



— BUREAU OF —
RECLAMATION

Environmental Assessment Warm Springs Preserve Stream Restoration and Irrigation Improvement Project

Ketchum, Idaho

Columbia-Pacific Northwest Region

CPN-EA-2025-05



Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated Island Communities.

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: Aerial image depicting the Warm Springs Preserve, Ketchum, Idaho (Blaine County Imagery)

Table of Contents

Acronyms and Abbreviations.....	vi
Chapter 1 Purpose and Need	1
1.1 Introduction	1
1.2 Location, Background, and Action Area	1
1.2.1 Location.....	1
1.2.2 Background.....	2
1.2.3 Action Area.....	4
1.3 Purpose and Need	4
1.4 Regulatory Compliance	4
1.5 Scoping Summary.....	5
Chapter 2 Description of Alternatives	5
2.1 Introduction	5
2.2 Alternative Development.....	5
2.3 Alternative A – No Action.....	5
2.4 Alternative B – Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action).....	6
2.4.1 Post-Construction Site Reclamation and Monitoring.....	9
2.4.2 Permit Requirements	9
2.5 Alternatives Considered but Eliminated from Further Study.....	10
2.6 Past, Present and Reasonably Foreseeable Future Actions	10
2.6.1 Private Parcel Development.....	10
2.6.2 Warm Springs Creek Restoration and Streambank Stabilization Projects (multiple).....	10
Chapter 3 Affected Environment and Environmental Consequences	11
3.1 Introduction	11
3.2 Hydrology and Geomorphology	11
3.2.1 Affected Environment.....	11
3.2.2 Environmental Consequences.....	15
3.3 Water Quality.....	17
3.3.1 Affected Environment.....	17
3.3.2 Environmental Consequences.....	18

3.4 Biological Resources: Vegetation, Wildlife, and Fisheries	19
3.4.1 Affected Environment.....	19
3.4.2 Environmental Consequences.....	23
3.5 Threatened and Endangered Species.....	25
3.5.1 Affected Environment.....	26
3.5.2 Environmental Consequences.....	28
3.6 Recreation and Aesthetics.....	30
3.6.1 Affected Environment.....	30
3.6.2 Environmental Consequences.....	31
3.7 Tribal Interests.....	32
3.7.1 Indian Trust Assets.....	32
3.7.2 Treaty Rights.....	32
3.8 Cultural Resources.....	34
3.8.1 Affected Environment.....	34
3.8.2 Environmental Consequences.....	36
Alternative A – No Action	36
Alternative B – Proposed Action	36
3.9 Indian Sacred Sites	37
3.9.1 Affected Environment.....	37
3.9.2 Environmental Consequences.....	37
Chapter 4 Consultation and Coordination.....	37
4.1 Agency Consultation and Coordination	38
4.1.1 National Historic Preservation Act	38
4.1.2 Endangered Species Act.....	38
4.1.3 Clean Water Act	38
4.1.4 Tribal Consultation and Coordination	39
Chapter 5 References	40

List of Figures

Figure 1. Project locator map, Warm Springs Preserve, Ketchum, Idaho2

Figure 2. Existing condition and National Wetlands Inventory mapping within the Warm Springs Preserve project area, Ketchum, Idaho3

Figure 3. Proposed site conditions, Warm Springs Preserve project area,

Ketchum, Idaho.....	6
Figure 4. Proposed headgate control structure and creek enhancement elements, Warm Springs Preserve, Ketchum, Idaho.....	7
Figure 5. Proposed condition inundation depth and extent at low flow conditions, Warm Springs Creek.....	8
Figure 6. Example of floodplain restoration and enhancement design elements.....	9
Figure 7. Map showing the general location of the proposed project in relation to USGS stream gauges and the City of Ketchum	12
Figure 8. Daily historic flow data for USGS gauge# 13136500 Warm Springs Creek at Guyer Hot Springs Near Ketchum, ID. Obtained from USGS gauging website.....	13
Figure 9. Daily historic flow data for USGS gauge#13137000 Warm Springs Creek Near Ketchum, ID. Obtained from USGS gauging website.....	13
Figure 10. Daily historic flow data for USGS gauge#13136550 Warm Springs Creek at Gates Road Near Ketchum, ID. Obtained from USGS gauging website.....	14
Figure 11. Existing water rights in the vicinity of the action area. Obtained from the State of Idaho IDWR Water Rights locator website.....	15
Figure 12. Map of documented monarch and milkweed occurrences nearest to the project, period of record 1900-present	28

List of Tables

Table 1. Warm Springs Preserve treatment quantities	8
Table 2. Native and Noxious Vegetation known to occur around the project area	20
Table 3. Wildlife and Fish species known to occur around the project area	21

Acronyms and Abbreviations

Acronym or Abbreviation	Definition
APE	Area of Potential Effect
AU	Assessment Unit
BMP	Best Management Practice
BP	Before Present
CAA	Clean Air Act
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CHC	Cannon Heritage Consultants, Inc.
CWA	Clean Water Act
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FWSP	Friends of the Warm Springs Preserve
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
IPaC	Information for Planning and Conservation
ITAs	Indian Trust Assets
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NTU	Nephelometric turbidity unit
Reclamation	Bureau of Reclamation
SHPO	State Historic Preservation Office
T&E	Threatened and Endangered

TMDL	Total maximum daily load
TP	Total phosphorous
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WRLT	Wood River Land Trust
WRS	Wood River sculpin

Chapter 1 Purpose and Need

1.1 Introduction

The Bureau of Reclamation (Reclamation) prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA)¹. This EA analyzes the potential environmental effects that could result from the Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (the Proposed Action in this document, for which Reclamation has received an application for grant funding).

This EA serves as a tool to aid the authorized official in making an informed decision that is in conformance with applicable federal laws and regulations. The Proposed Action and alternatives are described in Chapter 2 of this document, and the effects (direct, indirect, and cumulative environmental effects) of each alternative are evaluated for each of the affected resource areas in Chapter 3 of this document.

The NEPA process requires analysis of any federal action that may have an impact on the human environment. This EA is being prepared to assist Reclamation in finalizing a decision on the proposed action, and to determine whether to issue a Finding of No Significant Impact (FONSI) or a notice of intent to prepare an Environmental Impact Statement (EIS).

1.2 Location, Background, and Action Area

1.2.1 Location

The proposed project is located along Warm Springs Creek in Ketchum, Idaho (Figure 1). The project area reach of Warm Springs Creek is located about ¼-mile upstream of the confluence with the Big Wood River. The stream reach is about 4,800 feet long and is located about 2 miles west of downtown Ketchum, Idaho. Ketchum is located in the Wood River Valley in central Idaho. Warm Springs Creek originates high in the Smoky Mountains west of Ketchum and flows for about 24 miles before flowing into the Big Wood River in Ketchum. The Big Wood River originates at Galena Summit northwest of Ketchum and flows approximately 66 miles south past the resort towns of Ketchum, Hailey, and Bellevue before joining Camas Creek at Magic Reservoir. On its way, the river collects water from tributaries in the Smoky, Boulder, and

¹ Executive Order 14154, *Unleashing American Energy* (Jan. 20, 2025), and a Presidential Memorandum, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity* (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. Reclamation verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. Reclamation has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154.

Pioneer mountains, including Warm Springs Creek. Approximately 50 miles downstream from Magic Reservoir, the Big Wood River joins the Little Wood River to form the Malad River. The Malad River flows for another 12 miles before entering the Snake River.

1.2.2 Background

The Warm Springs Preserve property has a long and diverse history. The property was used for cattle ranching from the 1880's to the 1940's. Since that time, the property has been used for the establishment and operation of the Warm Springs Inn and restaurant, a rodeo arena, a golf course, tennis courts, fish ponds, and most recently a public park. The history of impactful land uses, and the vegetation clearing conducted to facilitate those uses, has degraded the project reach of Warm Spring Creek and the adjacent riparian and floodplain areas. The property currently provides limited aquatic and terrestrial habitat. In 2022, the City of Ketchum took possession of 65 acres of the Warm Springs Ranch property and established the Warm Springs Preserve for public use. The City of Ketchum has partnered with the Wood River Land Trust (WRLT) and various stakeholders including the Friends of the Warm Springs Preserve (FWSP) to create a renewed landscape and enhance the public streamside park.

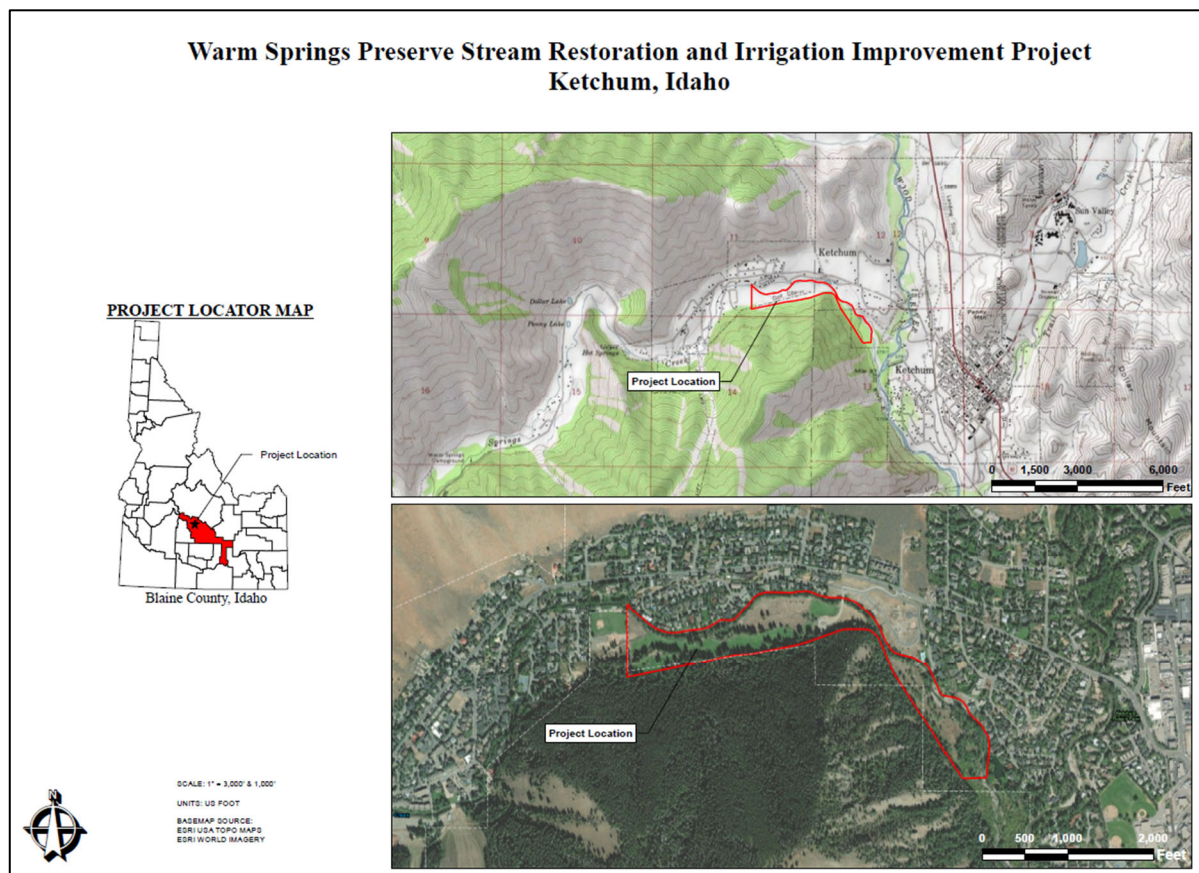


Figure 1. Project locator map, Warm Springs Preserve, Ketchum, Idaho.

Current Condition of Warm Springs Preserve

The project area has a history of landscape modification beginning with Euro-American settlement in the late-19th Century. The reach of Warm Springs Creek proximate to the project area historically meandered through a narrow river valley, within which it maintained a high quality riverine and riparian corridor with a connected and functional floodplain (Figure 2). The creek and floodplain were stabilized over time through the placement of riprap and fill intended to protect residential development and historical land uses, and the fluvial system now exhibits degraded aquatic habitat, reduced vigor and quantity of riparian vegetation, and limited floodplain connectivity. Riparian and terrestrial vegetation were also removed to accommodate historical land uses, and the riparian zone and surrounding area currently provide limited habitat for avian and terrestrial wildlife.



1.2.3 Action Area

The proposed project area is the Warm Springs Preserve, which is located along Warm Springs Creek in Ketchum, Idaho. All proposed project work, haul roads, equipment storage areas, and material stockpiles that would be used in the Proposed Action would be located within the project area. The city of Ketchum owns the land and jointly manages it with the Wood River Land Trust.

1.3 Purpose and Need

Reclamation's purpose and need for the Proposed Action is to finalize a decision on providing WaterSMART (Sustaining and Managing America's Resources for Tomorrow) grant to the Wood River Land Trust to fund riverine, riparian, and floodplain rehabilitation, along with adding irrigation and public park amenities at the Warm Springs Preserve. The proposed project would improve aquatic and terrestrial habitat and irrigation capabilities in the Warm Springs Preserve. Project objectives include the following:

- Improve the irrigation diversion and reduce annual maintenance requirements,
- Improve the complexity of Warm Springs Creek aquatic habitat (through pool creation, point bar establishment, and riffle bed feature creation),
- Improve stream function and aquatic habitat through the installation of woody material and creation of multiple perennial side channels,
- Improve riparian and floodplain habitat and function via reestablishing a hydraulically connected floodplain and planting native vegetation, and
- Improve public access and public park amenities by installing a new bridge.

1.4 Regulatory Compliance

The following major laws, executive orders, and secretarial orders apply to the Proposed Action, and compliance with their requirements is documented in this EA:

- National Environmental Policy Act (NEPA)
- Endangered Species Act (ESA)
- Clean Air Act (CAA)
- Migratory Bird Treaty Act (MBTA)
- Eagle Protection Act
- American Indian Religious Freedom Act (AIRFA)
- National Historic Preservation Act (NHPA)
- Clean Water Act (CWA)
- Executive Order (EO) 11988 Floodplain Management

- EO 11990 Protection of Wetlands
- EO 13007 Indian Sacred Sites
- EO 13112 Invasive Species
- EO 13175 Consultation and Coordination with Tribal Governments
- Executive Order 14154 Unleashing American Energy
- Secretarial Order 3175 Department Responsibilities for Indian Trust Assets (ITAs)

1.5 Scoping Summary

The scoping process provides an opportunity for the public, governmental agencies, and Tribes to identify their concerns or other issues and aids in developing a full range of potential alternatives that address meeting the project's purpose and need as stated in this document. To accomplish this, Reclamation provided information to the public through mailed and emailed preliminary information packages, and solicited oral and written comments from the public, governmental agencies, and potentially affected Tribes. Details regarding the public and agency scoping are presented in Chapter 4.

Chapter 2 Description of Alternatives

2.1 Introduction

This chapter describes the two alternatives analyzed in this EA: Alternative A-No Action Alternative; and Alternative B-Proposed Action.

2.2 Alternative Development

The alternatives presented in this chapter were developed based on the purpose and need for the project, as described in Chapter 1, and any issues raised during internal, external, and Tribal scoping. The alternatives analyzed in this document include the No Action alternative and the Proposed Action alternative. A no action alternative is evaluated because it provides an appropriate basis to which the other alternative is compared. No new alternatives were identified during the scoping process.

2.3 Alternative A – No Action

The No Action alternative would lead to a continuation of current conditions in the project area. The project area reach of the Warm Springs Creek and associated floodplain would continue to persist in a degraded condition, and the irrigation diversion would continue to operate inefficiently and require substantial annual maintenance, and vehicular and pedestrian access would be limited by existing infrastructure. Alternative funding opportunities would be pursued

to address these conditions.

2.4 Alternative B – Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

The objectives of the Warm Springs Preserve Stream Restoration and Irrigation Improvement project are to rehabilitate riverine, riparian, and floodplain on the Warm Springs Preserve property. The primary components of this project include restoration of aquatic habitat within the existing creek channel, creation of side channels, enhancement of floodplain connectivity, flood conveyance improvements, and reestablishment of native plant communities (Figure 3).

The project would improve the Warm Springs Preserve diversion by creating a constructed riffle and removing the existing concrete headworks. The new diversion riffle would divert perennial flow into the proposed diversion/side channel (“Baldy Channel”). The inlet of the Baldy Channel would include a gated steel and/or concrete structure (Figure 4) with the primary objective to allow for periodic exclusion of flows to allow for maintenance and removal of deposited sediments within the Baldy Channel and proposed sediment basin. The project would also establish additional side channels (the “Dollar Channel”, “Sunny Channel”, “Challenger Channel”, and “Roundhouse Channel”) that would provide increased and diverse aquatic habitat.

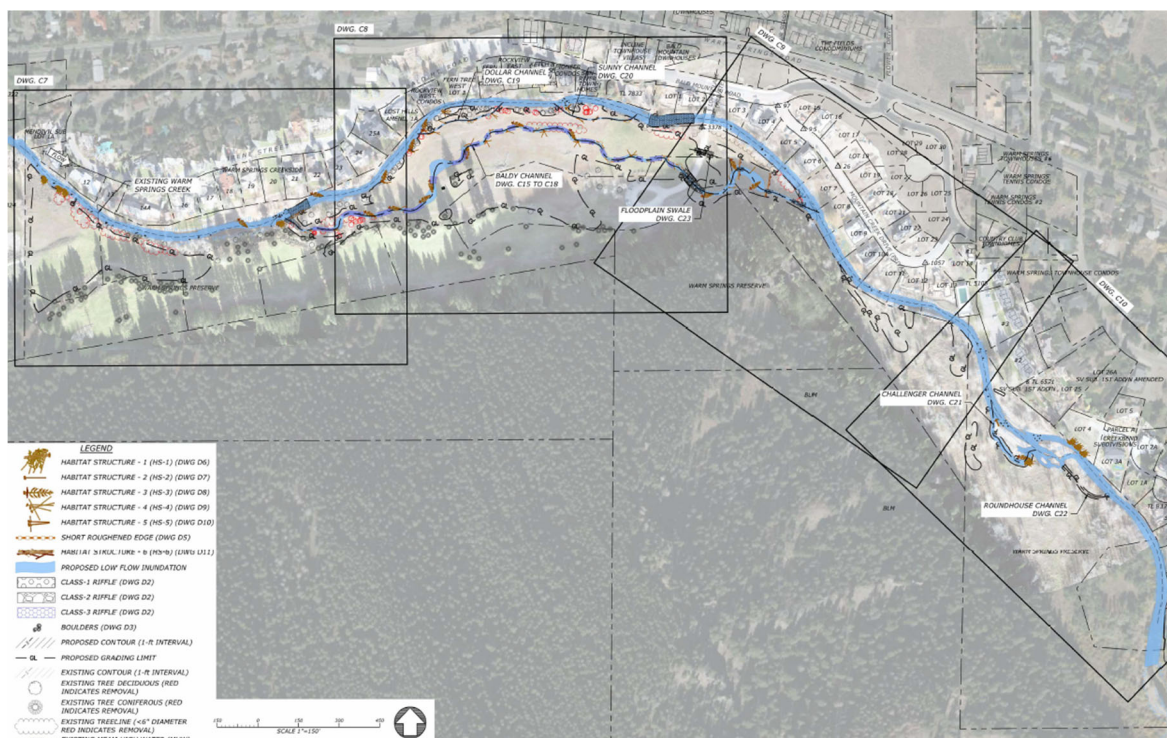


Figure 3. Proposed site conditions, Warm Springs Preserve project area.

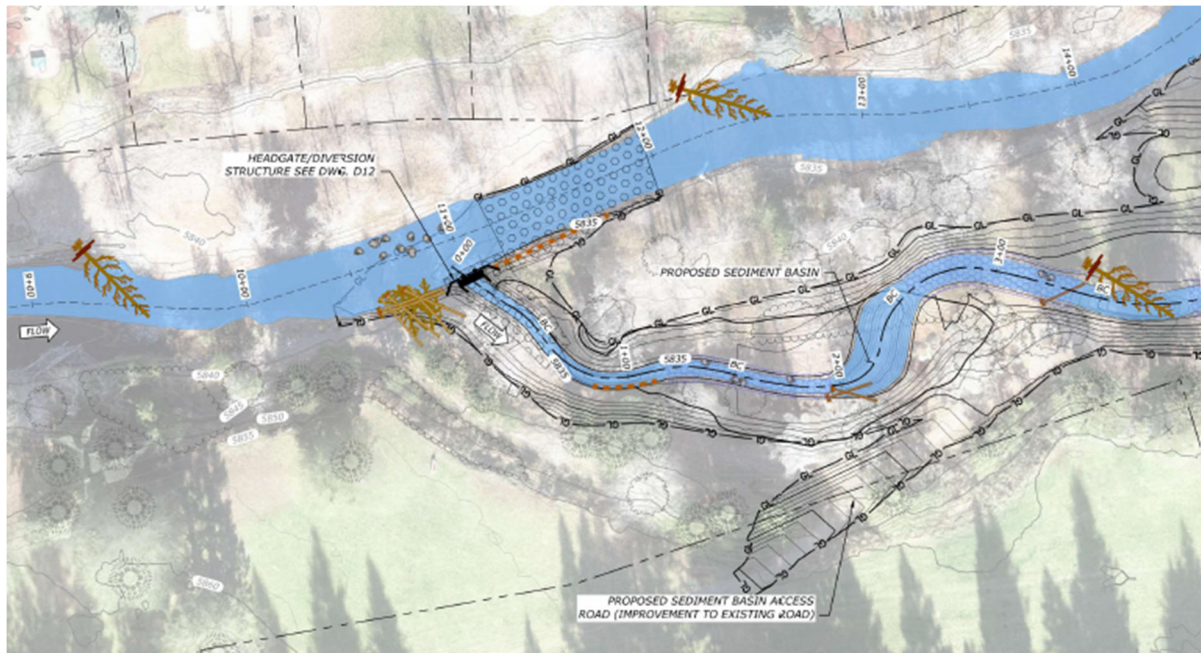


Figure 4. Proposed headgate control structure and creek enhancement elements, Warm Springs Preserve, Ketchum, Idaho.

The creek enhancement portion of the project would include in-channel grading, boulder placement, and the installation of woody debris along the banks of Warm Springs Creek. Heavy equipment would be utilized to create pools, point bars, and constructed riffles in the mainstem of Warm Springs Creek to develop a more complex riverine network. Large and small woody debris structures would be installed to promote in-channel complexity, force hydraulic response (scour, deposition, split flow, floodplain connection, sediment sorting, and overall hydraulic diversity), and provide cover for juvenile trout. The project would include excavation to lower designated areas of the floodplain to allow more frequent activation, improve floodplain inundation and conveyance, improve flood water attenuation, and reduce instream hydraulic forces during peak flow events (Figure 5). Treatment quantities associated with in-stream work, riffle bed creation and log placements, and side channel and floodplain grading are depicted in Table 1.

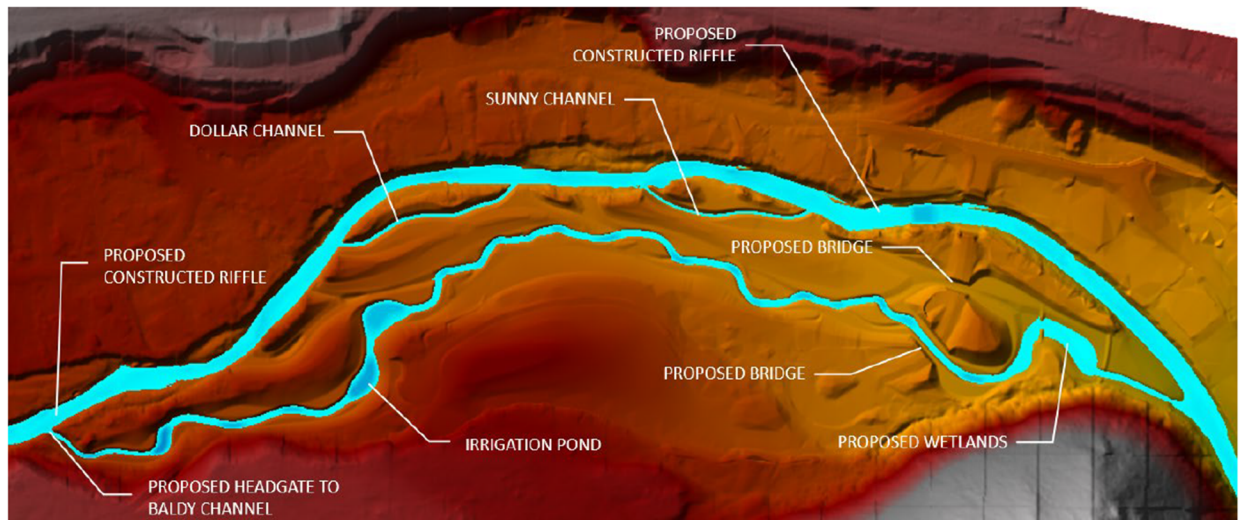


Figure 5. Proposed condition inundation depth and extent at low flow conditions, Warm Springs Creek.

Table 1. Warm Springs Preserve treatment quantities.

Summary of Impacts to Waters of the U.S. or Wetlands				
Type	Area (acres)	Area (sq. ft.)	Quantity (cubic yard)	Material
Channel Fill (Filling)	0.41	18,010	1,222	Riffle Material
Channel and Pool Excavation (Excavation)	0.65	28,417	978	Native alluvium
Wood Material (Filling)	0.19	8,155	731	Woody Material (for Habitat Structures)
Total	1.25	54,582	2,931	

The project would include the installation of two new bridges where the preserve parking lot access road crosses a proposed floodplain swale and the proposed Baldy Channel. The span of these crossings is proposed to be 1.5 times the width of the bankfull channel to allow for natural stream processes and fish passage. The project proposes a 15-foot span for the Floodplain Swale Channel and a 30-foot span for the Baldy Channel.

The project would restore and enhance the Warm Springs Creek floodplain via earthwork and grading, installation of woody debris, and revegetating with site-appropriate native riparian vegetation. Heavy equipment would be utilized to regrade and lower the floodplain throughout the project area to improve floodplain connectivity and allow for more frequent floodplain activation on a semi-annual basis (2-year recurrence interval flood or greater). Off-channel habitat including multiple perennial side channels with a small floodplain and an oxbow pond would also be created (Figure 6). Woody debris would be installed along the constructed side channels to provide habitat complexity and cover for trout. Revegetation of the floodplain would occur by planting site-appropriate native riparian species and transplanting native vegetation harvested near the project site, as available.

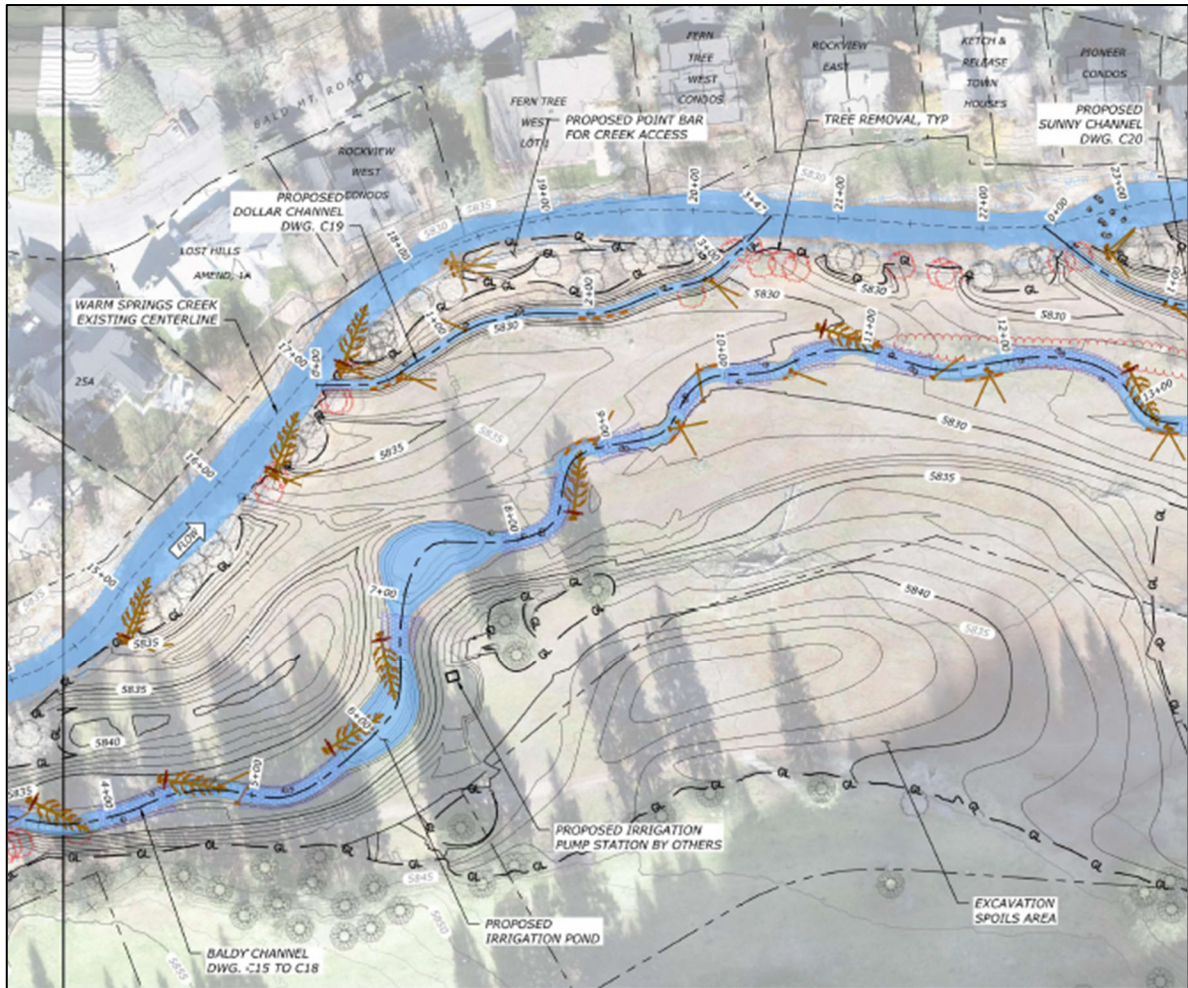


Figure 6. Example of floodplain restoration and enhancement design elements.

2.4.1 Post-Construction Site Reclamation and Monitoring

After construction has been completed, a native seed mix would be broadcast throughout the disturbance area. Post-construction monitoring would be implemented to assess post-project conditions and inform adaptive management (i.e., the replacement, removal, or adjustment of project components), as needed.

2.4.2 Permit Requirements

Multiple permits would be necessary to allow the project to proceed. A Floodplain Permit from the City of Ketchum and a joint 404/401 permit from the U.S. Army Corps of Engineers (USACE) and Idaho Department of Environmental Quality would be obtained. A stream channel alteration permit from Idaho Department of Water Resources (IDWR) may also be necessary. Construction activities would comply with all permit conditions and be conducted using all industry standard best management practices (BMPs), including the use of clean fill material, implementation of erosion and sediment control measures, limitations and

management of pollutants and toxins, implementation of turbidity containment measures, seasonal restriction of in-water work, and vegetation protection and restoration measures. All permits would be obtained, as necessary, before any ground disturbing activities take place.

2.5 Alternatives Considered but Eliminated from Further Study

NEPA requires Reclamation to consider alternatives developed through public scoping. However, only those alternatives that are reasonable and meet the purpose and need of the proposed action must be analyzed. There were no alternatives presented through the public scoping process.

2.6 Past, Present and Reasonably Foreseeable Future Actions

Past, present, and reasonably foreseeable actions identified in the area (public or private) that could adversely affect the same resource areas evaluated in this EA would be additive effects to the Proposed Action. The following past, present, and reasonably foreseeable future actions within the project vicinity were identified and included in the Combined Effects analysis in Chapter 3 for each environmental component (resource) applicable to the Proposed Action.

2.6.1 Private Parcel Development

The project area is surrounded by public lands [United States Forest Service (USFS), Bureau of Land Management (BLM), and City of Ketchum] on the south side and private lands on the east, west and north sides. A high density of primarily single-family homes exists on the north side of Warm Springs Creek, upstream, downstream and directly across from the project area. Warm Springs Ranch Subdivision is the newest subdivision proximate to the project area. It is approximately 11 acres in size and is comprised of 34 parcels that are all less than 0.4 acres in size. The neighborhood was recently established, and construction of single-family homes within the neighborhood is ongoing. The majority of private parcels proximate to the project area have been previously developed. A 9.5-acre private parcel currently used for agricultural purposes abuts the western boundary of the project area. There is potential for this parcel to be subdivided in the future.

2.6.2 Warm Springs Creek Restoration and Streambank Stabilization Projects (multiple)

Numerous creek restoration and streambank stabilization projects have occurred, or will occur, along Warm Springs Creek to restore fluvial conditions and stabilize creek banks to protect infrastructure adjacent to the creek. Private landowners along Georginia Road and Irene Street recently implemented creek bank stabilization projects that utilized scour protection rock, installation of wood (log) structures, and riparian vegetation planting to reduce bank erosion and

protect adjacent residential infrastructure. These efforts improved the fluvial conditions and functions of Warm Springs Creek and improved the vegetative conditions within the riparian corridor. Upstream of Ketchum, the U.S. Forest Service (in collaboration with Trout Unlimited) implemented a river restoration project in the fall of 2024 that restored floodplain connectivity, created new side channels, removed fill material placed on the floodplain decades ago, diversified aquatic habitat, and protected roadway infrastructure. That project improved fluvial, aquatic, and riparian conditions along approximately 2,000 ft Warm Springs Creek located on upstream federal lands. Given the oversight and permit requirements for these types of projects, ongoing and future projects of this nature along Warm Springs Creek are not expected to have a detrimental impact on aquatic resource values.

Chapter 3 Affected Environment and Environmental Consequences

3.1 Introduction

This 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 (resource). The affected environment (Proposed Action area) addressed in this EA is defined in varied contexts depending on the affected resource being analyzed.

Resources evaluated in this document and analyzed in Chapter 3 were selected based on: Reclamation requirements; compliance with laws, statutes, and EOs; public and internal scoping; and the potential for resources to be affected by the Proposed Action.

3.2 Hydrology and Geomorphology

3.2.1 Affected Environment

The proposed project area is in IDWR Water District 37. Water rights in the Warm Springs Creek basin are administered by Water District 37. The proposed project area reach of Warm Springs Creek is 4,800 feet long and located in Ketchum, Idaho about ¼-mile upstream of the confluence with the Big Wood River. Warm Springs Creek is a major tributary of the Big Wood River, originating in the Smokey Mountains about 24 miles west of Ketchum and is within the Big Wood River subbasin.

Warm Springs Creek flows over glacial outwash and alluvial deposits, with higher discharge during the last ice age leading to significant sediment accumulation in the valley (Pierce and Scott 1982). Over time, the creek has cut through these deposits, creating terraces. Recently, these terraces have been modified for land use, including a golf course, while the stream channel has been artificially confined, increasing flow intensity, incision, and reducing floodplain connectivity—especially in the northern section, which lacks connectivity even

during 100-year flood events. The southern section shows some connectivity at around the 5-year flood interval.

Ongoing channel incision occurs because flood flows are restricted to the stream bed and banks instead of spreading over the floodplain, leading to the loss of fine sediment and leaving a coarse cobble bed armor. This has resulted in a mainly plane-bed channel morphology, with only intermittent pools formed by obstacles like boulders and man-made structures. When fine sediment re-enters the system, it fills the gaps in the armor, reducing pool formation. Most banks are stable and often reinforced with riprap, while erosion primarily happens where stabilization is lacking.

There are two historical and one current United States Geologic Survey (USGS) gauging stations on Warm Springs Creek including USGS gauge #13136500 Warm Springs Creek at Guyer Hot Springs Near Ketchum, ID; USGS gauge #13137000 Warm Springs Creek Near Ketchum, ID; and USGS #13136550 Warm Springs Creek at Gates Road Near Ketchum, ID (Figure 7). Gauge #13137000 was located within the project area and recorded data from 2011-01-27 to 2024-07-09. Gauge #13136500 was located approximately 1 mile upstream of the project area near Guyer Hot Springs and recorded data from 1940-11-28 to 1959-04-13. Gauge #13136550 is an active gauge that is located approximately 0.9 miles upstream of the project area on Warm Springs Creek with a period of record beginning on 2019-04-26. Figure 8 depicts average daily flows for the 18-year period from 1941-1959 for USGS gauge #13136500 Warm Springs Creek at Guyer Hot Springs near Ketchum, ID. Figure 9 depicts average daily flows for the 10-year period from 2012-2022 for USGS gauge #13137000 Warm Springs Creek Near Ketchum, ID. Figure 10 shows average daily flows for the 2-year period from 2020-2022 for the USGS gauge #13136550 Warm Springs Creek at Gates Road Near Ketchum, ID.

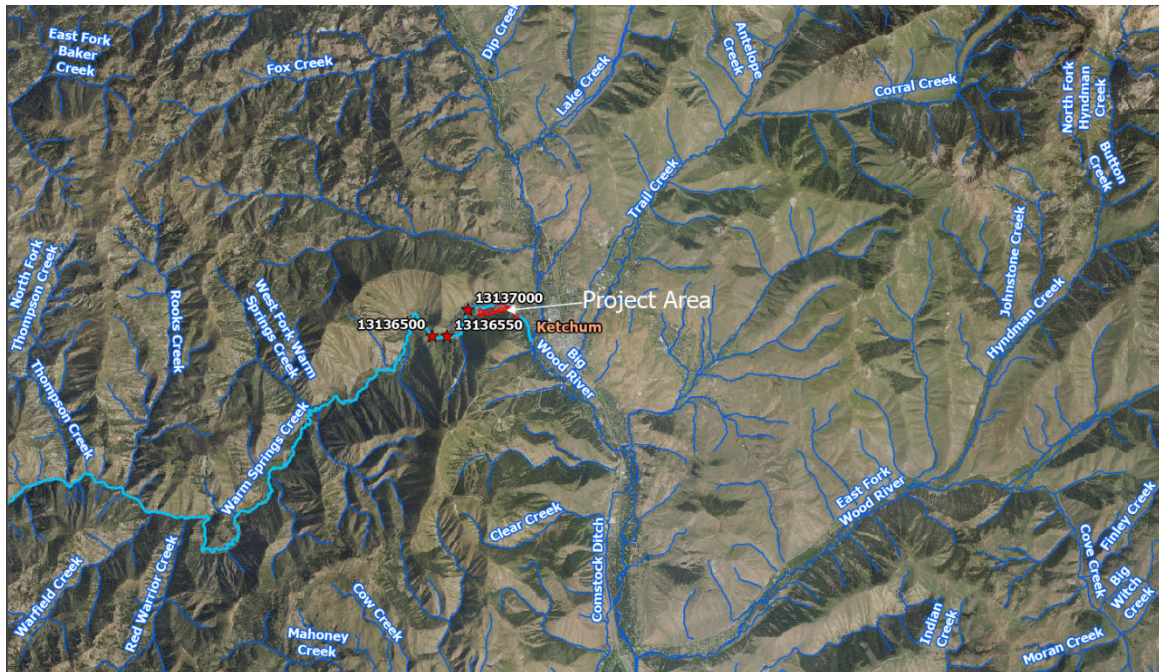


Figure 7. Map showing the general location of the proposed project in relation to USGS stream gauges and the City of Ketchum.

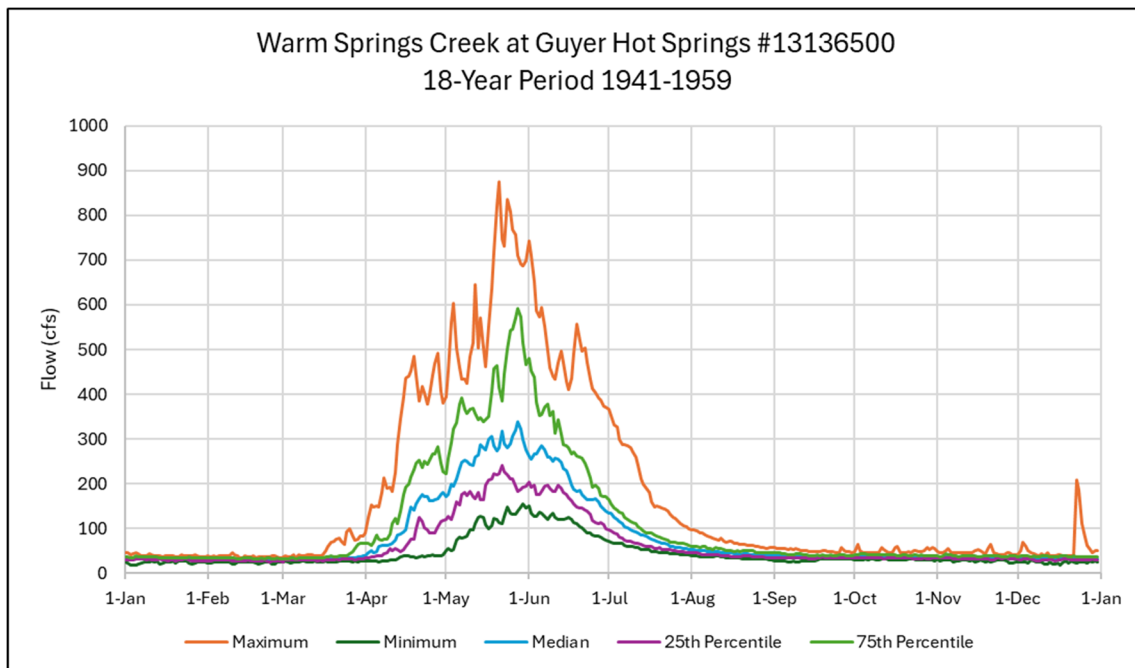


Figure 8. Daily historic flow data for USGS gauge# 13136500 Warm Springs Creek at Guyer Hot Springs Near Ketchum, ID. Obtained from USGS gauging website.

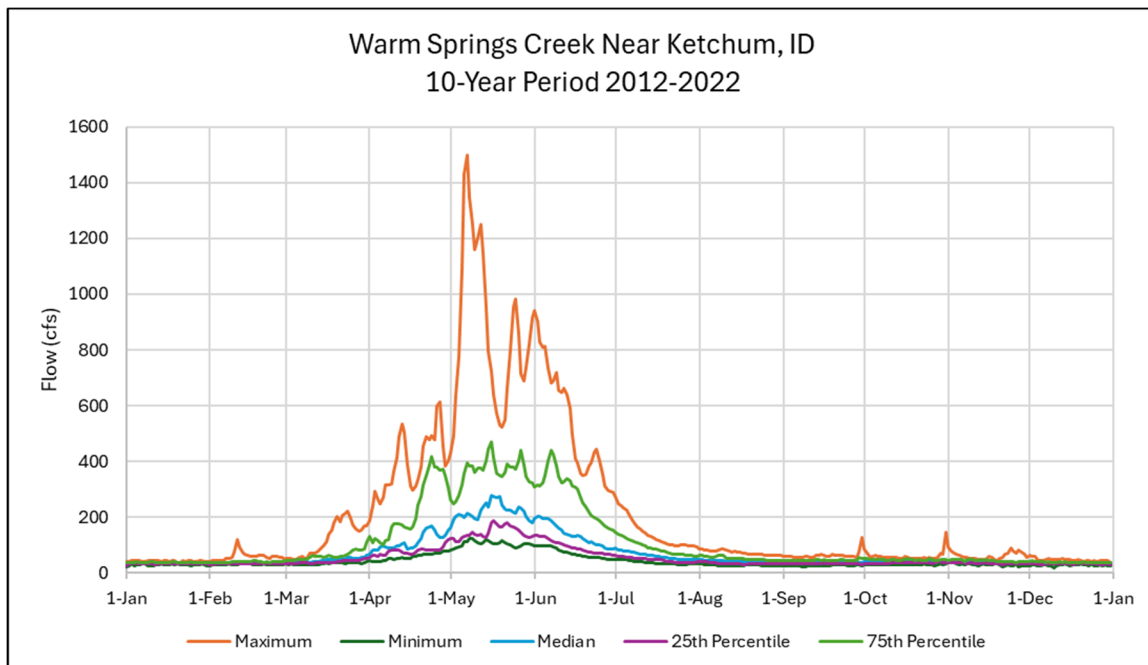


Figure 9. Daily historic flow data for USGS gauge#13137000 Warm Springs Creek Near Ketchum, ID. Obtained from USGS gauging website.

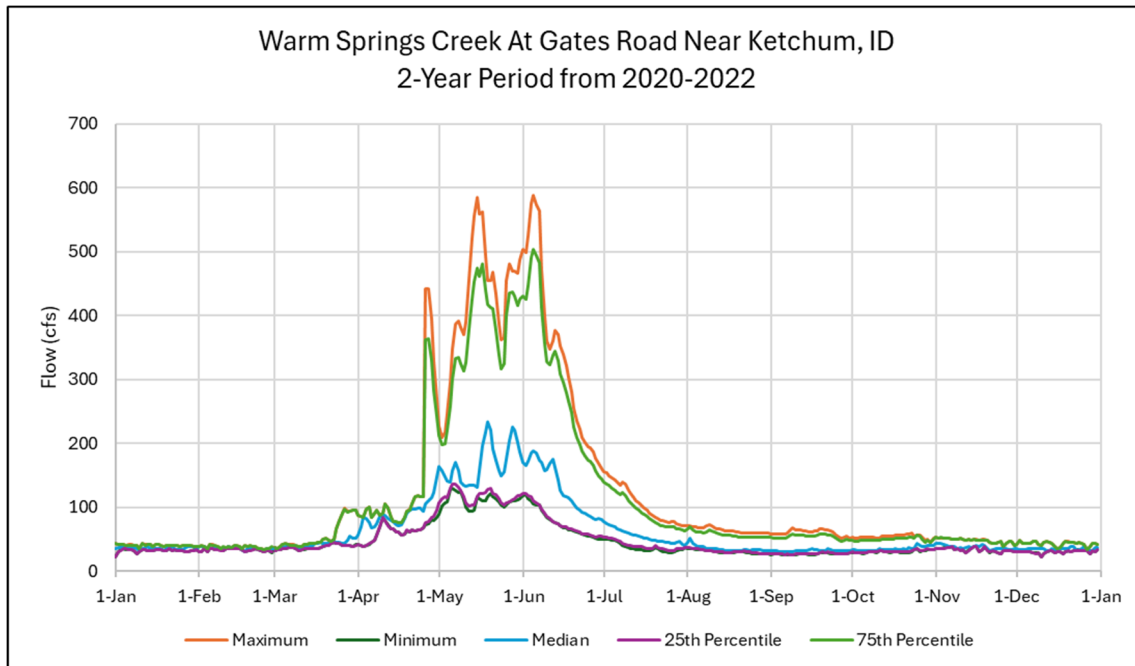


Figure 10. Daily historic flow data for USGS gauge#13136550 Warm Springs Creek at Gates Road Near Ketchum, ID. Obtained from USGS gauging website.

3.2.2 Environmental Consequences

Alternative A-No Action

Under the No Action alternative, hydrologic and geomorphologic processes described in the Affected Environment section would continue to affect the existing project area reach of Warm Springs Creek. The stream reach would persist in its degraded condition, resulting in reduced aquatic habitat conditions, reduced stream and floodplain function, a destabilized the stream channel, erosion and channel incision. The existing irrigation diversion structure would continue to function inefficiently and require annual maintenance. The overall basin hydrology in Warm Springs Creek would be unaffected under the No Action alternative.

Alternative B-Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

Under the Proposed Action, the project would rehabilitate riverine, riparian, floodplain, and irrigation function of the project area reach of Warm Springs Creek. The project reach of Warm Springs Creek has a 1.5-year recurrence interval flow of 330 cubic feet per second (cfs), and a low flow (95% exceedance flow) of 29 cfs. The proposed project configuration would establish side channels that would convey surface waters around an existing surface water diversion in the project area owned by Brennan Holdings 300 LLC. However, the surface water conveyance through these side channels (5.3 cfs in the Baldy Channel and 0.3 cfs in the Sunny Channel

during low flows) would leave 23.4 cfs in the main channel of Warm Springs Creek during even low flow conditions (the 95% exceedance flow). This volume of instream flow in the mainstem of Warm Springs Creek would be adequate to support the Brennan Holdings 300 LLC surface water right of 1.0 cfs even during low flow conditions.

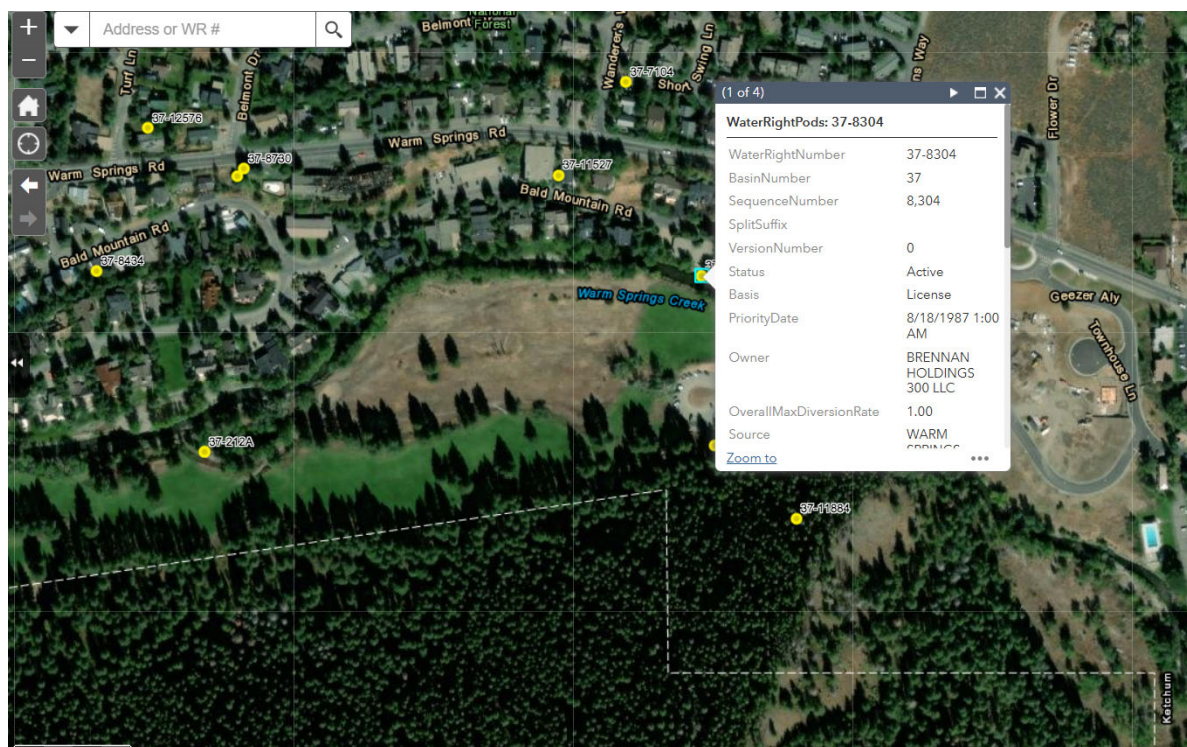


Figure 11. Existing water rights in the vicinity of the action area. Obtained from the State of Idaho IDWR Water Rights locator website.

The Proposed Action would provide continuity in the channel profile under both high-flow and low-flow conditions. The constructed riffle would help to maintain adequate hydraulic head, including at low flows, for sufficient water diversion without the need for additional recurring maintenance activity. These effects would be long-term and beneficial.

Floodplain grading along with side channel creation and enhancement would benefit floodplain functionality during high-flows and relieve pressure within the main channel. This would lead to more stable channel morphology and a reduction in sediment production via bank erosion. Habitat enhancement structures would help provide much-needed diversity in available fish habitat at all flow levels while also providing roughness to eroding banks to reduce erosive forces. Overall, the Proposed Actions would benefit the hydrologic system within the project reach by enhancing functionality of the stream channel, floodplains, side channels, and irrigation diversion.

Post-construction, monitoring of the project area over 5 years would ensure the ongoing long-

term effectiveness of the project's hydrologic goals. Photo points, surveys, and visual inspections would be performed to monitor the stability of the instream structures.

The Proposed Action would further maximize the overall restoration of fluvial functions in the project area reach of Warm Springs Creek while protecting land adjacent to the river from further erosion. The Proposed Action would beneficially contribute to the overall long-term effectiveness of restoration activities in Warm Springs Creek.

Combined Effects

In combination with other actions in the vicinity of the project area (discussed in Section 2.6), the Proposed Action would further improve fluvial and ecological functions in this reach of Warm Springs Creek. The proposed surface water conveyance through the constructed side channels would maintain adequate baseflows in Warm Springs Creek for aquatic organisms. And when combined with the numerous creek restoration and streambank stabilization projects that are planned for Warm Springs Creek, the combined effects would improve the restoration of fluvial conditions and stabilize creek banks. The combined effects of the Proposed Action and other past, present, and reasonably foreseeable actions identified in the area are not likely to adversely affect the hydrology or geomorphology of the area.

3.3 Water Quality

3.3.1 Affected Environment

Warm Springs Creek is a major tributary to the Big Wood River. Idaho Department of Environmental Quality's (IDEQ) *Total Maximum Daily Load (TMDL) 5-Year Review Report* (2017), divides the Big Wood River subbasin into three distinct geographical/ecological areas. These are (1) the northern half of the subbasin where the majority of the headwaters occur in the Sawtooth National Forest (above 5,800 feet in elevation), (2) the central Wood River Valley (4,800–5,800 feet in elevation) from Ketchum to Magic Reservoir, and (3) the rangeland/agricultural area (below 4,800 feet elevation). The proposed project is within the northern half of the subbasin just above the beginning of the central Wood River Valley zone. Per IDEQ's *TMDL 5-Year Review Report* (2017), most water quality issues in the Big Wood River basin are located in either the drier hills surrounding the central Wood River Valley (above Hailey and Bellevue) or are associated with lower rangelands and the lower agricultural valley. Warm Springs Creek is not located in these areas, and overall water quality in Warm Springs Creek is good. The only portion of the Warm Springs Creek subbasin that has been identified as water quality limited and has a TMDL developed for it is the headwaters reach of Warm Springs Creek, which is located upstream of the proposed project area. The IDEQ designated that reach as supporting beneficial uses of water supply, recreation, wildlife habitat, and aesthetics. The IDEQ designated that reach as not supporting beneficial uses of aquatic life due to elevated Total Phosphorus (TP). The headwaters reach has an approved TMDL for TP, including a target of 0.05 mg/L. It is not clear what causes high TP in these streams. Streams in this assessment unit (AU) have been exposed to recent wildfires that may in turn affect the release of phosphorus from soils and ash. Periodic low assessment scores in the AU, especially

in Warm Springs Creek, may have resulted from fire, low water, or both (IDEQ 2017, IDEQ 2022).

3.3.2 Environmental Consequences

Alternative A- No Action

Under the No Action alternative, water quality conditions in Warm Springs Creek would remain the same in the short term as that described in the Affected Environment section. In the long-term, the implementation of the approved TMDL could result in reduced TP from implementation of accepted best management practices and other conservation measures and improved water quality if the currently contemplated project is not implemented.

Alternative B – Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

The Proposed Action would have short-term construction effects and long-term effects on water quality in Warm Springs Creek. Short-term effects are associated with heavy equipment work in and around the Warm Springs Creek channel. Anticipated short term water quality effects include minor increases in turbidity in Warm Springs Creek from disturbance and mobilization of river-bottom and streambank sediments during the removal of the existing irrigation diversion structure, construction of the new riffle, installation of the habitat boulders and woody habitat structures, streambank grading and during tie-in of the new side channels. Instream work would be conducted during the low-flow period, and sediment and erosion control BMPs such as coffer dams would be utilized to isolate instream work and straw wattles utilized to prevent upland sediment from mobilizing into the creek. These measures would help to lessen water quality impacts. The sediment plumes created by the Proposed Action are anticipated to dissipate rapidly due to dilution and would be deposited downstream at locations determined by sediment particle size relative to varying areas of flow velocity in the channel.

Long-term post-construction effects include reduced likelihood of streambank erosion and associated sediment entrainment in the project area reach of Warm Springs Creek due to improved flood conveyance and increased vertical channel stability and bank stability. The long-term improvements resulting from the project would benefit designated uses of water supply, recreation, wildlife habitat, aesthetics, and aquatic life due to reduced channel incision, improved floodplain connectivity, improved vertical and lateral channel stability, and aquatic habitat diversification. The project would not affect elevated TP levels that have been documented upstream of the project area in the upper sub-basin.

Combined Effects

The combined effects of the Proposed Action and with other actions in the vicinity of the project area (discussed in Section 2.6) are not likely to have a negative long-term impact on water quality in Warm Springs Creek as long as BMPs are implemented to prevent erosion and movement of sediment from construction zones, disturbed areas are fully reclaimed and revegetated, and riparian areas and streambanks are protected. The combined effects would

likely not add to short-term sedimentation (turbidity and excessive fine sediment deposition) issues attributed to construction because of the temporal separation between projects. These projects are completed on different time frames, and any adverse short-term sedimentation effects would dissipate and fall back to baseline levels, and any short-term sedimentation effects would not be additive.

3.4 Biological Resources: Vegetation, Wildlife, and Fisheries

3.4.1 Affected Environment

Vegetation and Wildlife

The project area reach of the Warm Springs Creek drainage primarily consists of four vegetation habitat types: forested riparian habitat dominated by cottonwood, aspen, and willows; coniferous forest dominated by Douglas fir and snowberry; landscaped/disturbed grassland; and sagebrush-steppe. Descriptions of vegetation habitat types, the habitat each provides, and wildlife species likely to occur in each are included below by vegetation type.

Forested Riparian Habitat

Cottonwood/Aspen/willow-dominated forested riparian habitat occurs along the banks of Warm Springs Creek and on the adjacent floodplain. This vegetation community is dominated by narrowleaf cottonwood (*Populus angustifolia*) and quaking aspen (*Populus tremuloides*) trees in the tree stratum, with a variety of willow species and grasses dominating the understory. Other species observed in the forested riparian habitat include red-osier dogwood (*Cornus sericea*), gray alder (*Alnus incana*), golden currant (*Ribes aureum*), and Wood's rose (*Rosa woodsii*).

The western portion of this habitat type is located in an area of Warm Springs Preserve that has undergone multiple changes in land management practices over the past 100+ years, from ranching to use as a golf course. The habitat in this area has historically been cleared or altered which has resulted in a more open canopy than in the downstream portion of the project area. The forested riparian habitat in this portion of the project area now occurs as a narrow band of vegetation primarily located directly adjacent to the creek. The eastern portion of this habitat type is more difficult for visitors to access and therefore has begun to naturally recover from past land use disturbances. This segment of the riparian forest habitat is more densely vegetated and provides higher quality wildlife habitat than the upstream portion. Portions of this area with lower topographic positions have higher exposure to seasonal flooding and groundwater influence and accordingly have more dense mesic shrub coverage. The segments of this area that are elevated exhibit a more sparsely vegetated understory.

The forested riparian habitat that is located the furthest from development and human presence represents some of the highest value wildlife habitat in the Proposed Action area. Forested riparian habitat provides dense, effective hiding, thermal, and nesting cover for a variety of wildlife species, and it produces a substantial amount of forage for year-round wildlife use, including woody and herbaceous vegetation, small mammals, and insects. These habitats also

provide a secure conduit for movement of ungulate species including elk, moose, mule deer and white-tailed deer. The cover and foraging opportunities provided by the forested riparian habitat are especially valuable to moose and elk during stressful winter conditions.

Coniferous Forest Habitat

Coniferous forest habitat, dominated by Douglas fir, occurs along the steep hillside at the foot of Bald Mountain in the southern portion of the project area. This vegetation community is dominated by mature Douglas fir trees (i.e., greater than 40 feet in height) in the tree stratum, with an understory of snowberry (*Symphoricarpos albus*) and a variety of grasses and forbs. The Warm Springs Preserve Property has a long and diverse history of uses and activities that have greatly altered the property's landscape. Over the property's history, the mature Douglas fir forest has remained in an undisturbed natural condition with a densely vegetated understory.

This habitat provides high value wildlife habitat because it has remained undisturbed, is relatively isolated from development, and is subject to minimal human use. This habitat provides dense, effective hiding, thermal, and nesting cover for a variety of species. The forested habitat also produces a substantial amount of forage for year-round wildlife use, including woody and herbaceous vegetation, berries, small mammals, and insects, and provides a secure conduit for movement of species such as elk, moose, mule deer and white-tailed deer. Evidence of significant ungulate use, such as pellet groups, tracks, trails, and rubs were observed in this forested habitat.

Landscaped/Disturbed Grassland

About half of the project area is comprised of landscaped/disturbed grassland habitat. This habitat has been previously disturbed and exhibits signs of past alteration, such as mowed, irrigated, non-native grass. Narrow bands of Douglas fir forest are intermixed with the landscaped/disturbed grassland habitat in the western portion of the project area, which indicates these areas were likely historically comprised of coniferous forest habitat. The landscaped/disturbed grassland habitat currently sees the highest intensity and frequency of human use because it is currently used for multiple activities including hiking, birdwatching, wildlife observation, disc golf, photography, snowshoeing, nordic skiing, and off-leash dog walking. Wildlife most likely use the landscaped/disturbed grassland habitat as transitional foraging habitat as they move through the area to more desirable locations and/or during migrations between seasonal habitats. Wildlife most likely use this habitat during the dusk to dawn hours due to minimal cover and human presence during the daylight hours. Wildlife sign, such as tracks and pellet groups, were observed within the grassland habitat.

Noxious Weeds

The presence of weed infestation can impair the ecological function and dramatically reduce the wildlife habitat value of plant communities. Noxious weeds including Canada thistle (*Cirsium arvense*) and spotted knapweed (*Centaurea stoebe*) were observed within the project area. Although these species are present, so large-scale infestations currently exist in the project area. A noxious weed management plan should be developed and implemented prior to construction, to prevent the further spread of existing noxious weeds or introduction of other noxious weed species.

Table 2. Native and Noxious Vegetation known to occur around the project area.

Vegetation species	Scientific name
Black cottonwood	<i>Populus balsamifera ssp. trichocarpa</i>
Willows	<i>Salix lasiandra</i> , <i>Salix lemmonii</i> , <i>Salix exigua</i> and <i>Salix lutea</i>
Red-osier dogwood	<i>Cornus sericea</i>
Gray alder	<i>Alnus incana</i>
Golden currant	<i>Ribes aureum</i>
Chokecherry	<i>Prunus virginiana</i>
Serviceberry	<i>Amelanchier alnifolia</i>
Silver sage	<i>Artemisia cana</i>
Canada thistle (noxious weed)	<i>Cirsium arvense</i>
Rough cocklebur (noxious weed)	<i>Xanthium strumarium</i>
Bittersweet nightshade (noxious weed)	<i>Solanum dulcamara</i>
Common burdock (noxious weed)	<i>Arctium spp.</i>
Tansy (noxious weed)	<i>Tanacetum vulgare</i>
Rush skeleton weed (noxious weed)	<i>Chondrilla juncea</i>
Cheat grass (noxious weed)	<i>Bromus tectorum</i>

Fisheries

Warm Springs Creek is a major tributary to the Big Wood River, which is considered one of Idaho's most productive trout streams. Fish populations include game fish such as rainbow trout (*Oncorhynchus mykiss*), redband trout (a subspecies of rainbow trout, *Oncorhynchus mykiss gairdneri*), brook trout (*Salvelinus fontinalis*), cutthroat trout (*Oncorhynchus clarkia*), and mountain whitefish (*Prosopium williamsoni*), as well as non-game species such as speckled dace (*Rhinichthys osculus*), bridgelip sucker (*Catostomus columbianus*), and Wood River sculpin (*Cottus leiopomus*).

Redband trout are considered a sensitive species or a species of concern by several agencies due to the species' unique genetic lineage, and the Wood River sculpin is listed by the State of Idaho's Comprehensive Wildlife Conservation Strategy as a "Species of Greatest Conservation Need." The U.S. Forest Service and Bureau of Land Management classify the Wood River sculpin as a "Sensitive" species, and the Idaho Department of Fish and Game (IDFG) classifies the fish as a "Species of Concern."

The Wood River sculpin (WRS) is endemic to the Big Wood, Little Wood, and Camas subbasins of central Idaho. Between 1996 and 2017, the Sawtooth National Forest surveyed Warm Springs Creek upstream of the project area for WRS at 15 locations. WRS were observed

in high to moderate densities at most of the surveyed sites. Tributaries of Warm Springs Creek within which WRS were observed include Castle Creek, North Fork Thompson Creek, Placer Creek, and South Fork Warm Springs Creek. Based on this documentation of WRS presence, the species is likely to utilize the project area for seasonal, resident, or migratory purposes.

There are no known barriers to fish migration between lower Warm Springs Creek and the Big Wood River, and Warm Springs Creek provides important habitat and refuge for migratory and resident wild fishes. Habitat modifications have degraded fish habitat within Warm Springs Creek. These modifications are primarily associated with historic land use activities (grazing, riparian vegetation removal), road construction, and contemporary residential development that has encroached on the floodplain and resulted in subsequent bank armoring, flood control berm creation, channelization, and channel simplification.

Table 3. Wildlife and Fish species known to occur around the project area.

Species	Scientific name	Habitat Type
Wildlife		
Northern flicker	<i>Colaptes auratus</i>	riparian areas dominated by cottonwood
Bullock's oriole	<i>Icterus bullockii</i>	riparian areas dominated by cottonwood
Mourning dove	<i>Zenaida macroura</i>	riparian areas dominated by cottonwood
American robin	<i>Turdus migratorius</i>	riparian areas dominated by cottonwood
Western wood pewee	<i>Contopus sordidulus</i>	riparian areas dominated by cottonwood
Mountain chickadee	<i>Poecile gambeli</i>	riparian areas dominated by cottonwood
House finch	<i>Carpodacus mexicanus</i>	riparian areas dominated by cottonwood
American goldfinch	<i>Carduelis tristis</i>	riparian areas dominated by cottonwood
American kestrel	<i>Falco sparverius</i>	riparian areas dominated by cottonwood
Redtailed hawk	<i>Buteo jamaicensis</i>	riparian areas dominated by cottonwood
Mule deer	<i>Odocoileus hemionus</i>	riparian areas dominated by cottonwood and Alder/chokecherry/serviceberry/sagebrush
Black Bear	<i>Ursus americanus</i>	riparian areas dominated by cottonwood
Beaver	<i>Castor canadensis</i>	riparian areas dominated by cottonwood
Red Fox	<i>Vulpes vulpes</i>	riparian areas dominated by cottonwood
River Otter	<i>Lontra canadensis</i>	riparian areas dominated by cottonwood
Elk	<i>Cervus canadensis</i>	riparian areas dominated by cottonwood and Alder/chokecherry/serviceberry/sagebrush
Swainson's hawk	<i>Buteo swainsoni</i>	riparian areas dominated by cottonwood
Song sparrow	<i>Melospiza melodia</i>	riparian scrub dominated by willows
Warbling vireo	<i>Vireo gilvus</i>	riparian scrub dominated by willows
Common yellowthroat	<i>Geothlypis trichas</i>	riparian scrub dominated by willows
Fox sparrow	<i>Passerella iliaca</i>	riparian scrub dominated by willows
Yellow warbler	<i>Dendroica petechia</i>	riparian scrub dominated by willows
Cedar waxwing	<i>Bombycilla cedrorum</i>	riparian scrub dominated by willows

Species	Scientific name	Habitat Type
Black-throated gray warbler	<i>Dendroica nigrescens</i>	riparian scrub dominated by willows
Lincoln sparrow	<i>Melospiza lincolni</i>	riparian scrub dominated by willows
Dark-eyed junco	<i>Junco hyemalis</i>	riparian scrub dominated by willows
Gray catbird	<i>Dumetella carolinensis</i>	riparian scrub dominated by willows
Rufous-sided towhee	<i>Pipilo erythrophthalmus</i>	riparian scrub dominated by willows
Shiras Moose	<i>Alces alces</i>	riparian scrub dominated by willows
Western meadowlark	<i>Sturnella neglecta</i>	Alder/chokecherry/serviceberry/sagebrush
Turkey vulture	<i>Cathartes aura</i>	Alder/chokecherry/serviceberry/sagebrush
Northern harrier	<i>Circus cyaneus</i>	Alder/chokecherry/serviceberry/sagebrush
Short-eared owl	<i>Asio flammeus</i>	Alder/chokecherry/serviceberry/sagebrush
Western kingbird	<i>Tyrannus verticalis</i>	Alder/chokecherry/serviceberry/sagebrush
Common raven	<i>Corvus corax</i>	Alder/chokecherry/serviceberry/sagebrush
Black-billed magpie	<i>Pica pica</i>	Alder/chokecherry/serviceberry/sagebrush
Fish		
Rainbow trout	<i>Oncorhynchus mykiss</i>	Mainstem Big Wood River
Brown trout	<i>Salmo trutta</i>	Mainstem Big Wood River
Brook trout	<i>Salvelinus fontinalis</i>	Mainstem Big Wood River
Cutthroat trout	<i>Oncorhynchus clarkia</i>	Mainstem Big Wood River
Mountain whitefish	<i>Prosopium williamsoni</i>	Mainstem Big Wood River
Speckled dace	<i>Rhinichthys osculus</i>	Mainstem Big Wood River
Bridgelip sucker	<i>Catostomus columbianus</i>	Mainstem Big Wood River
Wood River sculpin	<i>Cottus leiopomus</i>	Mainstem Big Wood River

3.4.2 Environmental Consequences

Alternative A- No Action

Vegetation and Wildlife

Under the No Action alternative, the biological conditions currently found in the project area, including vegetation community extent and coverage, would slowly deteriorate until future management or land use changes. The project area reach of the Warm Springs Creek and associated floodplain would continue to persist in a degraded condition, and the irrigation diversion would continue to operate inefficiently and require substantial annual maintenance. The annual maintenance would continue to result in adverse effects to surrounding vegetation habitat types and associated wildlife. Riparian plant communities rely on flood pulse dynamics to stay productive and recruit new age classes of vegetation. Under the No Action alternative, floodplain inundation dynamics would remain altered, and trees would continue to mature with minimal or spatially restricted recruitment of new age classes. Under the No Action alternative,

wildlife would continue to utilize habitat in the project area as they currently do on a year-round basis until this use is impacted by external factors. Wildlife use would continue to be concentrated in the Douglas fir forest and riparian forest areas.

Fisheries

Under the No Action alternative, aquatic habitat conditions in the project area would continue to experience direct effects from past habitat modifications that have degraded fish habitat within Warm Springs Creek. These modifications are primarily associated with historic land use activities (grazing, riparian vegetation removal), road construction, and contemporary development that has encroached on the floodplain and resulted in subsequent bank armoring, flood control berm creation, channelization, and channel simplification. Current habitat limitations within the project area reach of Warm Springs Creek include lack of pool quantity and depth for overwintering and predator avoidance, lack of instream woody cover and lack of appropriate size substrate for spawning.

Alternative B – Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

Vegetation and Wildlife

The objectives of the Warm Springs Preserve Stream Restoration and Irrigation Improvement project are to rehabilitate riverine, riparian, floodplain, irrigation, and public park amenities on the Warm Springs Preserve property. The primary components of this project include restoration of aquatic habitat within the existing creek channel, creation of side channels, enhancement of floodplain connectivity, flood conveyance improvements, and reestablishment of native plant communities.

During construction, existing vegetation at the proposed construction sites would be disturbed or removed permanently to facilitate the proposed restoration and improvement designs. The use of heavy equipment in the area would create the risk of spreading noxious weeds in the project area; this risk would be minimized by the development and implementation of a noxious weed management plan before, during, and after construction. Disturbance to native vegetation outside of design features would be minimized and all temporarily impacted areas would be fully revegetated after construction has been completed, which would result in a long-term increase in vegetation coverage. As the restoration and improvement project is being constructed, wildlife would experience temporary but direct disturbance and would likely exhibit avoidance behavior due to the increased human presence and heavy equipment activity. This effect would be limited to the duration of construction and localized only to the project area.

Post-construction, vegetation and wildlife would experience long-term benefits from the creation of diverse aquatic and riparian habitats, improved floodplain connectivity and function, improved flood pulse dynamics, enhanced riparian vegetation recruitment, and the establishment of four additional side channels revegetated with site-specific native riparian vegetation. Due to the installation of a large amount of native vegetation there would be no net

loss of vegetation or habitat in the long term. The restoration of the ecological function of the Warm Springs Creek channel and floodplain would allow for enhanced long-term recruitment of riparian and floodplain vegetation that would continue to establish over a period of years. This increase in vegetation productivity and long-term cover would provide higher quality and additional riparian habitat for a diversity wildlife species. Proposed improvements would result in a long-term increase in habitat availability. Overall, effects to vegetation and wildlife from the implementation of Alternative B would be beneficial, as the improvement of creek, riparian, and floodplain functions would lead to increased habitat quantity and quality.

Fisheries

During the proposed construction, the project area of Warm Springs Creek would experience localized short-term detrimental effects to fisheries due to increased turbidity from equipment operation and direct disturbance to the proposed portions of the channel. These effects would be minor in scale and temporary, given that the proposed construction areas are relatively small compared to the surrounding landscape and Big Wood River watershed. Sediments released into the water during construction would be expected to dissipate rapidly as they move down stream downstream. The use of BMPs would isolate and minimize the short-term effects of disturbance.

Post construction, fisheries are expected to experience a direct long-term benefit from the creation and restoration of aquatic habitat in the Warm Springs Creek channel, by creating more pools, point bars, increasing instream woody cover and creating riffles with the appropriate size substrate for spawning. Additionally, there would be indirect and permanent beneficial effects to fish and fish habitat due to the increase in riparian habitat quality and revitalization of the floodplain connectivity and functionality. Improving the aquatic habitat and floodplain of Warm Springs Creek would contribute to improved water quality conditions, such as reduced water temperatures.

Combined Effects

The combined effects of the Proposed Action and other actions in the vicinity of the project area (discussed in Section 2.6) would result in an increase in the quantity and quality of riparian vegetation and enhanced fish and wildlife habitat associated with Warm Springs Creek. Riparian vegetation would be increased via active planting and restoration of flood-pulse dynamics that would enhance natural recruitment of herbaceous and woody species. The enhanced riparian plant community would result in improved cover and foraging habitat for big game and other wildlife species. The in-channel, streambank and floodplain improvements associated with this and other restoration projects in the vicinity would have a combined positive effect on the Warm Springs Creek fishery by directly improving and diversifying habitat and reducing erosion and sedimentation associated with unstable and unvegetated streambanks.

3.5 Threatened and Endangered Species

The Endangered Species Act (ESA) safeguards fish, wildlife, and plant species designated as Threatened or Endangered (T&E). It outlines procedures for adding or removing species from

the T&E list, developing and implementing recovery plans, and promoting interagency collaboration to prevent harm to listed species. Additionally, it allows for the issuance of permits for activities that would otherwise be prohibited (16 U.S.C. 1531-1544).

3.5.1 Affected Environment

The proposed project area was identified as the area of potential effect because the major component actions of the proposed project occur within this geographic area. A Species List was generated by the U.S. Fish and Wildlife Service (USFWS; Project Code 2025-0093724) on May 08, 2025. The USFWS identified two species listed as threatened (Canada lynx and North American wolverine), one proposed threatened species (Monarch butterfly), and one proposed endangered species (Suckley's cuckoo bumble bee) under the ESA that may occur in the vicinity of the subject property (Appendix B). Additionally, there are no federally listed Critical Habitats within the project area. Background research on the current status of Canada lynx, North American wolverine, Monarch butterfly, and Suckley's cuckoo bumble bee in the region was performed, and site investigations were conducted in fall 2024 to investigate habitat potential.

Canada Lynx (Lynx canadensis)

Species Life History and Distribution

Canada lynx are solitary carnivores that typically occur at low densities in boreal forests. Canada lynx presence has been documented in central Idaho (IDFG 2025). In Idaho, lynx are found primarily in montane and subalpine forest habitats at elevations above 4,000 feet. Douglas fir on moist sites at higher elevations in central Idaho may also be considered primary lynx habitat (Ruedinger et al. 2000). The distribution and abundance of lynx is closely tied to that of the snowshoe hare, their primary prey. Densely regenerating coniferous forests and regenerating burned areas in mixed species forests provide excellent habitat for snowshoe hares and, therefore, are also important habitat for lynx. Conditions that are characteristic of forest habitats occupied by Canada lynx are cool and moist micro-climates found principally in high elevation mixed-conifer forest with dense, multi-layered under- and mid-story canopies. Lynx are less likely to occur at lower elevations where competition with coyotes, mountain lions, bobcats, and domestic animals depletes available prey. Human disturbance is also a limiting factor affecting presence or absence of lynx in any habitat.

Occurrence in Action Area

Canada lynx may occasionally be present but are not expected to rely on habitat in the project area due to the lack of critical habitat and proximity to human activity. The Proposed Action involves habitat restoration, however, it is in an area that historically has had substantial human use.

North American Wolverine (Gulo gulo luscus)

Species Life History and Distribution

In February 2013, the distinct population segment of the North American wolverine occurring in the contiguous United States was proposed for listing as a threatened species under the ESA. North American wolverines are rare and wide-ranging predators, occurring mainly in high elevation, alpine environments. Given their large ranges, North American wolverines can be found in a wide variety of habitats in these areas, particularly boreal coniferous forests. Suitable

habitat is defined by a combination of cold temperatures and reliable winter precipitation, where deep persistent snow at high elevations is available late into the spring and early summer. Home ranges of this species are notoriously large, and adult males generally cover the greatest distances. Adult male wolverines generally have average home ranges in excess of 300 square miles.

Occurrence in Action Area

North American wolverines have been documented in the vicinity of the project area (IDFGa 2025, The Wolverine Foundation 2012), but North American wolverines are not expected to regularly occur on or in the vicinity of the project area based on the low elevation, proximity to human activity, and lack of critical habitat.

Suckley's Cuckoo Bumble Bee (Bombus suckleyi)

Species Life History and Distribution

Suckley's cuckoo bumble bee is proposed to be listed as an endangered species under the ESA. There are no requirements under Section 7 of the ESA for proposed species, but agencies are encouraged to take advantage of opportunities for conservation. Suckley's cuckoo bumble bee was historically widespread in a diversity of ecosystems throughout the northwestern United States. It occurred in prairies, grasslands, meadows, savannahs, and agricultural landscapes. It is a generalist forager and has been reported on a wide range of flowers mostly in the Asteraceae and Fabaceae families, with Aster, Chrysothamnus, Cirsium, and Solidago as examples (Center for Biological Diversity 2020). This species is threatened by habitat loss and fragmentation, habitat degradation, disease, loss of host species, climate change, and inadequacy of existing regulatory mechanisms.

Occurrence in Action Area

Several of the preferred forage plants for this species are present in and around the project area, and it is possible that Suckley's cuckoo bumble bees may occasionally be present.

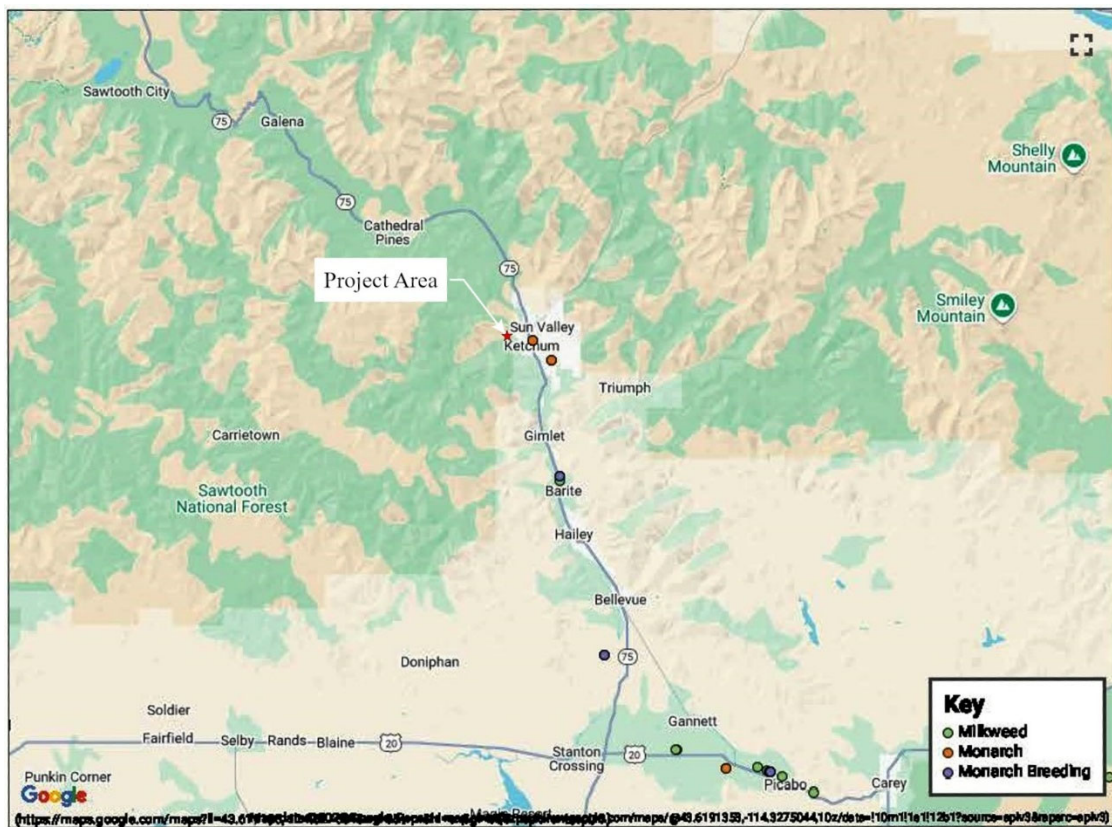
Monarch butterfly (Danaus plexippus)

Species Life History and Distribution

The monarch butterfly is proposed for listing as a threatened species under the ESA. There are no requirements under Section 7 of the ESA for proposed species, but agencies are encouraged to take advantage of opportunities for conservation. Monarchs located in western North America typically migrate south in the fall to overwintering sites along the California coast and northern Baja California. In the spring, they migrate north. During the spring breeding and migration season, adult monarchs rely on a diverse range of blooming nectar sources to sustain them throughout their journey (USFWS 2024). Important nectar sources during the spring migration typically include Coreopsis spp., Viburnum spp., Phlox spp., and early blooming milkweeds. Important nectar sources during fall migration include goldenrods (Solidago spp.), asters (Symphyotrichum spp. and Eurybia spp.), gayfeathers (Liatris spp.), and coneflowers (Echinacea spp.). Other important nectar sources include willow (Salix sp.), sunflower (Helianthus spp.), thistle (Cirsium spp.) and sage (Salvia spp.). The monarch butterfly requires milkweed to complete its life cycle. Monarchs lay eggs on the underside of milkweed leaves, and the resulting caterpillars subsequently eat the leaves. In western North America, these essential resources are often found in riparian corridors, with milkweed serving as a key nectar source in more arid regions.

Occurrence in Action Area

No milkweed was observed in the project area; however, monarchs are known to travel through the area during their annual migrations. The interagency Western Monarch Milkweed Mapper (www.monarchmilkweedmapper.org) does not show documentation of milkweed in the project area (Figure 12). Adult monarchs feed on nectar from a wide variety of flowering plants. Several plant species that are important nectar resources are present in and around the project area, and monarchs may be present in the project area for brief periods during their migrations in the summer and fall, but the project area does not provide long-term habitat for monarchs.



Western Monarch and Milkweed Occurrence Database. 2025. Data accessed from the Western Monarch Milkweed Mapper, a project by the Xerces Society, U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, and Washington Department of Fish and Wildlife. Available: www.monarchmilkweedmapper.org. Accessed: 03/06/2025

Figure 12. Map of documented Monarch butterfly and milkweed occurrences nearest to the project, period of record 1900-present.

3.5.2 Environmental Consequences

Alternative A- No Action

Current habitat conditions in the area of potential effect would continue to degrade under the No-Action alternative due to the lack of a functional floodplain and riparian habitat. Species discussed above could continue to potentially utilize habitat within the project area as they move through the area to more desirable habitat. Due to minimal habitat for these listed species, occupancy and utilization of habitat within the project area would be unaffected by continued maintenance of the Warm Springs Creek diversion and continued public recreation

in the project area. The No Action alternative may have short-term effects on ESA-listed species due to ongoing maintenance of the existing diversion but would have little long-term effect on ESA-listed species given the scale of the project area and the minimal habitat it provides for these species.

Alternative B- Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

Reclamation determined the Proposed Action would have no effect on the Canada lynx and North American wolverine, and would not Jeopardize the Existence of the two proposed species, Monarch butterfly and Suckley's cuckoo bumble bee. Consequently, no formal Section 7 consultation was required for this project. However, due to the uncertainty surrounding potential formal listing of the proposed species, informal conferencing with the USFWS was conducted as part of Reclamation's assessment.

Canada Lynx (Lynx canadensis)

Canada lynx may occasionally be present but are not expected to rely on habitat in the project area due to the lack of critical habitat and proximity to human activity. The Proposed Action involves habitat restoration, however, it is in an area that historically has had substantial human use. Construction activities would not block or restrict migration through the project area and no Canada lynx mortality is expected as a result of the proposed action. Impacts associated with the construction of the action would be considered temporary, seasonal, and unmeasurable at a population level scale or to habitat critical to the species, effects of the action are considered discountable. Therefore, the Proposed Action is expected to have no effect on Canada lynx and Canada lynx critical habitat.

North American Wolverine (Gulo gulo luscus)

North American wolverines have been documented in the vicinity of the project area (IDFGa 2025, The Wolverine Foundation 2012), but North American wolverines are not expected to regularly occur on or in the vicinity of the project area based on the low elevation, proximity to human activity, and lack of critical habitat. Due to the expansive range of North American wolverines, it is reasonable to assume that the project area lies in one or more home ranges of wolverines. Although long-term or regular use is not expected, it is possible that individuals could infrequently utilize habitat in or adjacent to the project area as they move between areas of higher quality habitat. The Proposed Action involves habitat restoration, however, it is in an area that historically has had substantial human use. Construction activities would not block or restrict migration through the project area, and no North American wolverine mortality is expected as a result of the proposed action. Impacts associated with the construction of the action would be considered temporary, seasonal, and unmeasurable at a population level scale or to habitat critical to the species, effects of the action are considered discountable. Therefore, the Proposed Action is expected to have no effect on North American wolverine and North American wolverine critical habitat.

Suckley's Cuckoo Bumble Bee (Bombus suckleyi)

Several of the preferred forage plants for this species are present in and around the project area,

and it is possible that Suckley's cuckoo bumble bees may occasionally be present. Habitat for these bees within the project area may increase due to the restoration of riparian habitat and reestablishment of native vegetation but is not limited in the vicinity. Impacts associated with the construction of the action would be considered temporary, seasonal, and unmeasurable at a population level scale or to habitat critical to the species, effects of the action are considered discountable. Therefore, the proposed action is "Not Likely to Jeopardize the Continued Existence" of Suckley's cuckoo bumble bee. Should the species be listed before the proposed action is complete, the action may affect but would be "Not Likely to Adversely Affect" Suckley's cuckoo bumble bee.

Monarch butterfly (Danaus plexippus)

No milkweed was observed in the project area; however, monarchs are known to travel through the area during their annual migrations. The interagency Western Monarch Milkweed Mapper (www.monarchmilkweedmapper.org) does not show documentation of milkweed in the project area (Figure 12). Adult monarchs feed on nectar from a wide variety of flowering plants. Several plant species that are important nectar resources are present in and around the project area, and monarchs may be present in the project area for brief periods during their migrations in the summer and fall, but the project area does not provide long-term habitat for monarchs. Potential habitat for monarchs may increase within the project area due to the restoration of riparian habitat and reestablishment of native vegetation. Impacts associated with the construction of the action would be considered temporary, seasonal, and unmeasurable at a population level scale or to habitat critical to the species, effects of the action are considered discountable. Therefore, the proposed action is "Not Likely to Jeopardize the Continued Existence" of Monarch butterfly. Should the species be listed before the proposed action is complete, the action may affect but would be "Not Likely to Adversely Affect" Monarch butterfly.

Combined Effects

Impacts associated with the construction of the Proposed Action and other past, present, and reasonably foreseeable actions identified in the area on T&E species would be considered temporary, seasonal, and unmeasurable at a population level scale or to habitat critical to T&E species. Expected combined effects would be discountable as long as industry standard construction BMPs are implemented and local riparian protection regulations are adhered to.

3.6 Recreation and Aesthetics

3.6.1 Affected Environment

The action area includes 1.3 miles of Warm Springs Creek and the adjacent floodplain and comprises a portion of the larger 65-acre Warm Springs Preserve property owned by the City of Ketchum. The action area has been degraded by stream stabilization, floodplain disturbance and habitat conversion to facilitate past and current land uses. Visitors to the action area currently enjoy a variety of recreational activities, including walking/hiking, birdwatching, wildlife observation, fishing/wading, disc golf, photography, snowshoeing, Nordic skiing, and off-leash dog walking. Visitors utilize the existing broad, open floodplain area for walking,

exercising dogs, and playing disc golf and the project area reach of Warm Springs Creek for fishing and wading. An old, deteriorating concrete irrigation diversion structure is present in the upstream portion of the project area reach. The diversion structure disrupts the natural aesthetic, poses a potential hazard to river users, and requires regular maintenance and associated disturbance to the river channel to maintain irrigation flows.

3.6.2 Environmental Consequences

Alternative A- No Action

Under the No Action alternative, the degraded condition of the Warm Springs Creek channel, streambanks and floodplain would not be addressed, and the requirement for regular maintenance of the irrigation diversion structure would persist and could worsen over time as the structure continues to deteriorate. The structure would continue to pose a potential hazard to creek users. Aesthetically, the stream channel, irrigation control structure, and floodplain would continue to deteriorate and function in an impaired, unnatural state. The lack of habitat and structural diversity on the floodplain would remain.

Alternative B – Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

Under the Proposed Action alternative, the restoration of creek function, and improvement of riparian vegetation conditions would all collectively result in long-term improvements to creek and floodplain function, riparian vegetation, and fish and wildlife habitat. Recreation opportunities would in turn be enhanced. The diversification and enhancement of instream habitat would improve aquatic conditions and result in increased angling opportunities. The improved habitat would support more wildlife and enhance wildlife viewing opportunities. Walking and hiking opportunities would be improved with new trails.

Recreation access to the project area would be restricted during construction, which would have a short-term impact on recreation. The aesthetic experience would also be disrupted on a temporary basis due to a need to control entry into the construction area and due to noise and the visual disturbance of heavy equipment usage that would be experienced by users of the action area and larger preserve. These impacts would be short in duration and would only occur during and shortly after construction. All temporary ground disturbances resulting from construction would be reclaimed at the conclusion of construction. Proposed reclamation and revegetation would return impacted areas to pre-project or better condition. The Proposed Action would result in a beneficial aesthetic impact due to the planting of native vegetation, removal of the irrigation diversion structure, and the establishment of more natural creek channel and streambank characteristics, reconnection of the floodplain, and reestablishment of more abundant and complex riparian and aquatic habitat. In concert with proposed improvements in the Warm Springs Preserve and other habitat restoration and improvement projects in the Warm Springs Creek drainage and nearby reach of the Big Wood River, the proposed project would contribute to an overall improvement of recreation opportunities and uses in the vicinity.

Combined Effects

The combined effects of the Proposed Action and other actions in the vicinity of the project area (discussed in Section 2.6) would result in improved recreation opportunities in the vicinity. Aesthetics associated with the Proposed Action and other habitat restoration projects in the vicinity would be improved due to restoration and revegetation of the area. When combined with expected residential development in the vicinity aesthetic improvements may be negligible.

3.7 Tribal Interests

3.7.1 Indian Trust Assets

Indian Trust Assets (ITAs) are assets legally held in trust by the United States for the benefit of Indian Tribes or individual Indian trust landowners. These assets include trust lands, natural resources, trust funds, and other resources managed by the federal government on their behalf. ITAs include usufructuary rights, such as hunting or fishing access, and they require possessory interest, meaning the asset must be held or owned by the federal government in trust.

The DOI mandates that all impacts to trust assets, including those deemed nonsignificant, be addressed in a trust analysis within NEPA documents. If trust assets are impacted, appropriate compensation and/or mitigation should be implemented.

Affected Environment

No ITAs were identified in the proposed project area during the scoping process. As part of the scoping process, Reclamation researched Tessel, a federal Geographic Information System land database that includes federal lands held in trust for tribes and Individual Indian trust landowners. This research indicated there are no ITAs in the Proposed Action area. The Proposed Action area, including staging areas, are not within a federally owned project or property.

ITAs such as the Shoshone-Bannock Tribes of the Fort Hall Reservation and Shoshone-Paiute Tribes of the Duck Valley Reservation are the closest trusts in proximity to the project area. These trusts are situated approximately 100 miles and 150 miles, respectively, of the project area.

Environmental Consequences

No known ITAs are present within the ground-disturbance APE, and no cultural properties are intervisible with the project area. Therefore, there are no environmental consequences for Alternative A, B, and Combined Effects.

3.7.2 Treaty Rights

Affected Environment

The United States has a fiduciary responsibility to protect and maintain rights reserved by Indian Tribes or Indian individuals by treaties, statutes, executive orders, and allotments, and these rights are sometimes further interpreted through court decisions and regulations. The Proposed Action area is surrounded by areas historically used by several Tribes. Treaty rights potentially affected by the Proposed Action include access and impacts to off-reservation

hunting, fishing, gathering rights, and cultural or ceremonial use rights. Although the Proposed Action would not occur on federally owned land, courts have ruled that members of federally recognized Tribes with reserved treaty rights have the right to cross private or state lands to gain access to treaty areas (United States v. Winans 1905).

The Shoshone-Bannock Tribes of the Fort Hall Reservation are federally recognized Tribes in southeast Idaho; the reservation is situated approximately 100 miles southeast of the Proposed Action area. On July 3, 1868, the Fort Bridger Treaty was signed and agreed to by the Eastern and Western Bands of the Northern Shoshone and the Bannock (or Northern Paiute Bands). Article IV of the treaty states that members of the Shoshone-Bannock Tribes, "...shall have the right to hunt on the unoccupied lands of the United States..." Courts interpreted this to mean "unoccupied federal lands."

In the case of State of Idaho v. Tinno, an off-reservation fishing case in Idaho, the Idaho Supreme Court interpreted the Fort Bridger Treaty of the Shoshone-Bannock Tribes. The Court determined that the Shoshone word for hunt also included to fish. Under Tinno, the Court affirmed the Tribal members' right to take fish off-reservation pursuant to the Fort Bridger Treaty. The Court also recognizes, "that treaty Indians have subsistence and cultural interests in hunting and fishing..." and "The Fort Bridger Treaty ... contains a unified hunting and fishing right, which...is unequivocal." The treaty did not grant a hunting, fishing, or gathering right; it reserved a right the Shoshone-Bannock Tribes have always exercised.

The Shoshone-Paiute Tribes of the Duck Valley Reservation are federally recognized Tribes in southern Idaho and northern Nevada; the reservation is situated approximately 150 miles southwest of the Proposed Action area. The reservation was established by EOs dated April 16, 1877; May 4, 1886; and July 1, 1910. The Shoshone-Paiute sometimes claim the interests of the Tribes that are reflected in the Bruneau, Boise, Fort Bridger, Box Elder, Ruby Valley, and other treaties and EOs that the Tribes' ancestors agreed to with the United States. The Tribes continue to observe these treaties and executive orders in good faith; however, the Federal Government did not ratify treaties that reserved off-reservation hunting and fishing rights. The Tribes assert they have aboriginal title and rights to those areas. All such treaties and executive orders recognize the need for the Tribes to continue to have access to off-reservation resources because most of the reservations established were and continue to be incapable of sustaining Tribal populations. This need continues and has not diminished from the time of the first treaties and EOs that established the Duck Valley Reservation (Cherokee Nation of Oklahoma and Shoshone-Paiute Tribes of the Duck Valley Reservation v. Leavitt 2005).

Environmental Consequences

The United States Supreme Court has ruled that treaties with Indian Tribes are to be construed liberally in favor of Tribes, as the Tribes would have understood the language of the treaty at the time the treaty was signed. It is likely that the ratified or unratified treaties listed above include areas surrounding the Big Wood River including the Proposed Action area.

Alternative A – No Action

Under the No Action alternative, Reclamation would not approve the request to rehabilitate riverine, riparian, floodplain, and irrigation function of the project area reach of Warm Springs

Creek by providing reimbursable funding through a WaterSMART Water and Energy Efficiency grant. There would be no short-term or long-term effects, either beneficial or adverse to existing reserved Treaty Rights for Tribal hunting, fishing, or gathering in traditional or customary places or for livestock grazing in the area.

Alternative B – Warm Springs Preserve Stream Restoration and Irrigation Improvement Project (Proposed Action)

Under the Proposed Action, Reclamation would restore aquatic habitat within the existing creek channel, create new side channels, enhance floodplain connectivity and flood conveyance, and reestablish native plant communities. Closures during the proposed construction period may cause a temporary, short-term adverse effect on access to traditional or customary hunting, fishing, or gathering sites.

Reclamation requested information from the Shoshone-Bannock Tribes of the Fort Hall Reservation, the Burns Paiute Tribe, and the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation, who traditionally and currently use the area for hunting, fishing, and gathering of plants; however, no responses were received. The lack of specific information about the area is not indicative of a lack of importance to Tribes. With no specific response, Reclamation assumes that there would be no adverse effects to reserved Treaty Rights, such as access or impacts to areas for hunting, fishing, or gathering.

Combined Effects

The combined effects of the Proposed Action and other actions in the vicinity of the project area (discussed in Section 2.6) are expected to be negligible.

3.8 Cultural Resources

This section includes an evaluation of the potential impacts to cultural resources that could result from project implementation. Cultural resources may include archaeological traces, such as Native American occupation sites and artifacts; historic-era buildings and structures; and places used for traditional Native American observances or places with special cultural significance.

Cultural resources were investigated within the project area, which is equivalent to the Area of Potential Effect (APE) defined by the Section 106 process of the National Historic Preservation Act. The Section 106 process is required only for Alternative B. Section 106 does not deal with impacts on all types of cultural resources, or all cultural aspects of the environment; it deals only with impacts on properties included in or eligible for the National Register of Historic Places (NRHP). This section addresses all cultural resources in the project area, regardless of eligibility, as required by NEPA.

3.8.1 Affected Environment

Cannon Heritage Consultants, Inc. (CHC) completed an extensive cultural resource inventory in May of 2024. Results of this inventory identified that previous research documented 136 cultural resources within one mile of the APE. These identified cultural resources included 16

properties eligible for or listed on the NRHP, 11 unevaluated resources, and 109 ineligible resources. Most of these recorded resources are buildings and structures within Ketchum. Three previously recorded cultural resources were identified within the ground-disturbance APE: a bridge, a barn, and a mine adit. Each of these resources was determined to be ineligible for the NRHP, but an attempt to locate the resources to ensure no change in NRHP status was needed. The three sites located within the APE are discussed in more detail below.

10BN1254 – Warm Springs Mining Adit

This site was recorded in 2004 as part of the Warm Springs Ranch SHPO survey. According to past surveys, the adit consisted of a short tunnel into solid rock. No historic information was located for the adit.

10BN2426 – Warm Springs Creek Bridge

This site was recorded in 2004 as part of the Warm Springs Ranch SHPO survey. At the time, the bridge, built in the 1960s, provided access to the golf course on the property. The bridge was constructed using salvaged materials, including steel beams with US military markings and featured a single-span design with concrete footings, a wooden deck, and steel longitudinal beams reinforced by I-beam cross supports. This site was considered not eligible for the NRHP.

10BN2459 – Warm Springs Ranch Barn

This site was recorded in 2004 as part of the Warm Springs Ranch SHPO survey and was built in 1978. According to information in the resource record, the barn was constructed on a concrete foundation and was wood framed with a shake roof. This site was considered not eligible for the NRHP.

Cultural Resources Field Investigations

An intensive cultural resources survey was completed within the APE on May 6-7, 2024. Transects were surveyed at a 15-meter interval and primarily oriented north to south. The purpose of the survey was to locate each previously identified site within the APE and isolated features and obtain photographs of the site location. Photographs of the APE and cultural resources were taken with a digital camera.

10BN1254 – Warm Springs Mining Adit

The survey was unable to locate the Warm Springs Mining adit due to dense vegetation and unsafe survey conditions. No newly discovered records or additional artifacts were observed at or near the location mapped for this resource. This site was considered not eligible for the NRHP.

10BN2426 – Warm Springs Creek Bridge

This bridge was constructed in the 1960s and was a single-span bridge with concrete footings on each streambank. During the Survey, the team located the remaining concrete bridge footings. The wooden bridge deck is no longer present, and therefore there are no historic features at this site. The footings appear to be in the same location as previously documented.

10BN2459 – Warm Springs Ranch Barn

The previous location of the barn was surveyed, but no evidence of the barn or its construction was found. Based on this finding, the resource is no longer extant.

Isolated Cultural Feature-Historic Pit Feature

The survey resulted in the locating of an isolated pit feature that most likely is a relic of a mining prospect. No artifacts were found in association with this feature.

3.8.2 Environmental Consequences

Impacts from potential project activities to cultural resources were measured according to their potential to reduce or eliminate the property's historical significance. Identification and research of the cultural resources included identification of significance criteria. These criteria comprise the historical importance and integrity of the resources, and a reduction or loss of these criteria would be considered adverse to the cultural resource. For this analysis, the evaluation performed during the Section 106 process to identify adverse effects was used as an equivalent method for evaluating adverse impacts. These impacts are evaluated in terms of their context and the intensity of their effects to the cultural resource.

The following indicators, consistent with federal regulations for the protection of historic properties (36 CFR 800) and treatment of historic properties (36 CFR 68), were used to assess impacts to cultural resources for this analysis.

- Physical destruction of or damage to all or part of the resource
- Alteration of a resource, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's standards for the treatment of historic properties (36 CFR 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

Alternative A – No Action

Reclamation has identified 4 cultural resources within the ground-disturbance APE: a bridge, a barn, a mine adit, and an isolated historic pit feature. Under the No Action alternative, Reclamation would not impact any of these features. The bridge deck is no longer present so would not be impacted. The bridge abutments would continue to degrade over time. The barn is no longer present and would not be affected. The mine adit and isolated pit feature would continue to persist and degrade over time.

Alternative B – Proposed Action

Under the Proposed Action alternative, the applicant would remove the old bridge abutments and restore and revegetate the streambanks in the footprint of the abutments. The bridge site was considered not eligible for the NRHP because it was not 50 years old at the time of recording, and Reclamation has determined that the abutments do not contribute to the historic significance of the action area due to loss of integrity. The Proposed Action would not impact the barn, mine adit, or open pit features.

Combined Effects

The combined effects of the Proposed Action and other actions in the vicinity of the project area (discussed in Section 2.6) would result in the removal of the bridge abutments and would not impact the barn, mine adit, or open pit features. The historic significance of the action area would not be impacted.

3.9 Indian Sacred Sites

3.9.1 Affected Environment

Evidence of human occupation in south-central Idaho dates back approximately 14,500 years. The region shares three major prehistoric cultural periods with southeastern Idaho including: Early Prehistoric Period (16,500–7,500 BP), Middle Prehistoric Period (7,400–1,300 BP) and Late Prehistoric Period (1,300–150 BP).

These periods reflect a transition from a highly mobile lifestyle based on hunting and gathering to a more settled existence with intensified use of key resources. The project area lies within the Snake River Basin, which was historically utilized by the Shoshone and Bannock Tribes for food gathering, hunting, fishing, trade, and ceremonial activities. While little physical evidence of precontact use exists within the immediate project area, the Big Wood River Drainage served as a vital travel corridor linking the Snake River Basin to the Sawtooth Mountains. This area was part of the ancestral homeland of the Northern Shoshone and Bannock peoples.

The Shoshone and Bannock Tribes of the Fort Hall Reservation represent two linguistically distinct groups with a debated historical presence in southern Idaho. Their subsistence patterns mirrored those of other Great Basin cultures, relying on a diverse range of resources, including roots, berries, nuts, small mammals, insects, large game, and fish. By the early 1800s, with the introduction of horses, these Tribes expanded their ability to hunt bison and engage in trade.

There are no known Indian Sacred Sites within or near the project area.

3.9.2 Environmental Consequences

No Indian Sacred Sites have been identified in or near the project area. Therefore, there are no environmental consequences for Alternative A, B, and Combined Effects.

Chapter 4 Consultation and Coordination

On August 7 and 16, 2024, Reclamation mailed scoping documentation including a letter,

project information, and a map to agencies, Indian Tribes, organizations, and individuals, soliciting assistance with identifying any issues and concerns related to the Proposed Action. The applicant also sent out scoping documentation to 1,160 community members on September 3, 2024. Reclamation received 6 written comments from the scoping period, many of which were letters to express support for the proposed project. Topics of concern that were brought to Reclamation's attention by commenters included: the potential impacts of off-leash dogs on water quality in Warm Springs Creek; the potential impact on flows in Warm Springs Creek; the potential for spread of noxious weeds; and the potential for increased traffic and parking in adjacent neighborhoods. Comments received from this scoping solicitation were addressed or incorporated into the Final EA. The mailing list, scoping letters, and comments received are included in Appendix C.

Reclamation received a Freedom of Information Act (FOIA) request (R24AP00079) on October 11, 2024 requesting any and all information regarding emails from the following domains: @ketchumidaho.org, @woodriverlandtrust.org, and @warm Springspreserve.org. Snake River Area Office responded with said information on October 23, 2024.

4.1 Agency Consultation and Coordination

4.1.1 National Historic Preservation Act

Reclamation initiated consultation with the Idaho State Historic Preservation Office (SHPO) on August 28, 2024. SHPO concurrence with Reclamation's finding of No Adverse Effect to Historic Properties for the project area was received on September 16, 2024. This concurrence was conditional, requiring that Reclamation develop an Inadvertent Discovery Plan which would provide direction for the immediate cessation of work in the event cultural material is inadvertently encountered during project implementation. The applicant has signed the Inadvertent Discovery Plan document acknowledging receipt and ensuring appropriate implementation of the terms therein prior to Reclamation's disbursement of grant funds. Reclamation's findings, communications with the SHPO, and the signed Inadvertent Discovery Plan are included in Appendix D.

4.1.2 Endangered Species Act

Per Section 7 of the ESA, formal consultation with USFWS is required for any action that is determined likely to adversely affect any species listed as Threatened or Endangered. Candidate and Proposed species receive no statutory protection under the ESA; however, USFWS encourages cooperative conservation efforts for these species because they are, by definition, species that may warrant future protection.

Reclamation determined the Proposed Action would have no effect on the Canada lynx and North American wolverine, and would not Jeopardize the Existence of the proposed species, Monarch butterfly or Suckley's Cuckoo bumble bee. Consequently, no formal Section 7 consultation was required for this project. However, due to the uncertainty surrounding potential formal listing of the proposed species, informal conferencing with the USFWS was conducted as part of Reclamation's assessment.

4.1.3 Clean Water Act

The applicant would apply for all relevant city, state and federal permits necessary for working in Warm Springs Creek before construction occurs. These include a 404 permit from the U.S. Army Corps of Engineers, a 401 Water Quality Certification from IDEQ, a stream channel alteration permit from IDWR, and others. Any other construction-related permits determined to be necessary, such as an Idaho Pollutant Discharge Elimination System Program permit from IDEQ for stormwater runoff, would also be obtained by the applicant.

4.1.4 Tribal Consultation and Coordination

On August 7, 2024, Reclamation mailed scoping letters to representatives of the Shoshone-Bannock Tribes of the Fort Hall Reservation, Burns Paiute Tribe, and the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation, who traditionally and currently use the area for hunting. No responses or concerns from the Tribes were brought forward during the scoping period or in response to Reclamation's invitation to consult. The invitation to consult, scoping information provided, and associated FedEx confirmations of mailing are included in Appendix E.

Chapter 5 References

Text Citation	Bibliographic Reference
Center for Biological Diversity 2020	Center for Biological Diversity. 2020. Petition to list Suckley's cuckoo bumble bee (<i>Bombus suckleyi</i>) under the Endangered Species Act and concurrently designate critical habitat. 43 pp.
IDEQ 2017	Idaho Department of Environmental Quality. 2017. Big Wood River Watershed Management Plan TMDL 5-Year Review. Idaho Department of Environmental Quality, Twin Falls Regional Office, Twin Falls, ID 83301.
IDEQ 2002	Idaho Department of Environmental Quality. 2022. Idaho's 2022 Integrated Report Final. April 2022.
IDFG 2025	Idaho Department of Fish and Game. 2025. Canada lynx - Idaho Species Description and Occurrence. Idaho Department of Fish and Game species website. Available online at: https://idfg.idaho.gov/species/taxa/16860 (last accessed April 21, 2025).
IDFG 2025a	Idaho Department of Fish and Game. 2025. North American Wolverine - Idaho Species Description and Occurrence. Idaho Department of Fish and Game species website. Available online at: https://idfg.idaho.gov/species/taxa/17557 (last accessed April 21, 2025).
Pierce and Scott 1982	Pierce, K., and Scott, W. 1982. Pleistocene episodes of alluvial gravel deposition, southeastern Idaho. Idaho Bureau of Mines and Geology Bulletin 26. 685-702.
Ruedinger et al. 2000	Ruediger, Bill, Jim Claar, Steve Gniadek, Bryon Holt, Lyle Lewis, Steve Mighton, Bob Naney, Gary~Patton, Tony Rinaldi, Joel Trick, Anne Vandehey, Fred Wahl, Nancy Warren, Dick Wenger, and A1 Williamson. 2000. Canada Lynx Conservation Assessment and Strategy. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Service Publication #R1-00-53, Missoula, M~F. 142 pp.
The Wolverine Foundation 2012	Central Idaho Wolverine and Winter Recreation Research Study Project Update Report. Report by the Wolverine Foundation. 4pp.
USFWS 2024	US Fish and Wildlife Service. 2024. Monarch Butterfly (<i>Danaus plexippus</i>) Species Status Assessment Report, version 2.3. December 2024. 151 Pp.

Appendices

Appendix A – Rio ACE 95% Restoration Design Plans

Appendix B – IPaC Report (ESA)

Appendix C – Scoping Information and Comments Received

Appendix D – SHPO Correspondence and Inadvertent Discovery Plan

Appendix E – Record of Tribal Consultation and Coordination