RECLAMATION

Managing Water in the West

Snake River Plain Aquifer Wells Project

Draft Environmental Assessment

Falls Irrigation District

Minidoka Project, Idaho

U.S. Department of the Interior
Bureau of Reclamation
Pacific Northwest Region
Snake River Area Office
Boise, Idaho

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U.S. DEPARTMENT OF THE INTERIOR

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian tribes and our commitments to island communities.

MISSION OF THE BUREAU OF RECLAMATION

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Cover photograph: A Falls Irrigation District canal below American Falls Dam

Acronyms and Abbreviations

Acronym or Abbreviation	Description
AFA	Acre-feet annually
AMF	American Falls Reservoir
cfs	Cubic feet per second
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
ESPA	Eastern Snake River Plain Aquifer
FID	Falls Irrigation District
FONSI	Finding of No Significant Impact
GIS	Geographic Information Systems
IDL	Idaho Department of Labor
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
IWRB	Idaho Water Resource Board
IPaC	USFWS Information for Planning and Consultation
ITAs	Indian Trust Assets
NASS	National Agricultural Statistics Service
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NRHP	National Register of Historic Places

Acronym or Abbreviation	Description
NWI	National Wetlands Inventory
Project	Snake River Plain Aquifer Wells Project
Reclamation	U.S. Bureau of Reclamation
ROD	Record of Decision
ROW	Right-of-Way
SHPO	State Historic Preservation Office
SO	Secretarial Orders
T&E	Threatened and/or Endangered
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

Table of Contents

Appendices

List of Figures

List of Tables

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1 Purpose and Need

1.1 Introduction

The United States Department of the Interior, Bureau of Reclamation (Reclamation) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) for the proposed Falls Irrigation District (FID) Snake River Plain Aquifer Wells Project (Project) in Power County, Idaho. NEPA requires an environmental analysis on any federal action that may have a significant impact on the human environment. This EA analyzes the potential environmental effects of constructing and operating three wells on private property within federal easements or rights-of-way managed by Reclamation to pump water from the Eastern Snake Plain Aquifer (ESPA) into FID's existing canal distribution system. Reclamation will use this EA to finalize a decision on the proposed action alternative and to determine whether to issue a Finding of No Significant Impact (FONSI) or a notice of intent to prepare an Environmental Impact Statement.

1.1.1 Project History

In 1904, the Minidoka Project was established by Reclamation with the purpose of controlling and impounding spring floodwaters of the Snake River for use by farmers later in the growing season. The project involved the construction of a series of dams and canals intended to store, regulate, and distribute waters of the Snake River with electric power generation as a benefit. In 1927, the 103.5-foot-high composite concrete and earthen American Falls Dam was completed as part of this project creating a 1,700,000 acre-feet reservoir (Rogers 2006). Advanced deterioration of the dam was discovered in the early 1970s which limited the storage capacity to 1,125,000 acre-feet. As a result, a new dam was constructed that replaced the concrete portion of the original structure and was built immediately downstream from the old dam. The new dam was completed in 1978 with a storage capacity of 1,672,600 acre-feet (Reclamation 1998). The elevation of the penstock intakes and pump station, as well as the design of the pumps, were based on typical operating levels in the American Falls Reservoir (AMF) at the time of initial construction in 1927.

Under contract, FID operates and maintains Reclamation's American Falls Division of the Minidoka Project. The American Falls Division was constructed as part of the Michaud Flats Project during the early 1950s. The United States holds storage rights to the reservoirs constructed by the United States for the purpose of meeting specific congressionally-authorized purposes. In the upper Snake River system, Reclamation administers these rights through space holder contracts. FID is a contracted space holder, holding 22,925 acre-feet of storage in American Falls Reservoir and 40,900 acre-feet in Palisades Reservoir. This water is used to meet irrigation demand in FID's 12,620-acre service area. Additionally, the United

States holds natural-flow surface water rights as well as ground water rights for the benefit of FID.

American Falls Reservoir has been experiencing low late-season water levels due to drought, downstream deliveries of water to enhance fisheries, decline in reach gains entering AMF due to groundwater pumping, and increased late season demand by users drawing from AMF. The elevation of the penstock intake and pump station at AMF were set in 1927 when water storage in the reservoir was at 1,700,000 acre-feet. Since that time, water storage within AMF has declined by 27,400 acre-feet. Late-season AMF water levels are below levels at which the existing pumping plant can deliver the full supply of irrigation water. Exacerbating the water supply issue, AMF also serves irrigated lands in other irrigation districts and canal company service areas. Twice in the last 25 years, reservoir levels have been so low that the pumps could not be operated without severe damage from cavitation.

FID uses both natural flow surface water stored in the upper Snake River reservoir system and groundwater within the ESPA to provide irrigation water to approximately 12,600 acres in Power County. Surface water is drawn from AMF through a 5-foot-diameter penstock that penetrates the American Falls Dam and is delivered through the penstock to a pumping station southeast of the dam. Water is piped uphill to the southeast into a canal system which distributes water east and west to FID's patrons. Additionally, FID uses 26 of 29 originally-authorized wells to supply groundwater under water rights held by the United States. These wells deliver water directly to patron lands via pivots or wheel lines. Water use at each of the 26 wells has been recorded as far back as 1959. This data indicates that, for many of the wells, actual historical diversion has been notably below the allowed diversion.

1.2 Proposed Action

To address the late-season water delivery issue, the Proposed Action would use existing groundwater rights during times of low water elevations at AMF. This would entail approval from Idaho Department of Water Resources (IDWR) to add points of diversions to existing water rights to better utilize current groundwater rights. FID would drill and operate three wells as points of diversion, which would pump water from ESPA into adjacent canals located along FID's canal system. Each well would be located on private property within federal easements or rights-of-way managed by Reclamation. The use of both groundwater and surface water (when fully available), would ensure that FID has adequate capability to meet demands during periods of drought.

The proposed wells would be federally owned as part of the Minidoka and Michaud Flats Projects and use existing federal water rights. FID would operate and maintain the wells in accordance with the existing contract. The proposed action would not require any new or additional water rights, as existing rights are sufficient to meet FID constituents' needs.

1.3 Purpose and Need for Action

Reclamation has a responsibility to respond to FID's proposal to drill three wells on Reclamation managed land. The purpose of the proposed action is to provide a reliable source of late-season irrigation water to FID patrons when AMF water levels are such that the pumping plant cannot deliver the full supply of irrigation water.

The need for the proposed action is a result of the fact that AMF is frequently unable to maintain adequate water levels for delivery late in the growing season. These inadequate water levels are due to changes in cropping patterns that require more water later in the year, increased demands caused by flow augmentation releases, and declining reach gains during the fall. This is especially true during low-water years, when there are not sufficient quantities of irrigation water available for FID to provide to certain areas within the district.

The 26 existing wells provide the sole source of irrigation for approximately 3,780 acres where natural flow irrigation cannot be accessed via the existing canal system. The development of new technology has resulted in a more efficient use of water resulting in a reduction in the amount of irrigation water historically used from these wells. This leaves an unused amount of water that could be utilized to supplement surface water irrigation to the remaining 8,820 acres within FID's district; however, none of the existing well locations are placed to provide or distribute irrigation water to these areas efficiently. Therefore, an additional three wells in key locations are necessary to supplement irrigation with this unused water during periods when AMF water levels are low.

1.4 Decision to be Made

The Reclamation Snake River Area Manager is the authorized officer for decisions regarding activities conducted within the federal right-of-way in the Minidoka Project Area. Based on the analysis results, the authorized officer will issue a determination of the significance of the environmental effects and whether an Environmental Impact Statement (EIS) would be required. If the authorized officer determines that it is not necessary to prepare an EIS, the EA would provide information to make an informed decision.

The Snake River Area Manager will decide whether to do one of the following:

1. Approve the proposed Project,
2. Approve the proposed Project with modifications; or
3. Deny the proposed Project.

1.5 Project Location

The Project area is located in southeast Idaho near of the City of American Falls in Power County (Figure 1-1), along the southeastern edge of the ESPA. American Falls is nestled between the edge of the AMF and U.S. Interstate 86, approximately 22 miles southwest of

Pocatello, Idaho. The proposed Project is located in three locations along the FID's canal system (Figure 1-2) on private land that contains federal easements or rights-of-way managed by Reclamation. These sites are located southeast of U.S. Interstate 86 near American Falls, Idaho.

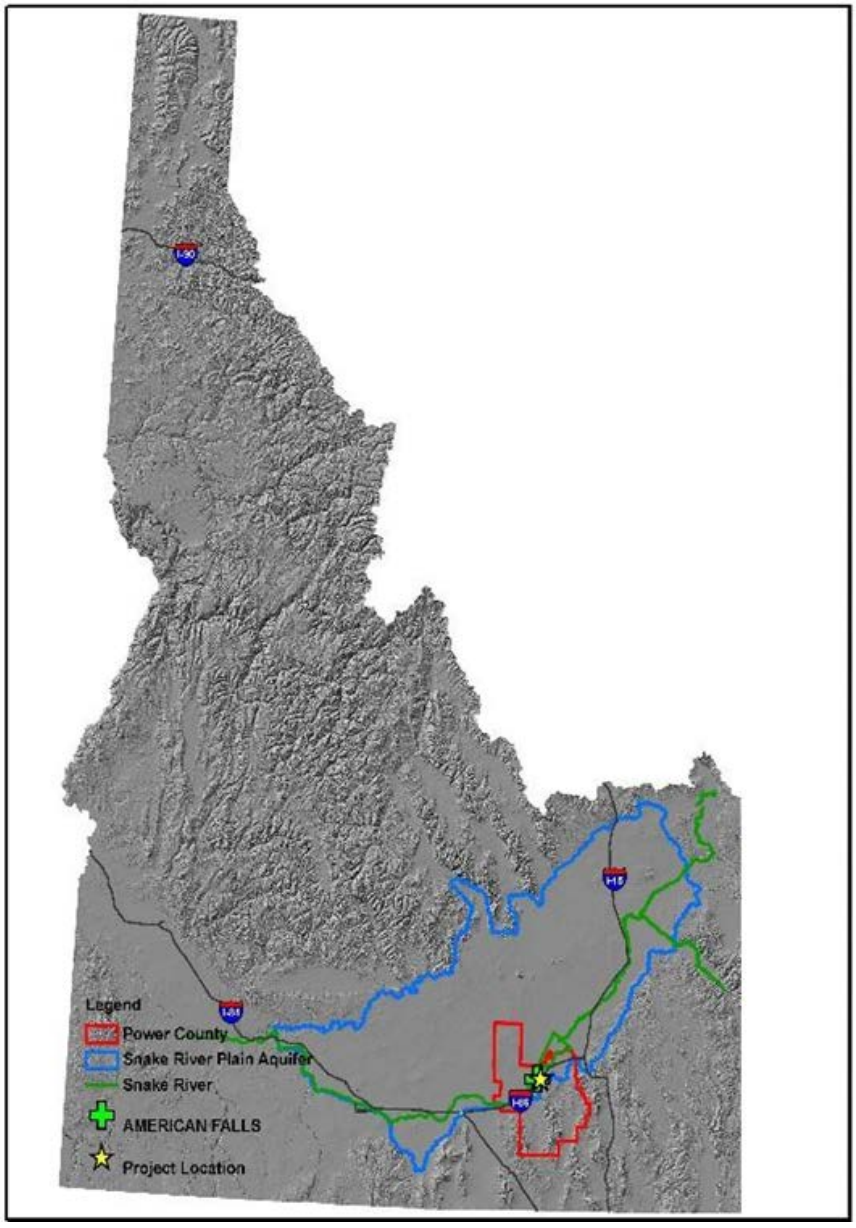

Figure 1-1. Project location

Proposed well location 1 (South Well) is located on the south bank of the Main West Canal in an unused corner of a field. Specifically, it is located in the southeast quarter of the northeast quarter of 13, Township 8 South, Range 30 East, Boise Meridian (latitude 42°43'34.45"N, longitude Section 112°53'26.79" W). The Main West Canal is classified by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) as an

excavated, permanently flooded, lower perennial stream with an unconsolidated bottom (USFWS-NWI 2016).

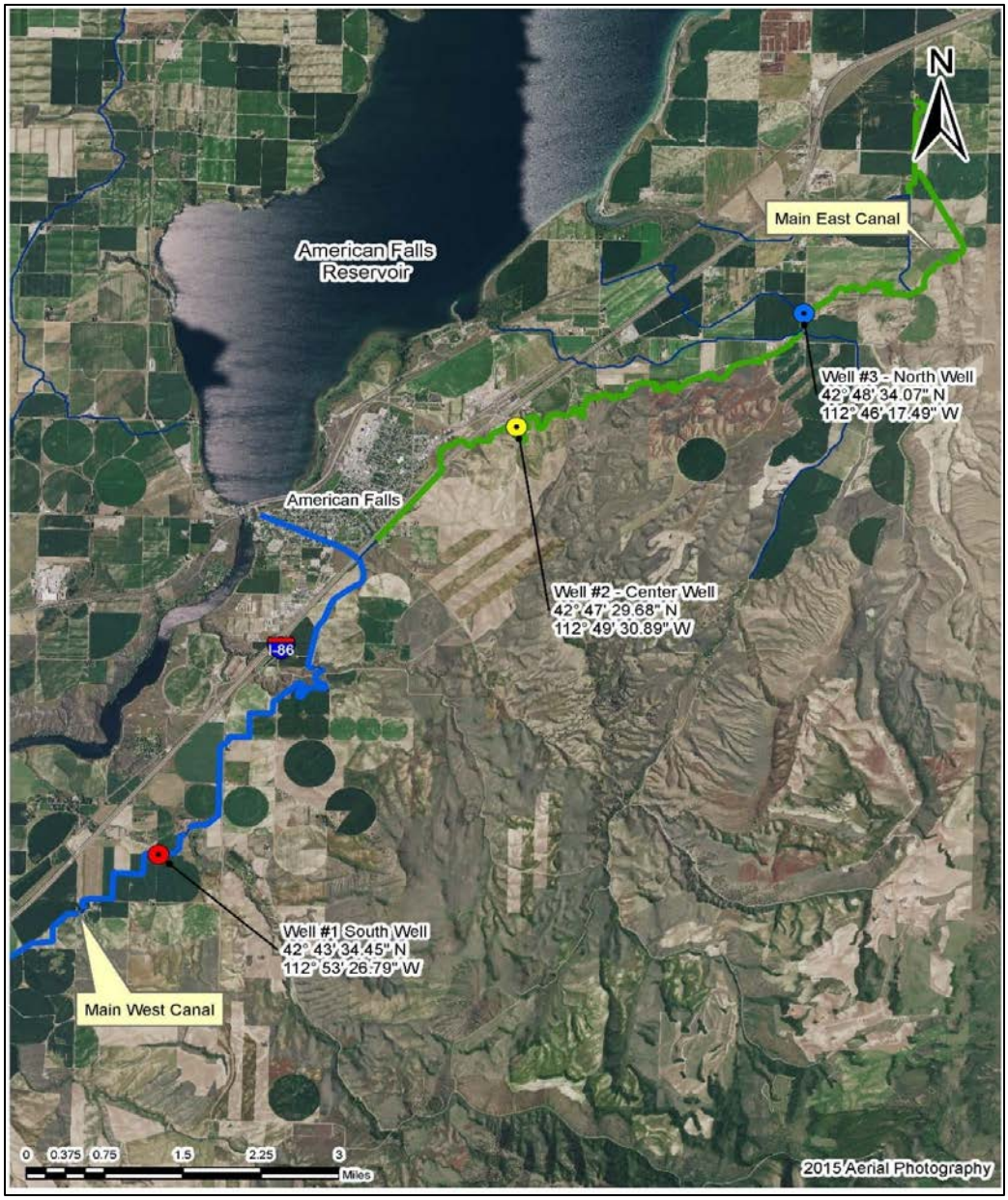

Figure 1-2. Proposed well locations

Proposed well location 2 (Center Well) is located on the south bank of the Main East Canal in an unused corner of a field located in the southwest quarter of the southwest quarter of Section 22, Township 7 South, Range 31 East, Boise Meridian (latitude 42°47'29.68"N, longitude 112°49'30.89"W). The Main East Canal is classified by the USFWS NWI as an excavated, semi-permanently flooded, lower perennial stream with an unconsolidated bottom (R2UBFx) (USFWS-NWI 2016).

Proposed well location 3 (North Well) is also located on the southeast bank of the Main East Canal in an unused corner of a field. Specifically, it is located in the northeast quarter of the northeast quarter of Section 24, Township 7 South, Range 31 East, Boise Meridian (latitude 42°48'34.07"N, longitude 112°46'17.49"W). The Main East Canal is classified by the USFWS NWI as an excavated, semi-permanently flooded, lower perennial stream with an unconsolidated bottom (R2UBFx) (USFWS-NWI 2016).

1.6 Legal Authority

The Minidoka Project was authorized by the U.S. Department of Interior Secretary of the Interior on April 23, 1904, under the 1902 Reclamation Act. Replacement of American Falls Dam was authorized by an Act of Congress on December 28, 1973 (87 Stat. 904, Public Law 93-206). Subsequently, the Act of September 25, 1979 (93 Stat. 437, Public Law 96-69) authorized that unobligated appropriations made for the payment of Teton Dam failure claims of up to $19 million could be used to pay some of the American Falls Dam replacement costs and would be non-reimbursable pursuant to the Reclamation Safety of Dams Act.

Evaluation of impacts to fish and wildlife resources associated with the proposed water resource development project are considered in accordance with the Fish and Wildlife Coordination Act of 1958 (P.L. 85-624).

The Snake River Water Rights Act of 2004 (P.L. 108-447) allows Reclamation's continued delivery of flow augmentation water for a 30-year period (through 2034). The provisions of this act improve Reclamation's ability to provide water for flow augmentation by increasing the long-term probability of obtaining 427,000 acre-feet and in some years providing as much as 487,000 acre-feet, and by minimizing the uncertainties related to the ability to protect the water in accordance with State law.

1.7 Regulatory Compliance

Various laws, Executive Orders (EO), and Secretarial Orders (SO) and how they apply to the proposed action and alternatives are summarized below. The legal and regulatory environment within which the federal activity would be conducted depends on which alternative is implemented.

1.7.1 National Environmental Policy Act of 1969

The National Environmental Policy Act of 1969 (NEPA) requires an agency to fully disclose potential effects/impacts of its proposed action on the environment and cite possible mitigation measures. This evaluation is documented and presented to the public. This is being done as an EA for this project. If, following public scoping and alternative evaluation, no significant impacts to the human environment are identified, then a Finding of No Significant Impact will be prepared and signed. However, if significant impacts that cannot

be mitigated or eliminated are identified through the EA process, Reclamation will prepare a notice of intent (NOI) to prepare an EIS for the project. A record of decision (ROD) would be issued following completion of a final EIS.

1.7.2 Secretarial Order 1375 – Department Responsibilities for Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States (with the Secretary of the Interior acting as trustee) for Indian tribes or Indian individuals. Examples of ITAs are lands, minerals, hunting and fishing rights, and water rights. In many cases, ITAs are on-reservation; however, they may also be located off-reservation on federal lands.

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 rights are sometimes further interpreted through court decisions and regulations. This trust responsibility requires that officials from federal agencies, including Reclamation, take all actions reasonably necessary to protect ITAs when administering programs under their control.

1.7.3 Executive Order 13007 – Indian Sacred Sites

Executive Order (EO) 13007, dated May 24, 1996, instructs federal agencies to promote accommodation of access to and protect the physical integrity of Indian sacred sites. A "sacred site" is a specific, discrete, and narrowly delineated location on federal land. An Indian tribe or an Indian individual determined to be an appropriately authoritative representative of an Indian religion must identify a site as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion. However, it is provided that the tribe or authoritative representative has informed the agency of the existence of such a site.

1.7.4 Executive Order 13175 – Consultation and Coordination with Tribal Governments

On November 6, 2000, E.O. 13175 "Consultation and Coordination with Indian Tribal Governments" was issued. This order requires all federal departments and agencies to consult with Indian tribal governments when considering regulatory policies that would impact tribal communities and reiterates the federal government's commitment to tribal self-government and limited autonomy. It is the Department of the Interior's policy to have government-to-government consultation between the appropriate Tribal and Department officials in order to create effective collaboration and informed federal decision making.

1.7.5 Endangered Species Act (1973)

The Endangered Species Act of 1973 requires all federal agencies to ensure that their actions do not jeopardize the continued existence of listed species, or destroy or adversely modify their critical habitat. As part of the Endangered Species Act's Section 7 process, an agency must request information from the USFWS and the National Marine Fisheries Service (NMFS) on whether any threatened and endangered species occur within or near the Project area. The agency then must evaluate effects to those species. If an action may affect any listed species, the agency must consult with the USFWS or NMFS. Details about this consultation are located in Chapter 3, Section 3.6.

1.7.6 National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 requires that, prior to authorizing an undertaking, Federal agencies must take into account the effect of the undertaking on any properties eligible for or listed on the National Register of Historic Places (National Register). Federal regulations entitled Protection of Historic Properties (36 CFR 800) define the process for implementing requirements of the National Historic Preservation Act, including consultation with the appropriate State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation.

1.7.7 Executive Order 13898 – Environmental Justice

EO 12898, dated February 11, 1994, instructs federal agencies, to the greatest extent practicable and permitted by law, make achieving environmental justice part of its mission by addressing, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. Environmental justice means the fair treatment of people of all races, incomes, and cultures with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no person or group of people should shoulder a disproportionate share of negative environmental impacts resulting from the execution of environmental programs.

1.8 Scoping of Issues and Concerns

Scoping documents provided information to the public, Tribes and governmental agencies, and requested their aid in identifying any issues and concerns related to the drilling of wells and withdrawal of water from the ESPA. To identify issues and concerns, Reclamation solicited oral and written comments from the Tribes, federal, state and local agencies, irrigation districts, adjacent landowners, and the general public.

An agency and public scoping period was held for the Scoping Document from September 2, 2016 to October 11, 2016. Over 50 letters were sent notifying federal, state and tribal

agencies, and adjacent landowners of the intent to prepare an EA. The letters included the information on the Project, scoping period duration, and comment submittal instructions.

Concerns resulting from scoping included the following:

- Water rights/supply – Ensure that withdrawal of water from the ESPA does not impact another's water rights or water levels within the ESPA.
- Permitting – Drilling and water right permits need to be obtained from the IDWR.
- Wildlife – Ensure flows at the American Falls Hatchery are not affected.
- Wetlands – Potential to impact Waters of the United States.

The scoping document, comments received, and Reclamation's response to the comments, can be found in Appendix A.

2 Alternatives

2.1 Introduction

This chapter describes in detail the alternatives analyzed in this EA: the No Action Alternative (A) and the Proposed Action Alternative (B). Other alternatives were identified that addressed ways to obtain the necessary water to fulfill FID obligations; however, each was eliminated due to cost, feasibility, and/or environmental effects. Alternatives that were eliminated are identified below in Section 2.4 Alternatives Eliminated from Consideration.

2.2 Alternative Development

NEPA requires agencies to evaluate a range of reasonable alternatives to a proposed federal action. Alternatives should meet the purpose and need of the agency while minimizing or avoiding environmental effects. The scope of the Project was defined by the purpose and need for the Project, as described in Chapter 1. Using this information, a range of alternatives were developed including a No Action alternative and the Proposed Action Alternative. No new alternatives were identified during the scoping process, although the Proposed Action was modified as a result of the scoping process.

The original Proposed Action consisted of exchanging FID's surface water diversion from AMF for groundwater that would be used at the proposed well locations. During the scoping process, it was determined that existing water rights, held by the United States in trust for FID, were of sufficient quantity to meet or exceed the needs of FID's constituents. Currently only a portion of these rights are being used. This resulted in the revised Proposed Action alternative, which would involve adding points of diversion to existing water rights. The Proposed Action would use rights assigned to existing wells where the rights are not being fully used.

The alternatives presented in this chapter are the result of the scoping process. Alternatives that were considered and dismissed for a variety of reasons are discussed in Section 2.4 below.

2.3 Description of Alternatives

2.3.1 Alternative A – No Action

The No Action Alternative would continue to provide available water to FID and its constituents through existing facilities using existing water rights. Current groundwater rights allow for a total volume of 12,028 acre-feet to be used between April 1 and October 31. Current groundwater use is primarily in the form of sprinkler irrigation, using pivots or wheel lines as sources of water delivery. Amounts pumped using the existing wells and groundwater rights vary from year to year and range from 720 acre-feet to almost 3,000 acre-

feet This high variability of water needs is due to the type of crop planted and the amount of precipitation received during periods of high water demand for crops.

2.3.2 Alternative B – Proposed Action

In the Proposed Action Alternative, three new wells would be drilled and operated along the FID's canal system on private land within a federal easement or Reclamation right-of-way. The size of each well site would be approximately 50 feet by 50 feet (2500 square feet). Each well site would be cleared of vegetation and clean gravel would be placed on the surface. Two 6-foot by 6-foot concrete pads would be poured on each gravel pad. A concrete pad would contain either a well or an electrical panel.

Wells would be approximately 16 inches in diameter and approximately 250 feet deep. A structure would be erected over the electrical panel to provide shade to the panel. The structure would cover the 6-foot by 6-foot pad and would be constructed using four 3-inch pipes supporting a metal ribbed roof. The height of each structure would be dependent upon the installation of the electrical panel but should range from 6 to 8 feet high. Water from the wells would be delivered to the canal system through 30 to 40 feet of pipe at expected rates of 3 to 4 cubic feet per second (cfs) per well. After installation, each well would undergo a 1-week flow test.

Water from the proposed wells would be pumped from the ESPA directly into the existing canal system for distribution during years when the water levels in the AMF are insufficient for FID to deliver water to its patrons. Water to be pumped from each new well, when added to existing volumes, would not exceed the historical annual volumes identified in the existing ground water rights. In order to transfer points of diversion, an application to the IDWR would need to be submitted and approved.

2.4 Alternatives Eliminated from Consideration

In developing the Proposed Action Alternative, other alternatives were developed and evaluated, such as alteration of the existing penstock at the American Falls Dam, installation of new pumps at locations within the AMF, or modifying reservoir operations. A penstock reconfiguration would be extremely costly and might jeopardize the integrity of the dam itself. This alternative would also require pumping plant changes, including the relocation of the pumping plant to a lower elevation site, which may not be feasible. Installing pumps in new locations would require pump-station islands or piers to be constructed within the reservoir, as well as the installation of pipelines and canals to deliver water to the existing distribution system. This would be very costly and would likely result in substantial environmental impacts. The final alternative that was considered and dismissed was to modify AMF operations to include adjusting timing and magnitude of flood-control and other releases, and refining delivery schedules of storage water. Each of these operational modifications were eliminated due to a variety of reasons, including lack of efficiency, cost, and increased area of disturbance.

3 Affected Environment and Environmental Consequences

3.1 Introduction

The Affected Environment and Environmental Consequences Chapter evaluates the environmental effects of implementing the No Action and Proposed Action alternatives described in Chapter 2. The level and depth of the environmental analysis corresponds to the context and intensity of the effects anticipated for each environmental component. Where alternatives would have the same impacts on an environmental component, the analysis is presented once and summarized or referenced in subsequent analysis to eliminate redundancy. The No Action Alternative describes the most likely future without the federal action and provides a basis to which the Proposed Action Alternative is compared.

3.2 Environmental Resources Considered in the Analysis

Environmental resources were evaluated to determine if there are any impacts resulting from the Proposed Action. Resource components identified by an X in the Not Present column in Table 3-1 are not present or affected by the Proposed Action or the No Action Alternative and receive no further consideration. Resources which are present and may be affected are discussed in the sections below.

Table 3-1. Resources considered in the analysis

Resource	Not Present	Present	Rationale
Access	X		Access would be via existing roads and no new access ways are needed.
Air Quality	X		The proposed action would not produce any air emissions. According to the Environmental Protection Agency Air Data Center, there are no air quality concerns within the project area. The closest active monitoring of Particulate Matter 10 is approximately 15 miles to the east in Pocatello, Idaho.
Cultural Resources		X	Discussed in Section 3.7
Environmental Justice		X	Discussed in Section 3.5
Indian Trust Assets and Sacred Sites		X	Discussed in Section 3.8

Resource	Not Present	Present	Rationale
Paleontological Resources	X		There are no known paleontological resources located in the project area.
Recreation	X		There are no recreational opportunities within the proposed project areas.
Socioeconomics		X	Discussed in Section 3.4
Soils	X		Soils within the proposed project areas are highly disturbed and are not representative of native soils in the area.
Threatened and Endangered Species		X	Discussed in Section 3.6
Vegetation	X		Vegetation within the proposed project areas consist of annual weedy species that are typical of highly disturbed areas. Additionally, the proposed project areas are relatively small and would result in no impacts to native vegetation.
Visual Resources	X		A small structure would be constructed over each well; however, these structures would not attract attention and the level of change to the landscape would be low.
Water Quality	X		There are no permanent surface waters present within the proposed activity locations.
Water Rights/Hydrology		X	Discussed in Section 3.3
Wildlife	X		Each of the proposed well sites are very small and would not impact wildlife populations.
Wastes	X		There are no known waste areas in the proposed project areas.

As part of the analysis, cumulative effects were also assessed. Cumulative Effect of Impact is defined as the "impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR 1508.7). The Council on Environmental Quality has interpreted this regulation as referring only to the cumulative impact of the direct and indirect effects of the alternatives when added to the aggregate effects of past, present, and reasonably foreseeable future actions. Cumulative impacts can result when individual minor impacts are combined and collectively

result in significant actions taking place over a period of time. No reasonably foreseeable future projects were identified within the general project area.

3.3 Water Rights/Hydrology

3.3.1 Affected Environment

Annual precipitation at the city of American Falls, Idaho, averages 12.34 inches (U.S. Climate Data 2017). Annual precipitation comes primarily in the form of winter snow and spring rain. November through May contribute about 70 percent of this annual precipitation. Predominant water sources within the Project area consist of channelized surface water which is used for irrigation, and groundwater for irrigation and residential purposes. Surface water from AMF is pumped into two canals, the Main East Canal and the Main West Canal.

The United States holds storage water right numbers 01-2064 and 01-2068 from the Snake River. Water right 01-2064, with a priority date of March 30, 1921, allows for irrigation storage of 1,672,590 acre-feet in AMF. Water Right 01-2068, with a priority of July 28, 1939, allows for irrigation storage of 1,200,000 acre-feet in Palisades Reservoir. FID provides water to approximately 12,620 acres in Power County and holds contracts which entitle it to 22,925 acre-feet of storage in AMF and 40,900 acre-feet of storage in Palisades Reservoir, for a total storage of 63,825 acre-feet. The United States also holds a natural flow surface water right and ground water rights for the benefit of the FID.

FID also holds multiple groundwater rights with various points of diversion throughout its district. Combined water right numbers 01-13, 01-2061, 01-2064, 01-2068, 01-4051, 29 2262, 29-2267, 29-2288, 29-2306, 29-2307, 29-2310, 29-2341, 29-2380, 29-2568, 29 2614, 29-10044, 29-11167, 29-11168, 29-11169, 29-11170, 29-13388, 29-13389, 29 13426, 29-13427 are limited to the irrigation of a combined total of 12,620 acres in a single irrigation season.

3.3.2 Environmental Consequences

Alternative A – No Action

Alternative A would not change the hydrology in the area, as irrigation practices would continue as they currently exist. However, under Alternative A – No Action, there may be a potential decrease in late-season water supplies as a result of hydrologically dry years.

Alternative B – Proposed Action

Under the Proposed Action (Alternative B), historic use associated with the existing wells would continue with additional points of diversion. Table 3-2 identifies water rights that would be diverted from existing wells to the proposed wells, the combined authorized diversion in cfs and amount of acre-feet annually (AFA), the acre limit that can be irrigated with each water right, the average amount of diversion per year, the greatest amount that has been diverted, and the approximate amount of water that should be transferred to the new

well. Water rights to be transferred have been determined by proximity to the proposed well locations.

Table 3-2. Falls Irrigation District Proposed Diverted Ground Water Rights Volumes.

Well Site	Water Right No.	Priority Date	Associated Well	Combined Authorized Diversion		Acre Limit	Acres not Irrigated	2012-2017 Average Diversion	Highest Diversion		Approximate amount of water that should be transferred to new well	Distance from Water Release Point of Diversion to Proposed Well Site
				CFS	AFA				Year	AFA		
Well Site 1	29-2341	10/29/1953	M	2.00	466.0	107.0	27.4	197.980	1966	534.70	**268.020**	15,840 feet
Well Site 2	29-13426 29-13427	01/15/1952 01/15/1952	C	2.75	540.0	135.0 48.5	88.8	209.723	1966	408.00	**198.277**	24,816 feet
Well Site 3	29-11168 29-2288	04/01/1954 05/19/1950	G	2.58	565.6	Both water rights combined for141.4	49.5	252.158	1967	475.07	**222.910**	14,784 feet
Well Site 3	29-2306	07/02/1951	B	2.80	770.0	192.5	83.3	121.735	1966	466.07	**344.330**	17,424 feet
										Total:	**1033.540**	

Because total groundwater pumping, including the new wells, is not proposed to exceed the historical pumping, there would be no groundwater supply effect resulting from the Proposed Action. IDWR has required an aquifer-modeling assessment of the reach-by-reach water supply effects of the water right transfer. With multiple well transfers, typical practice is to model the hydrogeologic effects at the Geographic Information Systems (GIS) centroid of the pre-transfer condition, and the proposed post-transfer condition.

Impacts and mitigation requirements were analyzed using the Enhanced Snake River Plain Aquifer Model mitigation analysis tool used by IDWR to evaluate transfers within the ESPA boundary. The model simulated a negative impact of 11 acre-feet to the "Neeley to Minidoka" reach of the Snake River, and a corresponding mitigation requirement of 10.5 acre-feet. It also simulated a 9 acre-feet positive impact to the adjacent "Near Blackfoot to Neeley" reach (see Appendix D).

When those two reaches are modeled as a single combined reach, however, the analysis shows no mitigation would be required. A number of factors support this combination as follows. The proposed transfer is located on the south side of the river, where geologic outcropping of the south mountains extends into the ESPA. The available aquifer on the south side is smaller than the rest of the ESPA (at one point it is only 1-mile wide). Additionally, the "Near Blackfoot to Neeley" reach includes the American Falls Reservoir. These factors substantially affect the hydrogeology of this area, and modeling results can be very sensitive. With the proposed action located near the boundary of the two reaches and due to the factors above, modeling with the two reaches combined is appropriate. Therefore, the proposed action has negligible impact and would not need mitigation.

3.3.3 Cumulative Effects

No cumulative effects are anticipated on this resource as a result of the proposed project due to the lack of reasonably foreseeable future projects and the lack of effects to Water Rights/Hydrologic resources.

3.4 Socioeconomics

3.4.1 Affected Environment

The population of Power County, Idaho has been slowly declining since 2010. The cause of this loss has been attributed to the loss of manufacturing jobs which forced people to look for work elsewhere (IDL 2017). In 2015, the population of Power County was estimated at 7,648 which is a 2.2 percent decline since 2010. Table 3 3 below provides information concerning the population in Power County and the State of Idaho.

Table 3-3. Demographics for Power County and the State of Idaho *

Population Category	Power County	State of Idaho
2015 Total Population Estimate	7,648	1,654,930
Population, percent change – April 1, 2010 to July 1, 2015	-2.2%	5.6%
Persons under 5 years, July 1, 2015, percent	9.9%	6.8%
Persons under 18 years, July 1, 2015, percent	31.1%	26.2%
Persons 65 years and over, July 1, 2015, percent	13.9%	14.7%
Female persons, July 1, 2015, percent	49.5%	49.9%

*Information taken from the U.S. Census Bureau: State and County QuickFacts for years 2010-2015 (U.S. Census Bureau 2016)

The workforce in Power County is heavily dependent on agriculture and related manufacturing (Eke 2017). The major employers in Power County consist of large farming operations and companies that are closely associated with agriculture. Agricultural related manufacturing pays the county's second-highest wages and agriculture itself pays the fourth highest wage. These wages rank well among all Idaho Counties. However, the County's per capita income of $36,019 is slightly lower than that of the State of Idaho at $38,392. The labor force in Power County has steadily declined since 2010. However, according to Idaho Department of Labor, agriculture has shown significant growth and in 2015 accounted for 22 percent of the jobs in the County.

3.4.2 Environmental Consequences

Alternative A – No Action

Socioeconomic effects associated with agriculture would likely continue as they have in the past. The area would continue to be heavily economically dependent on agricultural production. Due to the potential decrease in late-season irrigation water deliveries, crops necessitating these type of water deliveries would be limited in some years. Late water deliveries are used to harvest sugar beets, chemigate for spring planting of potatoes, germination of winter wheat, and for corn, hay and haylage.

For example, possible economic effects to sugar beet production are as follows. According to the National Agricultural Statistics Service (NASS 2017), the total number of acres of sugar beets harvested in Power County has doubled from 9,200 acres in 1991 to more than 18,000 acres in 2016 with an increase in production from 211,200 tons to 768,000 tons. This accounts for approximately 5 percent of the total acreage in Power County used for crop production. Using 2015/2016 prices, sugar beets in Power County are valued at more than 34 million dollars, which averages out to approximately $1,900 per acre. If five percent of the area within FID's service area is planted in sugar beets, this could potentially result in an

approximate $1.1 million loss during years when late-season irrigation water supplies are low or are unavailable. These economic effects would diminish in the long-term due to the likely crop changes to varieties that are not dependent upon late-season water deliveries for harvest. These crop changes would be dependent on a variety of factors, such as commodity values, changes to current agricultural equipment (irrigation, harvesting, transportation, etc.), and growing site potential.

Alternative B – Proposed Action

Irrigation water would be delivered to FID patrons reliably at the quantity and time of year necessary to harvest late-season crops. Since 1991, crop production has moved towards crops that rely on these late-season water deliveries. If this trend continues, producers would continue to have options to grow crops with higher commodity values. Direct and indirect effects would include sustained and possible increased economic gains due to reliable late-season irrigation water availability. The effects would be localized in Power County, but important to the local economy. These economic gains would eventually reach an equilibrium sometime in the future based on the agricultural potential for the area.

3.4.3 Cumulative Effects

No cumulative effects are anticipated on this resource as a result of the proposed project. There are no reasonable foreseeable future projects that would be additive to the localized economic effects of the area.

3.5 Environmental Justice

3.5.1 Affected Environment

EO 12898 (59 FR 7629) requires that each federal agency make achieving environmental justice part of its mission by identifying and addressing disproportionately high and adverse health or environmental effects of its programs and activities on minority and low-income populations. The intent of EO 12898 is to assess potential effects from an action to confirm that no person in the United States be excluded from participation in, denied benefits of, or be subjected to discrimination based on race, color, or national origin, or of receiving federal financial assistance. Measures should be taken, where possible, to avoid negative impacts to these communities or mitigate the adverse effects.

In order to accomplish this, the federal agency examines the demographics of the Project area to determine if minority (including American Indians) and/or low-income populations are present. Table 3-4 summarizes the race and ethnic characteristics of Power County and the State of Idaho overall.

Table 3-4. Race and ethnicity in Power County and the State of Idaho, 2015 estimate

Population Category	Power County	State of Idaho
2015 Total Population Estimate	7,648	1,654,930
White alone, (%)	92.8	93.4
Black or African American, (%)	0.9	0.8
American Indian and Alaska Native, (%)	3.2	1.7
Asian, (%)	0.5	1.5
Native Hawaiian or Pacific Islander, (%)	0.2	0.2
Two or More Races, (%)	2.5	2.3
Hispanic or Latino, (%)	32.8	12.2
White alone, not Hispanic or Latino, (%)	62.6	82.5

Source: U.S. Census Bureau, 2016

The majority of Power County residents identify themselves as white, which follows similar racial populations as the State of Idaho. However, the proportioned Hispanic or Latino population in Power County is much larger than the state. Race and Hispanic or Latino origin are two separate categories as defined by the U.S. Office of Management and Budget. People who report themselves as Hispanic or Latino can be of any race and are also counted in that category.

The majority of people in Power County do not identify themselves as Hispanic or Latino. Therefore, the overall population is not considered a minority population. However, a small Hispanic and Latino population is meaningful in that it is proportionally greater in Power County than in the State of Idaho as a whole.

Low-income populations are often characterized using income (per capita income and median household income) and the percentage of the population that is below the poverty level. Table 3-5 below provides the income and poverty information for Power County and the State of Idaho as obtained from the U.S. Census Bureau, State and County Quickfacts 2016.

Table 3-5. Income and poverty levels in Power County and the State of Idaho

Geographic Area	Per Capita Income	Median Household Income	Population below the Poverty Level
Power County	$18,877	$44,779	14.1%
State of Idaho	$23,399	$47,583	15.1%

Power County's median household income is approximately 94 percent of Idaho's median household income. Likewise, the percentage of people below the poverty level in Power County is only slightly lower than the overall state level.

3.5.2 Environmental Consequences

Alternative A – No Action

Under the No Action alternative, the additional wells would not be installed, and the distribution of irrigation water would continue as it currently exists. There are few, if any minority or low-income populations in or near the project area. The impacts associated with the No Action alternative would not result in any disproportionately high or adverse impacts on any particular population. All races and incomes would be affected in the same manner.

Alternative B – Proposed Action

Under the Proposed Action, there would be no direct or indirect disproportionately high and adverse health or environmental effects on minority and/or low-income populations. It would not require the relocation of any residents nor would it have any significant or adverse impact on any low-income populations. There would be no environmental justice effects to the Project area due to the small size of the action and the fact that the existing conditions would remain intact.

3.5.3 Cumulative Effects

No cumulative effects are anticipated on this resource as a result of the proposed project due to the lack of Environmental Justice resource effects.

3.6 Threatened, Endangered, Rare, and Sensitive Species

3.6.1 Affected Environment

The general Project area is dominated by large agricultural fields with canals and ditches providing water to the fields, and rural residences scattered throughout the area. The proposed Project areas are located in small, previously disturbed locations along the side of a large canal between the canal and an active agricultural field. Vegetation within adjacent fields consists of various crops such as wheat, barley, corn and alfalfa. Vegetation within

each Project site consists of annual native and non-native species, typical of frequently disturbed areas.

The Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884) provides a conservation program for threatened and endangered plants and animals and the habitats in which they are found. The USFWS, U.S. National Oceanic and Atmospheric Administration (NOAA), and NMFS Fisheries are tasked with implementing the program. The USFWS website identifies all listed or proposed as threatened or endangered species occurring in each county, as well as links that provide the most recent updates of species listing status and designation of Critical Habitat (USFWS 2017). Two species are identified as threatened in Power County—the yellow-billed cuckoo (Coccyzus americanus), and Canada lynx (Lynx canadensis) (Appendix B). The gray wolf (Canis lupus) is listed as a recovery species. Wildlife surveys have not been conducted within the proposed Project areas; therefore, the probability of species occurring and justification for occurrence is based upon seasonal habitat requirements for each species.

Yellow-billed cuckoos are considered a rare migrant and summer resident in Idaho (Reynolds and Hinckley 2005). Yellow-billed cuckoo habitat within southeastern Idaho generally consists of large stands of mature cottonwood forests with a well-developed understory (Taylor 2000). The closest designated yellow-billed cuckoo habitat is located north of AMF approximately 17 miles north of Well No. 3.

Canada lynx are strongly associated with moist, cool, boreal spruce-fir forests. Lynx also need persistent deep, powdery snow and a high density of snowshoe hares. The proposed Project areas and vicinity are not considered habitat for Canada lynx and it is highly unlikely that lynx would occur within the Project area. The closest critical habitat identified by USFWS for Canada lynx is in Wyoming approximately 90 miles east of the Project area.

The gray wolf in Idaho has been delisted due to recovery. Wolves are habitat generalists and can live in many places throughout the northern hemisphere. The primary requirement for wolves is sufficient numbers of deer and elk, which can influence the size of a pack's territory. The Project area is primarily used for the growing of agricultural crops. There may be an occasional ungulate (deer or elk) that frequents the area, but ungulates are not in sufficient abundance within the Project area to support a wolf pack. According to the USFWS, in 2014 there were no known wolf packs in Power County (Figure 3-1).

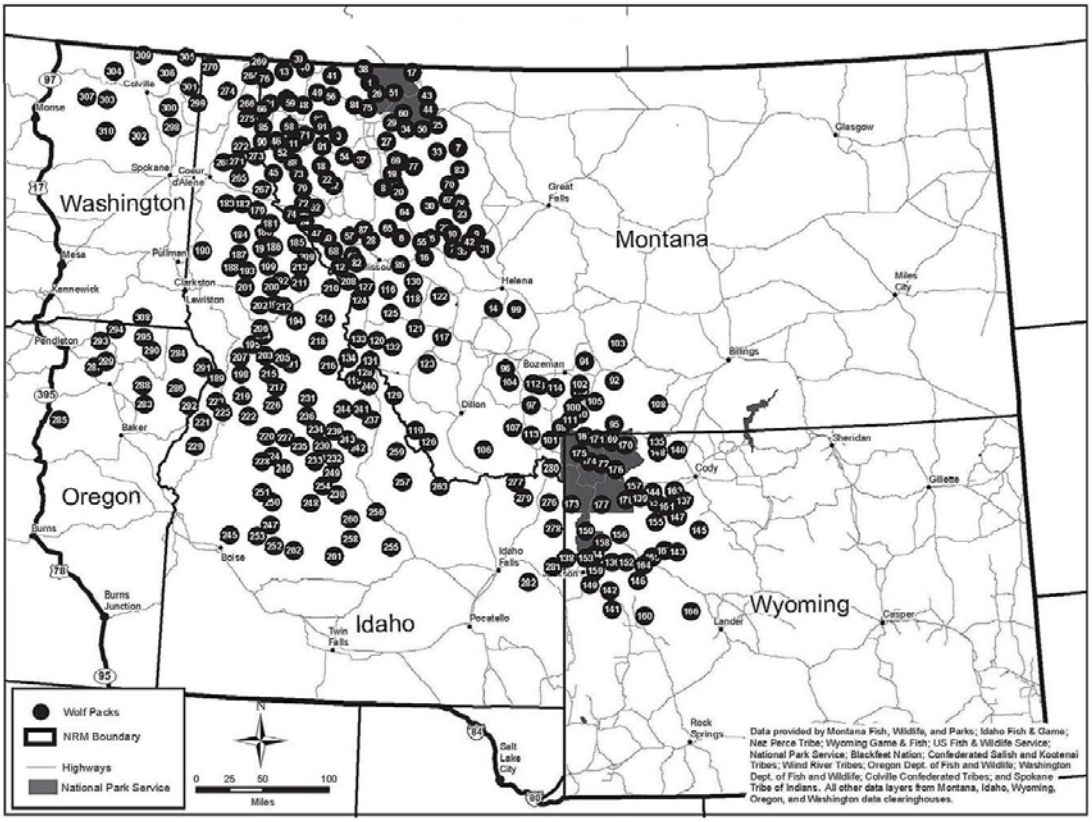

Figure 3-1. Known wolf pack locations in 2014

An official letter from USFWS listing threatened and endangered species and designated critical habitats occurring within the Project area, was requested and obtained on May 16, 2016 (Appendix B). This letter indicated that, "there are 0 threatened, endangered, or candidate species on your species list" and "there are no critical habitats within your Project area".

An IPaC Trust Resources Report was also obtained (Appendix B) from the USFWS. The results of this report indicated that there are 22 migratory bird species that are of particular conservation concern which may occur within the Project area and could be potentially affected. These species are identified in Table 3-6. Migratory birds are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Expected presence in the Project area is based on current conditions, habitat suitability, occurrence of similar habitats, and available literature. None of the species identified in the following Table 3-6 are known to occur within the Project area.

Table 3-6. Migratory birds listed as Species of Concern that are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

Common Name	Scientific Name
Bald Eagle	*Haliaeetus leucocephalus*
Black Rosy-Finch	*Leucosticte atrata*
Brewer's Sparrow	*Spizella breweri*
Burrowing Owl	*Athene cunicularia*
Calliope Hummingbird	*Stellula calliope*
Cassin's Finch	*Carpodacus cassinii*
Eared Grebe	*Podiceps nigricollis*
Ferruginous Hawk	*Buteo regalis*
Flammulated Owl	*Otus flammeolus*
Fox Sparrow	*Passerella iliaca*
Greater Sage-grouse	*Centrocercus urophasianus*
Green-tailed Towhee	*Pipilo chlorurus*
Lewis's Woodpecker	*Melanerpes lewis*
Loggerhead Shrike	*Lanius ludovicianus*
Long-billed Curlew	*Numenius americanus*
Peregrine Falcon	*Falco peregrinus*
Pinyon Jay	*Gymnorhinus cyanocephalus*
Sage Thrasher	*Oreoscoptes montanus*
Short-eared Owl	*Asio flammeus*
Swainson's Hawk	*Buteo swainsoni*
Western Grebe	*Aechmophorus occidentalis*
Willow Flycatcher	*Empidonax trailii*

The Idaho Department of Fish and Game (IDFG) tracks species that are identified as having special conservation status within the State of Idaho. Species are identified by a rank of S1 to S5. A species is designated as S1 if they are critically imperiled because of extreme rarity or because some factor makes them especially vulnerable to extinction. Species are identified by a rank of S2 if they are imperiled because of rarity or other factors that make them vulnerable to extinction. A S3 designation is for rare or uncommon but not imperiled species, a S4 designation for species that are not rare and apparently secure, and a S5 designation for species that are widespread and abundant. Table 3-7 identifies State listed species that occur within Power County that have a ranking of S1 or S2. The table also denotes whether the species has breeding-conservation status (B) which refers to the breeding population of the species, or nonbreeding-conservation status (N) which refers to the nonbreeding population of the species.

Table 3-7. Critical or imperiled State-listed species in Power County

Common Name	Scientific Name	State Rank
Columbia Pebblesnail	*Fluminicola fuscus*	S1
Blind Cave Leiodid Beetle	*Glacicavicola bathyscioides*	S1
Pinyon Jay	*Gymnorhinus cyanocephalus*	S1
Canada Lynx	*Lynx canadensis*	S1
Rustic Pondsnail	*Stagnicola hinkleyi*	S1
Columbian Sharp-tailed Grouse	*Tympanuchus phasianellus columbianus*	S1
Desert Valvata	*Valvata utahensis*	S1
Great Egret*	*Ardea alba*	S1B
American White Pelican	*Pelecanus erythrorhynchos*	S1B
Forster's Tern	*Sterna forsteri*	S1B
Common Tern	*Sterna hirundo*	S1B
Virginia's Warbler	*Vermivora virginiae*	S1B
Trumpeter Swan*	*Cygnus buccinator*	S1B, S2N
Common Loon	*Gavia immer*	S1B, S2N
California Floater	*Anodonta californiensis*	S2
Pygmy Rabbit	*Brachylagus idahoensis*	S2

Common Name	Scientific Name	State Rank
Greater-Sage Grouse	*Centrocercus urophasianus*	S2
Idaho Dunes Tiger Beetle	*Cicindela arenicola*	S2
Ringneck Snake	*Diadophis punctatus*	S2
Western Ridged Mussel	*Gonidea angulata*	S2
Spreading Gilia	*Ipomopsis polycladon*	S2
Northern Leopard Frog	*Rana pipiens*	S2
Piute Ground Squirrel*	*Spermophilus mollis*	S2
Townsend's Pocket Gopher*	*Thomomys townsendii*	S2
Clark's Grebe	*Aechmophorus clarkii*	S2B
Western Grebe	*Aechmophorus occidentalis*	S2B
Snowy Egret*	*Egretta thula*	S2B
Franklin's Gull*	*Larus pipixcan*	S2B
Long-billed Curlew*	*Numenius americanus*	S2B
Double-crested Cormorant	*Phalacrocorax auritus*	S2B
White-faced Ibis*	*Plegadis chihi*	S2B
Common Grackle	*Quiscalus quiscula*	S2B
Caspian Tern	*Sterna caspia*	S2B
Merlin	*Falco columbarius*	S2B, S2N
California Gull*	*Larus californicus*	S2B, S3N
Ring-billed Gull*	*Larus delawarensis*	S2, S3B, S3N

*Species identified with an asterisk are those that may occur within the Project area.

With the exception of the long-billed curlew, bird species identified with an asterisk may occasionally visit the area during periods of irrigation and harvest. These species would typically nest closer to AMF where there is an abundance of open water and more suitable nesting habitat. There is a potential for the long-billed curlew to nest in the general area, as they prefer to nest in dry grasslands.

The area surrounding the Project sites may also provide habitat for the Piute ground squirrel and Townsend's pocket gopher. IDFG has documented the presence of both the Piute ground squirrel and Townsend's pocket gopher in the area; however, the last documented record was in 1911.

3.6.2 Environmental Consequences

Alternative A – No Action

Under Alternative A, there would be no direct or indirect effects to threatened and/or endangered (T&E) species because no T&E species or their designated critical habitats have been found or would be expected to occur in the Project area. Additionally, no migratory birds would be affected because operations of adjacent canals would remain the same. However, rare and sensitive species may be affected by the no action alternative as water will not be available during the dry years to water crops that some species rely on for foraging opportunities.

Alternative B – Proposed Action

Under Alternative B, there would be no direct or indirect effects to the yellow-billed cuckoo, Canada lynx or the gray wolf or their designated critical habitat because there are no suitable habitats for these species and there are no documentation of these species occurring in the proposed Project area. Therefore, the proposed Project would have no effect on any listed T&E species. Additionally, the proposed well sites are located in highly disturbed areas adjacent to areas that experience regular use. It is unlikely that the migratory bird species identified above would use these areas even without the Proposed Action. Therefore, there would be no effect to migratory birds from Alternative B.

It is highly unlikely that the activities associated with the development and operation of the wells sites would have any impact upon Rare and Sensitive species. However, the Proposed Action would have positive effects on those rare and sensitive bird species that rely on irrigated crops for foraging opportunities, especially during drought years or in years when AMF is drawn down.

3.6.3 Cumulative Effects

No cumulative effects are anticipated on this resource as a result of the proposed project due to the lack of reasonably foreseeable future projects and the lack of effects to threated and endangered species.

3.7 Cultural Resources

3.7.1 Affected Environment

The Snake River Valley has been used by pre-contact and historic cultures for subsistence and settlement for thousands of years. Pre-field research, in particular Lohse (1993),

indicates that human groups have occupied the Snake River Valley during the past 10,000 years. Until the 19th century, these groups existed as hunter-gatherers.

The following is a summary of Lohse (1993) describing three broad cultural periods: Early Big Game Hunting (ca. 14,000 – 7,800 years before present [B.P.]), Archaic (7,800 – 1,300 B.P.), and Late (1300 – 150 B.P.). The Early Big Game Hunting Period has been argued as representing a cultural adaptation focused on hunting now-extinct megafauna and it is assumed that the diet also included plants and small game. The Archaic Period is the stage in North American prehistory characterized by generalized hunting-and-gathering economies in physical environments basically similar to those of today. Hunters took modern forms of bison, mountain sheep, deer, and small game. Also, plant resources were an important, dominant part of the diet. It is assumed that the atlatl and dart weapon system enters the archaeological record during the Archaic Period, and that this is reflected in the smaller and more variable types of projectile point types. The Late Period is better known than any of the preceding periods in regional prehistory, and most likely represents pre-contact and protohistoric Shoshoneans occupying the Upper Snake and Salmon River country. Two cultural hallmarks are indicative of this period: Shoshonean Intermountain Ware pottery tradition, and use of the bow and arrow.

The transition from protohistoric to historic Shoshonean groups, which hinges on finding European trade goods in association with aboriginal materials, has not been well demonstrated in the archaeological record of this region (Lohse 1993). Sometime after about 300 B.C. horses came to the Shoshone and other Plateau tribes, and trade goods of metal and glass began passing north in trade from the Spanish Southwest (Lohse 1993). The boundary between protohistoric and historic periods for Shoshone has been arbitrarily set at the year 1805, when the first written records of the Upper Snake River Basin were produced by Lewis and Clark (Reed et al. 1986).

Organized migrations to the Oregon Territory began by 1842, with a dramatic increase in immigrant use starting in 1849. Permanent settlements in Idaho would be relatively rare for several more decades. The first permanent settlement of American Falls was founded in 1800 on the west bank of the Snake River. The town moved to the east side of the river in 1888, only to be moved again in 1925 to its present day location to make way for American Falls Dam and Reservoir. The fertile land encouraged the settlement of the Snake River Valley, and the settlement of Euro-Americans by the mid-19th century introduced domestic stock, irrigation, and farming.

A record search through the Idaho SHPO was requested and results were received on May 2, 2017 (Record Search No. 17269). A cultural survey was conducted by Sundance Consulting, LLC on May 4, 2017 and a report was provided documenting the results of the survey and state record search. This report is provided in Appendix C. The Area of Potential Effect for this Project encompasses three non-contiguous parcels totaling approximately one-half acre and includes the staging and work areas associated with well development at each location.

The Area of Potential Effect has been previously disturbed by agricultural use, canal construction, and canal construction and maintenance.

3.7.2 Environmental Consequences

Alternative A – No Action and Alternative B – Proposed Action

A cultural survey was conducted by Sundance Consulting, LLC, on May 4, 2017, to determine the presence and/or extent of cultural resources within the Project Area. The survey resulted in the identification of two historic agricultural waterways, the Main East Canal and the Main West Canal. The Main East Canal was originally recorded in 2005 and was recommended as not eligible for listing in the National Register of Historic Places. The Main West Canal is not currently recorded by the SHPO. Both canals are recommended to be ineligible for listing on the National Register of Historic Places, although additional information may be provided by the SHPO after their review of the Cultural Resources report. Reclamation should receive the SHPO review at the end of January 2018. It is not anticipated that Alternatives A and B would have any effect on historic properties or cultural resources.

3.7.3 Cumulative Effects

No cumulative effects are anticipated on this resource as a result of the proposed Project due to the lack of cultural resource effects.

3.8 Indian Trust Assets and Sacred Sites

3.8.1 Affected Environment

ITAs are legal interests in property held in trust by the United States for Indian Tribes and Indian individuals. Acting as trustee, the Secretary of the Interior holds many assets in trust such as minerals, lands, grazing, hunting, fishing, and water rights. Most ITAs are located on American Indian Reservations; however, they may be also be located off-reservation on federally-managed lands.

The United States has the responsibility to protect and maintain rights granted to or reserved by American Indian Tribes and American Indian individuals by treaties, statutes and executive orders; interpretations of which may be provided by court decisions and regulations.

The Shoshone-Bannock Tribes are federally recognized Tribes with a reservation located at Fort Hall in southeastern Idaho (Figure 3-2). Both tribes have trust assets both on and off of the reservation. The Fort Bridger Treaty was agreed to and signed by Shoshone and Bannock tribal leaders on July 3, 1868. Article 4 of the treaty states that all members of the Shoshone-Bannock Tribes “shall have the right to hunt on the unoccupied lands of the United States…” which includes fishing as a form of hunting.

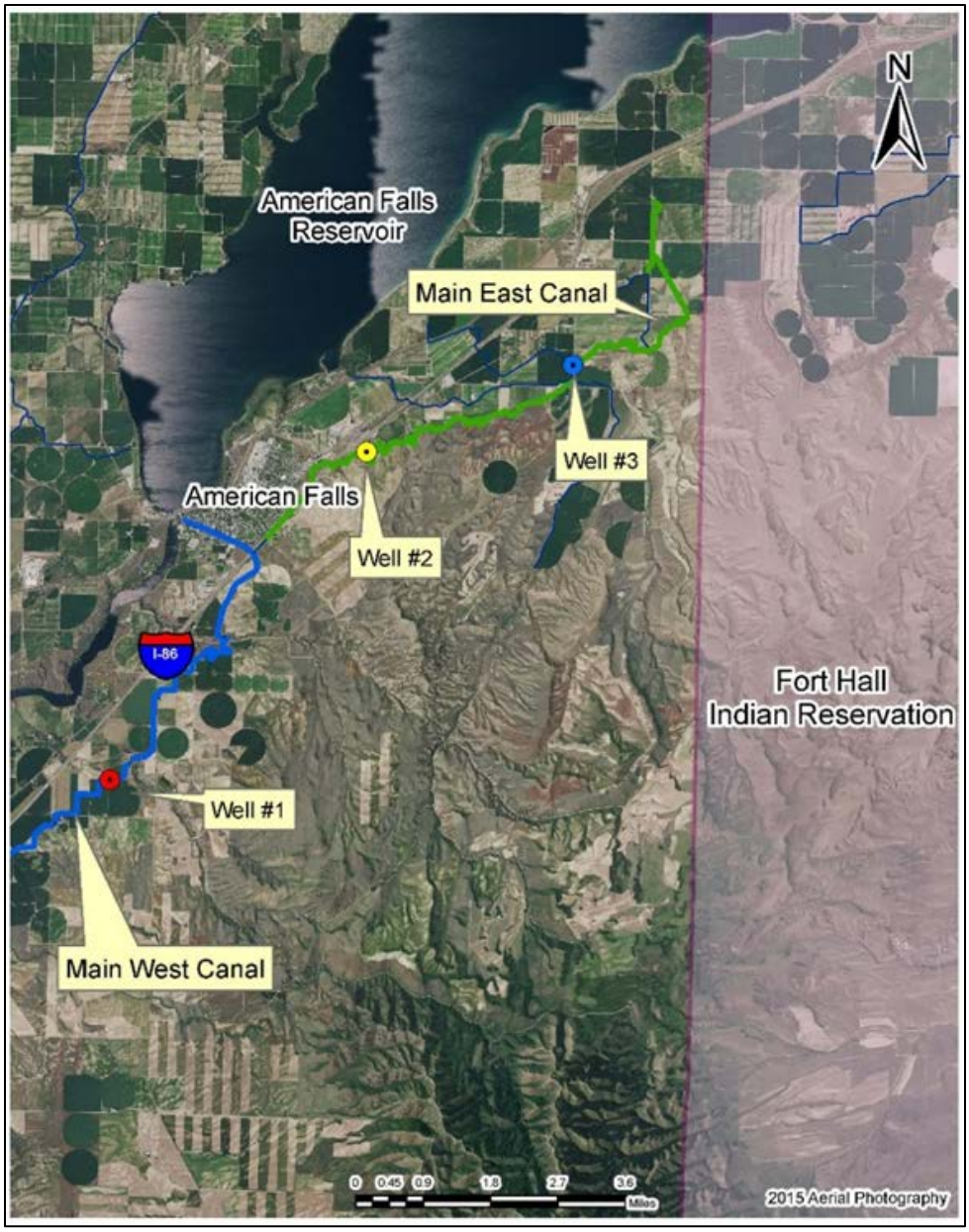

Figure 3-2. Proximity of the Shoshone-Bannock Tribes Fort Hall Indian Reservation to the proposed well locations

The Native American Graves Protection and Repatriation Act, and EO 13007 Indian Sacred Sites protect the interests of the Shoshone-Bannock Tribes or other Tribes that may have cultural and religious interests in the surrounding areas. Sacred sites are defined by EO 13007 as specific, discrete, narrowly delineated locations on federally owned land that are sacred by virtue of their established religious importance to, or ceremonial use by, an American Indian religion. Sacred sites can be various natural features and locations on the landscape that hold spiritual or religious significance to aboriginal Tribes, and may be in the form of various physical features and natural features. Sacred sites can be in the form of mountains, foothills, buttes, springs, lakes, rivers, and rock shelters. Additionally, specific

cultural sites such as altars; vision quest sites; water sources, springs, and headwaters; burial sites; and historic places where significant events occurred may be regarded as sacred to Tribes.

Information concerning American Indian sacred sites is not widely shared outside of the Tribal communities. Therefore, there is no information available on specific American Indian sacred sites within any portion of the Project areas. However, the potential for their existence in any location exists and must be taken into consideration.

3.8.2 Environmental Consequences

Alternative A – No Action and Alternative B – Proposed Action

The Project area is not located within an American Indian Reservation (Figure 3-2) and no known ITAs or Sacred Sites exist within the Project area. Under Alternatives A and B, there would be no direct or indirect effects to any know sacred sites or ITAs. Reclamation does not hold any trust assets for any Tribes in the project area. During the scoping process, no responses from the Tribes were received concerning any sacred sites or ITAs.

3.8.3 Cumulative Effects

No cumulative effects are anticipated on this resource as a result of the proposed project due to the lack of Indian Trust Assets and Sacred Sites effects.

4 Consultation and Coordination

Scoping letters were mailed to State and Government Agencies, Tribal representatives and adjacent landowners on August 22, 2016. Comments were received from the U.S. Army Corps of Engineers, Idaho Water Resource Board (IWRB), IDWR, IDFG, and Jerry R. Rigby representing the Committee of Nine (Appendix A). No response or concerns were received from Tribal representatives or local landowners. Responses to comments received are also in Appendix A.

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Appendix A – Scoping Documents and Responses to Comments

Scoping Informational Package

Falls Irrigation District Snake River Plain Aquifer Wells Project

Introduction

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) is asking for comments to help identify issues and concerns associated with a proposal from Falls Irrigation District (District) affecting Federal property interests. This proposal seeks Reclamation approval to drill three wells within Federal easements managed by Reclamation to pump water from the Snake River Plain Aquifer (Aquifer) into the District's existing canal distribution system. This proposal will be called the Falls Irrigation District Snake River Plain Aquifer Wells Project (Project). Federal actions must be analyzed in accordance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations to determine potential environmental and social consequences.

Background

The District operates and maintains Reclamation American Falls Division of the Minidoka Project and was constructed as part of the Michaud Flats Project during the early 1950's. The District utilizes natural flow surface water, surface water stored in the Upper Snake River reservoir system, and groundwater to provide irrigation water to approximately 12,000 acres in Power County, Idaho. Irrigation water delivery is accomplished by natural flow and storage surface water drawn through a five-foot diameter penstock that penetrates the American Falls Dam, and delivered to a pumping station southwest of the dam. Water is pumped to a hilltop southeast of the pumping station, into a canal system that distributes water east and west to the District's service areas. The District also uses 26, of an originally-authorized 29, wells to supply groundwater under water-rights held by Reclamation. These wells deliver water directly to patron lands, or pump into the canal system for distribution.

The elevation of the penstock intakes and pump station, and the design of the pumps, were based on typical operational levels in the American Falls Reservoir at the time of construction. Due to downstream water deliveries to enhance fisheries, declining reach gains entering the reservoir due to groundwater pumping, and increasing late-season irrigation by most users from the reservoir, late-season reservoir water levels are too low for the existing pumping plant to deliver the full supply of irrigation water held by the District in the reservoir system. Exacerbating the water supply issue, American Falls Reservoir also serves many other irrigated lands in other irrigation districts and canal company service areas. Twice in recent history reservoir levels have been so low that the pumps could not be operated without severe damage from cavitation, reducing deliveries to essentially zero.

The District's proposed Project to drill three wells within Federal easements managed by Reclamation to pump water from the Aquifer into the District's existing canal distribution system (see Map 1) would allow them to obtain a reliable water supply for late season delivery for the District and its constituents.

Purpose and Need for Action

Reclamation's purpose is to respond to the District's proposed Project. The need is to obtain a reliable irrigation water supply for late season water delivery for the District and its constituents.

Preliminary Alternatives

The environmental document will include a reasonable range of alternatives that meet the purpose and need of the Project. Preliminary alternatives considered, but not limited to, include:

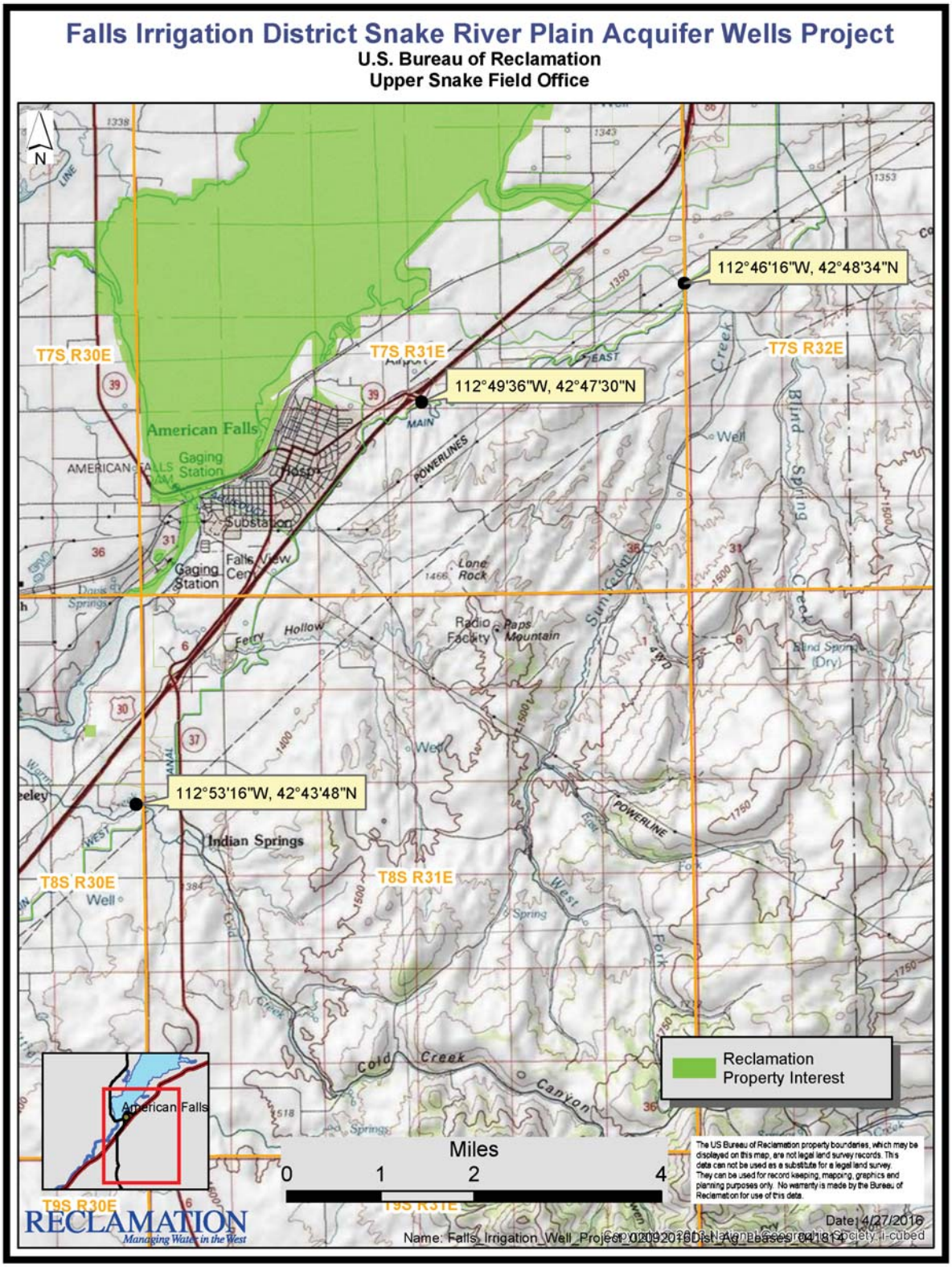
1. No Action – new development as proposed would not be approved and the Project rejected by Reclamation.

2. The District's proposed action: Drill, complete and operate up to three new wells (16-inches in diameter and approximately 250 feet deep) located along the District's canal system and within Federal easements managed by Reclamation (West Canal W-E turnout, West Canal E-C turnout, and head of the E7.1 Lateral) (see Map 1). The Project would involve surface disturbance of approximately 0.06 acre of land at each of the three locations. Extracted groundwater would be replaced by direct recharge into the aquifer, and by dedicating a block of storage water to the Watermaster of Water District 01 to mitigate, as necessary for seasonal depletionary effects that might accrue to other Snake River Users.

3. Other reasonable development alternatives:

   A. Penstock alteration, including potential changes in penstock diameter, inlet elevation, and pump design and/or pumping station elevation at American Falls Dam;

   B. New pump(s) at other locations, located on constructed piers, islands, or other features, with ditches or pipes to the existing irrigated lands;



Map 1: Proposed well locations at West Canal W-E turnout, West Canal E-C turnout, and head of the E7.1 Lateral in Power County, Idaho.

Law Offices

RIGBY, ANDRUS & RIGBY LAW, PLLC

Ray W. Rigby, retired
G. Rich Andms, of counsel, retired
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Fax: (208) 356-0768
jrigby@rex-law.com

October II, 2016

Roland K. Springer
C/O Rich Jackson
Natural Resources Specialist
Bureau of Reclamation
Snake River Area Office
230 Collins Rd.
Boise, ID 83 702

Sent via electronic mail
rjackson@usbr.gov

Dear Mr. Springer,

At the last Committee of Nine meeting held on September 8, 2016, the Committee (hereinafter "CO9") reviewed a request for scoping comments regarding the Falls Irrigation District's (hereinafter "FID") request to drill 3 wells on the BOR property and pump water from the Snake River Plain Aquifer into the existing canal distribution system at American Falls, Minidoka Project, Idaho. On the CO9's behalf, I have been instructed to provide the following comments. I appreciate the additional time granted me to do so by Rich Jackson, Natural Resources Specialist of the BOR.

Initially, the CO9 fully supports the concept that one of its own should be able to fully benefit from its storage rights held in BOR reservoirs or any other reservoir in Water District 0l and its tributaries. For that reason, any reasonable approach which would allow a storage right holder the ability to divert and beneficially apply its lawful storage water would be supported by the CO9, providing it does not impact another's water rights.

The CO9 is fully aware of the drought situation which has plagued southern and eastern Idaho for past few years. However, it is also aware that since the settlement of the Nez Perce Tribal and the Anadromous Fish claims in 2004, resulting in the current Biological Opinion of the Upper Snake and further resulting in the Flow Augmentation requirements of Water District Ol, the increased demand on our storage water has been enormous compared to its historical use and demands. It is precisely this increased demand upon the storage system which has caused the CO9 to commence

discussions with the United States through its representative, Duane Mecham, Solicitor for Interior, demanding that the United States compensate the water users of Water District 01 for the "impacts" caused by the flow augmentation requirements. Due to these ongoing discussions, we do not intend to make our flow augmentation impacts case in this present FID scoping other than to point out that the very need claimed by FID has been mostly caused by the flow augmentation and related demands placed upon the storage by the United States.

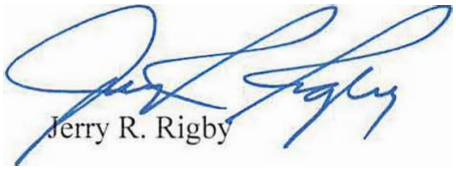
Notwithstanding the above, should the proposed three wells be fully **mitigated** pursuant to the impacts shown by the present version of the Eastern Snake Plain Aquifer Model (ESPAM) and approved by the Director of the Idaho Department of Water Resources, the CO9 has no objection to the Proposed Action to Drill three wells set forth in the letter dated September 2, 2016 and attached Scoping Information Package. However, the CO9 does not and can not speak for its individual user of WD0 I who may choose to object during the process of obtaining the proposed water rights.

Additionally, I have been instructed to remind you that BOR is NOT in a position to change any of its operation of the storage system in order to keep FID water rights divert-able from American Falls Reservoir under its present diversion system. As we are certain BOR is well aware, the 0 I storage system works on the ability to store water as high in the system as possible. By doing so, the likelihood of spilling storage water over Milner Dan1 is greatly lessened. Water spilled as a result of storing water too low in the system substantially impacts virtually all of the storage rights of those storage right holders located above American Falls Reservoir. Therefore, any change in the status quo for the benefit of FID present pumps into the Reservoir, while perhaps somewhat benefitting flD, would likely injure other water right holders and therefore would be impermissible.

The Committee has also taken the position that it cannot modify its rental pool procedures in order to accommodate FID's diversion of its storage water as the CO9 knows of no way to do so without disrupting the integrity of the procedures.

Thank you for the opportunity to make these comments on behalf of the CO9. Should you desire to discuss anything contained herein or need further clarification, please do not hesitate to contact this firm or the officers of the CO9.

Sincerely,



Jerry R. Rigby

JRR/md
sb/C09-BOR.ltr

Jackson, Richard <rjackson@usbr.gov>

AF Irr. Dist - 3 wells SCAN

1 message

Mende,Jim <jim.mende@idfg.idaho.gov> Tue, Oct 4, 2016 at 1:20 PM
To: "rjackson@usbr.gov" <rjackson@usbr.gov>

Rick;

Chatted with Tom Bassista about this, our interest is ensuring the flows at the American Fall Hatchery are not affected by these wells. Granted, the wells are located across the river but any reduction in flows (either amount or timing) would be problematic for our fish production operations… tks jim

Jim Mende

Environmental Staff Biologist

Idaho Department of Fish and Game

Southeast Region

1345 Barton Road

Pocatello, Idaho 83204

(208) 232-4703 (front desk)

(208) 236-1246 (office)

(208) 241-3452 (cell)

https://idfg.idaho.gov

State of Idaho
DEPARTMENT OF WATER RESOURCES
322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098
Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.iclwr.idaho.gov

C.L. "BUTCH" OTTER
Govt1·1101·

GARY SPACI(1\lu\T:I
Di.-ector

September 12, 2016

USDI BUREAU OF RECLAMATION
SNAKE RIVER AREA OFFICE
MR. RICH JACKSON
230 COLLINS RD
BOISE ID 83702

RE: FALLS IRRIGATION DISTRICT SNAKE RIVER PLAIN AQUIFER WELLS PROJECT-REFERENCE SRA-1208, ENV-6.00

Dear Mr. Jackson:

The Department of Water Resources (IDWR) received a request for comment on the proposed development indicated above. IDWR does not generally comment on potential environmental issues related to projects; however, IDWR wants to be sure that property owners comply with water appropriation laws when establishing new water uses or when changing existing water rights.

The information I received describes the Falls Irrigation District proposal as development of three wells on Federal land just south and east of American Falls Reservoir. The proposal seeks to divert water from the Snake River Plain Aquifer to obtain a reliable water supply for late season delivery of water to Falls Irrigation District during low water years. The stated reason for the project is because late-season reservoir levels are too low for the existing pumping plant to deliver the full supply of irrigation water held by the district in the reservoir system during low water years.

Based on the information describing the project, I would like to offer the following reminders:

- Anyone intending to drill a well in Idaho, for any purpose, must obtain a drilling permit from IDWR.
- A permit to drill a well does not authorize the diversion of water from the well. Permits to divert the public waters and establish water rights are separate from drilling permits. Generally, anyone who proposes to divert groundwater or surface water in Idaho is required to obtain a water right permit from IDWR. Anyone proposing to change an existing water right is required to file an application for transfer. To date, IDWR has not received any application associated with this proposal.

If you have any questions about these or other water appropriation issues, please contact me at 208-287-4948.

Sincerely,

Jeff Peppersack
Chief, Water Allocation Bureau

cc: Lyle Swank - IDWR in Eastern Region

IDAHO WATER RESOURCE BOARD

October 3, 2016

Rich Jackson
U.S. Bureau of Reclamation
Snake River Area Office
230 N. Collins Road
Boise, Idaho 83702-4520

RE: Request for Scoping Comments Regarding the Falls Irrigation District's Request to Drill Three Wells on Bureau of Reclamation Property and Pump Water from the Snake River Plain Aquifer into the Existing Canal Distribution System at American Falls, Minidoka Project, Idaho

Dear Mr. Jackson

The Idaho Water Resource Board **(IWRB)** appreciates the opportunity to comment on the Falls Irrigation District matter. The IWRB is the agency of the State of Idaho that is constitutionally charged with planning for Idaho's water resources and carrying out programs and projects to manage Idaho's water resources. As such, the IWRB has been working for many years to find solutions to the Eastern Snake Plain Aquifer (ESPA) situation. The IWRB understands that the proposal by Falls Irrigation District is to drill three new irrigation wells that would pump into the canal system when American Falls Reservoir drops to low levels and the existing pump system experiences delivery issues. Further, Falls Irrigation District plans to mitigate by releasing its storage water from American Falls Reservoir as needed to offset the depletionary effects to downstream Snake River users.

The ESPA has been losing water storage at a rate of approximately 200,000 acre-feet annually since 1952. This decrease in aquifer storage has resulted in declining water levels in the ESPA, and declining spring flows from the ESPA, resulting in numerous water use conflicts with the potential to severely disrupt the economy of the region and the state. Significant areas with declining spring flows from the ESPA include the American Falls area, where declining spring flows to the Snake River impact the water supplies for downstream surface water users, and the Thousand Springs area, where declining spring flows impact the water supplies for spring flow users, and for the Snake River at the Murphy Gaging Station where minimum stream flow

water rights have been established.

Over the past few years, major efforts have been initiated to stabilize and recover the ESPA. These include the State of Idaho's Managed Aquifer Recharge Program for the ESPA, managed by the IWRB, and the Surface Water Coalition Settlement Agreement. The Managed Aquifer Recharge program has a goal of recharging an average annual volume of 250,000 acre-feet annually into the ESPA, using excess natural flow water that would otherwise flow out of the basin. The State of Idaho is projected to spend approximately $40 million in capital costs to implement this effort, with ongoing operations and maintenance costs of $2-to-$3 million annually thereafter. Many canal companies and irrigation districts are working with the IWRB to help deliver the recharge water.

The Surface Water Coalition Settlement Agreement was reached in 2015 between the members of the Surface Water Coalition and the Ground Water Districts located on the Eastern Snake River Plain. The Agreement was reached in order to settle a long-running conjunctive administration delivery call by the members of the Surface Water Coalition for priority water right administration relative to the junior-priority ground water users on the Eastern Snake River Plain. The central feature of the Agreement is that ground water users will reduce their consumptive use of ESPA ground water by 240,000 acre-feet annually. There are also other features of the Agreement, including mandatory installation of flow meters on ground water wells and shortening the irrigation season by ground water users. These all entail a significant financial cost to the ESPA ground water users.

Given the ESPA is a declining aquifer, the State of Idaho is initiating a Managed Aquifer Recharge Program to stabilize the ESPA, and the ground water users have agreed to reduce their pumping from the ESPA by a significant amount to assist with stabilization and recovery of the ESPA, it may be a better course of action to find a solution that does not involve drilling wells and withdrawing additional water from the ESPA. The IWRB further understands that surface water supplies available to Falls Irrigation District are generally adequate, but that the pumping and delivery system from American Falls Reservoir experiences delivery issues when reservoir is at low levels.

The IWRB respectfully requests that Falls Irrigation District and the Bureau of Reclamation investigate solutions to this issue that will provide a more reliable water supply for the Falls Irrigation District and its patrons without drilling new irrigation wells into the ESPA.

Thank you for the opportunity to comment on this matter. Please contact me if you have any que.stions at 208-287, 0.

Brian W. Patton, P , Executive Officer
Idaho Water Resource Board

CC: Roger Chase, Chairman, Idaho Water Resource Board

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
IDAHO FALLS REGULATORY OFFICE
900 N SKYLINE DRIVE, SUITE A
IDAHO FALLS, IDAHO 83402

September 16, 2016

Regulatory Division

SUBJECT: NWW-2016-446-I02, Falls Irrigation District Snake River Plain Aquifer Wells Project

Mr. Roland K. Springer
Bureau of Reclamation
230 Collins Road
Boise, Idaho 83702-4520

Dear Mr. Springer:

Our preliminary jurisdictional determination (PJD) indicates your proposed project site may include Waters of the United States, including wetlands, specifically Warm Creek and East Canal. Your proposed project site is located at/near Warm Creek and East Canal within Section 13 of Township 8 South, Range 30 East and Sections 13 and 22, Township 7 South, Range 31 East, near latitude 42.79167º N and longitude -112.82667º W, in Power County, near American Falls, Idaho. Your request has been assigned file number NWW-2016-446-I02, which should be referred to in future correspondence with our office regarding this site.

Enclosed are two copies of the Preliminary Jurisdictional Determination Form indicating what may be Water(s) of the U.S., including wetlands, for the project site. Please review the document and any attachments thereto. If you consent to jurisdiction as set forth, please sign both copies, return one copy to the Corps at the address in the above letterhead and keep the other copy for your records. This PJD shall remain in effect unless an approved jurisdictional determination is requested or new information supporting a revision is provided to this office.

Although this determination is advisory in nature and may not be appealed under the Corps of Engineers Administrative Appeal Procedures, as defined in 33 CFR 331, the enclosed *Notification of Administrative Appeal Options and Process Fact Sheet and Request for Appeal Form* (RFA) explains your options, if you do not agree with this determination.

Section 404 of the Clean Water Act requires that a DA permit be obtained for the discharge of dredged and/or fill material into Waters of the U.S., including jurisdictional wetlands (33 U.S.C. 1344). Waters of the U.S. include most perennial and intermittent rivers and streams, natural and man-made lakes and ponds, as well as irrigation and drainage canals and ditches that are tributaries to other Waters, and wetlands. A

Department of the Army (DA) authorization may be required if you propose to perform work or place dredged and/or fill material into waters or wetlands as part of the project.

Further, the Corps defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Discharges of dredged or fill material into these areas may include those associated with mechanized land-clearing involving vegetation removal with mechanized equipment such as front-end loaders, backhoes, or bulldozers with sheer blades, rakes, or discs in wetlands and excavation activities which result in the discharge of dredged material and destroy or degrade Waters of the United States.

This determination applies only to Department of the Army permitting jurisdiction and does not authorize any injury to property or excuse you from compliance with other Federal, State, or local statutes, ordinances, regulations, or requirements which may affect these areas, or work you would propose to conduct in these areas. Please obtain all required permits before starting work in the Waters or wetland areas identified on this property.

CUSTOMER SERVICE

We actively use feedback to improve our delivery and provide you with the best possible service. Please take our online customer service survey to tell us how we are doing. Follow this link to take the survey:
http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

If you have questions or if you would like a paper copy of the survey, call our office at 208-433-4464.

For more information about the Walla Walla District Regulatory program, visit us online at http://www.nww.usace.army.mil/BusinessWithUs/RegulatoryDivision.aspx.

If you have any questions or need additional information about this permit, you can contact me at (208) 522-1676, by mail at the address in the letterhead, or email at james.m.joyner@usace.army.mil. A copy of this letter is being sent to: Mr. Rick Jackson (BOR).

Sincerely,

James M. Joyner

James M. Joyner
Sr. Project Manager, Regulatory Division

Enclosures:
Preliminary Jurisdictional Determination Form
Notification of Administrative Appeal Options and Request for Appeal Form

RESPONSE TO COMMENTS FROM SCOPING DOCUMENT RELEASE:

Comment: The USACE was concerned that one of the well locations was located within a Waters of the United States.

Response: After review of the provided locations it was determined that the location of Well #3 was in the wrong location. The actual well location is along the bank of the Main West Canal which is approximately 265 yards south of Warm Creek. There are no Waters of the United States in this location.

Comment: The IWRB's concern with the Project is that the Project has the potential to exacerbate the decline of water storage in the Eastern Snake Plain Aquifer (ESPA). IWRB requests that FID and BOR investigate solutions that will provide a more reliable water supply without drilling irrigation wells into the ESPA.

Response: As discussed in Chapter 2 Alternatives of the EA, several alternatives were explored and considered not feasible due to costs and impacts to the environment. The Proposed Alternative will not withdraw additional amounts of water than is currently allotted to or historically been used by existing wells owned by FID.

Comment: IDWR is concerned that the proper permits have not be obtained to conduct this activity. They indicate that a drilling permit and application to transfer an existing water right are required.

Response: Once the environmental review has been completed, the appropriate permits and applications will be submitted to IDWR prior to any activities.

Comment: IDFG is concerned that the withdrawal of water may reduce water flows at the American Falls Hatchery.

Response: The withdrawal of water will not exceed the historical use from existing wells and should not change any water flows at the American Falls Hatchery.

Comment: The CO9 expressed concern about potentially changing how water is stored at American Falls and other storage reservoirs if FID diverts its storage water and uses it for mitigation.

Response: Water storage in American Falls or surface water provided by that water right will not change. The withdrawal from the ESPA will not exceed the current allocated groundwater rights and no mitigation using surface water will be required.

Appendix B – IPaC Trust Report

U.S. Fish & Wildlife Service

ECOS

ECOS / Species Reports / Species By County Report

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

County: Power, Idaho

.!.CSV

Need to contact a FWS field office about a species? Follow this link to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Birds	Yellow-billed Cuckoo *(Coccyzus americanus)*	Western U.S. DPS	Threatened	Sacramento Fish and Wildlife Office			
Mammals	Gray wolf *(Canis lupus)*	Northern Rocky Mountain DPS	Recovery	Office of the Regional Director			
Mammals	Canada Lynx *(Lynx canadensis)*	Contiguous U.S. DPS	Threatened	Montana Ecological Services Field Office	Recove(Y Outline for the Contiguous United States Distinct Population Segment of Canada L◆nx (L◆nx canadensis)	Recovery efforts in progress, but no implementation information yet to display.	Outline

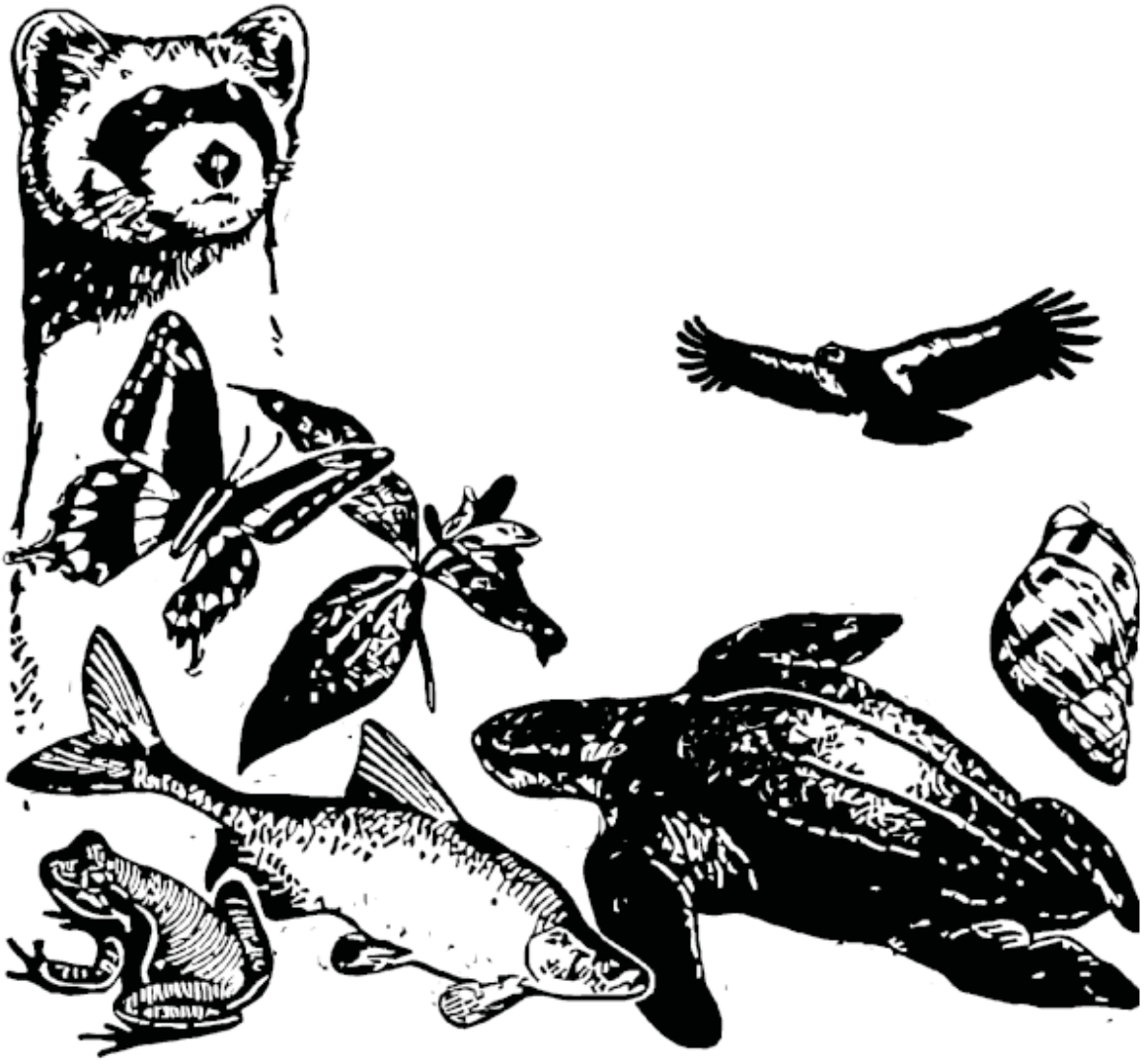
U.S. Fish & Wildlife Service

Falls Irrigation District Wells Project

IPaC Trust Resources Report

Generated September 26, 2016 12:55 PM MDT, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

Table of Contents

U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

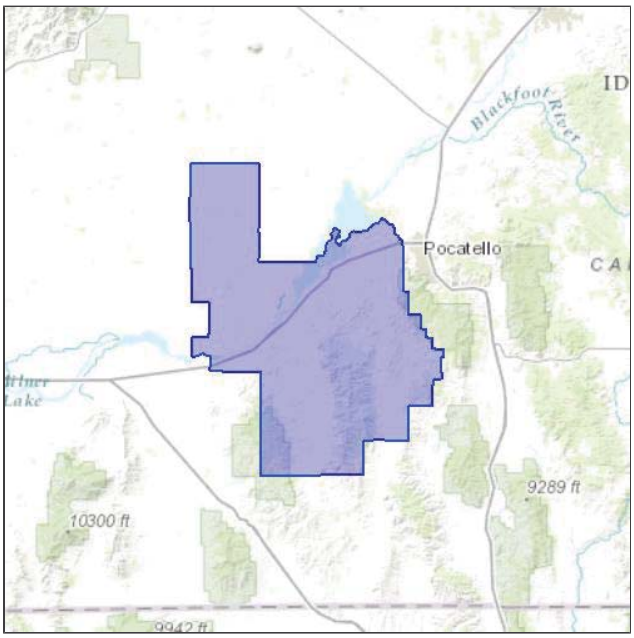
Falls Irrigation District Wells Project

LOCATION

Power County, Idaho

IPAC LINK

https://ecos.fws.gov/ipac/project/ODKP5-CLQ3F-EWZBG-AK6RA-P2UHZQ



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Yellow-billed Cuckoo Coccyzus americanus — Threatened

CRITICAL HABITAT
There is **proposed** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Mammals

Canada Lynx Lynx canadensis — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A073

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

---

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Black Rosy-finch Leucosticte atrata — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J4

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Calliope Hummingbird Stellula calliope — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0K3

Cassin's Finch Carpodacus cassinii — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J6

Eared Grebe Podiceps nigricollis — Bird of conservation concern
Season: Breeding

Ferruginous Hawk Buteo regalis — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06X

Flammulated Owl Otus flammeolus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DK

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Breeding

Greater Sage-grouse Centrocercus urophasianus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06W

Green-tailed Towhee Pipilo chlorurus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IO

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Pinyon Jay Gymnorhinus cyanocephalus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0I0

Sage Thrasher Oreoscoptes montanus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ID

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Swainson's Hawk Buteo swainsoni — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B070

Virginia's Warbler Vermivora virginiae — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IL

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Willow Flycatcher Empidonax traillii — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6

Wildlife refuges and fish hatcheries

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

This location overlaps all or part of the following National Wildlife Refuges:

Minidoka National Wildlife Refuge 44,927.64 acres

PHONE (208) 436-3589

ADDRESS
961 East Minidoka Dam
Rupert, ID 83350

http://www.fws.gov/refuges/profiles/index.cfm?id=14614

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

The area of this project is too large for IPaC to load all NWI wetlands in the area. The list below may be incomplete. Please contact the local U.S. Fish & Wildlife Service office or visit the NWI map for a full list.

Freshwater Emergent Wetland

PEM1/UBFh
PEM1A
PEM1Ad

PEM1Ah
PEM1Ax
PEM1B
PEM1C
PEM1Ch
PEM1Cx
PEM1F
PEM1Fh
PEM1J
PEMA
PEMC

Freshwater Forested/shrub Wetland

PFO1A
PFO1B
PFO1C
PFO1Ch
PSS1A
PSS1Ah
PSS1Ax
PSS1B
PSS1C
PSS1Ch
PSS1Fh
PSS1J
PSS1Jh
PSSA
PSSC

Freshwater Pond

PAB3Fh
PAB3Hh
PAB4/UBFh
PAB4Fh
PAB4Hh
PABF
PABH

PUB/EM1Fb
PUBF
PUBFb
PUBFh
PUBFx
PUBH
PUBHh
PUBHx
PUBKHx
PUSAx

Lake

L1UBHh
L2AB3Hh
L2UBHh
L2USAh
L2USCh

Other

PUSA
PUSC
PUSCx
PUSJ

Riverine

R2UBH
R3UBH
R3USA
R4SBA

A full description for each wetland code can be found at the National Wetlands Inventory website: http://107.20.228.18/decoders/wetlands.aspx

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262

In Reply Refer To: May 16, 2017
Consultation Code: 01EIFW00-2017-SLI-0525
Event Code: 01EIFW00-2017-E-01732
Project Name: Falls Irrigation District NEPA

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Please note: The IPaC module for producing a list of proposed and designated critical habitat is currently incomplete. At this time, we ask that you use the information given below to determine whether your action area falls within a county containing proposed/designated critical habitat for a specific species. If you find that your action falls within a listed county, use the associated links for that species to determine if your action area actually overlaps with the proposed or designated critical habitat.

Canada Lynx (Lynx canadensis) - Designated February 24, 2009.
Counties: Boundary County.

Federal Register Notice:
http://www.gpo.gov/fdsys/pkg/FR-2009-02-25/pdf/E9-3512.pdf#page=1
Printable Maps:
http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat_files/20081222_fedre

GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/lunx_ch.zip
KML for Google Earth: (None Currently Available)

Selkirk Mountains Woodland Caribou (Rangifer tarandus Caribou) - Proposed November 30, 2011.
Counties: Bonner and Boundary Counties.

Federal Register Notice: http://www.fws.gov/idaho/home/2011-30451FINALR.pdf
Printable Maps: http://www.fws.gov/idaho/home/Map1_sub1_150.pdf
GIS Data: (None Currently Available)
KML for Google Earth: (None Currently Available)

Bull Trout (Salvelinus confluentus) - Designated September 30, 2010.
Counties: Adams, Benewah, Blaine, Boise, Bonner, Boundary, Butte, Camas, Clearwater, Custer, Elmore, Gem, Idaho, Kootenai, Lemhi, Lewis, Nez Perce, Owyhee, Shoshone, Valley, and Washington Counties.

Federal Register Notice:
http://www.gpo.gov/fdsys/pkg/FR-2010-10-18/pdf/2010-25028.pdf#page=2
Printable Maps: http://www.fws.gov/pacific/bulltrout/CH2010_Maps.cfm#CHMaps
GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/bulltrout.zip
KML for Google Earth:
http://www.fws.gov/pacific/bulltrout/finalcrithab/BT_FCH_2010_KML.zip

Kootenai River White Sturgeon (Acipenser transmontanus) - Designated July 9, 2008.
Counties: Boundary County.

Federal Register Notice:
http://www.gpo.gov/fdsys/pkg/FR-2008-07-09/pdf/E8-15134.pdf#page=1
Printable Maps: (None Currently Available)
GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/fch_73fr39506_acit_2009.zip
KML for Google Earth: (None Currently Available)

Slickspot Peppergrass (Lepidium papilliferum) - Proposed May 10, 2011. Counties: Ada, Canyon, Elmore, Gem, Owyhee, and Payette Counties.

Federal Register Notice: http://www.gpo.gov/fdsys/pkg/FR-2011-10-26/pdf/2011-27727.pdf
Printable Maps: http://www.fws.gov/idaho/Lepidium.html
GIS Data: (None Currently Available)
KML for Google Earth: (None Currently Available)

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2017-SLI-0525

Event Code: 01EIFW00-2017-E-01732

Project Name: Falls Irrigation District NEPA

Project Type: LAND - EASEMENT / RIGHT-OF-WAY

Project Description: Project consists of the drilling of three wells one at each of the following locations
42°43'34.45"N 112°53'26.79"W;
42°48'17.75"N 112°46'25.53"W; and
42°47'29.68"N 112°49'30.89"W.
The size of each well site would be approximately 2500 square feet. Project managers would like to start drilling spring of 2017 and be completed before the end of summer 2017

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.772572995018876N112.83290446797172W

Counties: Power, ID

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Critical habitats

There are no critical habitats within your project area.

Appendix C – Cultural Survey Report

Falls Irrigation District Wells Project

Cultural Resources Survey

Project No. RO01-001

May 2017

By: David N. Larsen, MA, RPA

Sundance Consulting, Inc.

305 N. 3rd Avenue, Suite B, Pocatello, ID 83201

Abstract

Falls Irrigation District, in cooperation with the Bureau of Reclamation, propose to install three supplemental wells. The three irrigation well sites are located southeast of Highway 86 near American Falls, Idaho. Well Site 1 is located on the Falls Irrigation Main West Canal bank in Section 13 of T8S, R30E. Well Site 2 is located on the Falls Irrigation Main East Canal bank in Section 22 of T7S, R31E. Well Site 3 is located on unused ground along the Falls Irrigation Main East Canal in Section 13 of T7S, R31E.

The size of each irrigation well site is approximately 50 feet by 50 feet. Each well is expected to consist of a 20-inch diameter steel casing, drilled to a total depth of approximately 400 feet. Each well site is accessible via canal roads and will be cleared and grubbed before placement of clean gravel on the surface. A permanent structure providing shade will be constructed at each well location. The water will be delivered to the canal through 30 to 40 feet of pipe.

The Area of Potential Effect was surveyed for cultural resources, and one historic canal (Main West Canal) was identified. The project area had been previously disturbed by agricultural use. One previously recorded site (Main East Canal) was identified as a result of the survey. The Main West Canal and the Main East Canal are recommended ineligible for listing on the National Register of Historic Places.

The proposed project to install three supplemental irrigation wells will have no effect to historic properties and no additional work is recommended.

Certification of Results

I certify that this investigation was conducted and documented according to Secretary of Interior's Standards and guidelines and that the report is complete and accurate to the best of my knowledge.

Signature of Principal Investigator	9 May 2017 Date

Key Information

PROJECT NAME

Falls Irrigation District Wells Project Cultural Resources Survey

PROJECT NUMBER(S)

RO01-001

LOCATION

Power County

USGS QUADS

American Falls and Neely

LEGAL LOCATION OF SURVEY

T8S, R30E Section 13; T7S, R31E Sections 13 and 22

PROJECT AREA

0.5 Acres

AREA SURVEYED

0.5 Acres Intensive Survey
0 Acres Reconnaissance Survey

PROJECT DATA

1 Previously recorded cultural resource
1 New cultural resource located and/or recorded

AUTHORS

David N. Larsen, MA, RPA

FEDERAL AGENCY

Bureau of Reclamation

REPORT PREPARED FOR

Rocky Mountain Environmental Associates, Inc.

REPOSITORY

Sundance Consulting, Inc., 305 N. 3rd Ave, Suite B, Pocatello, ID 83201

PRINCIPAL INVESTIGATOR

David N. Larsen, MA, RPA

REPORT DATE

05/09/2017

CONTENTS

Project Description

Falls Irrigation District, in cooperation with the Bureau of Reclamation, propose to install three supplemental wells. The proposed Area of Potential Effect (APE) includes the location of three irrigation well sites located southeast of Highway 86 near American Falls, Idaho. Well Site 1 is located on the Falls Irrigation Main West Canal bank in Section 13 of T8S, R30E. Well Site 2 is located on the Falls Irrigation Main East Canal bank in Section 22 of T7S, R31E. Well Site 3 is located on unused ground along the Falls Irrigation Main East Canal in Section 13 of T7S, R31E.

The size of each irrigation well site is approximately 50 feet by 50 feet. Each well is expected to consist of a 20-inch diameter steel casing, drilled to a total depth of approximately 400 feet. Each well site is accessible via canal roads and will be cleared and grubbed before clean gravel is placed on the surface. A structure providing shade will be constructed at each well location. The water will be delivered to the canal through 30 to 40 feet of pipe.

The proposed irrigation well site locations are located on private land within five miles of American Falls, Idaho (Attachment A, Figure 1). Construction access to the site will be along a existing canal access roads. The project is considered an undertaking that requires compliance with Section 106 of the National Historic Preservation Act. The proposed project will result in ground disturbance that could have direct and indirect impacts to cultural resources. Therefore, it is necessary to evaluate the proposed project for potential impacts to cultural resources.

The objective of the cultural resource survey was to identify and assess potential impacts to historic properties associated with proposed development of three irrigation wells. The areas investigated included the location of the proposed well, staging area, and work areas associated with the project. The investigation included a record search through the Archaeological Survey of Idaho, review of General Land Office (GLO) plat maps, and a general understanding of Native American and pre-contact use of the region.

Project Area of Potential Effect (APE)

The APE for this project encompasses three non-contiguous parcels totaling approximately one-half acre and includes the staging and work areas associated with well development at each location (Attachment A and B). The APE has been previously disturbed by agricultural use.

Environmental Setting

The project is located within the Snake River Valley, with mostly flat topography and an elevation of 4,500 feet. The Snake River passes through the valley and is highly utilized for irrigation. The project is located in the edge of the Snake River Plain and the Northern Basin and Range ecoregions. The Snake River Plain ecoregions are part of the xeric intermontane west. Where irrigation water and soil depth are sufficient, sugar beets, potatoes, alfalfa, small grains, or vegetables are grown. Elsewhere, livestock grazing is widespread. Cattle feedlots and dairy operations are found locally. Potential natural vegetation is mostly sagebrush steppe but barren lava fields and saltbush–greasewood also occur (McGrath, et al 2002). The Northern Basin and

Range consists of dissected lava plains, rolling hills, alluvial fans, valleys, and scattered mountains. Basins support sagebrush grassland or saltbush greasewood vegetation. Ranges are covered in mountain sagebrush, mountain brush, Idaho fescue, Douglas-fir, or Aspen. Juniper woodlands occur on rugged, stony uplands. Both rangeland and cropland occurs (McGrath et al, 2002). Adjacent vegetation is cropland as land use in the area is primarily agriculture.

Project overview facing east

Cultural Setting

The Pahsimeroi Valley has been used by pre-contact and historic cultures for subsistence and settlement for thousands of years. Pre-field research, in particular Lohse (1993), indicates that human groups have occupied the Snake River Valley during the past 10,000 years. Until the 19th century, these groups existed as hunter-gatherers.

The following is a summary of Lohse (1993) describing three broad cultural periods: Early Big Game Hunting (ca. 14,000 – 7,800 years before present [B.P.]), Archaic (7,800 – 1,300 B.P.), and Late (1300 – 150 B.P.). The Early Big Game Hunting Period has been argued as representing a cultural adaptation focused on the procurement of now extinct megafauna and it is assumed that diet also included plants and small game. The Archaic Period is the stage in North American prehistory characterized by generalized hunting-and-gathering economies in physical environments basically similar to those of today. Hunters took modern forms of bison, mountain sheep, deer, and small game. Plant resources were an important, dominant part of the diet. It is assumed that the atlatl and dart weapon system enters the archaeological record during the Archaic Period, and that this is reflected in the smaller and more variable types of projectile point types. The Late Period is better known than any of the preceding periods in regional prehistory, and most likely represents precontact and protohistoric Shoshoneans occupying the Upper Snake and Salmon River country. Two cultural hallmarks are indicative of this period: Shoshonean Intermountain Ware pottery tradition and use of the bow and arrow.

The transition from protohistoric to historic Shoshonean groups, which hinges on finding European trade goods in association with aboriginal materials, has not been well demonstrated in the archaeological record of this region (Lohse, 1993). Some time after about 300 B.P. horses came to the Shoshone and other Plateau tribes, and trade goods of metal and glass began passing north in trade from the Spanish Southwest (Lohse, 1993). The boundary between protohistoric and historic periods for Shoshone has been arbitrarily set at the year 1805, when the first written records of the Upper Snake River Basin were produced by Lewis and Clark (Reed et al, 1986).

Organized migrations to the Oregon Territory began by 1842, with a dramatic increase in immigrant use starting in 1849. Permanent settlements in Idaho would be relatively rare for several more decades; however, the first permanent settlement of American Falls was founded in 1800 on the west bank of the Snake River. The town moved to the east side of the river in 1888, only to be moved again in 1925 to its present day location to make way for the American Falls Dam and Reservoir. The fertile land encouraged the settlement of the Snake River Valley, and the settlement of Euro-Americans by the mid-19th century introduced domestic stock, irrigation, and farming.

Pre-Field Research

A record search through the Idaho State Historic Preservation Office (SHPO) was requested and results were received on May 2, 2017 (Record Search #17269). The results of the record search identified 32 previously conducted cultural resource inventories, nine previously recorded archaeological sites, four historic sites, and four linear sites within one mile of the project area.

Previous Cultural Resources Studies

A total of 32 previously conducted cultural resource inventories have been completed within one mile of the APE; however, none of these studies occurred within the APE. The previously conducted inventories are summarized in the following table:

SHPO Report Number	Title	Author	Year	Acres
1989/641	Work Plan for Cultural Resource Mitigation of the AT&T Communications Fiber Optic Cable Project	Bassett, E. and Rings, B.	1989	2300
1989/989	Report on an Archaeological Survey of Public Lands along the Ben Lomond to Borah Substation Transmission Line	Butler, R.	1977	0
1989/1133	Archaeological Survey of Eagle Rock Reservoir	Caywood, L. and Shiner, J.	1952	0
1989/1530	Archaeological Investigations at Eagle Rock, Preliminary Report	Druss, M. and Druss, C.	1981	0
1989/1991	Annual Report of Archaeological Investigations 1979, 1980. Idaho Transportation Department	Gaston, J.	1981	0
1990/14	Lake Channel Road Paving	Lauderman, P.	1989	3
1990/219	Cultural Resources Technical Report for the AT&T Communications Fiber Optic Cable Project	Bassett, E., Ringe, B, and Rogge, A.E.	1990	unknown
1990/354	Rockland – Seagull Bay Interchange	Gaston, J.	1990	70
1991/377	Annual Report of Archaeological Investigations 1990	Gaston, J.	1990	0
1992/412	Northwest Pipeline Corporation System Expansion Project, Idaho Segments	Tucker, G. and Tate, M.	1992	5108
1992/454	Snake River Vista Testing	Lunderman, P.	1992	unknown
1992/466	Archaeological Explorations in Central and South Idaho – 1958	Swanson, E., Tuohy, D., and Bryan, A.	1958	0
1992/1041	CRM Report Northwest Pipeline Corporation System Expansion Project Idaho Segments: Access Roads	Newberry, G., Tucker, G., and Simmons, T.	1992	1140
1992/1251	An Archaeological Inventory of Indian Rocks and Massacre Rocks State Park	Corliss, D.	1973	0
1994/414	Cultural Resource Management Report Pipelines across Idaho: The Results of Archaeological Data Recovery	Tucker, G. and Newberry, G.	1994	0
1995/31	Mayer Brothers Irrigation Regulating Reservoir	Robertson, M.	1994	1

SHPO Report Number	Title	Author	Year	Acres
1996/897	American Falls: Cultural and Paleontological Resources Inventory on the Snake River Plain	Bruder, J.S., Douglas, D.L, Burke, S.E., and Wodall, G.R.	1999	6340
1998/404	Cultural Resources Inventory of the Proposed FTV Wester Build Part 2	Juell, K. and Sharp, N.	1998	274
1998/916	Cultural Resources Inventory of the Proposed FTV Western Fiber Build, Part 2 Addendum. Signal Regeneration Station Survey.	Juell, K.	1998	40
1999/729	Westport Apartments	Mead, A.	1999	2
2001/888	Proposed Direct Communications American Falls to the Power/Cassia County Line.	Nielson, A.	2001	78
2004/360	David Zimmerman, NRCS	Flatter, D.	2004	15
2005/675	Paul Warrick Irrigation Pipeline	Vrem, D.	2005	3
2005/836	I-86, Exit 40, American Falls Interchange Overpass	Harding, W.	2005	43
2009/355	Safe Routes to School (SR25)	Everhart, D.	2009	11
2010/239	Western Construction American Falls Borrow Source	Harding, W.	2010	12
2010/248	Western Construction American Falls Borrow Source (Zimmerman)	Harding, W.	2010	12
2011/627	East American Falls Interchange Overpass/Interchange Bridge	Harding, W.	2011	225
2012/484	Final Cutlural Resources Survey Report, Rockland Wind Farm	TetraTech EC	2010	1487
2012/692	Safe Route to School (SR25), Bannock Ave.	Everhart, D. and McManus, K.	2012	1
2012/759	Northwest Pipeline GP, Anomaly RGW 19140	Nelson, Z.	2012	4
2016/492	Willow Bay Access Improvement Project	Polson, N.	2016	44

The above reports were conducted using current and standard archaeological methods.

In addition to the record search, the National Register of Historic Places (NRHP) database was reviewed as well as the GLO survey plat for Township 8 South, Range 30 East (filed January 28, 1875) and Township 7 South, Range 31 East (filed November 7, 1874).

Expected Cultural Resources

Evidence of pre-contact and historic cultures could be present within the APE; however, encountering artifacts or cultural material is unlikely due to previous disturbance. The APE has been impacted by agricultural use. The area surrounding the APE has been used for agricultural purposes over the last 100 years and historic features, such as water diversion equipment and associated features may be expected due to the long history of irrigation in the area.

Nine previously recorded archaeological sites, four historic sites, and four linear sites have been identified within one mile of the APE; however, none of these sites are located within the project APE. Previously recorded cultural resources are summarized in the following table:

Site Number	Type of Property	Artifacts/Features	NRHP Eligibility
10PR46	Lithic Scatter	Flakes, cores	Undetermined
10PR61	Not given	Not given	Undetermined
10PR87	Lithic Scatter	Lithics	Undetermined
10PR163	Lithic Scatter	Flakes and tools	Undetermined
10PR241	Lithic Scatter	Flakes and tools	Undetermined
10PR291	Foundation	Concrete and cobble	Undetermined
10PR292	Lithic Scatter	Lithics	Undetermined
10PR323	Lithic Scatter	Lithics and tools	Undetermined
10PR813	Historic Trail	Oregon Trail/California Trail	NR Listed
10PR913	Lithic Scatter	Lithics and tools	Undetermined
77-17086	Interchange	SH 39 Interchange at I-86	Ineligible
77-17091	Overpass	I-86 Overpass	Ineligible
77-17092	Overpass	I-86 Overpass	Ineligible
77-17096	Canal	Main East Canal	Ineligible
77-17101	Building	William Schroeder Community Building	Ineligible
77-17111	Railroad	Oregon Short Line/ Union Pacific Railroad	Undetermined
77-17112	Road	Old U.S. Highway 30	Undetermined

Field Methodology

Mr. David Larsen, MA, RPA (Registered Professional Archaeologist) conducted fieldwork on May 4, 2017. Mr. Larsen has over 13 years of professional experience in archaeology and his education and experience exceed the requirements of the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (Federal Register, Volume 48, No. 190, September 29, 1983, 44716-44742).

The inventory included an intensive pedestrian survey of the entire APE. A total of one-half acre was surveyed using parallel transect intervals spaced no more than 15 meters apart.

Surface visibility was generally fair (50 to 75 percent) within the APE due to thick grasses and vegetation. The ground surface within the APE was primarily bunch grass species.

Results

The survey resulted in the identification of one historic agricultural waterway. One previously recorded historic agricultural waterway was also identified within the APE. The results of the cultural resources inventory are described below.

FID1 – Main West Canal

The Main West Canal originates at a collection pond in the northeast quarter of Section 32 in Township 7 South, Range 31 East. The canal flows to the southwest for approximately eight miles. The canal ends in the northeast quarter of Section 26, Township 8 South, Range 30 East. The canal is currently in use, and contained water at the time of recording.

The canal is banked by earth and is approximatley 16 feet wide and 8 feet deep. The canal receives regular maintenance and clearing as needed. The canal is owned and maintained by the Falls Irrigation District. Documentation of construction has not been located in literature search of regional history or historic map files; however, according to a representative of the Falls Irrigation District, the canal was built circa 1958. Water rights associated with the canal were filed by the Falls Irrigation District on April 7, 1955 (IDWR, 2017).

The Main West Canal, while contributing to the agricultural growth and settlement of the Snake River Valley, retains poor integrity. The canal retains some integrity of materials, location, setting, feeling, and association as the general course of the original canal has remained unchanged; however, the canal lacks integrity of design and workmanship. The canal has received a continuous stream of water and continued maintenance since its original construction. The canal is not associated with a significant person, and is not architecturally significant. It is not likely to yield information important to local or regional history. While the canal is associated with the irrigation of the arid west and agricultural development in southern Idaho, better examples exist that retain greater integrity and are more architecturally significant. Therefore, it is recommended ineligible for the NRHP.

77-17096 – Main East Canal

The Main East Canal was originally recorded in 2005 and found to be primarily as described. The Main East Canal originates at a collection pond in the northeast quarter of Section 32 in Township 7 South, Range 31 East. The canal flows to the northeast for approximately nine miles. The canal ends in the northwest quarter of Section 8, Township 7 South, Range 32 East. The canal is currently in use, and contained water at the time of recording.

The canal is banked by earth and is approximately 16 feet wide and 8 feet deep. The canal receives regular maintenance and clearing as needed. The canal is owned and maintained by the Falls Irrigation District. Documentation of construction has not been located in literature search of regional history or historic map files; however, according to a representative of the Falls Irrigation District, the canal was built circa 1958. Water rights associated with the canal were filed by the Falls Irrigation District on April 7, 1955 (IDWR, 2017).

The Main East Canal, while contributing to the agricultural growth and settlement of the Snake River Valley, retains poor integrity. The canal retains some integrity of materials, location, setting, feeling, and association as the general course of the original canal has remained unchanged; however, the canal lacks integrity of design and workmanship. The canal has received a continuous stream of water and continued maintenance since its original construction. The canal is not associated with a significant person, and is not architecturally significant. It is not likely to yield information important to local or regional history. While the canal is associated with the irrigation of the arid west and agricultural development in southern Idaho, better examples exist that retain greater integrity and are more architecturally significant. Therefore, it is recommended ineligible for the NRHP.

Isolates/Noted but not recorded

No isolates were recorded as a result of the survey.

Management Recommendations

No historic properties are located within the proposed project APE. Two historic agricultural waterway were identified; however, the canals are recommended ineligible for listing on the NRHP.

No additional work is recommended, and the proposed project will have no adverse effect on historic properties.

Determination of Effects

The proposed project will have no effect on historic properties.

Avoidance, Minimization, or Mitigation Options

No avoidance or mitigation is warranted because no historic properties are located within the APE.

Conclusions

The proposed project to establish three irrigation wells will have no effect to historic properties and no additional work is recommended. The Main West Canal and the Main East Canal are recommended ineligible for listing on the NRHP and, as a result, the proposed impacts would have no effect.

Original survey records, field notes, and photographs are located at:

Sundance Consulting, Inc.
305 North 3rd Avenue, Suite B
Pocatello, ID 83201

References

Idaho Department of Water Resources (IDWR)
2017 General Mapping Tool. http://www.idwr.idaho.gov Data accessed on May 4, 2017.

Lohse, E.S.
1993 Manual for Archaeological Analysis: Field and Laboratory Analysis Procedures. Department of Anthropology Miscellaneous Paper No. 92-1 (revised). Idaho Museum of Natural History, Pocatello, Idaho.

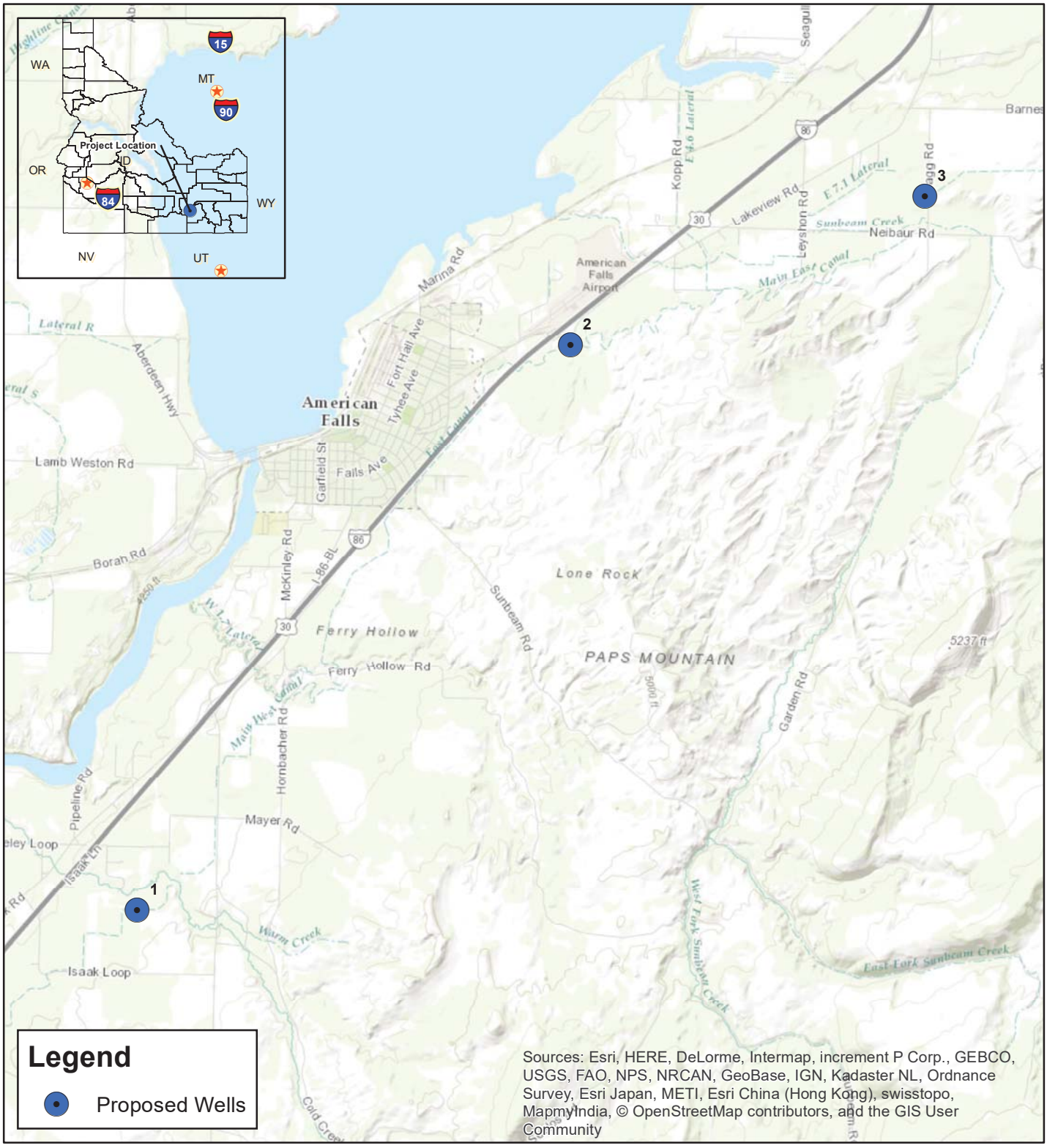
McGrath C.L., Woods A.J., Omernik, J.M., Bryce S.A., Edmondson M., Nesser J.A., Shelden J., Crawford R.C., Comstock J.A., and Plocher M.D.
2002 Ecoregions of Idaho (color poster with map, descriptive text, summary tables, and photographs). Reston, Virginia. United States Geological Survey (map scale 1:1,350,000).

Reed, W.G. et al
1986 Archaeological investigations on the Idaho National Engineering Laboratory, 1984-1985. Report to EG&G, Idaho, Earth and Life Sciences Division, Idaho Falls, Idaho. Swanson/Crabtree Anthropological Research Laboratory, Report of Investigations 86.

Appendix A

Figures

Figure 1 - Project Location
Falls Irrigation District Wells Project



N
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S

Scale 1:70,000

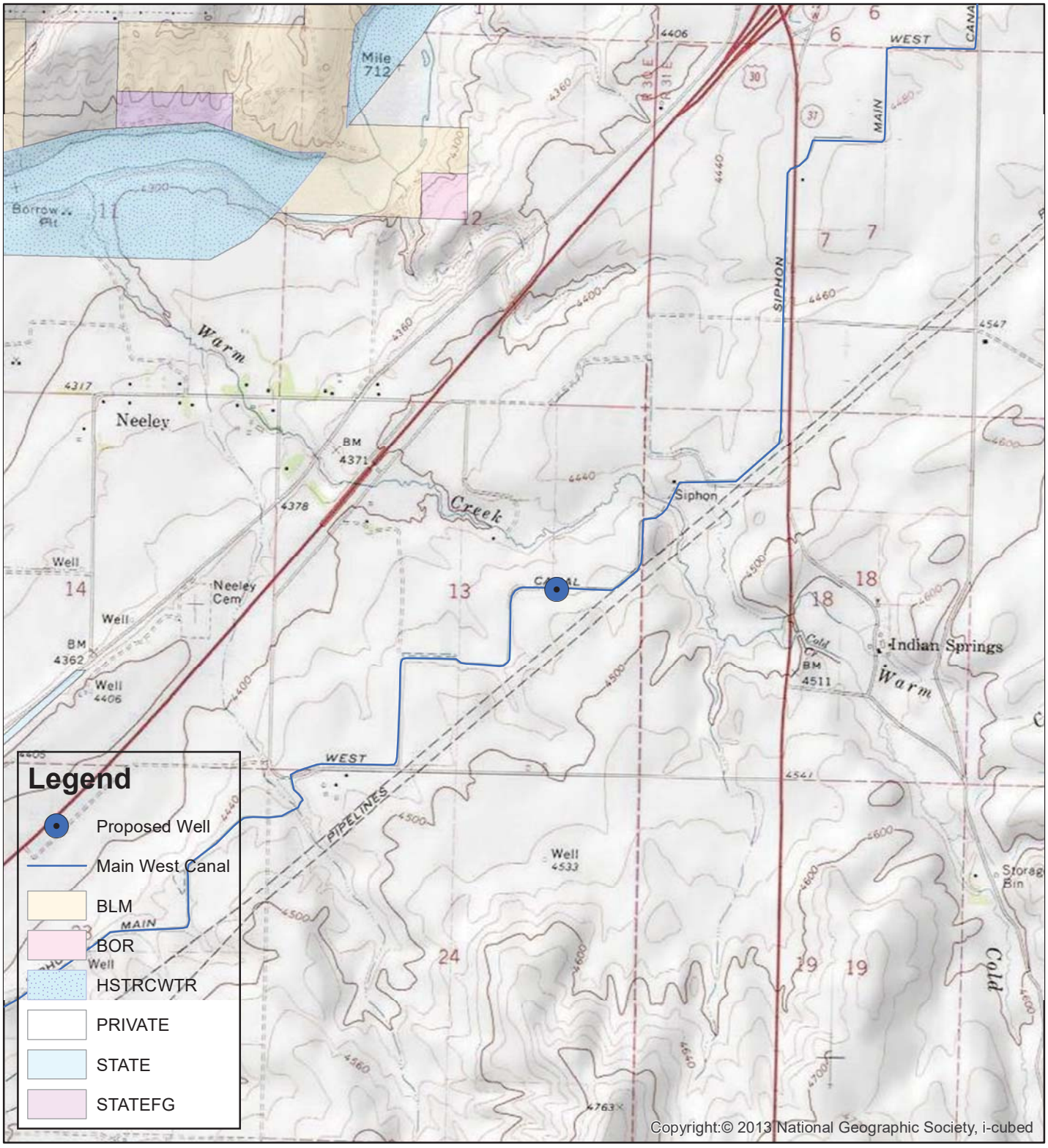
Data Displayed in UTM Zone 12, NAD83

0 0.5 1 2 Miles

0 1.5 3 Kilometers

Date Created: 5/4/2017

Figure 2a - Project Area Map (Well #1)
Falls Irrigation District Wells Project



N
W E
S

Scale 1:24,000

Data Displayed in UTM Zone 12, NAD83

T8S, R30E

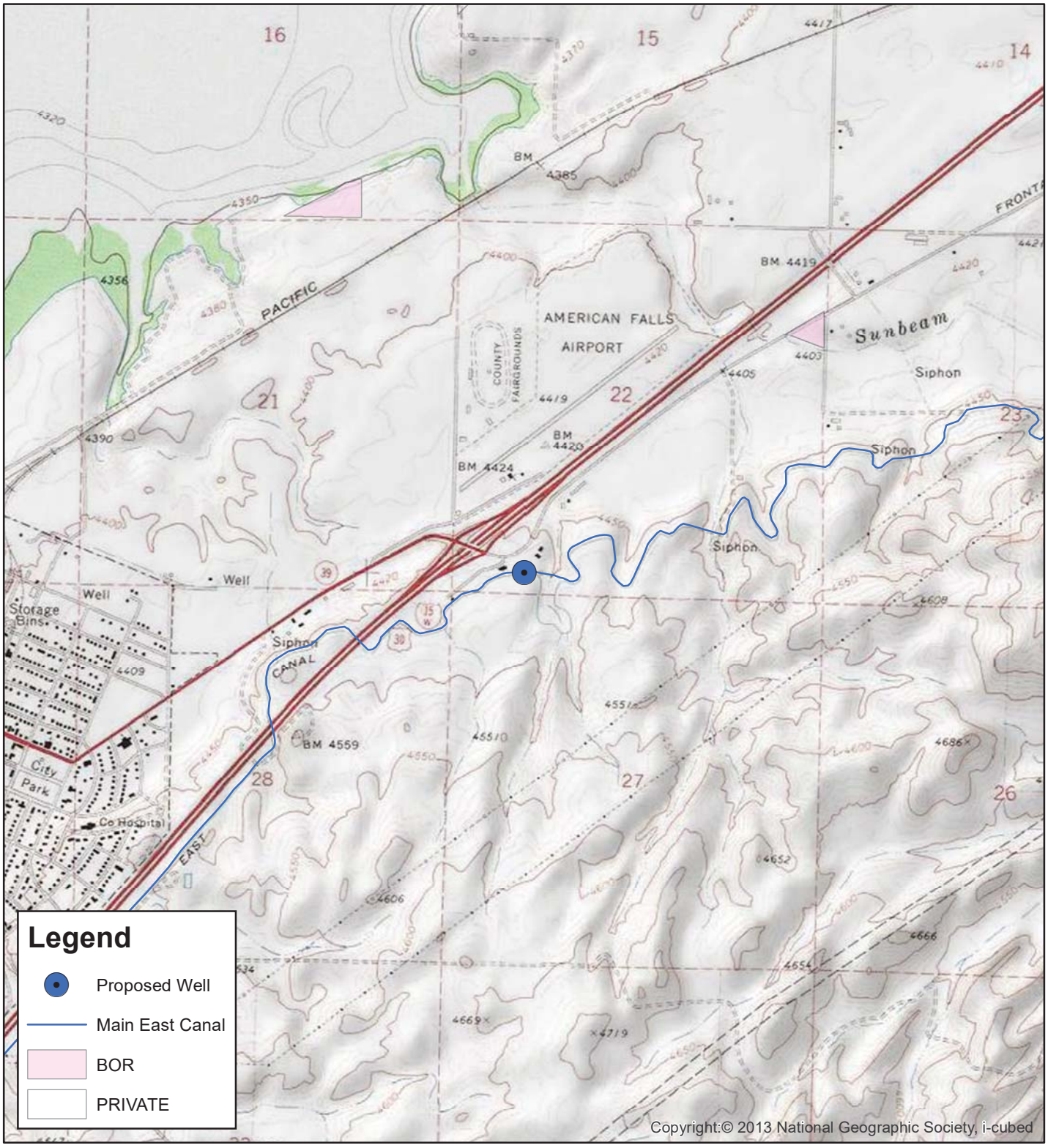
USGS Quadrangle: Neely / Indian Springs

0 0.5 1 Kilometers

0 0.5 1 Miles

Date Created: 5/4/2017

Figure 2b - Project Area Map (Well #2)
Falls Irrigation District Wells Project



N
W E
S

Scale 1:24,000

Data Displayed in UTM Zone 12, NAD83

T8S, R31E

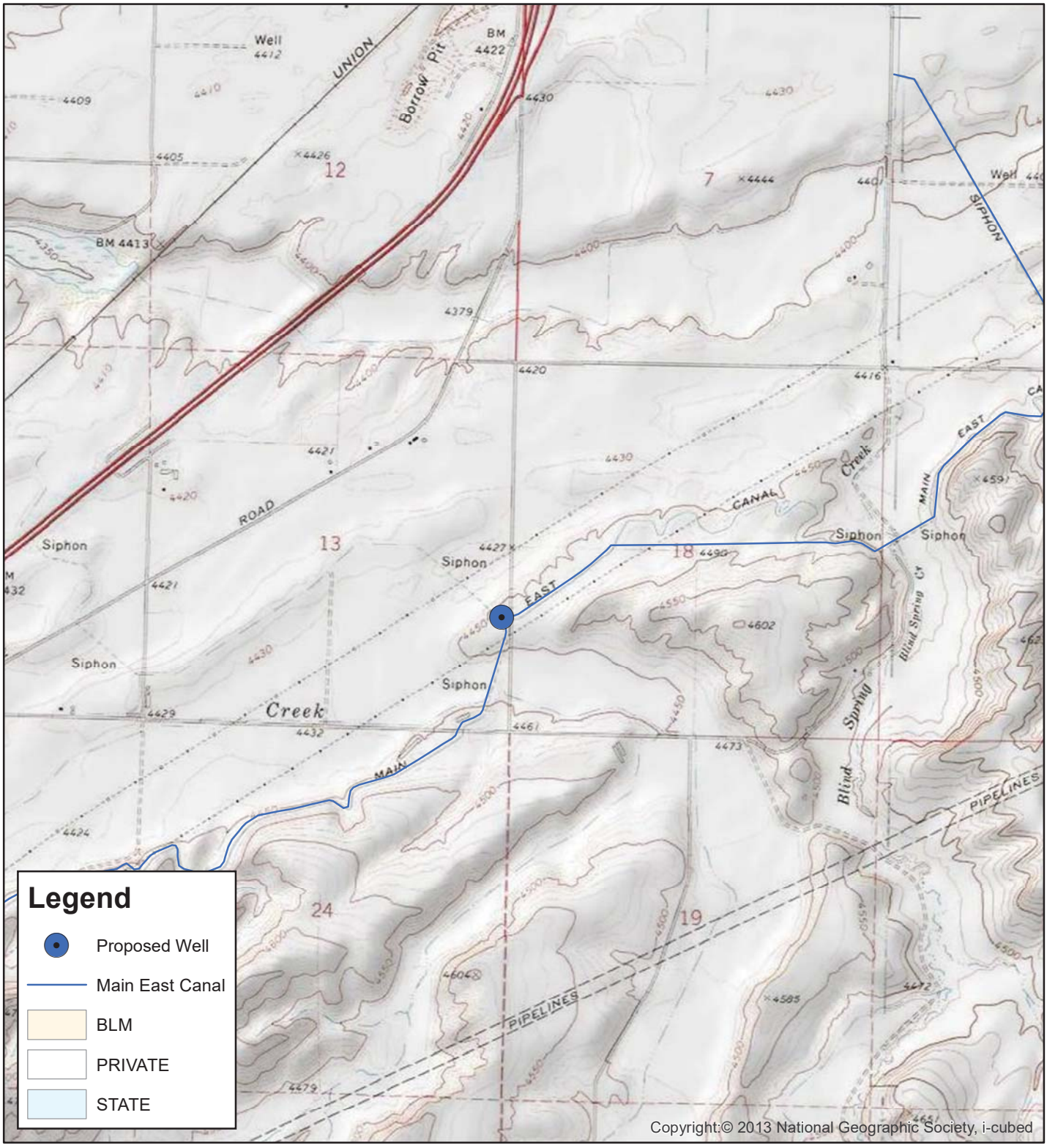
USGS Quadrangle: American Falls

0 0.5 1 Kilometers

0 0.5 1 Miles

Date Created: 5/4/2017

Figure 2c - Project Area Map (Well #3)
Falls Irrigation District Wells Project



N
W E
S

Scale 1:24,000

Data Displayed in UTM Zone 12, NAD83

T7S, R31E

USGS Quadrangle: American Falls

0 0.5 1 Kilometers

0 0.5 1 Miles

Date Created: 5/4/2017

Figure 3a - Area of Potential Effect (Well #1)
Falls Irrigation District Wells Project

N
W E
S

Scale 1:1,000

Data Displayed in UTM Zone 12, NAD83

T8S, R30E Section 13

USGS Quadrangle: Neely / Indian Springs

0 100 200 Feet

0 25 50 Meters

Date Created: 5/4/2017

Figure 3b - Area of Potential Effect (Well #2)
Falls Irrigation District Wells Project

N
W E
S

Scale 1:1,000

Data Displayed in UTM Zone 12, NAD83

T8S, R31E Section 22

USGS Quadrangle: American Falls

0 100 200 Feet

0 25 50 Meters

Date Created: 5/4/2017

Figure 3c - Area of Potential Effect (Well #3)
Falls Irrigation District Wells Project

N
W E
S

Scale 1:1,000

Data Displayed in UTM Zone 12, NAD83

T7S, R31E Section 13

USGS Quadrangle: American Falls

0 100 200 Feet

0 25 50 Meters

Date Created: 5/4/2017

Appendix B

Photographs

P5040004: Main East Canal facing south

P5040005: Project area at proposed well #3 facing southwest

P5040006: Project area at proposed well #2 facing east

P5040011: Project area at proposed well #1 facing west

P5040015: Main West Canal facing northeast

Appendix C

Site Forms

IDAHO HISTORIC SITES INVENTORY FORM

PROPERTY NAME: Main East Canal | FIELD#: FID2

STREET: | RESTRICT: ☐

CITY: American Falls | VICINITY: ☑ | COUNTY CD: 77 | COUNTY NAME: Power

SUBNAME: | BLOCK: | SUBLOT: | ACRES: | LESS THAN: ☐

TAX PARCEL: | UTMZ: 12 | EASTING: 350676 | NORTHING: 4739303

TOWNSHIP: 8 | N_S: S | RANGE: 31 | E_W: E | SECTION: 22 | NW ¼, ¼ SE ¼

QUADRANGLE: AMERICAN FALLS | OTHERMAP:

SANBORN MAP: | SANBORN MAP#: | PHOTO#: Digital

PROPERTY TYPE: Structure | CONST/ACT1: Original Construction | ACTDATE1: 1958 | CIRCA1: ☑

CONST/ACT2: | ACTDATE2: | CIRCA2: ☐

ASSOCIATED FEATURES: Various concrete culverts | TOTAL # FEATURES:

ORIGINAL USE: Agriculture/Subsistence | WALL MATERIAL: EARTH

ORIGSUBUSE: irrigation facility | FOUND. MATERIAL: EARTH

CURRENT USE: Agriculture/Subsistence | ROOF MATERIAL:

CURSUBUSE: irrigation facility | OTHER MATERIAL:

ARCHSTYLE: No Style | PLAN: linear | CONDITION: Good

NR REF #: | NPS CERT: | ACTIONDATE: | FUTURE ELIG DATE: 0

DIST/MPLNAME1: | DIST/MPLNAME2:

Individually Eligible ☐ | Contributing in a potential district ☐ | Noncontributing ☐ | Future eligibility ☐

Not Eligible ☑ | Multiple Property Study ☐ | Not evaluated ☐

CRITERIA A ☐ B ☐ C ☐ D ☐ | CRITERIA CONSIDERATION A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

AREA OF SIGNIF: | AREA OF SIGNIF:

COMMENTS: The Main East Canal was originally recorded in 2005 and found to be primarily as described. The Main East Canal originates at a collection pond in the northeast quarter of Section 32 in Township 7 South, Range 31 East. The canal flows to the northeast for approximately nine miles. The canal ends in the northwest quarter of Section 8, Township 7 South, Range 32 East. The canal is currently in use and contained water at the time of recording

PROJ/RPT TITLE: Falls Irrigation District Wells Project Cultural Resource Inventory | SVY DATE: 05/04/17 | SVY LEVEL: Intensive

RECORDED BY: David N. Larsen, MA, RPA | PH: 208-576-4962 | ADDRESS: 305 N. 3rd Ave, Suite B, Pocatello, ID 83201

SUBMITTED PHOTOS ☑ NEGS ☐ SLIDES ☐ SKETCH MAP ☐

SVY RPT #: | ******** FOR ISHPO USE ONLY ******** | IHSI#: 77-17096

MS RPT #: | SITS#:

IHPR #: | HABS NO. ID-: | HAER NO. ID-: | REV#:

CS #: | IHSI# REF: | NR REF# 2: | REV# REF:

SVY RPT# 1: | SVY RPT# 2: | SVY RPT# 3: | MS RPT# 1: | MS RPT# 2:

ADD'L NOTES:

MORE DATA ☑

ATTACH ☑

REV# | SITS# | IHSI#

OF PHOTOS: | NEGBOX#: | # OF SLIDES: | SHPO DETER: | DETER DATE:

INITIALED: | ENTRY DATE: | REVISE1: | REVISE2: | REVISE3:

IDAHO HISTORIC SITES INVENTORY FORM

PROPERTY NAME: Main East Canal | IHSI#: 77-17096

FIELD#: FID2 | COUNTY NAME: Power

OTHER NAME:

COUNTY CD: 77 | CITY: American Falls | VICINITY: ☑

UTM REF2: 12/348315/4737047 | UTM REF3: 12/356862/4743535 | UTM REF4:

OTHER MATERIAL2: | CULTAFFIL: | AGENCYCERT:

SIGNIFDATE: | SIGNIFPERIOD: | SIGNIFPERSON:

ARCH/BUILD: | ARCHPLANS: ☐ | TAXEASE: ☐ | TAXCERT: ☐

OWNERSHIP: Private | PROPOWN: Falls Irrigation District

MORE DATA: ☑ | ATTACH: ☑

DOCSOURCE: Idaho Department of Water Resources - http://www.idwr.idaho.gov/
Water Right No. 29-2568

ADD'L NOTES:

COMMENTS: The Main East Canal was originally recorded in 2005 and found to be primarily as described. The Main East Canal originates at a collection pond in the northeast quarter of Section 32 in Township 7 South, Range 31 East. The canal flows to the northeast for approximately nine miles. The canal ends in the northwest quarter of Section 8, Township 7 South, Range 32 East. The canal is currently in use, and contained water at the time of recording.

The canal is banked by earth and is approximatley 16ft wide and 8ft deep. The canal receives regular maintenance and clearing as needed. The canal is owned and maintained by the Falls Irrigation District. Documentation of construction has not been located in literature search of regional history or historic map files; however, according to a representative of the Falls Irrigation District the canal was built circa 1958. Water rights associated with the canal were filed by the Falls Irrigation District

PHOTO LOG: ☐ | IHSI# REF: | INITIALED: | DATEENTERED:

SKETCH: ☐

IHSI#
SITS#
REV#

IDAHO HISTORIC SITES INVENTORY FORM

PROPERTY NAME: Main East Canal | IHSI#: 77-17096

FIELD#: FID2 | COUNTY NAME: Power

COMMENTS:

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The Main East Canal, while contributing to the agricultural growth and settlement of the Snake River Valley, retains poor integrity. The canal retains some integrity of materials, location, setting, feeling, and association as the general course of the original canal has remained unchanged; however, the canal lacks integrity of design and workmanship. The canal has received a continuous stream of water and continued maintenance since its original construction. The canal is not associated with a significant person, and is not architecturally significant. It is not likely to yield information important to local or regional history. While the canal is associated with the irrigation of the arid west and agricultural development in southern Idaho, better examples exist that retain greater integrity and are more architecturally significant. Therefore, it is recommended ineligible for the NRHP.

ATTACH ☑

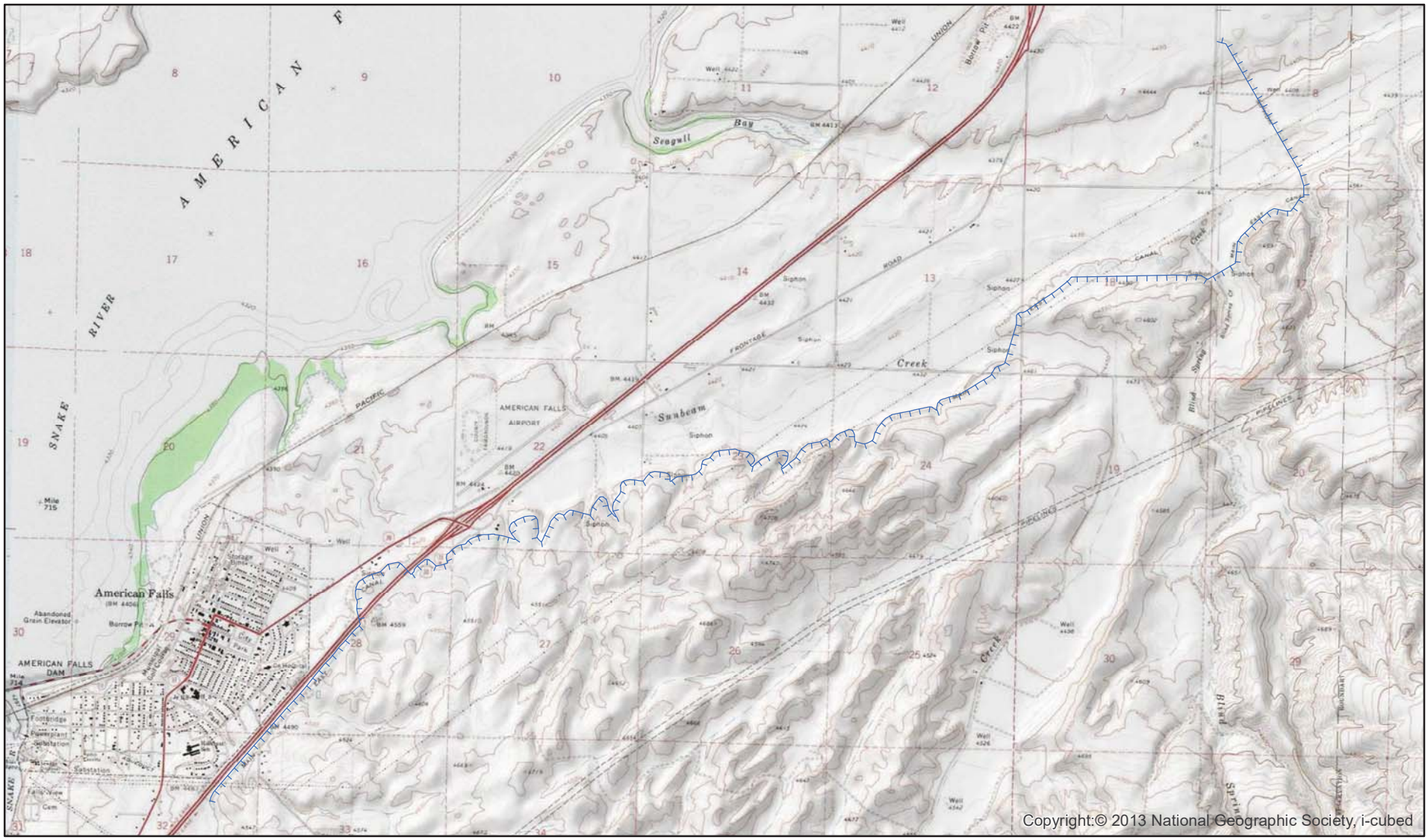
REV#

SITS#

IHSI#

Main East Canal

Figure 1 - Site Overview Map



Scale 1:48,000

0 0.5 1 Kilometers

0 0.5 1 Miles

Data Displayed in UTM Zone 12, NAD83

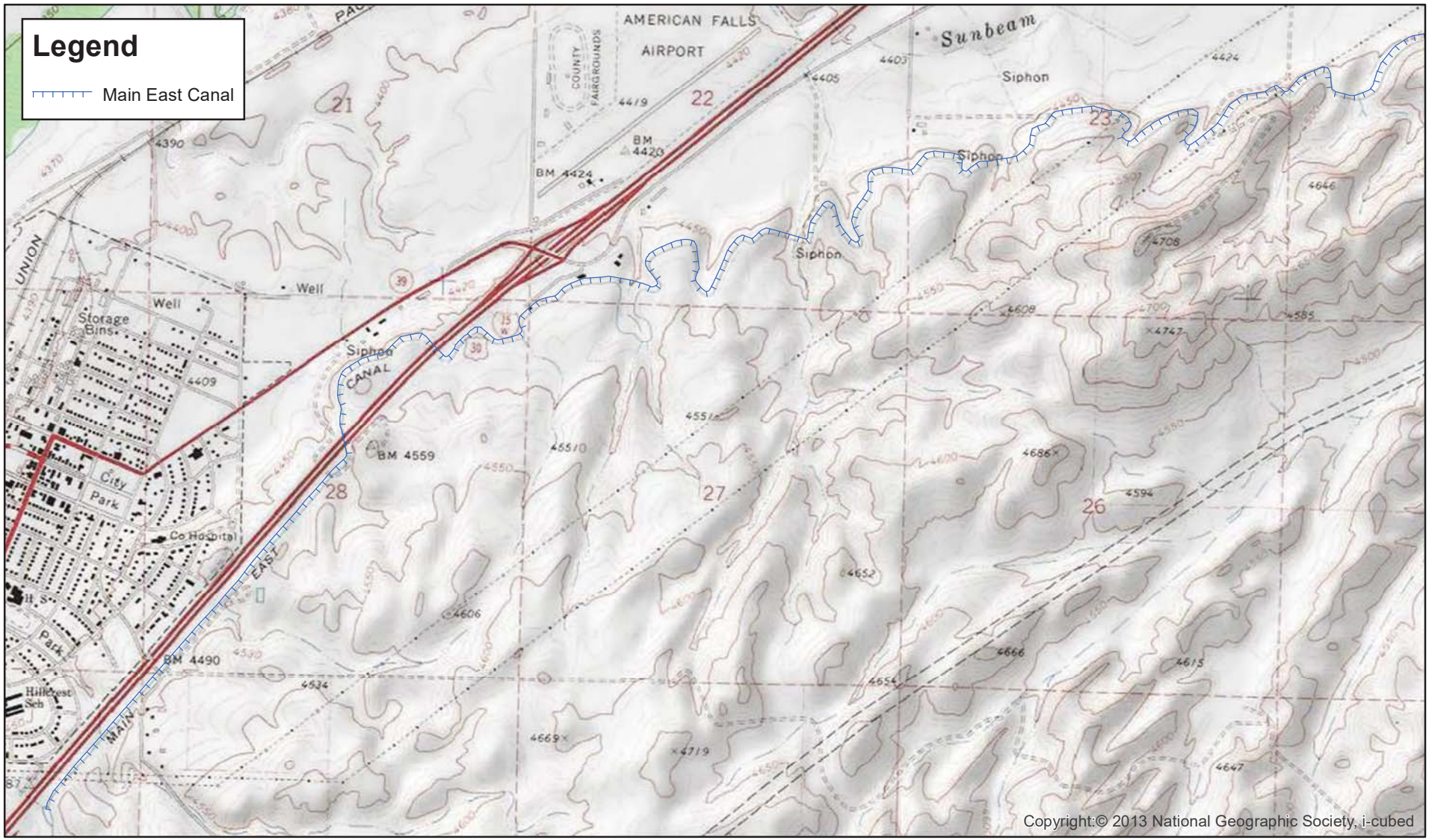
T7S, R31E / T7S, R32E

USGS Quadrangle: American Falls / Wheatgrass Bench

Date Created: 5/4/2017

Main East Canal

Figure 2a - Site Map



N
W E
S

Scale 1:24,000

Data Displayed in UTM Zone 12, NAD83

T7S, R31E

USGS Quadrangle: American Falls

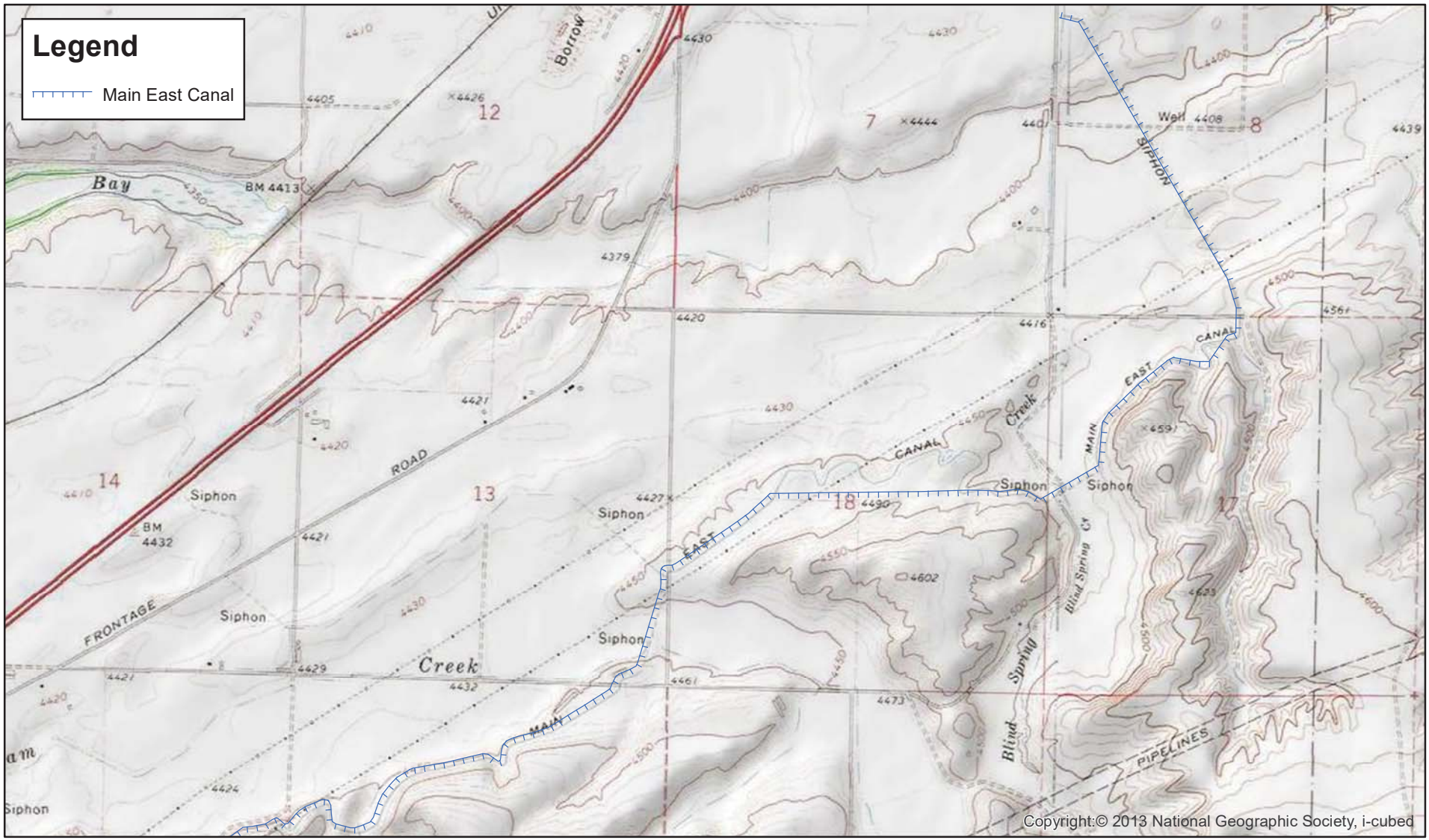
0 0.5 1 Kilometers

0 0.5 1 Miles

Date Created: 5/4/2017

Main East Canal

Figure 2b - Site Map



N

W E

S

Scale 1:24,000

Data Displayed in UTM Zone 12, NAD83

T7S, R31E / T7S, R32E

USGS Quadrangle: American Falls / Wheatgrass Bench

0 0.5 1 Kilometers

0 0.5 1 Miles

Date Created: 5/4/2017

P5040004: Main East Canal facing south

IDAHO HISTORIC SITES INVENTORY FORM

PROPERTY NAME: Main West Canal | FIELD#: FID1

STREET: | RESTRICT: ☐

CITY: American Falls | VICINITY: ☑ | COUNTY CD: 77 | COUNTY NAME: Power

SUBNAME: | BLOCK: | SUBLOT: | ACRES: | LESS THAN: ☐

TAX PARCEL: | UTMZ: 12 | EASTING: 345196 | NORTHING: 4732157

TOWNSHIP: 8 | N_S: S | RANGE: 30 | E_W: E | SECTION: 13 | SW ¼, ¼ NE ¼

QUADRANGLE: NEELEY | OTHERMAP:

SANBORN MAP: | SANBORN MAP#: | PHOTO#: Digital

PROPERTY TYPE: Structure | CONST/ACT1: Original Construction | ACTDATE1: 1958 | CIRCA1: ☑

CONST/ACT2: | ACTDATE2: | CIRCA2: ☐

ASSOCIATED FEATURES: Various concrete culverts | TOTAL # FEATURES:

ORIGINAL USE: Agriculture/Subsistence | WALL MATERIAL: EARTH

ORIGSUBUSE: irrigation facility | FOUND. MATERIAL: EARTH

CURRENT USE: Agriculture/Subsistence | ROOF MATERIAL:

CURSUBUSE: irrigation facility | OTHER MATERIAL:

ARCHSTYLE: No Style | PLAN: linear | CONDITION: Good

NR REF #: | NPS CERT: | ACTIONDATE: | FUTURE ELIG DATE: 0

DIST/MPLNAME1: | DIST/MPLNAME2:

Individually Eligible ☐ | Contributing in a potential district ☐ | Noncontributing ☐ | Future eligibility ☐

Not Eligible ☑ | Multiple Property Study ☐ | Not evaluated ☐

CRITERIA A ☐ B ☐ C ☐ D ☐ | CRITERIA CONSIDERATION A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

AREA OF SIGNIF: | AREA OF SIGNIF:

COMMENTS: The Main West Canal originates at a collection pond in the northeast quarter of Section 32 in Township 7 South, Range 31 East. The canal flows to the southwest for approximately eight miles. The canal ends in the northeast quarter of Section 26, Township 8 South, Range 30 East. The canal is currently in use, and contained water at the time of recording.

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RECORDED BY: David N. Larsen, MA, RPA | PH: 208-576-4962 | ADDRESS: 305 N. 3rd Ave, Suite B, Pocatello, ID 83201

SUBMITTED PHOTOS ☑ NEGS ☐ SLIDES ☐ SKETCH MAP ☐

SVY RPT #: | MS RPT #: | IHPR #: | HABS NO. ID-: | HAER NO. ID-: | REV#:

******** FOR ISHPO USE ONLY ********

IHSI#: FID1 | SITS#: | REV#:

CS #: | IHSI# REF: | NR REF# 2: | REV# REF:

SVY RPT# 1: | SVY RPT# 2: | SVY RPT# 3: | MS RPT# 1: | MS RPT# 2:

ADD'L NOTES:

MORE DATA ☑

ATTACH ☑

OF PHOTOS: | NEGBOX#: | # OF SLIDES: | SHPO DETER: | DETER DATE:

INITIALED: | ENTRY DATE: | REVISE1: | REVISE2: | REVISE3:

REV# | SITS# | IHSI#

IDAHO HISTORIC SITES INVENTORY FORM

PROPERTY NAME: Main West Canal | IHSI#: FID1

FIELD#: FID1 | COUNTY NAME: Power

OTHER NAME:

COUNTY CD: 77 | CITY: American Falls | VICINITY: ☑

UTM REF2: 12/342302/4729747 | UTM REF3: 12/348336/4736993 | UTM REF4:

OTHER MATERIAL2: | CULTAFFIL: | AGENCYCERT:

SIGNIFDATE: | SIGNIFPERIOD: | SIGNIFPERSON:

ARCH/BUILD: | ARCHPLANS: ☐ | TAXEASE: ☐ | TAXCERT: ☐

OWNERSHIP: Private | PROPOWN: Falls Irrigation District

MORE DATA: ☑ | ATTACH: ☑

DOCSOURCE: Idaho Department of Water Resources - http://www.idwr.idaho.gov/
Water Right No. 29-2568

ADD'L NOTES:

COMMENTS: The Main West Canal originates at a collection pond in the northeast quarter of Section 32 in Township 7 South, Range 31 East. The canal flows to the southwest for approximately eight miles. The canal ends in the northeast quarter of Section 26, Township 8 South, Range 30 East. The canal is currently in use, and contained water at the time of recording.

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PHOTO LOG: ☐ | IHSI# REF: | INITIALED: | DATEENTERED:

SKETCH: ☐

IHSI#
SITS#
REV#

IDAHO HISTORIC SITES INVENTORY FORM

PROPERTY NAME: Main West Canal

IHSI#: FID1

FIELD#: FID1

COUNTY NAME: Power

COMMENTS:

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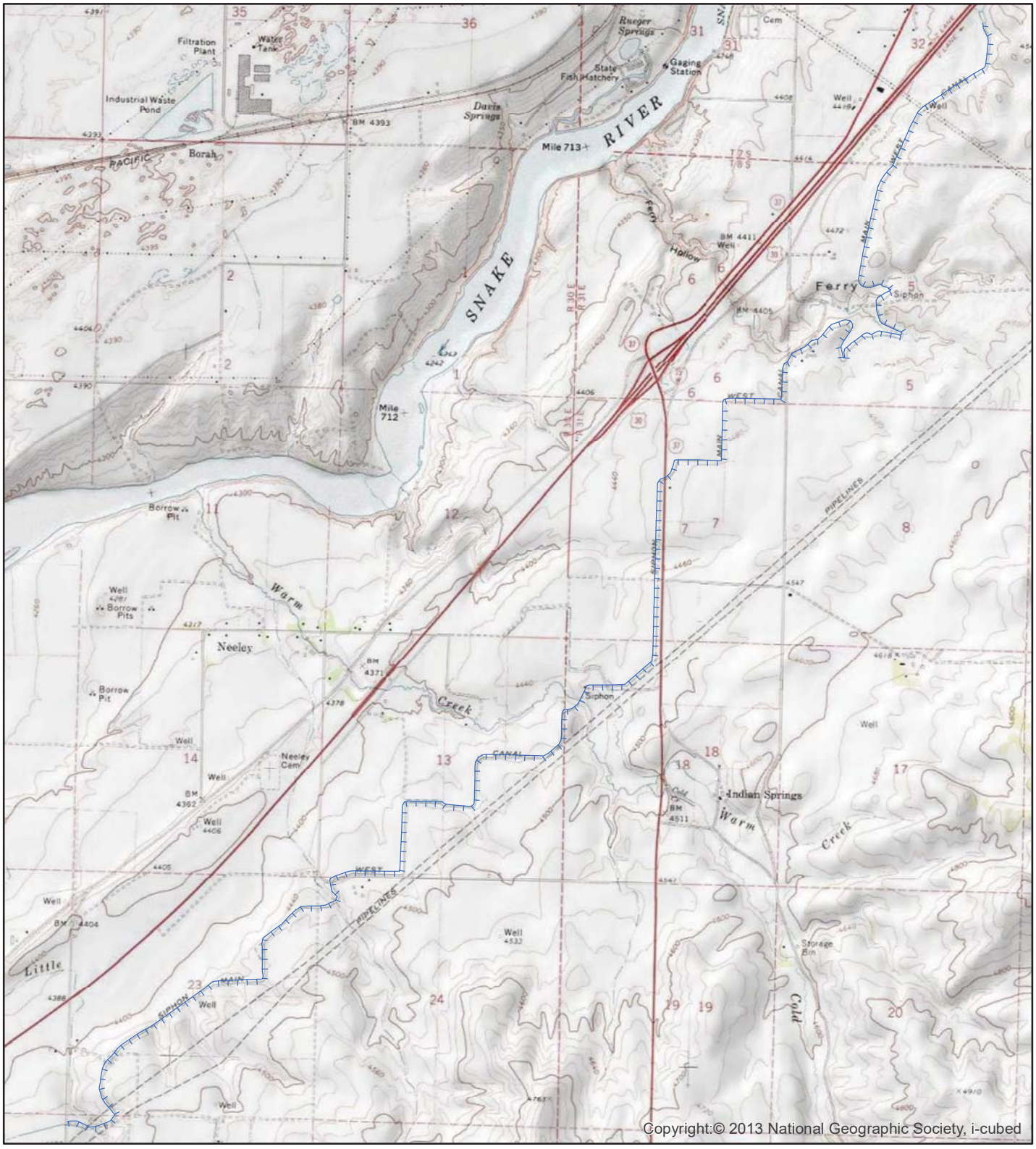
ATTACH ☑

REV#

SITS#

IHSI#

Main West Canal
Figure 1 - Site Overview Map



N
W E
S

Scale 1:36,000

0 0.5 1 Kilometers

0 0.5 1 Miles

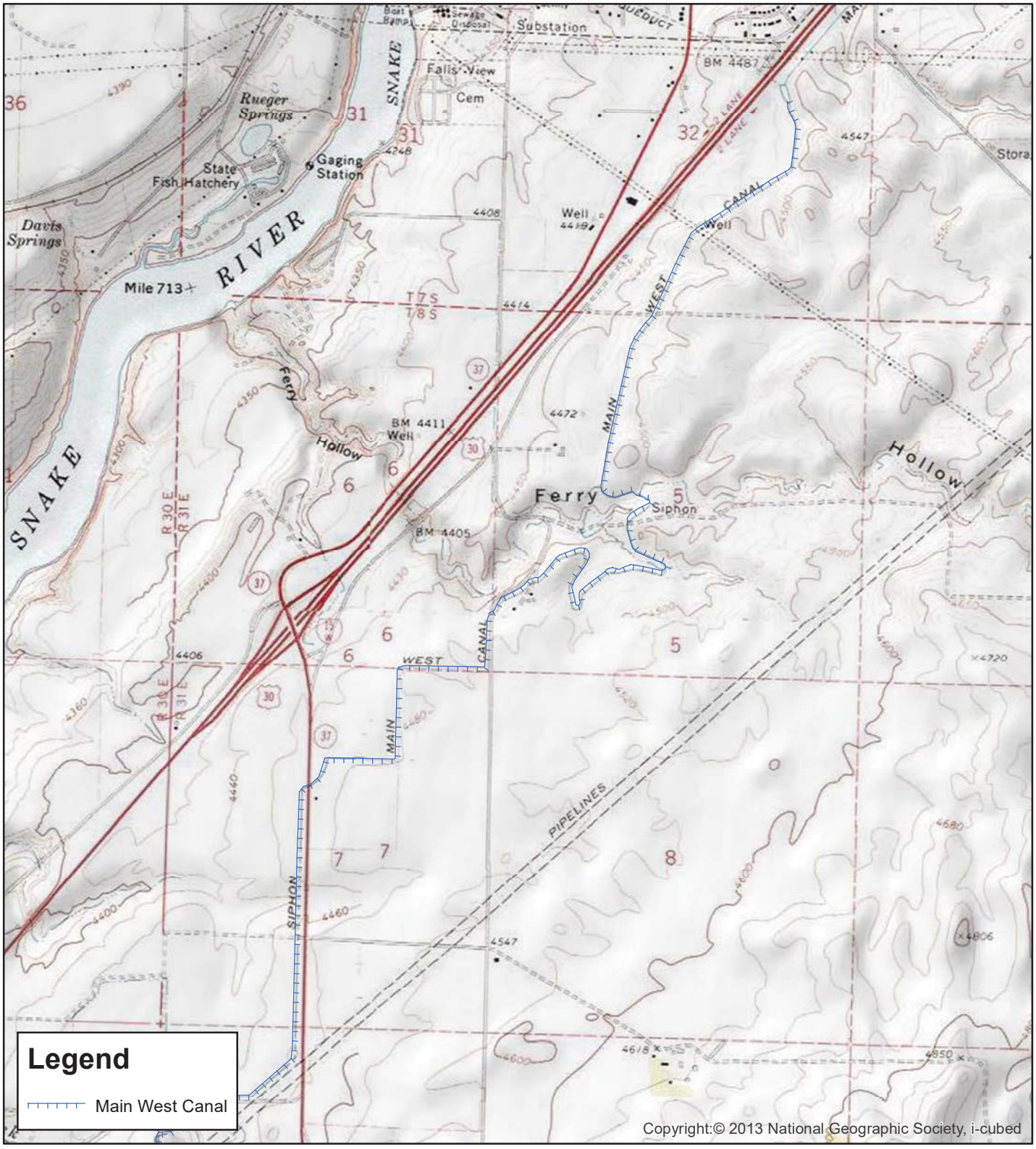
Data Displayed in UTM Zone 12, NAD83

T8S, R30E / T8S, R31E / T7S, R31E

USGS Quadrangle: American Falls / Neely / Indian Springs

Date Created: 5/4/2017

Main West Canal
Figure 2a - Site Map



N
W E
S

Scale 1:24,000

0 0.5 1 Kilometers

0 0.5 1 Miles

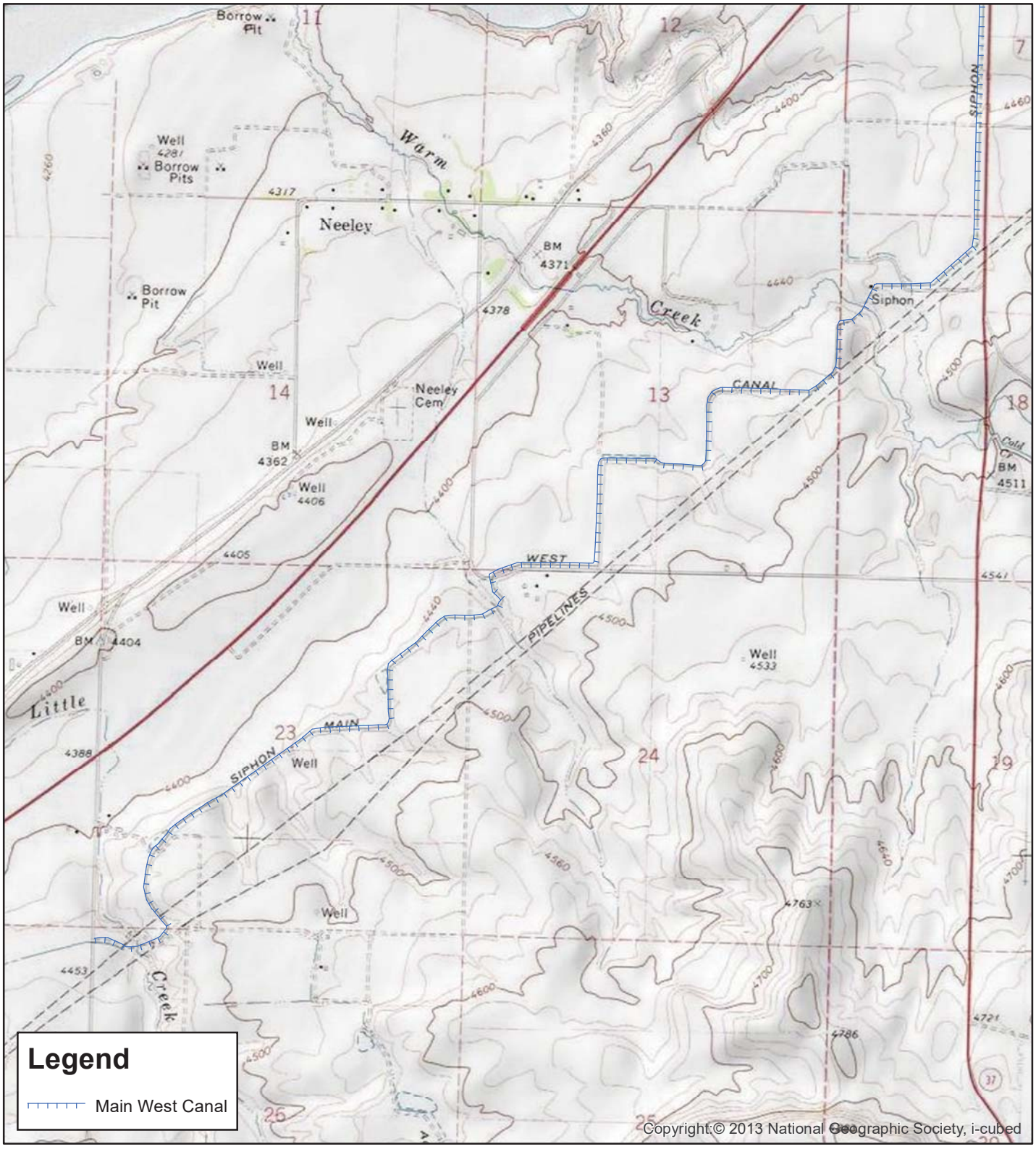
Data Displayed in UTM Zone 12, NAD83

T8S, R30E / T8S, R31E / T7S, R31E

USGS Quadrangle: American Falls / Neely / Indian Springs

Date Created: 5/4/2017

Main West Canal
Figure 2b - Site Map



N
W E
S

Scale 1:24,000

Data Displayed in UTM Zone 12, NAD83

T8S, R30E / T8S, R31E

USGS Quadrangle: Neely / Indian Springs

0 0.5 1 Kilometers

0 0.5 1 Miles

Date Created: 5/4/2017

P5040012: Main West Canal facing west

P5040013: Main West Canal facing northeast

Close

IDAHO DEPARTMENT OF WATER RESOURCES
Water Right Report

5/4/2017

WATER RIGHT NO. 29-2568

Owner Type	Name and Address
Current Owner	UNITED STATES OF AMERICA ACTING THROUGH BUREAU OF RECLAMATION REGIONAL DIRECTOR PN CODE-3100 1150 N CURTIS RD STE 100 BOISE, ID 83706-1234 (208) 378-5306
Present Owner	FALLS IRRIGATION DISTRICT 310 VALDEZ ST AMERICAN FALLS, ID 83211 (208)226-5227
Attorney	LING & ROBINSON C/O ROGER D LING PO BOX 396 RUPERT, ID 83350-0396 (208)436-4717
Original Owner	JOHN P MEHLHAFF AMERICAN FALLS, ID 83211

Priority Date: 04/07/1955
Basis: Decreed
Status: Active

Source	Tributary
GROUND WATER	

Beneficial Use	From	To	Diversion Rate	Volume
IRRIGATION	04/01	10/31	3.1 CFS	640 AFA
Total Diversion			3.1 CFS	

Location of Point(s) of Diversion:

GROUND WATER | NWSWSE | Sec. 32 | Township 07S | Range 31E | POWER County

IRRIGATION Use:
Acre Limit: 160

Place(s) of use: Large POU Info

Conditions of Approval:

1.		The rights listed below are limited to the irrigation of a combined total of 12,621 acres in a single irrigation season. Combined right nos. 01-13, 01-2061, 01-2064, 01-2068, 01-4051, 29-2262, 29-2267, 29-2288, 29-2306, 29-2307, 29-2310, 29-2341, 29-2380, 29-2568, 29-2614, 29-10044, 29-11167, 29-11168, 29-11169, 29-11170, 29-13388, 29-13389, 29-13426, 29-13427.
2.		This right is limited to the irrigation of 160 acres within the place of use described above.
3.	C05	RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO SECTION 42-1425, IDAHO CODE.
4.		The beneficial use of the water represented hereby is for the landowners within the Falls Irrigation District pursuant to Contract No. 14-06-100-851, dated December 9, 1955 (as may be supplemented or amended) between the United States of America through the U.S. Bureau of Reclamation and the Falls Irrigation District for irrigation and other permitted purposes as authorized by the Act of August 31, 1954, Ch. 1159, 68 Stat. 1026, of the Michaud Flats Project.
5.	127	Place of use is within the boundary of Falls Irrigation District pursuant to Section 43-323, Idaho Code.
6.	C18	This partial decree is subject to such general provisions necessary for the definition of the rights or for the efficient administration of the water rights as may be ultimately determined by the Court at a point in time no later than the entry of a final unified decree. Section 42-1412(6), Idaho Code.

Dates:
Licensed Date:
Decreed Date: 03/16/2004
Permit Proof Due Date:
Permit Proof Made Date:
Permit Approved Date:
Permit Moratorium Expiration Date:
Enlargement Use Priority Date:
Enlargement Statute Priority Date:

Water Supply Bank Enrollment Date Accepted:
Water Supply Bank Enrollment Date Removed:
Application Received Date:
Protest Deadline Date:
Number of Protests: 0

Other Information:
State or Federal: S
Owner Name Connector:
Water District Number:
Generic Max Rate per Acre:
Generic Max Volume per Acre:
Combined Acres Limit: 12621
Combined Volume Limit:
Combined Rate Limit:
Civil Case Number:
Old Case Number:
Decree Plantiff:
Decree Defendant:
Swan Falls Trust or Nontrust:
Swan Falls Dismissed:
DLE Act Number:
Cary Act Number:
Mitigation Plan: False

Close

Appendix D – Eastern Snake River Plain Aquifer Model Results Summary, Brockway Engineering, PLLC and Response to Model Comments

Falls Irrigation District Transfer
ESPA Model Results Summary
Brockway Engineering, PLLC
GEP – July 26, 2018

Six of the decreed groundwater irrigation rights held by Falls Irrigation District are diverted from four wells. A transfer has been prepared and proposes to add three additional points of diversion. This analysis evaluates the impacts of the proposed transfer to the Snake River by using the ESPA Model v. 2.1 under steady state and transient conditions. An overview map of the proposed transfer is shown in Figure 1.

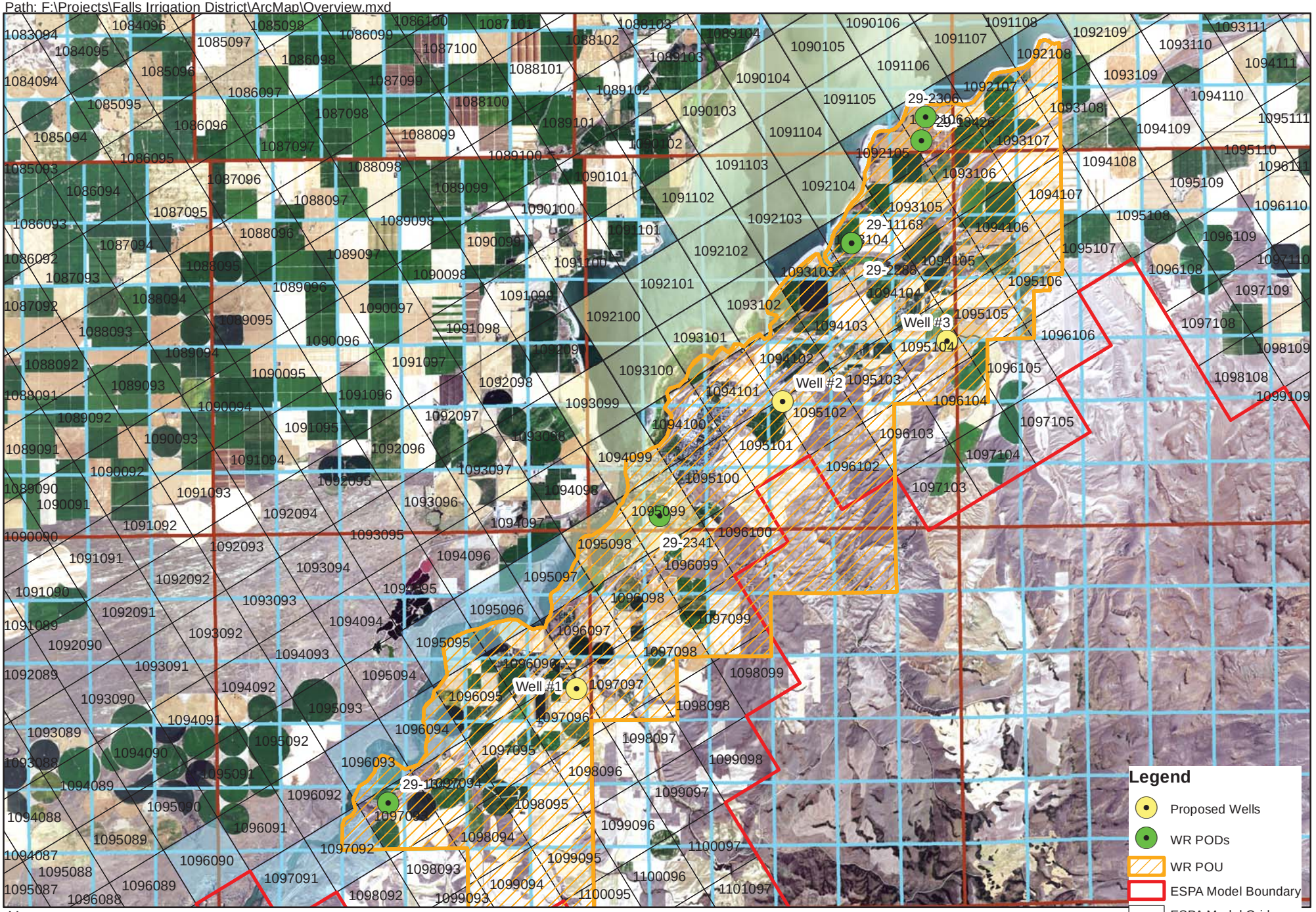
The current conditions of diversion of groundwater under the following irrigation rights (water right nos. 29-2288, 29-2306, 29-2341, 29-11168, 29-13426, and 29-13427) assumes the authorized number of acres allowed under the water right and IDWR's consumptive use for the Fall Irrigation District area of 3 acft/acre. The total consumptive use volume per year for these rights was calculated to be 1873.2 afa. The proposed transfer seeks to allow for consumptive use volume to be diverted from the proposed wells. Table 1 outlines the associated consumptive use volume attributed to ESPAM cells for each of the existing wells under the current condition. Table 2 outlines the consumptive use volume associated with the existing and proposed wells under the proposed transfer condition.

The steady state ESPAM results are shown in Table 3. The results are in acre-feet/year. There is a negative impact of 11 acre-feet to the Neeley to Minidoka reach of the Snake River. However, there is a simulated 9 acre-feet benefit to the Near Blackfoot to Neeley reach. These reach results have been combined together in past transfers because of the locations of the proposed wells are close to the reach dividing line. It is my opinion that combining the Near Blackfoot to Neeley and the Neeley to Minidoka reaches would be appropriate in this case.

The annual consumptive use volumes from Tables 1 and 2 were shaped based on typical seasonal consumptive use demands for the area near Falls Irrigation District to generate a seasonal consumptive use curve for evaluation in transient conditions. The ESPA model was then evaluated in current conditions and proposed transfer conditions to calculate the transient impacts of the transfer. Figure 2 shows the transient response to the transfer. Again, the combination of the Near Blackfoot to Neeley reach is also shown combined with the Neeley to Minidoka reach.

The mitigation analysis tool that IDWR uses to evaluate transfers within the ESPA boundary to determine if mitigation is required was used. Table 4 shows the results of the mitigation analysis tool. With separate river reaches, it was determined that 10.5 acre-feet of mitigation is required under this transfer. But when the analysis considers the Near Blackfoot to Neeley and the Neeley to Minidoka reaches combined as a single reach, the evaluation shows no mitigation is required.

Path: F:\Projects\Falls Irrigation District\ArcMap\Overview.mxd



N

1 in = 2 miles

FALLS IRRIGATION DISTRICT TRANSFER MODEL ANALYSIS

ESPAM 2.1 MODEL GRID
NAIP 2013 AERIAL PHOTOGRAPH

BROCKWAY ENGINEERING
GEP - JULY 27, 2018

Falls Irrigation District

Data Used for Model Evaluation
ESPA Steady State Model Results
Brockway Engineering, PLLC
GEP, PE
7/26/2018

Table 1: Current Conditions of Consumptive Use Diversion

Model Cell	Water Right No.	CU Volume	Acres	Basis
95, 99	29-2341	321.0	107	METRIC ET Data and IDWR CU of 3 acft/acre
97, 93	29-13427	145.5	48.5	METRIC ET Data and IDWR CU of 3 acft/acre
93, 104	29-11168/29-2288	424.2	141.4	METRIC ET Data and IDWR CU of 3 acft/acre
92, 106	29-13426/29-2306	982.5	327.5	METRIC ET Data and IDWR CU of 3 acft/acre
		1,873.2		

Table 2: Proposed Transfer Consumptive Use Diversion

Model Cell	Water Right No.	CU Volume
95, 99	29-2341	198.0
97, 93	29-13427	55.4
93, 104	29-11168/29-2288	252.2
92, 106	29-13426/29-2306	333.8
97, 96	29-2341	268.0
95, 102	29-13426/29-13427	198.3
95, 104	29-11168/29-2288/29-2306	567.2
		1,872.9

Falls Irrigation District

Proposed Transfer Evaluation
ESPA Steady State Model Results
Brockway Engineering, PLLC
GEP, PE
7/26/2018

Table 3: Steady State ESPA Model Results

River Reach	Flow Change		Combined Reach	
Ashton to Rexburg	0	acft/yr	0	acft/yr
Heise to Shelley	1	acft/yr	1	acft/yr
Shelley to Near Blackfoot	4	acft/yr	4	acft/yr
Near Blackfoot to Neeley	9	acft/yr	-2	acft/yr
Neeley to Minidoka	-11	acft/yr		
Devils Wasbowl to Buhl	-1	acft/yr	-1	acft/yr
Buhl to Thousand Springs	-1	acft/yr	-1	acft/yr
Thousand Springs	0	acft/yr	0	acft/yr
Thousand Springs to Malad	0	acft/yr	0	acft/yr
Malad	0	acft/yr	0	acft/yr
Malad to Bancroft	0	acft/yr	0	acft/yr
Total	**0**	**acft/yr**	**0**	**acft/yr**

Figure 2: Proposed Falls Irrigation District Transfer
10-year Transient ESPA Model Results

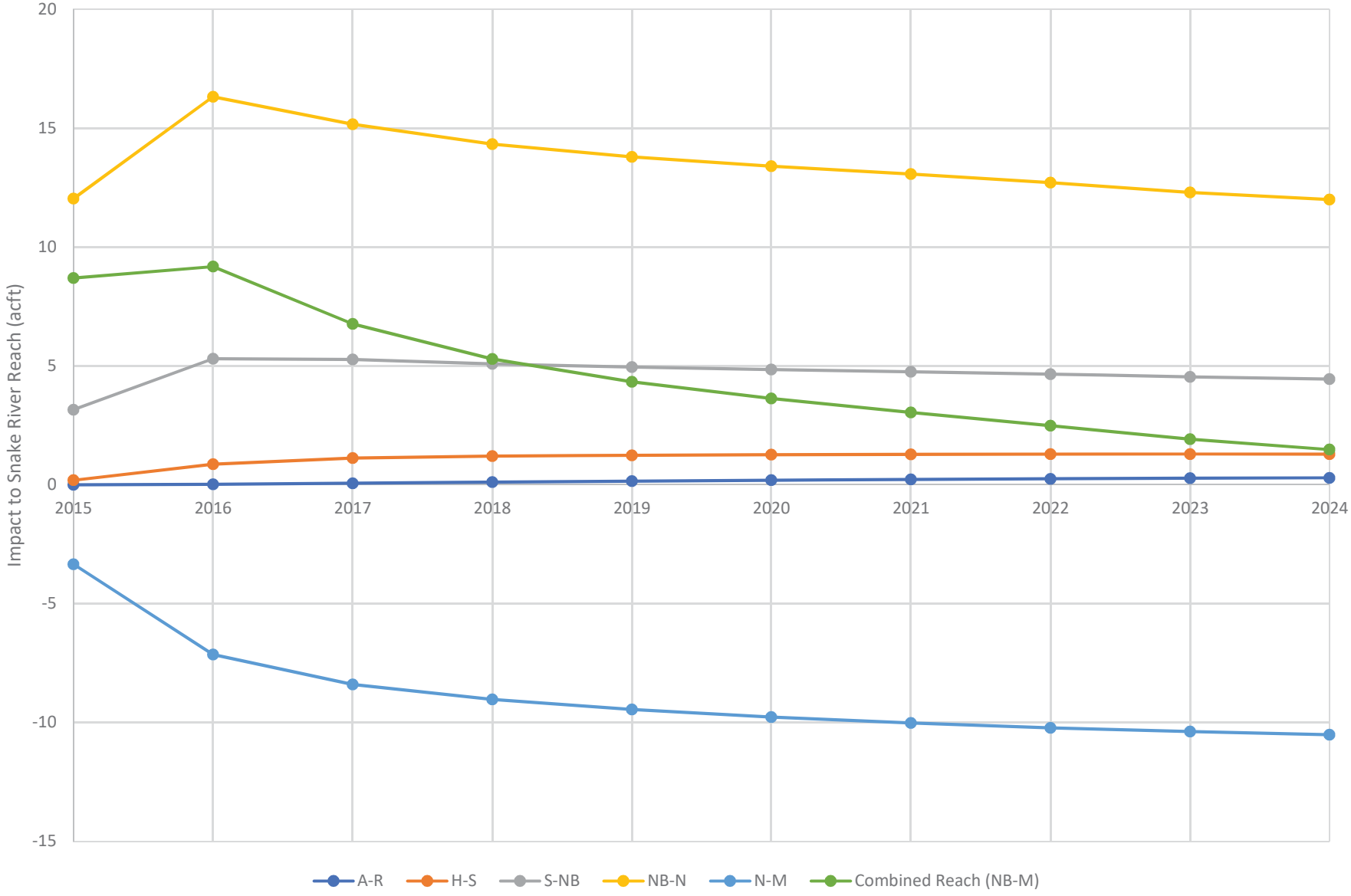


Table 4: IDWR Mitigation Tool Analysis results

New Water Right (GModelo):

WR No.	Div. Rate (CFS)	Con. Vol. (AFA)	No. of Irr. Acres	Priority Date	POD Location	Dedicated Vol. AFA/ AFT	Model Node		Impact by Reach (AF/Annum) Ashton to Rexburg	Heise to Shelley	Shelley to Nr Blckft	Nr Blckft To Neeley	Neeley to Minidoka	Combined Nr Blckft to Minidoka	Dev. Wbl. To Buhl	Buhl to Kspr	Kspr	Kspr to Malad	Malad	Malad to Bancroft
Transfer 1: Proposed Steady State Impacts following Transfer																				
								Pre-SS	36.57	109.16	331.97	1103.76	61.07	1164.83	67.36	76.50	33.97	21.43	19.61	1.22
								Post-SS	36.18	107.99	328.37	1,094.51	72.26	1,166.77	68.22	77.46	34.39	21.69	19.86	1.24
Transfer 1: Worst Case Transient State Impacts following Transfer																				
								Pre-TS	13.53	74.50	282.47	959.76	52.26	1,012.02	49.56	56.95	25.16	15.82	14.23	0.87
								Post-TS	13.24	73.21	278.03	947.76	62.78	1,010.54	49.65	57.07	25.21	15.85	14.25	0.87
								Steady State Analysis: Mitigation Check 1 - >10% of Historical:	-1.1%	-1.1%	-1.1%	-0.8%	18.3%	0.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
								Mitigation Check 2: > 6 AF/A:	-0.4	-1.2	-3.6	-9.3	11.2	1.9	0.9	1.0	0.4	0.3	0.2	0.0
								Mitigation Check 3 - >10% of Total:	1.2%	3.6%	10.8%	36.1%	2.4%	38.5%	2.3%	2.6%	1.1%	0.7%	0.7%	0.0%
								Mitigation Required?:	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
								Mitigation Vol. Req'd (ac-ft):	-0.4	-1.2	-3.6	-9.3	11.2	1.9	0.9	1.0	0.4	0.3	0.2	0.0
								Transient State Analysis: Mitigation Check 1 - >10% of Historical:	-2.2%	-1.7%	-1.6%	-1.3%	20.1%	-0.1%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%
								Mitigation Check 2: > 6 AF/A:	-0.3	-1.3	-4.4	-12.0	10.5	-1.5	0.1	0.1	0.1	0.0	0.0	0.0
								Mitigation Required?:	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO
Read Me								Mitigation Vol. Req'd (ac-ft):	-0.3	-1.3	-4.4	-12.0	10.5	-1.5	0.1	0.1	0.1	0.0	0.0	0.0

Falls Irrigation District Transfer Response to USBR Comments
ESPA Model Results Summary
Brockway Engineering, PLLC
GEP – September 6, 2018

The USBR reviewed the proposed Falls Irrigation District Transfer and the modeling results that were prepared. I appreciate the USBR review and comments. The USBR had two questions and this memo was written to address those questions. I have included the USBR original questions in italics and my response to each question directly follows.

1. *Even though the wells are near the dividing line between the Neeley to Minidoka and Near Blackfoot to Neeley reaches, it seems odd that there is such a large negative impact to the Neeley to Minidoka reach and a similar large impact to the Near Blackfoot to Neeley reach. A possible solution is to add a figure that clearly shows the proximity of the previous and proposed diversion locations along with the reaches delineated may help.*

The ESPA Model v. 2.1 was calibrated to available data, including Snake River reach gains/losses, groundwater elevation data, spring flows, precipitation data, and irrigation diversion. Extensive effort was put forth to ensure adequate calibration throughout the model domain. However, the ESPA model, any model, is a simplified reflection of a very complex system, but according to IDWR it is the best scientific tool available to evaluate transfers within the ESPA boundary. IDWR has recognized that transfers in the area near the division between the Near Blackfoot to Neeley and Neeley to Minidoka reaches occasionally produce results that justify combining those two reaches. IDWR has approved transfers in this area with combined reach results in the past.

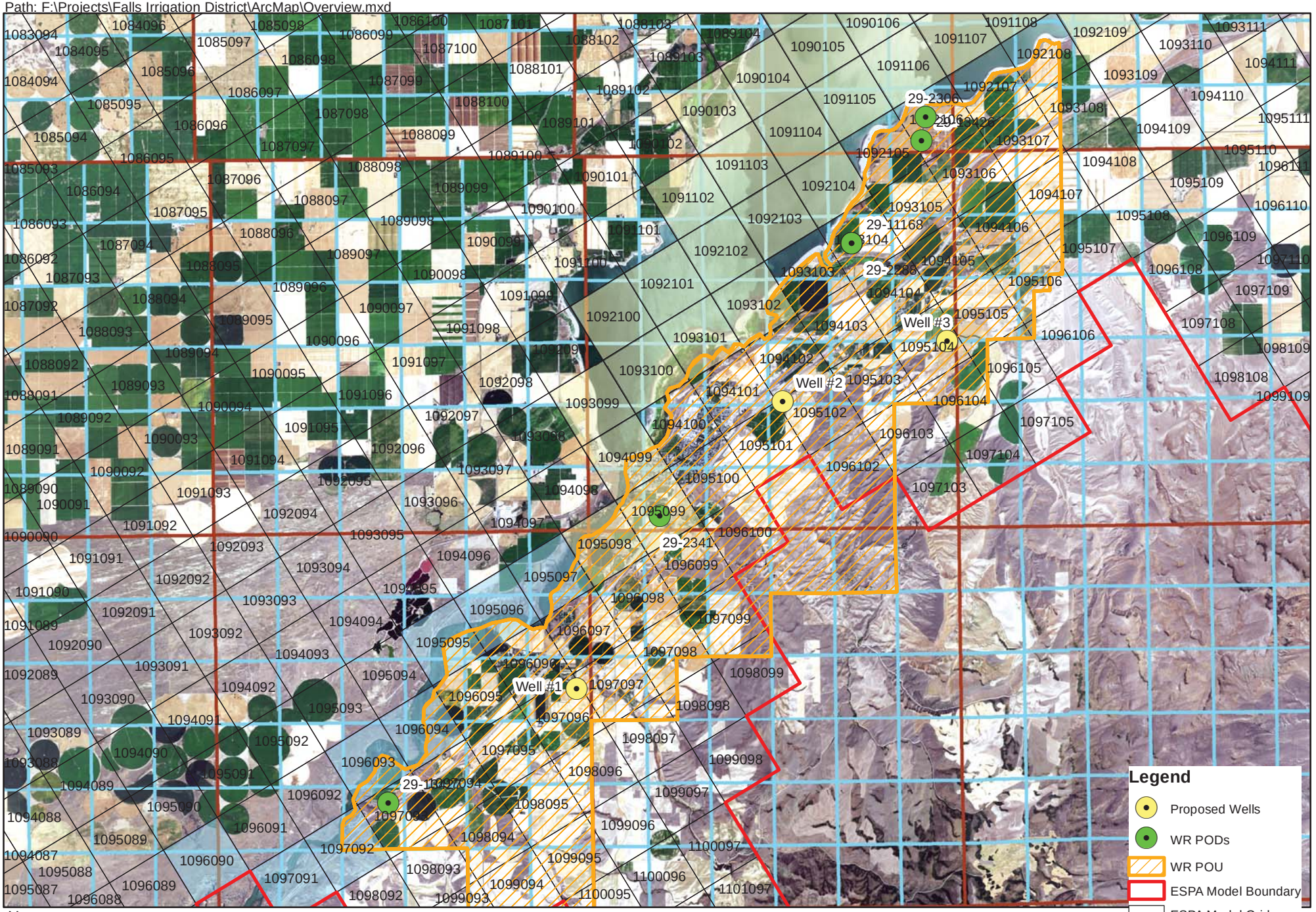
Furthermore, the proposed transfer is located on the south side of the river, where geologic outcropping of the south mountains extends into the ESPA. The available aquifer on the south side is smaller than the rest of the ESPA (at one point is only 1-mile wide). And the Near Blackfoot to Neeley reach also includes the American Falls Reservoir. These factors substantially effect the hydrogeology of this area and help explain why the model results to changes in groundwater pumping are so sensitive within the river reaches.

The figure included with the model summary results shows the ESPA model boundary, the river reaches, the existing wells and the proposed wells. This figure is included again, as suggested.

2. *Table 3 doesn't appear to add up. The totals should be 1 acre-foot per year, unless there is some rounding that isn't shown.*

There was rounding that was not shown in Table 3. All values were rounded to the nearest whole acft/year, and I included a clarifying statement regarding the rounding. I have revised Table 3 to illustrate the values that were slightly greater than zero were rounded down to zero and values slightly less than zero were rounded up to zero.

Path: F:\Projects\Falls Irrigation District\ArcMap\Overview.mxd



N

1 in = 2 miles

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BROCKWAY ENGINEERING
GEP - JULY 27, 2018

Falls Irrigation District

Proposed Transfer Evaluation
ESPA Steady State Model Results
Brockway Engineering, PLLC
GEP, PE
7/26/2018 - revised 9/6/2018

Table 3: Steady State ESPA Model Results, values rounded to nearest whole number.

River Reach	Flow Change		Combined Reach	
Ashton to Rexburg[a]	>0	acft/yr	>0	acft/yr
Heise to Shelley	1	acft/yr	1	acft/yr
Shelley to Near Blackfoot	4	acft/yr	4	acft/yr
Near Blackfoot to Neeley	9	acft/yr	-2	acft/yr
Neeley to Minidoka	-11	acft/yr		
Devils Wasbowl to Buhl	-1	acft/yr	-1	acft/yr
Buhl to Thousand Springs	-1	acft/yr	-1	acft/yr
Thousand Springs[b]	<0	acft/yr	<0	acft/yr
Thousand Springs to Malad[b]	<0	acft/yr	<0	acft/yr
Malad[b]	<0	acft/yr	<0	acft/yr
Malad to Bancroft[b]	<0	acft/yr	<0	acft/yr
Total[a]	**>0**	**acft/yr**	**>0**	**acft/yr**

[a] Model results are slightly greater than zero, but round down to zero

[b] Model results are slightly less than zero, but round up to zero