery Manager of the Idaho Department of Fish and Game (Jerome Office), telephone interview with Maria Dudash, CH2M HILL, May 29, 2003.

Pool, Larry, Chief, City of Rupert City Fire and Rescue, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA, August 15, 2002.

Temple, Dan, General Manager A&B Irrigation District, Rupert Idaho, Telephone Interview with Mike Usen, Planner, EDAW, Inc. Seattle WA, June 6, 2002.