

RECLAMATION

Managing Water in the West

**Environmental Assessment
Excavation of Paleontological Resources
American Falls Reservoir, Minidoka Project, Idaho**



U.S. Department of the Interior
Bureau of Reclamation
Pacific Northwest Region
Boise, Idaho

September 2015

U.S. DEPARTMENT OF THE INTERIOR

PROTECTING AMERICA'S GREAT OUTDOORS AND POWERING OUR FUTURE

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

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.

RECLAMATION

Managing Water in the West

**Environmental Assessment
Excavation of Paleontological Resources
American Falls Reservoir, Minidoka Project, Idaho**



U.S. Department of the Interior
Bureau of Reclamation
Pacific Northwest Region
Boise, Idaho

September 2015

Finding of No Significant Impact

Excavation of Paleontological Resources

American Falls Reservoir, Minidoka Project, Idaho

PN-FONSI 15-06
September 25, 2015

Introduction

In accordance with the National Environmental Policy Act (NEPA), the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) has prepared a Final Environmental Assessment (EA) that evaluates the environmental effects of excavating and removing paleontological resources that may exist on the shore of American Falls Reservoir, and curating them in a Reclamation-approved non-federal repository for future study.

Reclamation's purpose is to comply with the Paleontological Resources and Preservation Act (PRPA) by actively protecting and managing irreplaceable fossil resources found on federal lands. Reclamation's need is to protect these paleontological resources from erosion and degradation from fluctuating reservoir levels and possible damage/looting from private individuals. Under the PRPA, Federal agencies have a responsibility to document and protect paleontological resources found on Federal lands.

In October 2014, Reclamation contracted under an emergency action with the Idaho Museum of Natural History at Idaho State University for the recovery of a partial Pleistocene elephant (Columbian mammoth) skull with associated tusks on the northern shore of American Falls Reservoir on Federal land. The remains were eroding out of a cutbank created by an irrigation drainage channel, and excavation was necessary to remove the specimens from further erosion and deterioration. During that work, part of a tusk was not recovered, and paleontologists believe that additional mammoth parts and possibly other fossils are likely still in place, and would be threatened by future erosion caused by the irrigation drainage channel, annual reservoir water level fluctuations, and associated wave action. The excavation area is on the shoreline of the American Falls Reservoir, which is the largest reservoir in the upper Snake River basin and is a storage facility of the Minidoka Project, which supplies irrigation water to more than 1.15 million acres.

Alternative Considered and Recommended Action

Two alternatives, the No Action and the Proposed Action, were considered and analyzed in detail in this EA. The No Action alternative consists of not allowing the excavation and removal of paleontological resources and curation of the resources in a Reclamation-approved non-Federal repository. Reclamation would continue to operate American Falls Reservoir as they have done in the past. The proposed Action consists of Reclamation contracting for the excavation and removal of any paleontological resources and having them curated at the Idaho Museum of

Natural History, a Reclamation-approved non-Federal repository, for future study and potential public display and interpretation.

Two alternatives were eliminated from consideration and not carried forward for detailed analysis because neither would meet the purpose and need of actively protecting and managing irreplaceable fossil resources found on Federal lands. One alternative proposed delaying paleontological excavation to 2016. This alternative was determined to be ineffective in protecting the paleontological resources from erosion caused by the irrigation drainage channel and annual reservoir water level fluctuations. Additionally, excavation, removal, and protection of any paleontological resource sooner rather than later would prevent the possibility of illegal disturbance/removal by private individuals. The second alternative proposed sealing/preserving the paleontological resources in situ instead of excavation and was dismissed because reservoir level fluctuations would eventually erode the casing and damage/destroy the fossil remains.

Consultation, Coordination, and Public Involvement

Reclamation mailed scoping letters and maps to the Shoshone-Bannock Tribes, Shoshone-Paiute Tribes, and Northwestern Shoshone Tribe on August 24, 2015.

Summary of Environmental Effects

Due to the limited size and scope of the proposed project, environmental effects are virtually non-existent for Cultural Resources, Indian Sacred Sites, Indian trust Assets, Environmental Justice, Socioeconomics, Threatened and Endangered Species, and Climate Change resources.

Paleontological Resources would be affected under both alternatives in various ways. Under the No Action alternative, the paleontological resources would not be excavated and would remain in situ. Annual fluctuations of the reservoir water levels would pose a threat to the fossils, potentially eroding the sediments away and exposing the fossils to water action that would deteriorate the specimens and negatively affect the irreplaceable resources. In addition, exposure of the fossils would increase the possibility of illegal collection (i.e., collection without a permit). Under the Proposed Action alternative, the potentially scientifically invaluable fossil remains of a Columbian mammoth and other paleontological resources would be professionally excavated and removed through a contract and deposited at an approved non-Federal repository for preparation, stabilization, long-term curation, study, and potential interpretation and exhibit. This alternative meets the requirements of PRPA and its mandate to protect and manage paleontological resources on Federal land, and would benefit the public by making the resource more available for education and research.

Finding

Based on the analysis of the environmental impacts presented in the EA and consultation with potentially affected tribes, Reclamation concludes that implementation of the Proposed Action will not have a significant effect on the quality of the human environment or natural and cultural resources. The effects of the Proposed Action will be minor and localized. Therefore, preparation of an environmental impact statement (EIS) is not required.

Recommended:

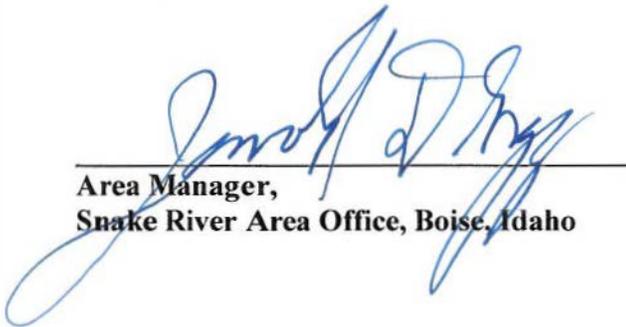


Natural Resource Specialist,
Snake River Area Office, Boise, Idaho

9-25-2015

Date

Approved:



Area Manager,
Snake River Area Office, Boise, Idaho

9/25/2015

Date

Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
B.P.	Before Present
BPA	Bonneville Power Administration
CEQ	Council on Environmental Quality
CIG	Climate Impacts Group
Corps	U.S. Army Corps of Engineers
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FY	Fiscal Year
IPaC	Information for Planning and Conservation
ITA	Indian Trust Asset
NAGPRA	The Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
OPLMA	Omnibus Public Lands Management Act
P.L.	Public Law
PRPA	Paleontological Resources and Preservation Act
Reclamation	U.S. Bureau of Reclamation
RMJOC	River Management Joint Operating Committee
T&E	Threatened and Endangered
USFWS	U.S. Fish and Wildlife Service

TABLE OF CONTENTS

Chapter 1	Purpose and Need	1
1.1.	Introduction	1
1.2.	Purpose and Need for Action	1
1.3.	Location and Background	1
1.4.	Legal Authority	3
1.5.	Regulatory Compliance.....	3
1.5.1.	National Environmental Policy Act	3
1.5.2.	Paleontological Resources Preservation Act (2009).....	3
1.5.3.	Endangered Species Act (1973).....	3
1.5.4.	Executive Order 13007 Indian Sacred Sites	3
1.5.5.	Secretarial Order 3175: Department Responsibilities for Indian Trust Assets..	4
1.5.6.	Executive Order 12898 Environmental Justice.....	4
1.6.	Scoping of Issues and Concerns	4
Chapter 2	Alternatives	5
2.1.	Introduction	5
2.2.	Alternative Development	5
2.3.	Description of Alternatives	5
2.3.1.	Alternative A – No Action.....	5
2.3.2.	Alternative B – Proposed Action	5
2.4.	Alternatives Eliminated from Consideration.....	6
Chapter 3	Affected Environment and Environmental Consequences	7
3.1.	Introduction	7
3.2.	Paleontological Resources.....	7
3.2.1.	Affected Environment.....	7
3.2.2.	Environmental Consequences	10
3.3.	Cultural Resources	10
3.3.1.	Affected Environment.....	10

3.3.2. Environmental Consequences	12
3.4. Indian Trust Assets and Sacred Sites	12
3.4.1. Affected Environment.....	12
3.4.2. Environmental Consequences	13
3.5. Environmental Justice	13
3.5.1. Affected Environment.....	13
3.5.2. Environmental Consequences	15
3.6. Social and Economic Values.....	15
3.6.1. Affected Environment.....	15
3.6.2. Environmental Consequences	16
3.7. Threatened and Endangered Species.....	16
3.7.1. Affected Environment.....	16
3.7.2. Environmental Consequences	17
3.8. Climate Change	17
3.8.1. Affected Environment.....	17
3.8.2. Environmental Consequences	18
3.9. Cumulative Effects	19
3.9.1. Environmental Consequences	19
Chapter 4 Consultation and Coordination	20
4.1. Tribal Consultation and Coordination.....	20
Literature Cited	21
Appendix.....	23
Appendix 1 – IPaC Trust Report	24
Appendix 2 – Scoping Letters to Tribes	25

List of Figures

Figure 1-1. General location of proposed paleontological excavation at American Falls Reservoir to recover paleontological resources and associated environmental data 2

Figure 3-1. General stratigraphic column of the exposed American Falls Formation at American Falls Reservoir. The proposed mammoth excavation would take place in Layer E deposits, dating to greater than 72,000 years old. (Redrawn from Pinsof, 1992)..... 9

List of Tables

Table 3-1. Population statistics from the 2013 U.S. Census Bureau for Power County and the State of Idaho 14

Table 3-2. Income and poverty levels in Power County and the State of Idaho..... 14

Table 3-3. Demographics for Power County and the State of Idaho 15

Chapter 1 PURPOSE AND NEED

1.1. Introduction

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and state laws and regulations. This EA summarizes a Bureau of Reclamation (Reclamation) proposal to excavate and remove paleontological resources, including fossilized mammoth bones, which may exist on the shore of American Falls Reservoir, and curate them in a Reclamation-approved non-Federal repository for future study. The project would benefit the public by safeguarding paleontological scientific and educational values, as well as to promote public benefit and enjoyment.

1.2. Purpose and Need for Action

Reclamation is proposing to excavate and remove paleontological resources that may exist in this location and curate them in a Reclamation-approved non-Federal repository for future study and possible public display and interpretation. Under the Paleontological Resources Preservation Act (PRPA), Federal agencies have responsibility to document and protect paleontological resources.

Reclamation's purpose is to comply with the PRPA by actively protecting and managing irreplaceable fossil resources found on federal lands. Reclamation's need is to protect these paleontological resources from erosion and degradation from fluctuating reservoir levels and possible damage/looting from private individuals.

Decision to be made – Reclamation will decide whether the project qualifies for a statement of Finding of No Significant Impact (FONSI) and whether to approve:

- Acquisition of access agreements for the crossing of Federal lands;
- Excavation and removal of paleontological resources; and
- Curation of the paleontological resources in a Reclamation-approved non-Federal repository.

1.3. Location and Background

Reclamation contracted with the Idaho Museum of Natural History at Idaho State University in October 2014, under an emergency action, for the recovery of a partial Pleistocene elephant (Columbian mammoth) skull with associated tusks on the northern shore of American Falls Reservoir on Federal land. The remains were eroding out of a cutbank created by an irrigation spillway, and excavation was necessary to remove the specimens from further erosion and decay. During that work, part of a tusk was not recovered; paleontologists believe that additional parts

of those mammoth and other fossils are likely still in place and would be threatened by future erosion caused by the irrigation drainage channel and annual reservoir water-level fluctuations.

The proposed project is located in Township 7 South, Range 31 East, NW ¼ Section 5, in Power County, Idaho (American Falls, Idaho 7.5' USGS Topo Quad) (see Figure 1-1). The excavation area is on the shoreline of the American Falls Reservoir. American Falls Reservoir is the largest reservoir in the upper Snake River basin and is a storage facility of the Minidoka Project. The Minidoka Project supplies irrigation water to more than 1.15 million acres. In addition to irrigation, project functions include flood control, power generation, fish and wildlife enhancement, and recreation.

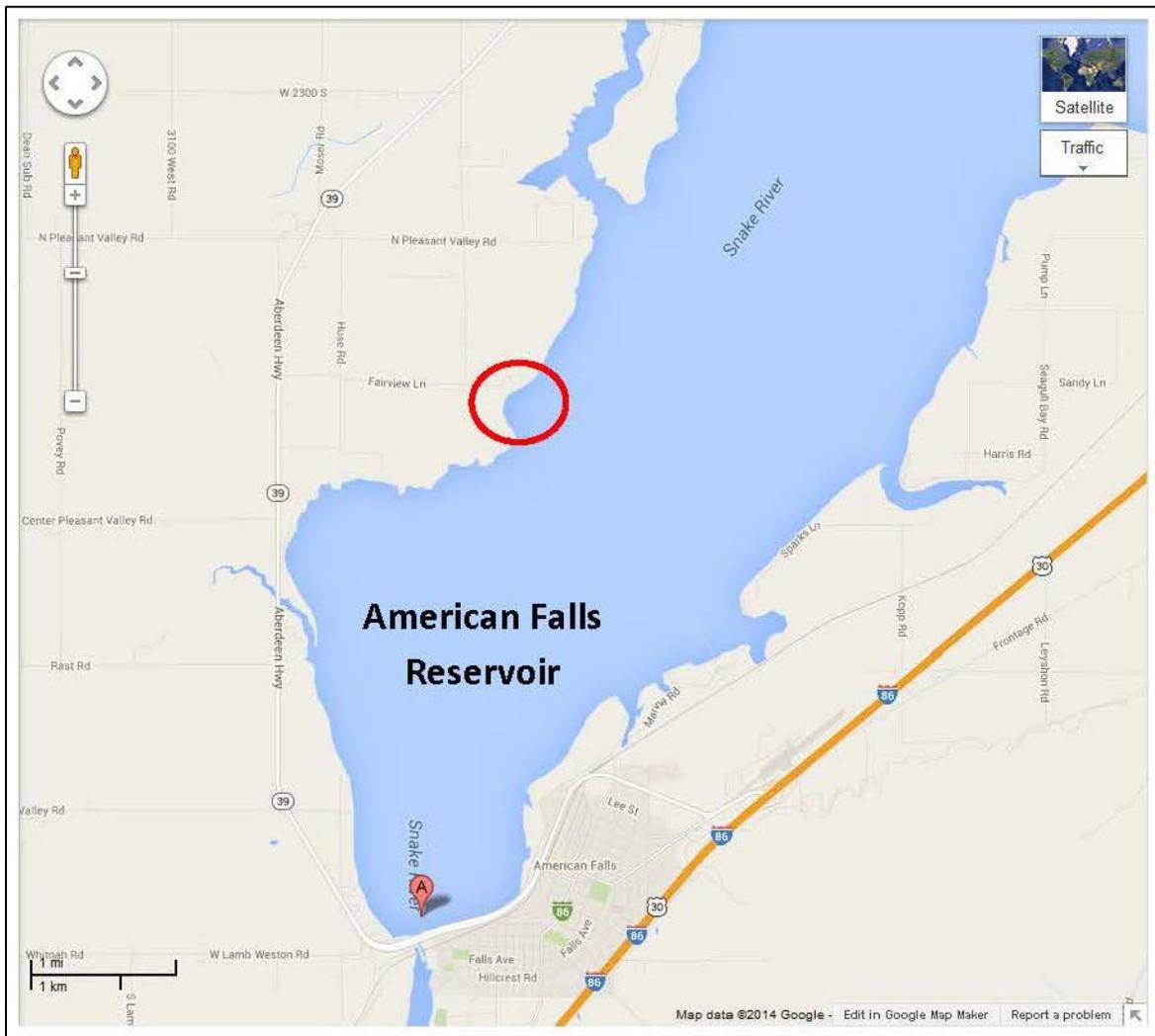


Figure 1-1. General location of proposed paleontological excavation at American Falls Reservoir to recover paleontological resources and associated environmental data

1.4. Legal Authority

The Minidoka Project was authorized under the Reclamation Act of 1902 on June 17, 1902, as amended and supplemented (Minidoka, American Falls, Jackson Lake, Island Park and Grassy Lake); P.L. 111-11, Omnibus Public Land Management Act of 2009, March 30, 2009, 123 Stat. 1348, Sec. 9603.

1.5. Regulatory Compliance

Various laws, executive orders, and secretarial orders apply to the Proposed Action and are summarized below. The legal and regulatory environment within which the Federal activity would be conducted depends on which alternative is implemented.

1.5.1. National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) requires that the action agency determine whether there are any environmental impacts associated with proposed Federal actions. If there are no significant environmental impacts, a finding of no significant impacts (FONSI) can be signed to complete the NEPA compliance.

1.5.2. Paleontological Resources Preservation Act (2009)

The Paleontological Resources Preservation Act (PRPA) became law when the Omnibus Public Land Management Act (OPLMA) was signed in 2009. The Act states that the Secretary of Interior and Secretary of Agriculture shall manage and protect paleontological resources on Federal land using scientific principles and expertise. The Secretary shall develop appropriate plans for inventory, monitoring, and the scientific and educational use of paleontological resources, in accordance with applicable agency laws, regulations, and policies. These plans shall emphasize interagency coordination and collaborative efforts with non-Federal partners, the scientific community, and the public, where possible.

1.5.3. Endangered Species Act (1973)

Section 7 of the Endangered Species Act (ESA) requires Federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries), as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species, or destroy or adversely modify their critical habitat. In accordance with Section 7 of the ESA, an agency must request information from the USFWS and the NOAA Fisheries about whether any threatened and endangered species occur within or near the action area. The agency then must evaluate impacts to those species.

1.5.4. 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 American 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, this is provided that the tribe or authoritative representative has informed the agency of the existence of such a site.

1.5.5. Secretarial Order 3175: 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 found off-reservation.

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or Indian individuals by treaties, statutes, and EOs. 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.

1.5.6. Executive Order 12898 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, income, 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 Federal agency programs, policies, and activities.

1.6. Scoping of Issues and Concerns

Scoping is an early and open process used to obtain information that helps identify issues and concerns related to a proposed action, the affected public and geographical area, alternatives, and constraints in the NEPA process. Internal scoping with Reclamation personnel occurred in August and September 2015. Reclamation also sent out a scoping package consisting of a letter and a map (see Appendix) to the Shoshone-Bannock, Shoshone-Paiute, and Northern Shoshone tribes at the end of August 2015. Reclamation received no comments from contacted Native American tribes.

Chapter 2 ALTERNATIVES

2.1. Introduction

This chapter describes the alternatives analyzed in this EA, the No Action alternative and the Proposed Action alternative.

2.2. Alternative Development

The alternatives presented in this chapter were determined by the scope of analysis. The scope of the project was defined by the purpose and need for the project, as described in Chapter 1, and the issues developed during internal and tribal scoping. Using this information, the range of developed alternatives include a No Action alternative and the proposed excavation and removal of paleontological resources, and curation of the resources in a Reclamation-approved non-Federal repository for future study.

2.3. Description of Alternatives

2.3.1. Alternative A – No Action

Under the No Action alternative, the proposed excavation and removal of paleontological resources and curation of the resources in a Reclamation-approved non-Federal repository would not occur. Reclamation would continue to operate American Falls Reservoir as has been done in the past. Consistent with requirements identified in PRPA, Reclamation would need to determine an alternate method to protect the known paleontological resources in the area from erosion caused by the irrigation drainage channel and annual reservoir water level fluctuations.

2.3.2. Alternative B – Proposed Action

Reclamation is proposing to contract for the excavation and removal of any paleontological resources and curate them at the Idaho Museum of Natural History, a Reclamation-approved non-Federal repository, for future study and potential public display and interpretation.

There is no vehicle access to the site, and pedestrian access includes crossing both Federal and private lands. The portion of the access route that crosses private lands would be authorized through right-of-entry agreements between Reclamation and the respective landowners. Once at the site, the contractor would perform exploratory excavation using hand tools near the 2014 recovery location to ascertain the presence of additional skeletal or other paleontological material that may remain in situ, beginning with the known remaining in situ tusk. The contractor would recover the paleontological resources using appropriate field excavation methods and without the use of machinery. The extraction would take place in such a manner to recover appropriate information regarding the site formation processes. Appropriate and thorough paleontological field notes would be maintained by the contractor throughout the recovery process, including photographs showing the arrangement of the remains and their relationship to soil stratigraphic

units. Other samples for radiocarbon dating, soil analysis, and paleo-environmental analysis would be collected as appropriate. All remains and samples would be appropriately tagged or labeled, and the field notes would include a record of the recovered items. The proposed excavation is anticipated to occur sometime between late September and October 31, 2015. On-site work could take up to 2 weeks.

Once excavation is complete, the site would be cleaned of any debris and the area contoured by hand to match the existing shoreline. Total disturbance area is expected to be less than 30 square meters.

2.4. Alternatives Eliminated from Consideration

Delaying excavation to 2016 was determined to be ineffective in protecting the paleontological resources from erosion caused by the irrigation drainage channel and annual reservoir water-level fluctuations. Additionally, excavation, removal, and protection of any paleontological resource sooner rather than later would prevent the possibility of disturbance/removal by private individuals.

Sealing/preserving the paleontological resources in situ instead of excavation was discussed and dismissed because reservoir level fluctuations would eventually erode the casing and damage/destroy the fossil remains.

Chapter 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1. Introduction

The Affected Environment chapter evaluates the environmental consequences of implementing each of the alternatives described in Chapter 2. The level and depth of the environmental analysis corresponds to the context and intensity of the impacts anticipated for each environmental component. Where the alternatives would have the same impacts on an environmental component, the analysis is presented once and summarized or referenced in subsequent analyses to eliminate redundancy. The No Action alternative describes current conditions and provides the basis to which the proposed alternative is compared.

Discussions are arranged by resources in the following order:

- Paleontological Resource
- Cultural Resources
- Indian Sacred Sites
- Indian Trust Assets
- Environmental Justice
- Socioeconomics
- Threatened and Endangered Species
- Climate Change
- Cumulative Effects

The following resources are not significantly affected by the alternatives, and are not discussed in detail in this EA:

- Vegetation
- Wildlife
- Recreation
- Visual Resources
- Soils
- Air Quality
- Hydrology
- Water Quality
- Wastes

3.2. Paleontological Resources

3.2.1. Affected Environment

The American Falls vicinity and the eastern Snake River Plain have a number of important fossil and geologic localities that play an important role in reconstructing the geologic history of

southeastern Idaho. Fossil specimens collected from these localities include extinct forms of bison, camel, horse, ground sloth, mammoth, and large carnivores, as well as small to medium-sized mammals present during the Pleistocene Era and extant today (Hopkins 1951, 1955; Hopkins et al., 1961, 1969; McDonald and Anderson, 1975). Previous studies have focused on sedimentary analysis, invertebrate fossils, pollen, and plant macrofossils to track the depositional history and local past environments around ancestral American Falls Lake throughout the late Pleistocene (Bright, 1982; Scott et al., 1982) and augment the original geological and paleontological work (Carr and Trimble, 1963; Trimble and Carr, 1961). Fossils collected from the American Falls Reservoir area and associated deposits up and down the Snake River dominate the vertebrate paleontological collections at the Idaho Museum of Natural History in both abundance and reputation.

Sedimentation and Stratigraphy

The late Pleistocene geological sequence of the area can be ordered from the beach level of American Falls Reservoir, best defined along its southeastern shore, up through the cliff deposits, 32 to 50 feet high, exposed by action of the Snake River and subsequent erosion by the reservoir. The basic chronology (Figure 3-1) begins with the deposition of fine-grained alluvial sediments of the Snake River flood plain. Large numbers of vertebrate fossils are eroded annually from the sands and fine gravels of this “beach” or Layer E deposit, and have occasionally been recovered in situ along the reservoir. The partial mammoth skeleton recovered in 2014 was most likely situated within the Layer E deposit. The fossils consist of isolated elements and partially articulated skeletons, which, although initially well preserved, are often lost to weathering and re-burial. In addition, illegal collection and removal of fossils from Federal lands by private individuals without a permit is a constant threat.

The age and total thickness of this basal deposit can only be inferred, but the upper boundary is identified by a transition to fine-grained lacustrine sediments marking the formation of a large lake in the American Falls Reservoir basin, resulting from the damming of the Snake River by the Cedar Butte Basalt flow. The date of this flow has been accepted as approximately 72,000 years before present (B.P.) based on radiometric dating. The flow occurred in the vicinity of Eagle Rock, a few miles downstream from the present day American Falls Dam. Vertebrate fossils are rare in the lakebeds (Layers C and D, Figure 3-1). Paleontological remains consist of invertebrates, or diatoms, which contribute to the distinctive cliff forming fine sediments, ostracods, mollusks, as well as a few fish, plant, and insect fragments (Bright, 1982).

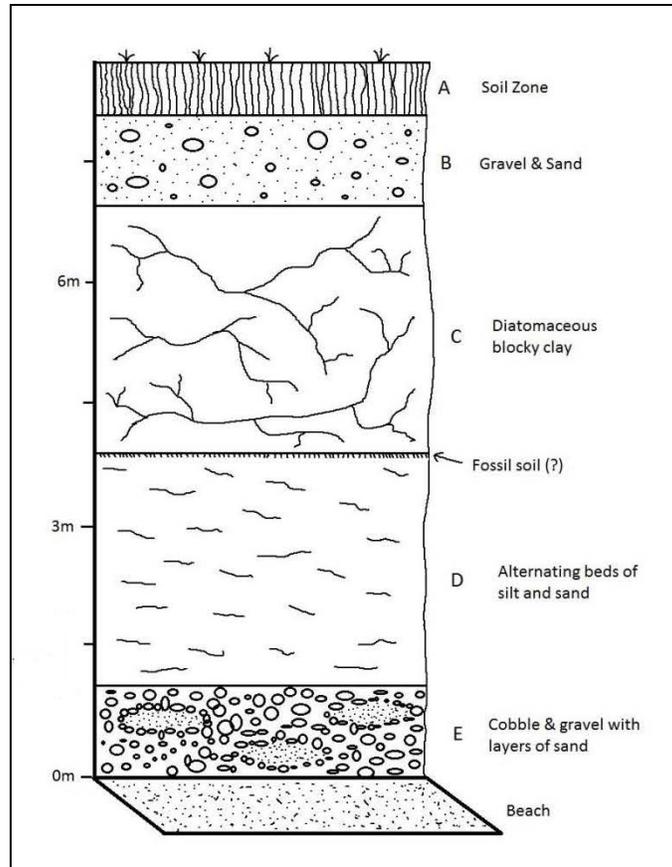


Figure 3-1. General stratigraphic column of the exposed American Falls Formation at American Falls Reservoir. The proposed mammoth excavation would take place in Layer E deposits, dating to greater than 72,000 years old. (Redrawn from Pinsof, 1992)

When Lake Bonneville, the large inland Pleistocene lake of northern Utah, drained into Idaho via Marsh Creek, the lower Portneuf River, and into the Snake, the resulting catastrophic floods breached the remaining natural basalt dam at Eagle Rock. Evidence for the flood lies in Layer B, a distinctive unit grading from boulder gravels near Pocatello to sand and fine gravels exposed near the top of Bronco Point and other localities along the Reservoir. Current radiometric dates place the timing of the Bonneville Flood at approximately 14,500 B.P. (Link, et al. 1999). The Layer B deposits, with dates of 20,000 to 30,000 B.P., contain numerous vertebrate fossils characteristic of the late Pleistocene. This suggests that American Falls Lake was waning or had completely drained before the Bonneville Flood (Hearst, 1990). There is some overlap in faunal composition with the pre-72,000-year Layer E deposits. The flood deposits are covered by fine silts, sands and soil development of the late Pleistocene-Holocene period.

Current Conditions

The normal maximum surface area of the American Falls Reservoir is about 58,000 acres, and the water-surface elevation operating range is between 4354.5 and 4295.7 feet. At the average minimum pool level, water surface elevation is at 4325.6 feet, exposing more than 47 miles of shoreline. The mammoth skull was excavated at an elevation of approximately 4321, an area

that lies below the normal minimum pool level and is only accessible in low-water years. Water elevations fluctuate annually and are tied to diversion demand from the upper Snake River system, including irrigation, municipal, industrial, and other uses (Bureau of Reclamation 1995). When the water-year ends on September 30, reservoir releases are still driven by irrigation demand, and water levels may continue to drop or stabilize. By the statutory end of the irrigation season, which is November 1, all of the Minidoka Project reservoirs have begun to fill, with water levels at the Reservoir historically beginning to rise again in mid-October (ibid.).

3.2.2. Environmental Consequences

3.2.2.1. Alternative A – No Action

Under the No Action alternative, the paleontological resources would not be excavated and would remain in situ. Annual fluctuations of the reservoir water levels would pose a threat to the fossils, potentially eroding the sediments away and exposing the fossils to water action that would deteriorate the specimens and negatively affect the irreplaceable resources. In addition, exposure of the fossils would increase the possibility of illegal collection (i.e., collection without a permit). The PRPA states that removal of vertebrate specimens from Federal land without a permit is a prohibited act that could result in criminal and/or civil penalties. This alternative is not viable, as it negates the agency's responsibility to protect paleontological resources, as per PRPA.

3.2.2.2. Alternative B – Proposed Action

Under the Proposed Action alternative, the potentially scientifically invaluable fossil remains of a Columbian mammoth and other paleontological resources would be professionally excavated and removed through a contract and deposited at an approved non-Federal repository for preparation, stabilization, long-term curation, study, and potential interpretation and exhibit. This alternative meets the requirements of PRPA and its mandate to protect and manage paleontological resources on Federal land, and would benefit the public by making the resource more available for education and research.

3.3. Cultural Resources

3.3.1. Affected Environment

According to evidence from archaeological investigations in southeastern Idaho, people began moving through and utilizing the Snake River region more than 14,000 years ago. The Paleo-Indians of that time were highly nomadic, moving over the landscape in small groups, primarily hunting big game. Over time, as the climate and environment gradually changed around them to warmer and drier conditions, people adapted through increasing complexity in subsistence procurement practices and settlement systems.

The exploitation of broad ranges of resources over very large areas during the period of 11,500-4,200 B.P. shifted to a more intensive procurement focus on highly productive resources like

camas and salmon, as well as the increase of food processing during the later period of 4,200-250 B.P., evidenced by more mortar-and-pestle ground stone tools. This period also saw an increase in house pit building and the development of food storage methods as people began to settle for longer periods of time in order to take advantage of certain seasonal resources within one area.

The Snake River Basin area was traditionally used by the Shoshone and Bannock Tribes, two linguistically distinct populations. Both Tribes practiced a way of life consistent with other Great Basin cultures, including their subsistence practices. Though the land contained a wide variety of resources, it could not sustain large groups of people in one place throughout the year. Therefore, people adapted a semi-nomadic lifestyle, moving from resource to resource as they became available, and utilizing many different kinds of foods, including plant resources such as roots, tubers, berries, and nuts, and animal resources like squirrels, marmots, rabbits, insects, large game, fish, and freshwater shellfish. By the time of the earliest Euro-American contact within the Snake River Basin in the early 1800s, the Shoshone and Bannock Tribes had already been introduced to the horse, an important new resource that they used with great efficacy (Bureau of Reclamation 2000). Incorporation of the horse into the Shoshone-Bannock way of life was rapid, and “drastically modified their economic and political institutions” (Walker 1978).

The earliest Euro-Americans in south-central Idaho came to develop the fur trade, to convert the Native Americans, or to explore and survey the region. The latter group helped to determine the best routes for military and immigrant roads to Oregon and California. Early trails to and along the Snake River were established by Indian peoples and then used by trappers and explorers. The major east-west travel route of these early explorers passed along the Snake River. Portions of the route later became the Oregon Trail, first used by emigrants in 1841 (Ozbun et al. 2000).

The earliest Euro-American settlements in south-central Idaho in the Snake River area are associated with the northward expansion of Mormon communities out of Utah in the 1870s. The arrival of Union Pacific’s Oregon Short Line railroad in the early 1880s proved crucial to the development of southeastern Idaho, helping to speed up the settlement of the region. Agriculture served as the primary economic activity of settlers in south-central Idaho in the late 19th and early 20th centuries, and irrigation systems supported that development by drawing on the Upper Snake River watershed to support farming (Ozbun et al. 2000).

Previous Investigations and Identified Cultural Resources

The actual location of the mammoth fossil excavation has not been subject to previous archaeological investigations. However, an archaeological survey took place over the area prior to the emergency action in 2014 that resulted in the removal of the partial mammoth skull. A thin scatter of historic trash on the shoreline, becoming denser to the north, was identified but not documented because these items have most likely eroded down from the cliff top and are out of their original context. No artifacts were noted within the excavation area, either on the surface of the shoreline or within the material that was removed during excavation. In short, no cultural resources eligible for listing in the National Register of Historic Places (i.e., historic properties,

as per the National Historic Preservation Act of 1966) exist within the proposed project's boundaries.

3.3.2. Environmental Consequences

3.3.2.1. Alternative A – No Action and Alternative B – Proposed Action

No historic properties exist within the activity area, thus no cultural resources would be affected under Alternatives A and B. If artifacts, skeletal materials, or other archeological or historical materials are discovered during project implementation, work in the immediate area of the discovery shall cease and appropriate Reclamation authorities would be contacted for further instructions.

3.4. Indian Trust Assets and Sacred Sites

3.4.1. Affected Environment

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

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

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

The Tribes included fishing after the case of State of Idaho vs. Tinno, an off-reservation fishing case in Idaho. The Idaho Supreme court determined that the Shoshone word for "hunt" also included "fish." Under Tinno, the court affirmed the Tribal Members' right to take fish off-reservation pursuant to the Fort Bridger Treaty (Shoshone-Bannock Tribes v. Fish & Game Commission Idaho 1994).

Other Federally recognized Tribes are the Shoshone-Paiute Tribes of the Duck Valley Reservation located on the Idaho/Nevada border and the Burns Paiute near Burns, Oregon. These Tribes have cultural and religious interests in the area of the proposed project. These interests are protected under historic preservation laws, the Native American Graves Protection and Repatriation Act (NAGPRA), and EO 13007 Indian Sacred Sites.

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 Indian religion. The land must be identified by an Indian individual or Tribe determined to be an identified and appropriate representative of an Indian religion. As a part of EO 13007 and the MOU between the Advisory Council on Historic Preservation (ACHP) and multiple Federal agencies, Federal agencies must accommodate access to and ceremonial use of all Indian sacred sites by Indian religious practitioners, and avoid any adverse effects to the physical integrity of sacred sites. In addition to this, Federal agencies must also make a good faith effort to improve the protection of tribal access to Indian sacred sites through enhanced and improved interdepartmental coordination and collaboration.

There is no information on any specific Indian sacred sites within any portion of the project area. However, because information about Indian sacred sites is not widely shared outside of traditional communities, the potential for their existence in any location exists and must be taken into consideration. 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 and natural features. Examples of such features include mountains, foothills, buttes, springs, lakes, rivers, and rock shelters, among others. Additionally, specific cultural sites may be regarded as sacred to Tribes such as altars; vision quest sites; water sources, springs, and headwaters; burial sites; historical places where significant events occurred; and others.

3.4.2. Environmental Consequences

3.4.2.1. Alternative A – No Action and Alternative B – Proposed Action

No known Indian Trust Assets or sacred sites exist within the activity area. Under Alternatives A and B, there would be no direct or indirect effects to any known sacred sites or ITAs.

3.5. Environmental Justice

3.5.1. Affected Environment

EO 12898 (59 FR 7629) requires Federal agencies to achieve environmental justice by addressing disproportionately high and adverse human health and environmental effects on minority and low-income populations. To determine if environmental justice populations are present, the Federal agency examines the demographics of the affected area to determine if minority (including Native American) and/or low-income populations are present. If present, the agency must determine if implementation of the Proposed Action alternative would cause disproportionately high and adverse human health or environmental effects on the populations.

Table 3-1 summarizes the populations of Power County and the State of Idaho overall. Information contained in the 2013 Census of Population was used to identify these populations (U.S. Census Bureau 2015).

By definition from the U.S. Office of Management and Budget, race and Hispanic or Latino origin are two separate categories. People who report themselves as Hispanic or Latino can be of any race. For example, Hispanics and Latinos who are white are counted in the total of white category, and Hispanics who are black or African American are counted in that category.

Table 3-1. Population statistics from the 2013 U.S. Census Bureau for Power County and the State of Idaho

Population Category	Power County	State of Idaho
2013 Total Population Estimate	7,694	1,612,843
White, percent	93.4	93.7
Black or African American, percent	1.0	0.8
American Indian and Alaska Native, percent	2.9	1.7
Asian, percent	0.5	1.4
Native Hawaiian or Pacific Islander, percent	0.2	0.2
Two or More Races, percent	2.1	2.2
Hispanic or Latino, percent	31.1	11.8
White alone, not Hispanic or Latino, percent	64.6	83.1

The majority of Power County residents identify themselves as white, which follows similar racial population percentages for the State of Idaho. However, Power County has a much larger Hispanic or Latino population compared to the state.

Low-income populations are identified by several socioeconomic characteristics. Specific characteristics used in this description of the existing environment, as categorized by the 2013 Census, are income (per capita income and median household income) and percentage of the population below poverty. Table 3-2 provides income and poverty information for Power County and the State of Idaho.

Table 3-2. 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	\$17,684	\$44,212	13.9%
State of Idaho	\$22,568	\$46,767	15.5%

*Information taken from U.S. Census Bureau: State and County Quick Facts for years 2009-2013 (U.S. Census Bureau 2015)

Census Bureau data identify that although residents of Power County have a marginally lower per capita income and median household income compared to the State of Idaho, Power County has a slightly smaller percentage of people who live below the poverty line than the state overall.

3.5.2. Environmental Consequences

3.5.2.1. Alternative A – No Action and Alternative B – Proposed Action

Under both Alternatives A and B, there would be no direct or indirect effects on minority and low-income populations. The reservoir would be operated as it has in the past. There would be no environmental justice effects to the area due to the small size of the project. The existing environmental conditions would remain intact and would not be affected.

3.6. Social and Economic Values

3.6.1. Affected Environment

Population

Power County’s population was fairly stable through the 2000s. Between 2000 and 2010, the county’s population grew by 9.3 percent to 7,817; however, the population in recent years has declined. Natural growth and in-migration raised the population early in the decade. The loss of manufacturing jobs midway through forced people to look for work elsewhere (IDL 2015). The population in 2013 was estimated to be 7,694 (U.S. Census Bureau 2015).

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

Population Category	Power County	State of Idaho
2013 Total Population Estimate	7,694	1,612,843
Population, percent change – April 1, 2010, to July 1, 2013	-2.6%	4.3%
Persons under 5 years, percent	9.7%	7.0%
Persons under 18 years, percent	30.5%	26.5%
Persons 65 years and over, percent	13.4%	13.8%
Female persons, percent	49.0%	49.9%

* Information taken from U.S. Census Bureau: State and County QuickFacts for years 2010-2013 (U.S. Census Bureau 2015)

Labor Force and Employment

The labor force changed little between 2000 and 2010 in Power County. Due to seasonal layoffs in food processing, the county unemployment rate was comparatively high at 7.1 percent in 2009, and 9.3 in 2010. In 2013 the rate was 7.0 percent, a decline of 0.9 percent from the prior year. The rate fell in 2014 further, with 4.8 percent unemployed. Employment, however, dropped from 3,405 in 2003 to 3,209 in 2013. Nearly all of the loss was in manufacturing, due to the shutdown of the Astaris phosphate plant at the end of 2001 (IDL 2015).

Industry Employment and Wages

Although the number of manufacturing jobs decreased between 2000 and 2013, the industry still provides 39 percent of covered employment and pays the county's second-highest wages. Government accounts for 24 percent of the jobs, with many in public education. The average covered wage of \$38,641 ranks well among all Idaho counties, influenced by the large percentage of workers in manufacturing, where the average wage is \$51,884. However, the county's per capita income is higher than the average wage for all of Idaho (IDL 2015).

3.6.2. Environmental Consequences

3.6.2.1. Alternative A – No Action and Alternative B – Proposed Action

Under the both Alternatives A and B, there would be no direct or indirect effects to social and economic values. An estimated five workers will be present in the area with enactment of the proposed action, which will have little or no effect on local businesses. The reservoir would be operated as it has in the past. There would be no economic effects to the area due to the small size of the project. The existing conditions would remain intact and would not be affected.

3.7. Threatened and Endangered Species

3.7.1. Affected Environment

Federal protection is afforded to those species listed or proposed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the ESA of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884). The USFWS website for Idaho identifies all listed, proposed, and candidate species for each county, as well as links to recent updates in respective species listing status and, where relevant, designation of Critical Habitat (USFWS 2015). The greater sage-grouse (*Centrocercus urophasianus*) and yellow-billed cuckoo (*Coccyzus americanus*) are listed as Candidate and Proposed species, respectively. Neither of these species is expected at this site. Additionally, Reclamation generated a report from the USFWS Information for Planning and Conservation (IPaC) Trust Resource website on August 20, 2015, that identified no endangered species or critical habitats for that specific project area (see Appendix 1).

3.7.2. Environmental Consequences

3.7.2.1. Alternative A – No Action and Alternative B – Propose Action

Under both Alternatives A and B, there would be no direct or indirect effects to threatened and/or endangered (T&E) species because no T&E species have been found in the project area. The reservoir would be operated as it has in the past. The existing environmental conditions would remain intact and would not be affected.

3.8. Climate Change

3.8.1. Affected Environment

Climate change has the potential to alter habitats through both direct and indirect effects. Future projections suggest that the Pacific Northwest may gradually become wetter than historical conditions. This is also substantially different from projections in the southern United States. Warming trends may lead to a shift in cool-season precipitation, resulting in more rain and less snow, which would cause increased rainfall-runoff volume during the cool season, accompanied by less snowpack accumulation (Reclamation 2011). Future climate projections based on hydrologic analyses suggest that warming and associated loss of snowpack will persist over much of the western United States.

Warming is expected to diminish the accumulation of snow during the cool season (i.e., late autumn through early spring) and the availability of snowmelt to sustain runoff during the warm season (i.e., late spring through early autumn). Decreased snowpack volume also could result in decreased groundwater infiltration, runoff, and ultimately decreased contribution to summer base flow in rivers.

Warming is expected to lead to more rainfall-runoff during the cool season than snowpack accumulation. This would lead to increases in the December to March runoff and decrease the April to July runoff. For example, for cold-water associated salmonids in mountainous regions, where the upper distribution is often limited by impassable barriers, an upward thermal shift in suitable habitat can result in a reduction in size of suitable habitat patches and loss of connectivity among patches, which in turn can lead to a population decline (CIG 2006).

The Climate Impacts Group (CIG) at the University of Washington has analyzed the effects of global climate change on the Pacific Northwest (CIG 2006). Relative to average temperatures from 1970 to 1999 climate models project a future rate of warming in the Pacific Northwest of approximately 0.5°F (0.3°C) per decade through 2050, with the greatest temperature increases being during June through August. Models also indicate rising temperatures could affect regional precipitation including decreased snow packs and summer flows, increased winter flows, and earlier spring runoffs.

In 2011, Reclamation completed the River Management Joint Operating Committee (RMJOC) Climate Change Study in collaboration with the Bonneville Power Administration (BPA) and the

U.S. Army Corps of Engineers (Corps), to adopt climate change and hydrology datasets for their longer-term planning activities in the Columbia-Snake River Basin. These agencies collaborated to develop climate change and hydrology datasets to be used in their longer-term planning activities in the Columbia-Snake River Basin.

The RMJOC is a subcommittee of the Joint Operating Committee that was established through direct funding MOAs between BPA, Reclamation, and the Corps. Four reports¹ were generated from this work and include:

- Part I: Future Climate and Hydrology Datasets
- Part II: Reservoir Operations Assessment – Reclamation Tributary Basins
- Part III: Reservoir Operations Assessment – Columbia Basin Flood Control and Hydropower
- Part IV: Summary Report

The three partners are collaborating again to update the RMJOC Climate Change Study results and to generate new hydrology and climate change datasets for use. In the first RMJOC Climate Change Study, projections were selected based on the changes in temperature and precipitation averaged over the Columbia River Basin. When these same projections were used to evaluate the Snake River basin, they tended towards wetter conditions overall. In the update to the RMJOC Climate Change Study, projections will be selected based on temperature and precipitation changes over the Snake River basin, which will provide for a broader range of wet to dry in potential future climate. This work is ongoing and will be completed by fiscal year (FY) 2017.

3.8.2. Environmental Consequences

3.8.2.1. Alternative A – No Action and Alternative B – Proposed Action

The environmental consequences analysis for the climate change section analyzes two scenarios: what impacts the action (No Action or Proposed Action) has on climate change and what impacts climate change has on the action. Both scenarios are presented for each alternative.

Alternatives A and B would have no direct or indirect effects on climate change. The reservoir would be operated as it has in the past. There would be no ecological effects to the area due to the small size of the project. The existing environmental conditions would remain intact and would not be affected.

In the long term (greater than 10 years), climate change could alter precipitation patterns and river hydrology. This could result in potential increases or decreases in the magnitude and duration of flow events, alter the timing of snowmelt, increase or decrease flow regimes, and changes river level. All of these factors could influence physical sites by directly or indirectly

¹ These reports can be downloaded online at <http://www.usbr.gov/pn/climate/planning/reports/index.html>.

affecting soil erosion rates due to more or less precipitation. This potential erosional increase could place the paleontological resources at greater risk of damage the longer they remain unprotected.

3.9. Cumulative Effects

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 (CEQ) interprets this regulation as referring only to the cumulative impact of the direct and indirect effects of the proposed action and its alternatives when added to the aggregate effects of past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.

Past, present, and reasonably foreseeable actions identified in the area (public or private) that would adversely affect the same resource area evaluated in this EA would be additive effects to the proposed project. Actions considered for cumulative impacts are the continued shoreline erosional barrier maintenance and the continued use of the irrigation drainage channel that is thought to have exposed the remains.

3.9.1. Environmental Consequences

3.9.1.1. Alternative A – No Action and Alternative B – Proposed Action

There are no cumulative effects identified for any of these resources. The reservoir would be operated as it has in the past. Because of how small the project is and its very limited effects, there are no cumulative effects to the area.

Chapter 4 CONSULTATION AND COORDINATION

4.1. Tribal Consultation and Coordination

Reclamation mailed tribal scoping letters to the Shoshone-Bannock Tribes, Shoshone-Paiute Tribes, and Northwestern Shoshone Tribe on August 24, 2015 (Appendix 2). No response or concerns from the Tribes were brought forward during the scoping period.

LITERATURE CITED

Bright, R. C. 1982. Paleontology of the lacustrine member of the American Falls Lake Beds, southeastern Idaho; pp. 597-614 in B. Bonnicksen and R. M. Breckenridge (eds.). *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26.

Carr, W.J. and D.E. Trimble. 1963. *Geology of the American Falls Quadrangle, Idaho*. United States Geological Survey Bulletin 1121-G:1 -43.

CIG. 2006. University of Washington, Joint Institute for the Study of the Atmosphere and Ocean Center for Science in the Earth System, Climate Impacts Group.

<http://www.cses.washington.edu/cig/pnwc/cc.shtml> Updated February 14, 2006.

Hearst, Jonena M., 1990, Paleontology and Depositional Setting of the Duck Point Local Fauna (Late Pleistocene: Rancholabrean) Power County, Southeastern Idaho. Idaho State University, Pocatello, ID.

Hopkins, M. L. 1951. Bison (*Gigantobison*) *latifrons* and Bison (*Simobison*) *alleni* in southeastern Idaho. *Journal of Mammalogy* 32(2):192-197.

Hopkins, M. L. 1955. Skull of fossil camelid from American Falls Lake Bed area of Idaho. *Journal of Mammalogy* 36(2):278-282.

Hopkins, M. L., R. Bonnicksen and D. Fortsch. 1969. The stratigraphic position and faunal associates of Bison (*Gigantobison*) *latifrons* in southeastern Idaho, a progress report. *Tebiwa* 12(1):1-8.

Hopkins, M.L. and B. R. Butler. 1961. Remarks on a notched fossil Bison ischium. *Tebiwa* 4(2):10 -18.

IDL. 2015. Power County population, labor force & employment, per capita income & employment. Idaho Department of Labor, Boise Idaho, 83735. <http://www.labor.idaho.gov>

Link, P.K., Kaufman, D., and Thackray, G.D., 1999, Field Guide to Pleistocene Lakes Thatcher and Bonneville and the Bonneville Flood, Southeastern Idaho, *in* Hughes, S.S. and Thackray, G.D., *eds.*, *Guidebook to the Geology of Eastern Idaho*: Idaho Museum of Natural History, Pocatello, p. 251-266.

McDonald, J. G. and E. Anderson. 1975. A late Pleistocene vertebrate fauna from southeastern Idaho. *Tebiwa* 18(1):1-8.

Ozburn, Terry., B. Mills, S. Miller, L Jerofke, W Willingham, And J. Fagan. 2000. *Minidoka Northside Resource Management Plan Class I Cultural Resources Inventory*. Archaeological Investigations Northwest, Inc. Report No. 197. Prepared for U.S. Bureau of Reclamation, Snake River Area Office – West, Boise, Idaho.

Pinsof, J. D. 1992. The late Pleistocene vertebrate fauna from the American Falls area, southeastern Idaho. Ph.D. Dissertation, Department of Biological Sciences, Idaho State University, Pocatello, 421 pp.

Reclamation. 2000. Minidoka North Side Resource Management Plan (RMP), Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI). Bureau of Reclamation Pacific Northwest Region, Snake River Area Office, PN-FONSI-04-12.

Reclamation 2011. *Climate and Hydrology Datasets for Use in the RMJOC Agencies' Longer-Term Planning Studies: Part II – Reservoir Operations Assessment for Reclamation Tributary Basins*. U.S. Bureau of Reclamation, Pacific Northwest Region, Boise, Idaho. January 2011.

Scott, W. E., L. L. Pierce, J.P. Bradbury and K.M. Forester. 1982. Revised Quaternary stratigraphy and chronology in the American Falls Area, southeastern Idaho; pp. 581-595 in B. Bonnicksen and R. M. Breckenridge (eds.). *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26.

Trimble, D. E. and W. J. Carr. 1961. Late Quaternary history of the Snake River in the American Falls region, Idaho. *Geological Society of America Bulletin* 72: 1793-1748.

U.S. Census Bureau. 2015. U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Non-employer Statistics, Economic Census, Survey of Business Owners, Building Permits Last Revised: Wednesday, 22-Apr-2015 08:54:54 EDT

U.S. Fish and Wildlife Service (USFWS). 2015. Idaho ESA-Listed Species List, by County. <http://www.fws.gov/idaho/>

Walker, Jr., Deward E. 1978. *Indians of Idaho*. University of Moscow Press, Moscow, Idaho.

APPENDIX

Appendix 1 – IPaC Trust Report

Proposed American Falls Mammoth Excavation

IPaC Trust Resource Report

Generated August 20, 2015 03:32 PM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

Proposed American Falls Mammoth
Excavation

PROJECT CODE

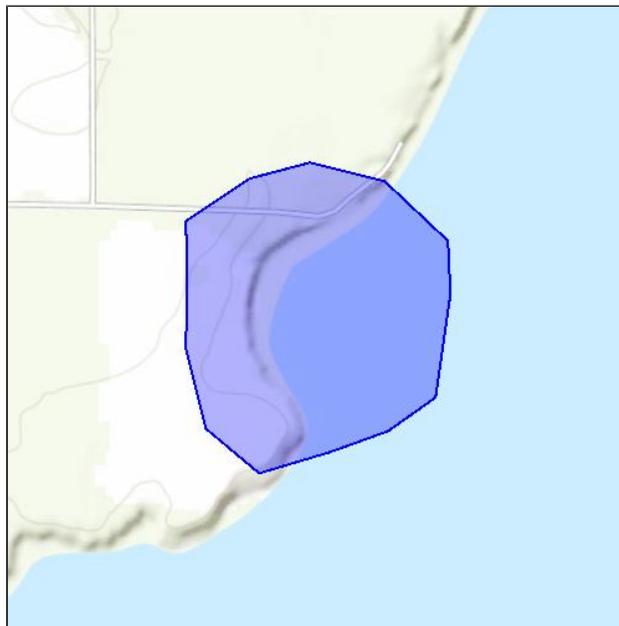
XGJGW-UCTP5-FYPPH-VTZ4X-CBNUXM

LOCATION

Power County, Idaho

DESCRIPTION

No description provided



U.S. Fish & Wildlife Contact Information

Species in this report 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 that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

There are no endangered species identified for this project area

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

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

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Season: Wintering https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Brewer's Sparrow <i>Spizella breweri</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=BOHA</p>	Bird of conservation concern
<p>Calliope Hummingbird <i>Stellula calliope</i> Season: Breeding</p>	Bird of conservation concern
<p>Cassin's Finch <i>Carpodacus cassinii</i> Year-round</p>	Bird of conservation concern
<p>Eared Grebe <i>Podiceps nigricollis</i> Season: Breeding</p>	Bird of conservation concern
<p>Ferruginous Hawk <i>Buteo regalis</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06X</p>	Bird of conservation concern
<p>Fox Sparrow <i>Passerella iliaca</i> Season: Breeding</p>	Bird of conservation concern
<p>Greater Sage-grouse <i>Centrocercus urophasianus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06W</p>	Bird of conservation concern
<p>Green-tailed Towhee <i>Pipilo chlorurus</i> Season: Breeding</p>	Bird of conservation concern
<p>Loggerhead Shrike <i>Lanius ludovicianus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY</p>	Bird of conservation concern
<p>Long-billed Curlew <i>Numenius americanus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06S</p>	Bird of conservation concern
<p>Pinyon Jay <i>Gymnorhinus cyanocephalus</i> Year-round</p>	Bird of conservation concern
<p>Sage Thrasher <i>Oreoscoptes montanus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Swainson's Hawk *Buteo swainsoni*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B070>

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [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 tubercid 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.

Lake

L1UBHh

39700.0 acres

Appendix 2 – Scoping Letters to Tribes



United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Snake River Area Office
230 Collins Road
Boise, ID 83702-4520

IN REPLY REFER TO:

SRA-1208
PRJ-28.00

AUG 24 2015

Honorable Blaine Edmo
Chairman
Shoshone-Bannock Tribal Council
P.O. Box 306
Fort Hall, ID 83203-0306

Subject: Request for Comments Regarding a Bureau of Reclamation Proposal to Excavate Mammoth Remains at American Falls Reservoir

Dear Mr. ^{Blaine}Chairman:

In October 2014, under an emergency action, the Bureau of Reclamation (Reclamation) contracted with the Idaho Museum of Natural History (IMNH) at Idaho State University for the recovery of a partial Pleistocene elephant (mammoth) skull on Federal lands associated with American Falls Reservoir. The remains were exposed as a result of erosion along an irrigation drainage channel and excavation was necessary to remove the specimen from further erosion and decay. During that work, part of a tusk was not recovered, and paleontologists believe that additional mammoth remains are likely still in place and will be threatened by future erosion.

Prior to the 2014 emergency excavation, Reclamation contacted the Shoshone-Bannock Tribes (Tribes) cultural resource staff to inform them of the situation and the planned recovery effort. Reclamation discussed the geological layer in which the recovery was taking place and indicated that it would be unlikely to encounter cultural or archaeological material due to the age (70,000+ years old) of the respective layer.

Reclamation is now proposing to contract for the excavation and removal of any additional fossilized mammoth bones that may still exist in this location. Recovered material would be curated at IMNH, a Reclamation-approved non-federal repository, for future study and potential public display and interpretation. Under the Paleontological Resources Preservation Act, Federal agencies are directed to manage and protect paleontological resources found on Federal lands. To facilitate this Federal action, an environmental assessment (EA) that will meet requirements of the National Environmental Protection Act of 1969 (NEPA) is being completed by Reclamation.

The proposed project is located in Township 7 South, Range 31 East, NW ¼ Section 5, in Power County, Idaho (American Falls, Idaho 7.5' USGS Topo Quad) (see enclosed map). The excavation area is on the north shore of American Falls Reservoir. No vehicle access exists to the site, therefore pedestrian access across private lands to access federal lands would be obtained through a right-of-entry agreement.

Reclamation's contractor would perform exploratory excavation in the vicinity of the 2014 recovery location to ascertain the presence of additional skeletal or other paleontological material, beginning with the remaining in situ tusk. The contractor would recover the mammoth remains using appropriate paleontological field excavation methods. The extraction would take place in such a manner so as to recover appropriate information regarding the site formation processes. Appropriate and thorough paleontological field notes would be maintained by the contractor throughout the recovery process, including photographs showing the arrangement of the remains and their relationship to soil stratigraphic

units. Other samples for radiocarbon dating, soil analysis, and paleo-environmental analysis would be collected as appropriate. All remains and samples would be appropriately tagged or labelled, and the field notes would include a record of the recovered items. The proposed excavation is anticipated to occur sometime between late September and October 31, 2015. On-site work may take up to two weeks to complete.

The purpose of this letter is to inform interested and affected Tribal public of the project proposal and to solicit comments pursuant to NEPA. An analysis of the proposal would be conducted through an EA and would be completed prior to the start of any excavation work. Comments received in response to this solicitation will be used to identify potential environmental issues related to the proposed action and to identify alternatives to the proposed action that meet the purpose of and need for the project.

Upon completion of the EA, Reclamation will issue a decision authorizing or rejecting the proposed mammoth excavation and subsequent curation in a Reclamation-approved, non-federal repository for future study, and/or public display and interpretation.

Please help us identify important issues and concerns by submitting your comments by **September 25, 2015** to: Mr. Richard Jackson, Natural Resource Specialist, Bureau of Reclamation, 230 Collins Road, Boise, ID 83702-4520. The office business hours for submitting hand-delivered comments are 8:00 a.m. – 4:00 p.m., Monday through Friday, excluding Federal holidays. Electronic comments should be submitted to rjackson@usbr.gov. To be most helpful, comments sent electronically should include the title of this project in the subject line. Issues that are outside the scope of the proposal will not be addressed at this planning level.

If you would like to meet and discuss this project further, please contact Mr. Hap Boyer at rboyer@usbr.gov, 208-678-0461, extension 15, or mail your request to Mr. Hap Boyer, Natural Resources Manager, Bureau of Reclamation, 470 22nd Street, Heyburn, ID 83336.



Jerrold D. Gregg
Area Manager

Enclosure

cc: Mr. Wes Jones
Emergency Manager
Shoshone-Bannock Tribes
P.O. Box 306 Pima Drive
Fort Hall, ID 83203-0306

Mr. Cleve Davis
Environmental Program Manager
Shoshone-Bannock Tribes
P.O. Box 306 Pima Drive
Fort Hall, ID 83203-0306

Mr. Chad Colter
Fish and Wildlife Director
Shoshone-Bannock Tribes
P.O. Box 306 Pima Drive
Fort Hall, ID 83203-0306



United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Snake River Area Office
230 Collins Road
Boise, ID 83702-4520

IN REPLY REFER TO:

SRA-1208
PRJ-28.00

AUG 24 2015

Honorable Jason Walker
Chairman
Northwestern Shoshone Tribe
505 Pershing Ave., Suite 200
Pocatello, ID 83201

Subject: Request for Comments Regarding a Bureau of Reclamation Proposal to Excavate Mammoth Remains at American Falls Reservoir

Dear Mr. Chairman:

In October 2014, under an emergency action, the Bureau of Reclamation (Reclamation) contracted with the Idaho Museum of Natural History (IMNH) at Idaho State University for the recovery of a partial Pleistocene elephant (mammoth) skull on Federal lands associated with American Falls Reservoir. The remains were exposed as a result of erosion along an irrigation drainage channel and excavation was necessary to remove the specimen from further erosion and decay. During that work, part of a tusk was not recovered, and paleontologists believe that additional mammoth remains are likely still in place and will be threatened by future erosion.

Prior to the 2014 emergency excavation, Reclamation contacted the Northwestern Shoshone Tribe (Tribe) cultural resource staff to inform them of the situation and the planned recovery effort. Reclamation discussed the geological layer in which the recovery was taking place and indicated that it would be unlikely to encounter cultural or archaeological material due to the age (70,000+ years old) of the respective layer.

Reclamation is now proposing to contract for the excavation and removal of any additional fossilized mammoth bones that may still exist in this location. Recovered material would be curated at IMNH, a Reclamation-approved non-federal repository, for future study and potential public display and interpretation. Under the Paleontological Resources Preservation Act, Federal agencies are directed to manage and protect paleontological resources found on Federal lands. To facilitate this Federal action, an environmental assessment (EA) that will meet requirements of the National Environmental Protection Act of 1969 (NEPA) is being completed by Reclamation.

The proposed project is located in Township 7 South, Range 31 East, NW ¼ Section 5, in Power County, Idaho (American Falls, Idaho 7.5' USGS Topo Quad) (see enclosed map). The excavation area is on the north shore of American Falls Reservoir. No vehicle access exists to the site, therefore pedestrian access across private lands to access federal lands would be obtained through a right-of-entry agreement.

Reclamation's contractor would perform exploratory excavation in the vicinity of the 2014 recovery location to ascertain the presence of additional skeletal or other paleontological material, beginning with the remaining in situ tusk. The contractor would recover the mammoth remains using appropriate paleontological field excavation methods. The extraction would take place in such a manner so as to recover appropriate information regarding the site formation processes. Appropriate and thorough paleontological field notes would be maintained by the contractor throughout the recovery process, including photographs showing the arrangement of the remains and their relationship to soil stratigraphic

units. Other samples for radiocarbon dating, soil analysis, and paleo-environmental analysis would be collected as appropriate. All remains and samples would be appropriately tagged or labelled, and the field notes would include a record of the recovered items. The proposed excavation is anticipated to occur sometime between late September and October 31, 2015. On-site work may take up to two weeks to complete.

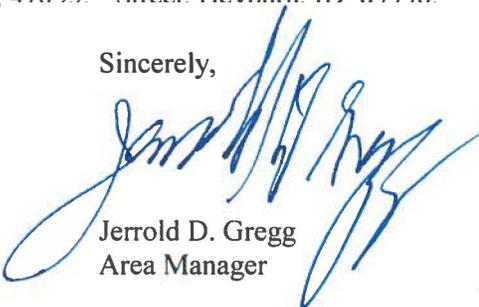
The purpose of this letter is to inform interested and affected Tribal public of the project proposal and to solicit comments pursuant to NEPA. An analysis of the proposal would be conducted through an EA and would be completed prior to the start of any excavation work. Comments received in response to this solicitation will be used to identify potential environmental issues related to the proposed action and to identify alternatives to the proposed action that meet the purpose of and need for the project.

Upon completion of the EA, Reclamation will issue a decision authorizing or rejecting the proposed mammoth excavation and subsequent curation in a Reclamation-approved, non-federal repository for future study, and/or public display and interpretation.

Please help us identify important issues and concerns by submitting your comments by **September 25, 2015** to: Mr. Richard Jackson, Natural Resource Specialist, Bureau of Reclamation, 230 Collins Road, Boise, ID 83702-4520. The office business hours for submitting hand-delivered comments are 8:00 a.m. – 4:00 p.m., Monday through Friday, excluding Federal holidays. Electronic comments should be submitted to rjackson@usbr.gov. To be most helpful, comments sent electronically should include the title of this project in the subject line. Issues that are outside the scope of the proposal will not be addressed at this planning level.

If you would like to meet and discuss this project further, please contact Mr. Hap Boyer at rboyer@usbr.gov, 208-678-0461, extension 15, or mail your request to Mr. Hap Boyer, Natural Resources Manager, Bureau of Reclamation, 470 22nd Street, Hevburn, ID 83336.

Sincerely,



Jerrold D. Gregg
Area Manager

Enclosure



United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Snake River Area Office
230 Collins Road
Boise, ID 83702-4520

IN REPLY REFER TO:

SRA-1208
PRJ-28.00

AUG 24 2015

Honorable Lindsey Manning
Chairman
Shoshone-Paiute Tribes
P.O. Box 219
Owyhee, NV 89832

Subject: Request for Comments Regarding a Bureau of Reclamation Proposal to Excavate Mammoth Remains at American Falls Reservoir

Dear Mr. ^{W. Soy}Chairman:

In October 2014, under an emergency action, the Bureau of Reclamation (Reclamation) contracted with the Idaho Museum of Natural History (IMNH) at Idaho State University for the recovery of a partial Pleistocene elephant (mammoth) skull on Federal lands associated with American Falls Reservoir. The remains were exposed as a result of erosion along an irrigation drainage channel and excavation was necessary to remove the specimen from further erosion and decay. During that work, part of a tusk was not recovered, and paleontologists believe that additional mammoth remains are likely still in place and will be threatened by future erosion.

Prior to the 2014 emergency excavation, Reclamation contacted the Shoshone-Paiute Tribes (Tribes) cultural resource staff to inform them of the situation and the planned recovery effort. Reclamation discussed the geological layer in which the recovery was taking place and indicated that it would be unlikely to encounter cultural or archaeological material due to the age (70,000+ years old) of the respective layer.

Reclamation is now proposing to contract for the excavation and removal of any additional fossilized mammoth bones that may still exist in this location. Recovered material would be curated at IMNH, a Reclamation-approved non-federal repository, for future study and potential public display and interpretation. Under the Paleontological Resources Preservation Act, Federal agencies are directed to manage and protect paleontological resources found on Federal lands. To facilitate this Federal action, an environmental assessment (EA) that will meet requirements of the National Environmental Protection Act of 1969 (NEPA) is being completed by Reclamation.

The proposed project is located in Township 7 South, Range 31 East, NW ¼ Section 5, in Power County, Idaho (American Falls, Idaho 7.5' USGS Topo Quad) (see enclosed map). The excavation area is on the north shore of American Falls Reservoir. No vehicle access exists to the site, therefore pedestrian access across private lands to access federal lands would be obtained through a right-of-entry agreement.

Reclamation's contractor would perform exploratory excavation in the vicinity of the 2014 recovery location to ascertain the presence of additional skeletal or other paleontological material, beginning with the remaining in situ tusk. The contractor would recover the mammoth remains using appropriate paleontological field excavation methods. The extraction would take place in such a manner so as to recover appropriate information regarding the site formation processes. Appropriate and thorough paleontological field notes would be maintained by the contractor throughout the recovery process, including photographs showing the arrangement of the remains and their relationship to soil stratigraphic

units. Other samples for radiocarbon dating, soil analysis, and paleo-environmental analysis would be collected as appropriate. All remains and samples would be appropriately tagged or labelled, and the field notes would include a record of the recovered items. The proposed excavation is anticipated to occur sometime between late September and October 31, 2015. On-site work may take up to two weeks to complete.

The purpose of this letter is to inform interested and affected Tribal public of the project proposal and to solicit comments pursuant to NEPA. An analysis of the proposal would be conducted through an EA and would be completed prior to the start of any excavation work. Comments received in response to this solicitation will be used to identify potential environmental issues related to the proposed action and to identify alternatives to the proposed action that meet the purpose of and need for the project.

Upon completion of the EA, Reclamation will issue a decision authorizing or rejecting the proposed mammoth excavation and subsequent curation in a Reclamation-approved, non-federal repository for future study, and/or public display and interpretation.

Please help us identify important issues and concerns by submitting your comments by **September 25, 2015** to: Mr. Richard Jackson, Natural Resource Specialist, Bureau of Reclamation, 230 Collins Road, Boise, ID 83702-4520. The office business hours for submitting hand-delivered comments are 8:00 a.m. – 4:00 p.m., Monday through Friday, excluding Federal holidays. Electronic comments should be submitted to rjackson@usbr.gov. To be most helpful, comments sent electronically should include the title of this project in the subject line. Issues that are outside the scope of the proposal will not be addressed at this planning level.

If you would like to meet and discuss this project further, please contact Mr. Hap Boyer at rboyer@usbr.gov, 208-678-0461, extension 15, or mail your request to Mr. Hap Boyer, Natural Resources Manager, Bureau of Reclamation, 470 22nd Street, Heyburn, ID 83336.

Sincerely,

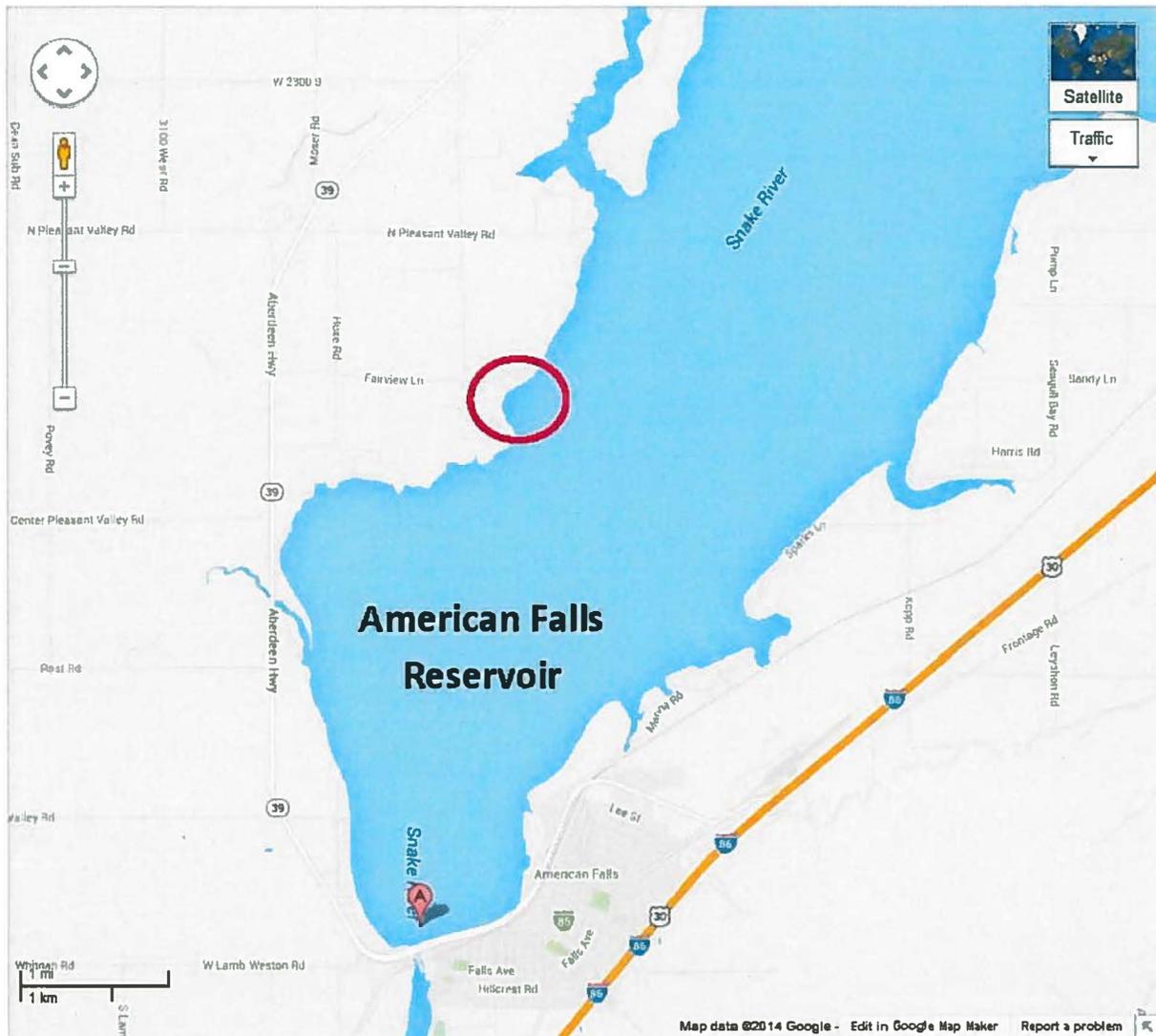


Jerrold D. Gregg
Area Manager

Enclosure

cc: Mr. Ted Howard
Cultural Resources Director
Shoshone-Paiute Tribes
P.O. Box 219
Owyhee, NV 89832

Mr. Jinwon Seo, Ph. D.
Director
Fish, Wildlife, & Parks Department
Shoshone-Paiute Tribes
P.O. Box 219
Owyhee, NV 89832



General location of proposed paleontological excavation at American Falls Reservoir to recover additional fossil mammoth bones and associated environmental data.