



— BUREAU OF —
RECLAMATION

Draft Environmental Assessment New York Canal Lining Project

Ada County, Idaho
Columbia-Pacific Northwest Region



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: The New York Canal, empty of water (Reclamation photo by Jennifer Rilk)

Acronyms and Abbreviations

Acronym or Abbreviation	Definition
ACHD	Ada County Highway District
APE	Area of Potential Effect
B.P.	Before Present
BPBOC	Boise Project Board of Control
cfs	Cubic feet per second
Canal	New York Canal
CFR	Code of Federal Regulations
CHP	Canal Hazard Program
D&S	Directives and Standards
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
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
MOA	Memorandum of Agreement
MSFO	Middle Snake Field Office
NEPA	National Environmental Policy Act
PAR	Population at Risk
Reclamation	Bureau of Reclamation
SBWC	South Boise Water Company
SHPO	State Historic Preservation Office
TMDL	Total Maximum Daily Load
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
WEEG	Water and Energy Efficiency Grant

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Table of Contents

Acronyms and Abbreviations	i
Chapter 1 Purpose and Need	1
1.1 Introduction	1
1.2 Location and Background	1
1.2.1 Location and Background.....	1
1.3 Purpose and Need.....	2
1.4 Regulatory Compliance.....	3
1.5 Scoping Summary	4
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 – Reline the New York Canal (Proposed Action)	5
2.4.1 Staging Areas.....	7
2.5 Alternatives Considered but Eliminated from Further Study.....	9
2.6 Past, Present, and Reasonably Foreseeable Actions Considered for Cumulative Effects	9
2.6.1 Boise Airport Runway Incursion Mitigation Program and Related Improvements	10
2.6.2 Community Development Actions	10
2.6.3 Ada County Highway District 2022-2026 Integrated Five Year Work Plan	12
Chapter 3 Affected Environment and Environmental Consequences	13
3.1 Introduction	13
3.2 Hydrology and Groundwater Resources	13
3.2.1 Affected Environment.....	13
3.2.2 Environmental Consequences.....	14
3.3 Public Safety and Property.....	19
3.3.1 Affected Environment.....	19
3.3.2 Environmental Consequences.....	19
3.4 Groundwater Utilities	20
3.4.1 Affected Environment.....	20
3.4.2 Environmental Consequences.....	24

3.5	Water Quality	26
3.5.1	Affected Environment.....	26
3.5.2	Environmental Consequences.....	27
3.6	Environmental Justice and Socioeconomics	28
3.6.1	Affected Environment.....	28
3.6.2	Environmental Consequences.....	32
3.7	Biota – Vegetation, Wetlands, Fish and Wildlife	32
3.7.1	Affected Environment.....	32
3.7.2	Environmental Consequences.....	34
3.8	Threatened and Endangered Species.....	35
3.8.1	Introduction and Analysis Area.....	35
3.8.2	Affected Environment.....	35
3.8.3	Environmental Consequences.....	37
3.9	Cultural Resources.....	37
3.9.1	Affected Environment.....	37
3.9.2	Environmental Consequences.....	39
3.10	Indian Sacred Sites	41
3.10.1	Affected Environment.....	41
3.10.2	Environmental Consequences.....	42
3.11	Tribal Interests.....	42
3.11.1	Indian Trust Assets.....	42
3.11.2	Treaty Rights	44
3.12	Greenhouse Gas Emissions.....	46
3.12.1	Affected Environment.....	46
3.12.2	Environmental Consequences.....	48
Chapter 4	Consultation and Coordination	49
4.1	Agency Consultation and Coordination	49
4.1.1	National Historic Preservation Act.....	49
4.1.2	Endangered Species Act.....	49
4.2	Tribal Consultation and Coordination.....	49
Chapter 5	References	50
Appendices	53

List of Figures

Figure 1. Photographs of residential areas within the proposed 6-mile lining/relining segment of the New York Canal. The photograph on the left illustrates a high embankment in relation to a residential area. The photograph on the right shows the top of the New York Canal embankment looking down toward a residential area.....	3
Figure 2. Canal cross-section with cutaway of Huesker liner	6
Figure 3. Project location and staging areas.....	8
Figure 4. Major staging area near the west entrance to the BPBOC yard.....	9
Figure 5. Map showing the 6-mile section of the New York Canal that would be lined, the modeled potential extent and magnitude of groundwater reductions in the unconfined aquifer, and the locations of wells. Well locations are subject to the accuracy of the source data (https://data-idwr.hub.arcgis.com/datasets/IDWR::wells ; accessed February 28, 2023).....	16
Figure 6. Veolia service area map	21
Figure 7. Known permitted wells within the APE from the IDWR GIS database	23
Figure 8. Wells that are not serviced by Veolia, shown within contour lines of possible change in groundwater level after the Proposed Action.....	25
Figure 9. Map of sole source drinking water wells.....	26
Figure 10. The Climate and Economic Justice Screening Tool shows the project area, the location of overburdened and underserved census tract 16001001700, and the section of the New York Canal that is proposed to be lined	31
Figure 11. A stretch of the New York Canal during a period when it has been dewatered. The photograph shows the adjacent gravel access road. This location is just east of where the proposed lining would begin. This view is facing east and shows a segment of canal where lining has already been installed.	33
Figure 12. Map of Native American lands compared to the project location.....	44

List of Tables

Table 1. Estimated types and numbers of wells within the area potentially having 5 or more feet of water table reduction.....	17
Table 2. Well drawdown information relevant to Figure 8.....	25
Table 3. 2021 Summary of racial and ethnic minority distribution in Idaho, Ada County, and the City of Boise (U.S. Census Bureau 2022).....	29
Table 4. 2021 income and poverty status and 2020 unemployment status for Ada County, the State of Idaho, and the City of Boise	29
Table 5. Equipment usage for 1-mile section of canal lining	47

Appendices

Appendix A – Technical Memorandum: New York Canal 6-Mile Relining Groundwater Modeling of Potential Effects

Appendix B – Information for Planning and Conservation Report

Appendix C – Cultural Resources and Sacred Sites Consultation with State Historic Preservation Office and Shoshone-Bannock Tribes

Appendix D – Scoping Documents, Mailing List, and Scoping Comments Received

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). This EA analyzes the potential environmental effects that could result from the proposed construction activities associated with a 6-mile section of the federally owned New York Canal. Specifically, the construction project proposes to fund the lining of a portion of canal that has not been lined before and relining a portion of canal.

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 additional alternatives are described in Chapter 2 of this document, and the effects (short-term and long-term, adverse and beneficial, and public health and safety and effects that would violate federal, state, tribal, or local laws protecting the environment) 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 discretionary 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 and Background

1.2.1 Location and Background

The New York Canal (canal) is 41 miles long and conveys water from the Boise River westward toward Lake Lowell in Nampa, Idaho. The canal provides irrigation water to about 165,000 acres in the Boise Valley. Construction of the canal began in the late 1800s and was enlarged between 1909 and 1912 by Reclamation. Pursuant to contracts executed in 1926, Reclamation transferred operation, care, and maintenance of the canal to the five irrigation districts receiving water from it, with the Boise Project Board of Control (BPBOC) established as the districts' operating agent. This is commonly referred to as "transferred works". The canal's current operating capacity is approximately 2,450 cubic feet per second (cfs). The United States owns the New York Canal and holds legal title to the project water rights used to divert water into the canal.

As the operating agent for five irrigation districts (Boise-Kuna Irrigation District, Big Bend Irrigation District, Nampa and Meridian Irrigation District, New York Irrigation District, and Wilder Irrigation District), the BPBOC's purpose is to manage the irrigation facilities and other works transferred by Reclamation to these five irrigation districts and to deliver water to their landowners. BPBOC has a robust maintenance program and has lined and relined several short canal segments as part of their typical and normal maintenance activities. The relined canal sections have usually been between 300 and 600 feet in length and the work was funded by grants that could fund only the

construction of short segments. The proposed 6-mile canal lining would allow BPBOC to maintain and improve a significant portion of canal's structural integrity.

Canal safety and reliability are of utmost importance when considering operation and maintenance activities and become even more important in urbanized areas. Urbanization in the areas adjacent to the canal has increased rapidly, with Boise's annual growth rate of 1.26 percent and a growth of 2.55 percent since the last census making it the 15th fastest growing city in the United States (World Population Review 2023). The risk to populated areas from a canal failure event is increasing due to increasing urbanization. Reclamation Manual Directives and Standards (D&S) FAC 01-12 Canal Hazard Program (CHP) identifies requirements and procedures to inventory and inspect canal reaches in urban areas. The CHP is intended to identify potential risks through inspections and to minimize the risk to public safety, welfare, and property damage through recommendations. The 6-mile canal segment has been identified as "at-risk" by CHP due to its proximity to populated areas and other risks associated with canal integrity. The proposed canal lining would provide an increase in safety for the surrounding public and increased conveyance reliability.

1.3 Purpose and Need

Reclamation proposes to provide funding through the WaterSMART (Sustaining and Managing America's Resources for Tomorrow) Water and Energy Efficiency Grant (WEEG) and an extraordinary maintenance loan under Public Law 11-11 from Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law for BPBOC to install a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete. The purpose and benefits from the proposed project are:

- Conserving water supplies
- Enhancing dependability of water delivery to all patrons including urban water users, thus reducing the need to rely on more expensive treated water
- Safeguarding property and people by decreasing the risk of seepage and embankment failure
- Preserving the estimated \$600 million per year agricultural benefit and the related employment and other secondary benefits by reducing the risk of interruption of deliveries

The proposed project is needed because the New York Canal is a critical piece of infrastructure in the Treasure Valley. It currently experiences irrigation water loss through seepage. This seepage loss is a significant inefficiency in the irrigation system. A 1997 United States Geological Survey (USGS) study (Berenbrock 1999) estimated that seepage loss from lined, and some unlined portions of the canal have been up to 8.9 cfs per mile, or approximately 34,800 acre-feet per year. Seepage loss estimates from Reclamation for 2022 and 2023 are 29,270 and 41,980 acre-feet per year, respectively (Appendix A).

This 6-mile section in the upper region of the 41-mile canals total length is prioritized for lining due to its tall and narrow embankment. Examples of the steep sloped areas and residential communities immediately below the canal are shown in Figure 1. A failure at any point within this 6-mile section

would result in the greatest flood damage to adjacent landowners and would be the hardest to repair in a rapid manner. The canal is in good overall condition, but a canal breach at any point within this 6-mile section would result in the greatest flood damage to adjacent landowners and be the hardest to repair in a rapid manner.

It is also important to note that Idaho law allows a canal owner to line its canal to reduce or eliminate waste or seepage. Relining the canal in these areas with a more substantial lining system would significantly reduce both public safety risk and seepage.¹



Figure 1. Photographs of residential areas within the proposed 6-mile lining/relining segment of the New York Canal. The photograph on the left illustrates a high embankment in relation to a residential area. The photograph on the right shows the top of the New York Canal embankment looking down toward a residential area.

1.4 Regulatory Compliance

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

- NEPA
- Endangered Species Act (ESA)
- National Historic Preservation Act
- Clean Water Act
- Executive Order 13007 Indian Sacred Sites

¹ See generally: Jeffrey C. Fereday, Christopher H. Meyer, and Michael C. Creamer, *Water Law Handbook: The Acquisition, Use, Transfer, Administration, and Management of Water Rights in Idaho* (March 1, 2022) at 211-12.

- Executive Order 12898 Environmental Justice
- Executive Order 13175 Consultation and Coordination with Tribal Governments
- Secretarial Order 3175 Department Responsibilities for Indian Trust Assets (ITAs)
- Secretarial Order 3398 Revocation of Secretary’s Orders Inconsistent with Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis
- Section 8 of the Reclamation Act 43 U.S.C. §§ 372 & 383

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 by mailing an information package, hosting a public open house, and soliciting 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, the No Action alternative; and Alternative B, the Proposed Action alternative.

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 the issues raised during internal, external, and tribal scoping. The alternatives analyzed in this document include the No Action alternative and the Proposed Action alternative to reline a 6-mile segment of the New York Canal. A no-action alternative is evaluated because it provides an appropriate baseline to which the other alternative is compared. No new alternatives were identified during the scoping process. A summary of alternatives considered but not carried forward can be found in Section 2.5.

2.3 Alternative A – No Action

Under the No Action alternative, Reclamation would not approve the request to perform maintenance by providing reimbursable funding through Reclamation’s Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law. Maintenance and operations would continue to occur on the New York Canal as they have previously. It is likely that short (300-600 foot) canal segments would continue to be lined via other funding means (WaterSMART grants, etc.) over a period of many years, as funding becomes available. However, for the purpose of this analysis, the assumption is that the project would not go forward under the No Action alternative. The environmental effects associated with taking no action can be compared to the other alternatives as required under NEPA.

2.4 Alternative B – Reline the New York Canal (Proposed Action)

Reclamation proposes to approve reimbursable funding in the form of an extraordinary maintenance loan through Reclamation’s Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law and a WaterSMART WEEG Grant for the BPBOC. The BPBOC applied for an extraordinary maintenance loan under Public Law 111-11 in the amount of \$50 million for 6 miles of canal work. This loan would be repaid over a 30-year repayment term and is 100% reimbursable with interest. While BPBOC was only awarded part of the requested amount, they entered into Contract 22-XM-

102189 to pay for the environmental compliance work and cultural resource work for the entire 6 miles of work. The contract recognizes that BPBOC may seek additional federal funds under Public Law 111-11 or other authorizations, some of which may be more favorable to BPBOC. This EA would cover the canal work for the 6-mile section under all sources of funding.

The project includes installing a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete, known as Huesker liner (Figure 2). Installation of the lining would occur when the canal is dewatered during the non-irrigation season. This season is typically from October to March each year. Recognizing there are circumstances that could be outside the contractors' control, the project is expected to begin in 2024 and to be completed by 2032.

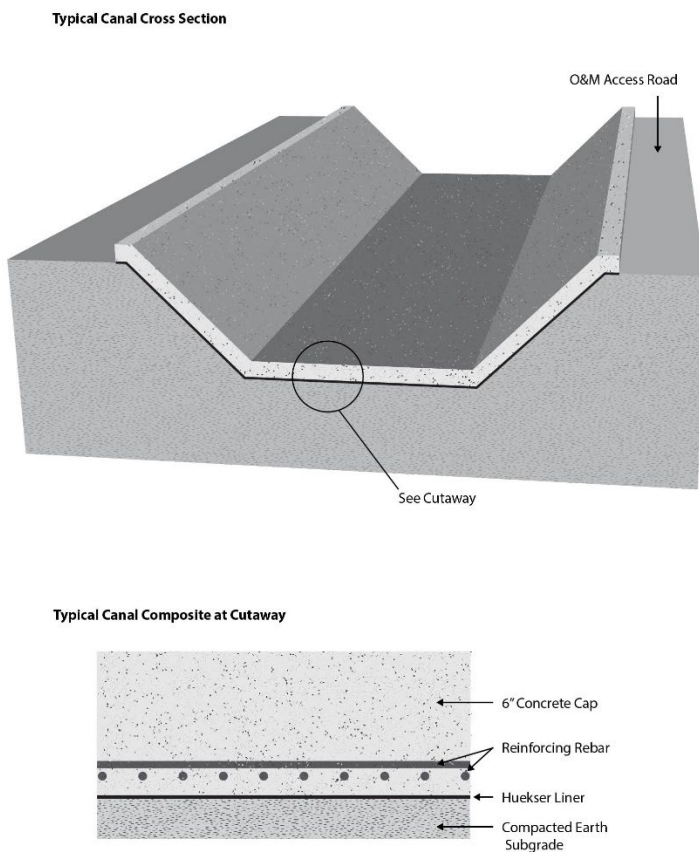


Figure 2. Canal cross-section with cutaway of Huesker liner

Construction would begin with the removal of any existing lining. Medium sized track excavators, such as Caterpillar 374s, would be used to break and load existing concrete lining into trucks to be hauled away. These same excavators would shape the canal prism to final dimensions and grade. Standard trucks with 10-cubic-yard dump beds would be used to shuttle broken concrete and subbase material on- and off-site. The canal subbase would be evaluated for adherence to compaction requirements. If needed, the subbase would be over-excavated and proper material

would be brought in and compacted to the specified density utilizing sheep's foot and smooth roller compactors. Once prism geometry and subbase are finalized and approved, the geomembrane liner would be laid transverse on the wall sections and in the canal invert with the appropriate overlap per the manufacture's suggestion. Once the geomembrane is laid down, steel reinforcing would be placed with proper bar spacing. Wood forms would be placed up the canal walls at a spacing of approximately 20 feet.

Concrete would be placed on the walls in a checkerboard fashion to reduce future cracking. Prior to placement, a rubber water stop would be installed to prevent water from penetrating the construction joint. Concrete would be placed with a standard concrete pump truck. The concrete would be manually finished using screeds, power trawls, and hand trawls. Care will be taken to control for environmental conditions such as temperature. If necessary, cold weather precautions would be followed, such as heating the ground prior to the pour and placing blankets on the freshly placed concrete to retain heat. The specific concrete mix will meet industry standards with the proper amount of air entrainment and water content. It is anticipated that canal preparation would take approximately two-thirds of the construction window. The types of heavy equipment to be used would typically involve excavators, dump trucks, and miscellaneous equipment such as mini-excavators, water trucks, and backhoes. The last third of the construction window would consist of placing and finishing the concrete. Typical heavy equipment used for this task would be concrete and pump trucks.

2.4.1 Staging Areas

Two major staging areas would be used by the proponent for storage of materials and equipment (see Figure 3). These staging areas (see Figure 4) would be used to store heavy equipment and materials for construction. Multiple minor staging areas would be used within the right-of-way of the canal for access and day-use staging and storage of materials and equipment.

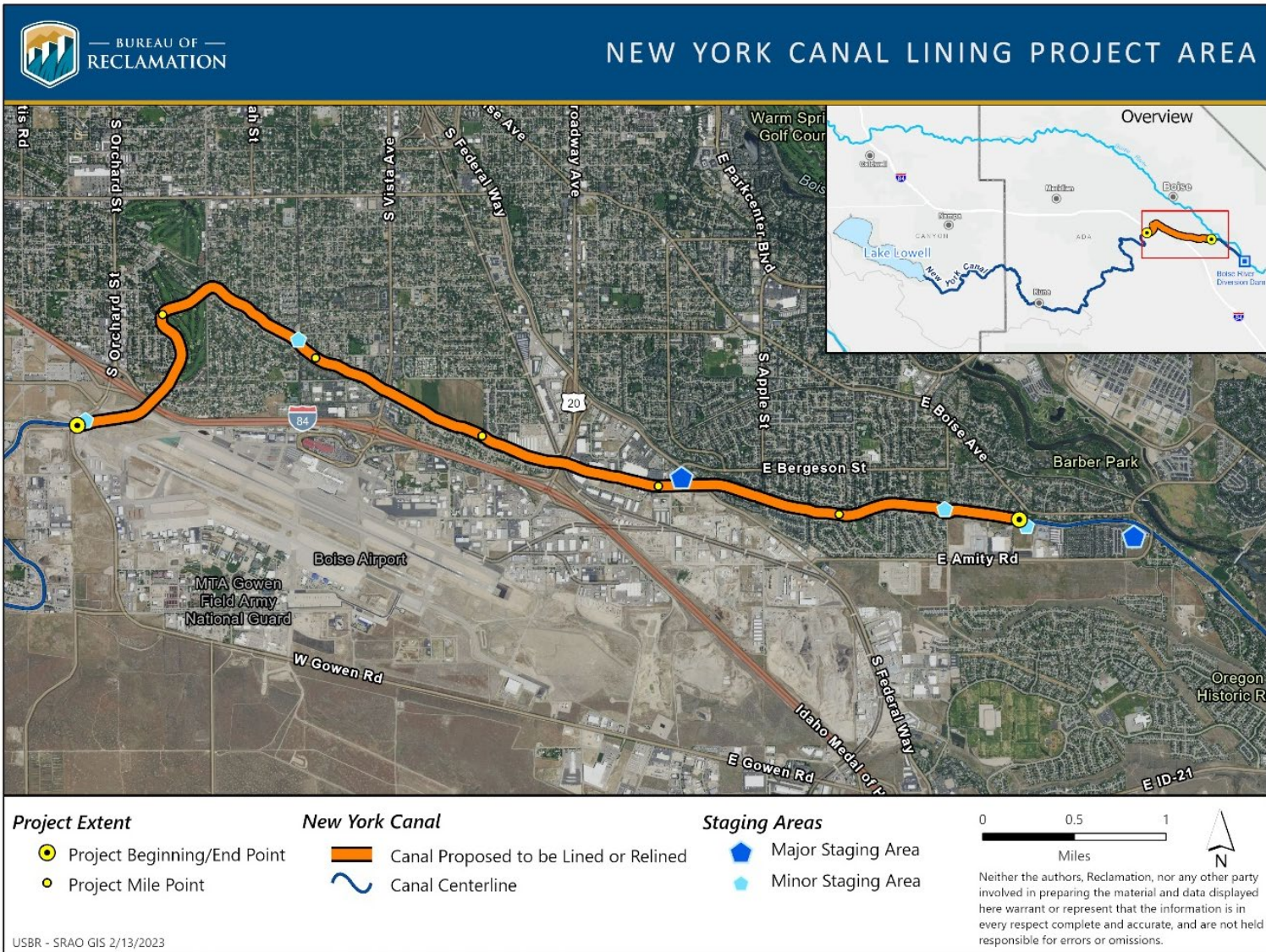


Figure 3. Project location and staging areas



Figure 4. Major staging area near the west entrance to the BPBOC yard

2.5 Alternatives Considered but Eliminated from Further Study

NEPA encourages the consideration of 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 additional alternatives developed through the public and agency scoping process.

2.6 Past, Present, and Reasonably Foreseeable Actions Considered for Cumulative Effects

Cumulative Effects are defined in 40 CFR 1508.1 (g)(3) as the reasonably foreseeable effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

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 project.

The New York Canal would likely continue to have 300–600-foot segments lined or relined as funding allows. Future canal lining projects would occur downstream from where the proposed 6-

mile canal section ends. There is also short canal section between the Boise Diversion Dam and where this proposed 6-mile canal section begins that new lining could be installed to provide water savings and increased water delivery reliability.

Reclamation's Middle Snake Field Office (MSFO) oversees lands and realty actions in accordance with 43 CFR Part 429, "Use of Bureau of Reclamation Land, Facilities, and Waterbodies," which includes administering Use Authorizations for crossings and encroachments inside of Reclamation easements or over Reclamations facilities. An MFSO Realty Specialist analyzed any planned or possible realty actions along the project area of the canal between E. Boise Avenue and S. Orchard Street in Boise, Idaho. The analysis identified few, if any, foreseen realty actions approved along that section of the canal in the next 5 years. The project area is highly urbanized and developed, and most of the public utilities and their associated crossings are already in place. The canal is a critical piece of infrastructure and is the Treasure Valley's main water delivery source. Due to the critical nature of this infrastructure and related safety concerns, Reclamation does not allow crossings under the canal, necessitating that any future utility crossings must be attached to current bridges or overhead utility lines. Similarly, Reclamation would not permit additional encroachments along the 6-mile section due to the limited space we have for operations and maintenance along the canal.

2.6.1 Boise Airport Runway Incursion Mitigation Program and Related Improvements

The Boise Airport is seeing an increase in demand on their services and a lack of capacity for the current and future growth occurring in the Treasure Valley and surrounding areas. In 2010, a Master Plan was completed for future expansions and improvements on the Boise Airport which was last updated in 2019. This Master Plan Update has a summary of key recommendations which include long-term development of all functional areas of the airport, including runways, taxiways, passenger terminal, general aviation, support facilities, and ground access.

The removal and/or relocation of various taxiways and relocation and extension of runways, lighting, and instrumentation are key focus areas of the updated master plan. Expanded passenger terminal facilities is another primary area of focus for the Boise Airport. Further information on these plans can be found at https://www.iflyboise.com/media/1588/boi-mpu_full-report_final-sm.pdf. A draft EA is expected to be released for public comment in early spring 2024.

2.6.2 Community Development Actions

The City of Boise's Community Development Tracker tool was used to account for developments taking place near the project area. This tool is still in the testing stage but is useful for basic information related to actions occurring near the project area; it can be accessed at <https://www.cityofboise.org/departments/planning-and-development-services/planning-and-zoning/zoning-code-rewrite/community-development-tracker>.

- Mcleod Storage on S. Cole Road – The proposed project is a 26,668 square foot storage facility providing neighbors and visitors with covered, conditioned, and unconditioned storage options.

- Pioneer Federal Credit Union on W. Overland Road – The project proposes to improve the existing site to add more parking and an automated teller machine drive-through lane. Additional improvements include demolition of the existing drive-through lane on the north side of the bank.
- Giraffe Laugh on S. Orchard Street – The proposed project is to construct a single-story, 6,395 square foot child care facility with related site improvements.
- Whitney Baptist Church on W. Dorian Street – The proposed project would improve the existing exterior entry plaza and Americans with Disabilities Act ramp to include larger usable space adjacent to the main entrance.
- S. Manitou Avenue – Proposal to build two residential homes.
- Idaho Power Distribution Center on E. Amity Road – Proposal for modification of site elements.
- Seasons on the Bench Multi-Family Housing Community on W. Victory Road – The proposed project would construct a 354-unit apartment complex.
- Vista Point on W. Victory Road – The project site currently consists of vacant land on approximately 44 acres. Vista Point will include 800 rental residential units, ranging from studio apartments to 4-bedroom homes, with a mix of single-family detached, townhome-style attached, and podium apartments. The proposed multi-family use is consistent with Blueprint Boise, compatible with surrounding uses, and adequately served by existing utilities and city services.
- Vista Apartments and Hotel on S. Vista Avenue – Two five-story apartment buildings would be constructed with underground parking. The project would include 5 studio, 115 one-bedroom, 60 two-bedroom, and five three-bedroom units, totaling 255 bedrooms across 180 apartments. Additionally, two existing hotels on the property would be demolished and replaced with a newly constructed 222-room hotel with amenities including a restaurant, pool, gym, and meeting space. A Hindu temple would be added to the end of the hotel as well.
- Del Taco on S. Vista Avenue – The project proposes to renovate the existing convenience store and gas station into a fast-food restaurant (Del Taco) with a drive-through lane and parking.
- Golden Eagle Audubon Society Riparian Habitat Restoration on E. Barber Valley Drive – The proposed project includes the Golden Eagle Audubon Society and 20 other nonprofits and agencies working together to restore and enhance critical wildlife habitat along the Boise River on 50 acres of public land between Diversion Dam and the East Parkcenter Bridge. Work involves the removal of invasive plants, shrubs, and trees and replacing them with species native to southwest Idaho. Work will also be done to deter unauthorized pathways that are contributing to erosion in the area. Educational signs about plants, birds, pollinators, and important habitat features will be erected in compliance with landowner requirements.

- Additionally, there are proposals for three rezoning actions, three easements, three accessory dwelling units, two minor land divisions, and one property line adjustment within the project area.

The increase in urbanization within the Treasure Valley has affected groundwater levels. Irrigation in the Treasure Valley has been largely utilized since the late 1800s. However, conversion of agricultural land to residential and commercial areas may have led to decreases in groundwater levels. An Idaho Water Resources Research Report (2004) identified southeast Boise and an area south of Lake Lowell as experiencing ground water declines. The report also identifies that canal seepage and infiltration associated with irrigated agriculture are significant factors in shallow aquifer recharge (IDWR 2004). These changes from irrigated crop agriculture to residential and commercial properties and the associated decreases in irrigation water that previously recharged the shallow aquifer has led to groundwater declines. This trend will likely continue as the Treasure Valley continues to convert croplands into residential and commercial areas.

2.6.3 Ada County Highway District 2022-2026 Integrated Five Year Work Plan

The Ada County Highway District (ACHD) is a government entity that serves as the only countywide highway district in Idaho. The ACHD would initiate approximately 55 planned projects within the project area between 2023-2026, according to their 5-year work plan, which can be found at

<https://achd.maps.arcgis.com/apps/MapSeries/index.html?appid=c1b6fafa7b384b45918666e472f9767b>. These projects include installing bikeway signage along identified bikeways, bridge maintenance, and mile-long stretches of corridor improvement projects.

The Orchard Street Realignment, Gowen Road to Victory Road project would specifically coincide with the project area during the proposed period of construction. This is a corridor improvement project which would realign Orchard Street by shifting it to the west and widening it to a four-lane road with a raised median. Enhanced pedestrian and bike facilities would be constructed on both sides of the roadway. Three roundabouts would be added to the Diamond Street, Dorman Street, and Gowen Road intersections.

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 potentially affected environment and the degree of the effects of the action anticipated for each environmental component (resource). The affected environment addressed in this EA is defined in varying contexts, depending on the affected resource being analyzed.

Resources evaluated in this document and analyzed in this chapter were selected based on Reclamation requirements; compliance with laws, statutes, and executive orders; public and internal scoping; and the potential for resources to be affected by the proposed project.

3.2 Hydrology and Groundwater Resources

3.2.1 Affected Environment

The affected environment for hydrology and groundwater resources is defined based on those environments that are affected by canal seepage. This includes diversions and lands served by the New York Canal, including Lake Lowell, the upper-most unconfined aquifer and groundwater underlying the section of the New York Canal that is recharged by seepage from the canal, and other waterbodies that interact with groundwater. Additionally, it includes the wells and lands that use seepage-recharged groundwater and the network of drains, natural watercourses, and downstream water users that receive return flow from the seepage through the groundwater.

Measurements and estimates of canal seepage vary widely among canals depending on construction materials and methods, underlying soils, aquifer hydrogeology, and hydrologic gradients (Sonnichsen 1993). Variability in these factors for the New York canal causes seepage rates to be highly variable, both spatially along the length of the New York canal and over time as hydrologic conditions change (Berenbrock 1999). This may result in some canal reaches losing water to seepage while others gain water back from groundwater. Additionally, there are sections of the canal that may lose water to seepage for part of the year but gain water back during other times of year.

Flow measurements for the 6-mile section during 2022 suggest the seepage totaled about 29,370 acre-feet during the 183-day irrigation season (Appendix A). In 2021, the BPBOC estimated 17,358 acre-feet of total seepage for the 6-mile section, but this was based on limited flow measurements in a specific test area that may not have been representative of the full 6-mile section. Both of these measurement-based seasonal estimates of seepage produce average seepage rates that fall within the

range of earlier seepage measurements for this canal section during shorter time periods in 1997 (Berenbrock 1999).

The New York Canal delivers water from the Boise River and upstream reservoirs to Lake Lowell and irrigation users. The amount of water that is diverted by the canal is reduced by the current seepage from the canal and ultimately reduces the amount of water that is delivered to water users. To deliver the requested amounts of water, these transmission losses are accounted for when water is released from reservoirs and diverted into the canal, with more water diverted to account for seepage. Seepage losses can also affect the amount of water delivered to support Lake Lowell water levels, waterway flows, water deliveries, and irrigated lands. The unconfined aquifer below and in the area of the canal is currently recharged by canal seepage, which changes groundwater elevations throughout the irrigation season. Seepage from the canal and on-farm infiltration of irrigation water are the primary sources of groundwater recharge for the uppermost unconfined aquifer, which varies in thickness up to a few hundred feet, but do not appear to be major sources of recharge for deeper regional aquifers (Urban and Petrich 1998; Hutchings and Petrich 2002; Reclamation and IDWR 2008). Seepage from the New York Canal has increased groundwater recharge and water table elevations.

Groundwater levels affect infiltration and seepage rates of other surface water to groundwater. Elevated groundwater levels from New York Canal seepage may reduce infiltration rates of other water sources to groundwater by reducing hydraulic gradients. This might affect water levels in other surface water bodies and waterways.

Wells pumping from groundwater are affected by the height of the water table. The difference between the ground surface and the water table height determines the vertical distance water must be pumped in wells (i.e., hydraulic head) and can affect pumping costs. Additionally, the height of the water table may affect how much, or whether, water can physically be pumped. Seepage-driven elevated groundwater along the canal reduces pumping costs and may effectively be allowing some wells to pump water that otherwise could not.

Where the water table rises above the land surface, it may exfiltrate out of the ground, producing surface ponding and/or flow. In some locations, drainage ditches and pumps have been used to help prevent ponding and flooding. Where the water table intersects irrigation ditches and drains, groundwater may exfiltrate and flow down through the drainage network, some of which is withdrawn by water users, seeps back into groundwater, or flows into natural watercourses. Seepage from canals that ultimately returns to the Boise River serves as an important source of water for river flows and diversions downstream.

3.2.2 Environmental Consequences

Alternative A – No Action

The No Action alternative would not change the current amounts of seepage from the New York canal. Although the canal may still be progressively lined in the future by BPBOC, regardless of federal funding, this is outside the scope of this effects analysis; it is unclear how long this would take at the slower rate, or how degradation of current lining and seepage might change. This effects analysis assumes current conditions for this alternative. Under these assumptions, this seepage

would continue to act as a transmission loss for the water users that divert their water through the canal. However, this seepage would continue to recharge groundwater, raising the water table along the canal and producing return flow to drains and the Boise River. Reservoir releases and surface water diversions would be unchanged, with downstream diversions still recapturing seepage-driven return flows from the drains and the river.

Alternative B – New York Canal Lining (Proposed Action)

Lining the 6-mile section of the canal would reduce seepage-related losses from the canal. The effects of reduced seepage on downstream diversions from the canal and other water users depend on what is done with the water that is saved; the water that used to be lost to seepage could be saved back in the reservoirs, still diverted into the canal, or used elsewhere (Malek et al. 2021; Meeks 2021). Since less water would be lost during transmission, reduced seepage could require less water to be released from the reservoir and diverted into the canal in order to deliver the same amount of water to canal users. Alternatively, if the same amount of water continues to be diverted, reducing seepage would allow more water to reach the end of the canal and be delivered, potentially increasing consumptive use and on-farm infiltration and/or increasing canal return flows. Regardless of what is done with the saved water, other downstream users that used to rely on the seepage as a water source as it flowed back to the river or recharged groundwater may find it to be inadequate and require water from other water sources, if available, or experience shortages.

Reductions in seepage would also reduce groundwater recharge, potentially leading to reductions in the water table. Groundwater modeling based on seepage measurements for the 6-mile section (Appendix A) suggests that the largest reductions would likely occur beneath and along the newly lined section and diminish with distance (Figure 5).

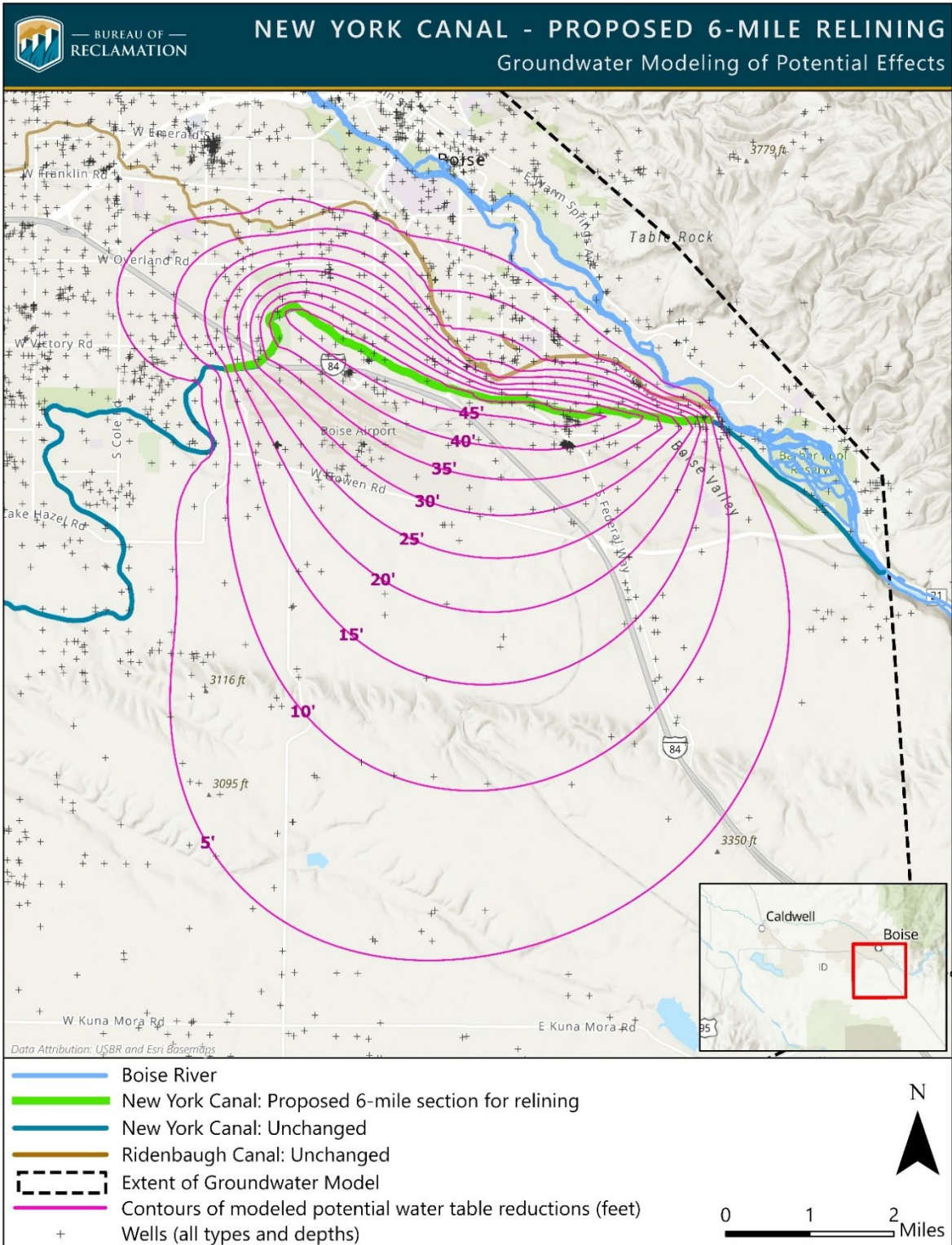


Figure 5. Map showing the 6-mile section of the New York Canal that would be lined, the modeled potential extent and magnitude of groundwater reductions in the unconfined aquifer, and the locations of wells. Well locations are subject to the accuracy of the source data (<https://data-idwr.hub.arcgis.com/datasets/IDWR:wells>; accessed February 28, 2023).

A total of 1,506 wells are within the area that the modeling suggests could be affected by 5 or more feet of groundwater reduction (Table 1), although the extent and magnitude of groundwater reductions is inherently uncertain. This number includes all types of wells, including wells that would be unlikely to be affected (e.g., deeper cased wells, injection wells, monitoring wells, etc.), and many which had no well type information. Additional study would be needed to better constrain the number of wells affected and the nature of these effects (e.g., increased pumping costs or drying up wells), but such analysis would be complicated by uncertainties related to the accuracy of well locations, incomplete well information (e.g., missing well type/depth information), whether wells are still used and operational, and the accuracy of modeled extents and magnitudes of groundwater effects. However, no amount of additional study would be able to fully quantify effects, nor would actual effects be fully quantifiable after the canal were relined.

Table 1 shows estimates of well types and counts within the area potentially having 5 or more feet of water table reduction. Note that well types were unknown (i.e. blank) for most of the wells. The accuracy of well types and numbers are uncertain and depend upon the accuracy of the source data locations and well information (<https://data-idwr.hub.arcgis.com/datasets/IDWR::wells>; accessed February 28, 2023). Modeled extents of groundwater reductions carry additional inherent accuracy uncertainties, which may further affect the accuracy of these numbers.

Table 1. Estimated types and numbers of wells within the area potentially having 5 or more feet of water table reduction

Well Type	Number of Wells
Irrigation	28
Domestic/Public/Municipal	144
Monitoring	299
Injection	61
Other	74
Unknown	900
Total	1,506

Actual groundwater reductions would likely vary locally depending on interactions with other water recharge sources (e.g., other canals, drains, streams, and ponds) and sinks (e.g., wells and seeps), aquifer heterogeneity (i.e., varying aquifer composition from clay, sand, gravels, and different lava flow types), and regional groundwater trends (Hutchings and Petrich 2002). Other sources of recharge, such as other nearby canals and the Boise River, may effectively limit the extent of groundwater effects. For example, the groundwater modeling suggests that seepage from the Ridenbaugh Canal to the north acts as a source of recharge that may limit and/or reduce modeled groundwater lowering from lining the New York Canal. This causes potential reductions in the water table to diminish more rapidly to the north. Seepage from the Ridenbaugh Canal might also increase due to increase hydraulic gradients related to the lower water table to the south. The Ridenbaugh Canal may set a vertical bound for potential water table lowering, in that the New York Canal is about 50 feet higher than the Ridenbaugh canal at corresponding distances down valley. Thus, if the Ridenbaugh Canal continues to act as a source of recharge, the groundwater modeling suggests that

water table reductions would be unlikely to exceed about 50 feet. In contrast, the modeling shows a greater extent of potential water table lowering to the south, where there are no other canals, little on-farm irrigation, and little natural groundwater recharge, and water table reductions diminish more slowly with distance.

The network of drains excavated to reduce elevated groundwater levels that occurred after the canals were installed could also experience changes in drain flows from canal lining. Lining the canal and lowering the water table could reduce the amount of water that seeps back into these drains and returns to the Boise River and/or is used by other water users (e.g., Reclamation and IDWR 2008). This could have unintended negative consequences for downstream water users and the overall water supply, but these effects also depend upon what is done with the water that is "saved" from seepage (Malek et al. 2021; Meeks 2021). For example, if canal users continue to divert their full entitlement, with seepage savings allowing them to increase their consumptive use, and downstream diversions that previously relied on seepage-driven return flows might require additional water to be released from the reservoirs to fully meet their demands, this could negatively affect the water supply. Conversely, if seepage reductions allow less water to be diverted to deliver the same amount of water to canal users, and more water is saved in the upstream reservoirs, this could positively affect the water supply.

The proposed action to line a 6-mile section of the New York Canal has the potential to affect water resources. With respect to water delivery, lining the canal would reduce seepage and transmission losses, potentially saving surface water. However, flow lost as seepage from the canal is not lost to Boise Project as a whole, as it is an important source of groundwater recharge and generates return flows to the Boise River. Reducing seepage would reduce groundwater recharge and could result in lower groundwater levels, which could impact supplies to a certain number of wells and drains. This project is driven by public safety, with the primary purpose of the proposed canal lining/relining to improve structural integrity, thereby reducing canal breach risk in an urbanized area. Unfortunately, this would also likely affect groundwater resources such as wells in a specific area. Section 8 of the Reclamation Act requires Reclamation to follow state law in the appropriation, use, and distribution of irrigation water. Under Idaho law, a canal owner can line its canal to reduce or eliminate waste or seepage (see *Application of Boyer*, 73 Idaho 152, 162-63, 248 P.2d 540, 546 (1952)). The legalities of canal lining to eliminate waste or seepage is further described by Idaho Supreme Court Justice Bistline in the 1980 case *Hidden Springs Trout Ranch v. Hagerman Water Users*, where he stated that, "...some loss of water through seepage or evaporation is considered a prerogative of the appropriator, so long as the loss is reasonable. The senior appropriator retains his right to all of the water, including that which is lost through reasonable seepage, and thus may reclaim it, for instance, by improving his transmission system." This decision ultimately means that senior water right holders can improve and line their canals and water loss from seepage still belongs to them and not junior groundwater users. The United States owns the New York Canal and holds legal title to the Project water rights used to divert water into the canal.

3.3 Public Safety and Property

3.3.1 Affected Environment

The proposed project area is a 6-mile section of the New York Canal that has been prioritized for relining due its tall and narrow embankment and proximity to a population center. This section is part of an urban canal reach as defined in Reclamation’s CHP. An urban canal reach is a reach “where failure would result in an estimated population at risk (PAR) greater than 100 people and/or an estimated property damage of greater than \$5,000,000” (Reclamation D&S FAC 01-12). Under the CHP, this section receives regular inspections by qualified Reclamation personnel and is performing as designed. The BPBOC operates and maintains the New York Canal at a high standard. Ditch riders drive and monitor the canal around the clock during the irrigation season. The last time the canal failed in this section, in 1955, it flooded mostly pastures and fields. In the past 70 years, the city of Boise has grown considerably and houses and businesses have replaced the pastures and fields. For comparison, when the Truckee Canal in Nevada failed in 2008, it was conveying 700 cfs and flooded 600 properties. As a much larger canal closer to a larger population center, a failure in this section of the New York Canal could have more significant flooding.

3.3.2 Environmental Consequences

Alternative A – No Action

The BPBOC would continue to proactively maintain the canal and reline segments of the canal with the Huesker lining and reinforced concrete during the offseason when the canal is dewatered. They can line approximately 600 linear feet of canal each offseason; at this rate, it would take nearly 50 years to line the prioritized 6-mile section of canal. Although there is minimal public safety risk of canal breach, a 50-year canal relining would increase risk, even if it is minimal.

Alternative B – New York Canal Lining (Proposed Action)

Under Alternative B, funding to reline the prioritized 6-mile section of the canal would allow a longer canal segment to be relined each offseason, with an expected completion of the section by 2032. This action would directly improve public safety in the short and long terms. Because the proposed canal lining/relining would occur faster than the timeline described for the No Action alternative (i.e., approximately 50 years to line/reline the proposed 6-mile section), Alternative B would help limit risk.

Modernizing this section of the canal by relining it with Huesker lining and reinforced concrete would reduce risks to public safety and property for many years. The longevity of the lining system could extend to 50 years, allowing the BPBOC to focus on other canal maintenance activities which would also minimize future public safety risk.

3.4 Groundwater Utilities

3.4.1 Affected Environment

Groundwater and water quality resource analyses consider possible impacts to largely environmental aspects of the subject project, while the analysis in this section examines more human-related aspects such as the status of drinking water available to residents in the area of potential effect (APE). Safe drinking water is absolutely essential for the human environment. Lack of access to safe and clean drinking water can quickly lead to disease, dehydration and even death. Drinking water for most Boise and Ada County residences is supplied by Veolia North America. The water system was originally founded in 1890 and today operates 81 wells, 35 reservoirs, two treatment plants, and 1,241 miles of water mains, to serve a population of more than 240,000 people throughout the Boise region (Figure 6) (Veolia 2023). The water system has been bought and sold many times since it was first developed; most recently, Suez Group merged with Veolia in 2022 to become Veolia North America.

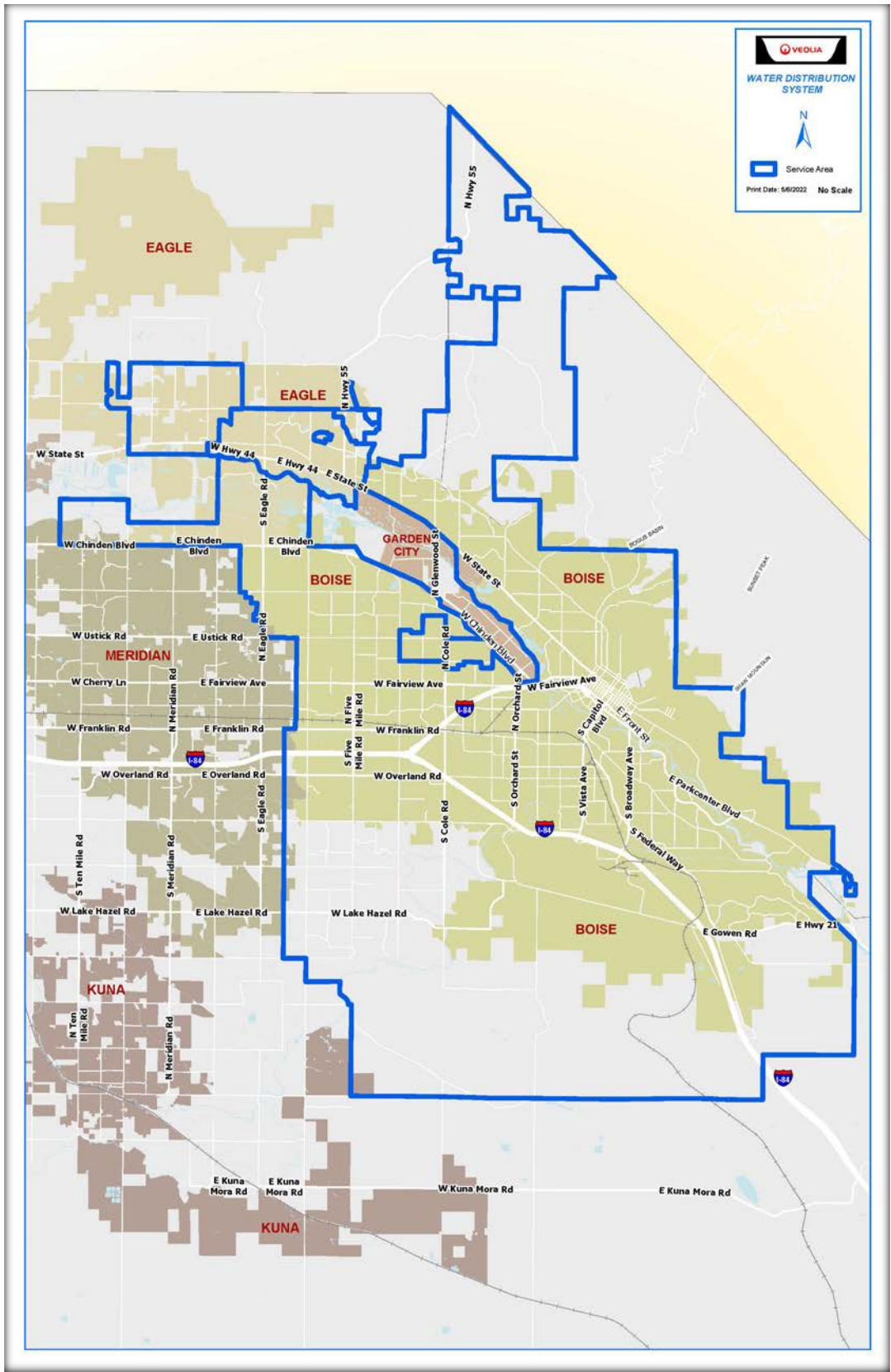


Figure 6. Veolia service area map

Residents who do not receive their drinking water from Veolia are likely using domestic wells to receive drinking water. The Idaho Department of Water Resources (IDWR) has statutory authority for the state-wide administration of the rules governing well construction and the licensing of drillers in Idaho (IDWR 2023). IDWR issues permits for all wells drilled in Idaho including water wells, monitoring wells, low temperature geothermal wells, geothermal wells, injection wells, and other artificial openings and excavations in the ground greater than 18 vertical feet below land surface (see <https://idwr.idaho.gov/wells/>). Monitoring and drinking water wells do not need to obtain a water right prior to receiving a permit, but irrigation, municipal, multi-family, commercial, and irrigation wells do. IDWR maintains an online Geographic Information System (GIS) database of recent and historical permitted wells. Figure 7 shows all of the known permitted wells within the APE.

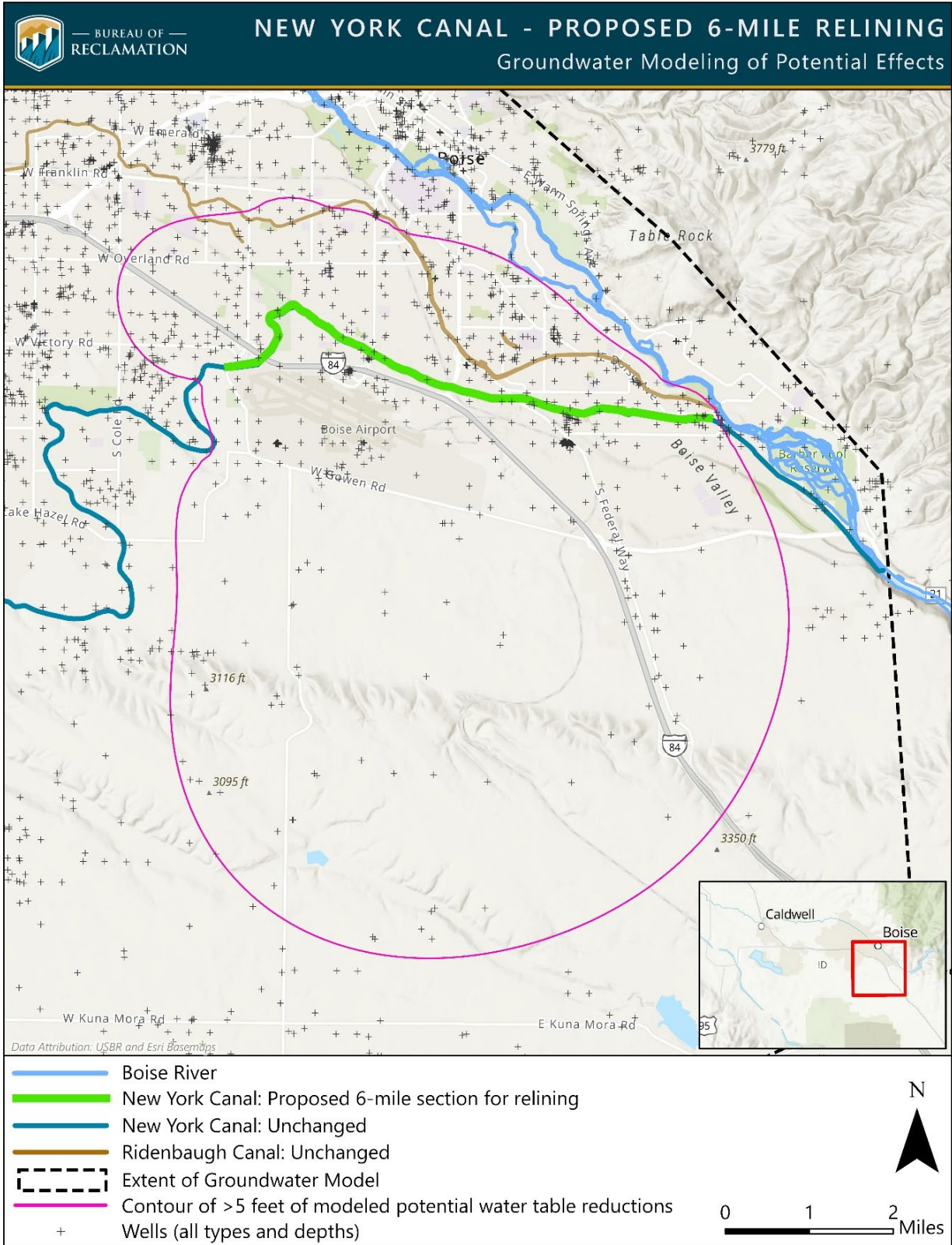


Figure 7. Known permitted wells within the APE from the IDWR GIS database

Within the City of Boise, there are additional water utility companies that serve smaller service areas than Veolia. The Capitol Water Corporation provides drinking water to an area of west Boise. Their service area is outside the APE of this project. The South Boise Water Company (SBWC) is in southeast Boise and is within the APE, but SBWC only provides irrigation water and not drinking water. The City of Boise provided well information that is gathered through their "Annual Water Update" form, which is an elective form for residences or businesses that do not receive Veolia water; this form allows their water renewal (sewer) usage rate to be accurately calculated in their City of Boise bill. Ultimately, this information didn't provide any new or additional usable data to include in the analysis.

3.4.2 Environmental Consequences

Alternative A- No Action

Under the No Action alternative, there would be no lining or relining of the New York Canal, which would mean no effects to groundwater and therefore no effects to accessibility of drinking water. The service area would still exist for Veolia under the No Action alternative and the same number of wells would still be in use; these well locations would overlap entirely with the service area.

Alternative B-New York Canal Lining (Proposed Action)

The Proposed Action would result in a possible change in groundwater levels that would be most observable closest to the New York Canal lining project area and would decrease in severity with distance from the project area. There could be up to 300 domestic drinking water wells within this APE. To derive this number of potentially-affected domestic drinking water wells, Reclamation conducted a specific process of elimination on non-domestic wells. First, Reclamation obtained all the known well permits and information from IDWR and started to filter out all non-domestic wells (industrial, irrigation, injection, etc.). Upon removal of all non-domestic wells, the remaining locations were categorized into "zones" based on depth contours that were determined by Reclamation's Columbia-Pacific Northwest Region Long-Term Operations and Planning modeling group (see Section 3.2). Additionally, any wells deeper than 300 feet were removed based on the aquifer depth known using estimates from the USGS groundwater model. USGS identified that any well deeper than 300 feet would likely be in a stable aquifer.

This filtered list of well addresses was sent to Veolia Water Company to understand which addresses were serviced by Veolia. A list of Veolia-serviced addresses was returned and these wells were filtered out of the remaining well addresses, leaving only the wells that could be used for sole source drinking water due to no public utility connection. Finally, the zones were recategorized to show the number of wells in each contour of possible change in depth. Since there were fewer wells in each zone after the filtering, eight zones showing increments of approximately 5-foot depth changes were re-zoned and were combined to approximately 10- 15-foot depth changes to display a more obvious change in color gradient in Figure 8.

Table 2. Well drawdown information relevant to Figure 8

Zone	Approximate Drawdown (feet)	Contour Color in Figure 8	Number of Possibly Affected Wells
1	5-20	Green	235
2	20-35	Yellow	36
3	35-45	Orange	20

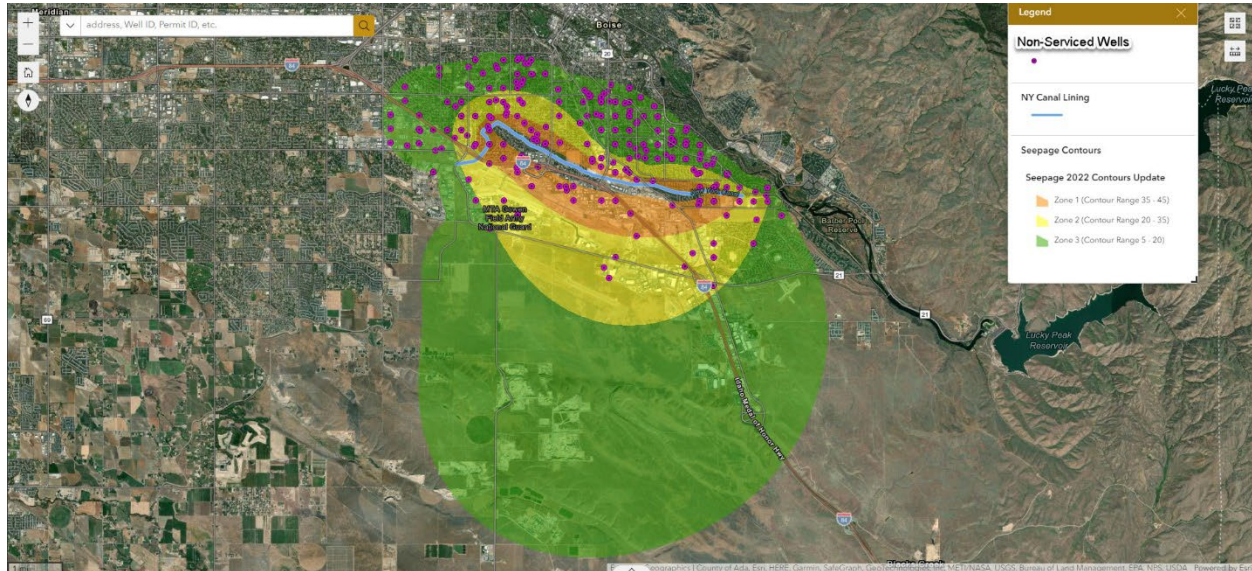


Figure 8. Wells that are not serviced by Veolia, shown within contour lines of possible change in groundwater level after the Proposed Action

Wells closer to the project area would possibly experience a larger change in groundwater level (approximately up to 45 feet), while a well further away from the project area would experience less change in groundwater level (approximately 5 feet). However, the overlap of the Veolia service area and the number of wells within the APE would allow for any individual to gain access to drinking water by connecting to the public utility (Figure 9).

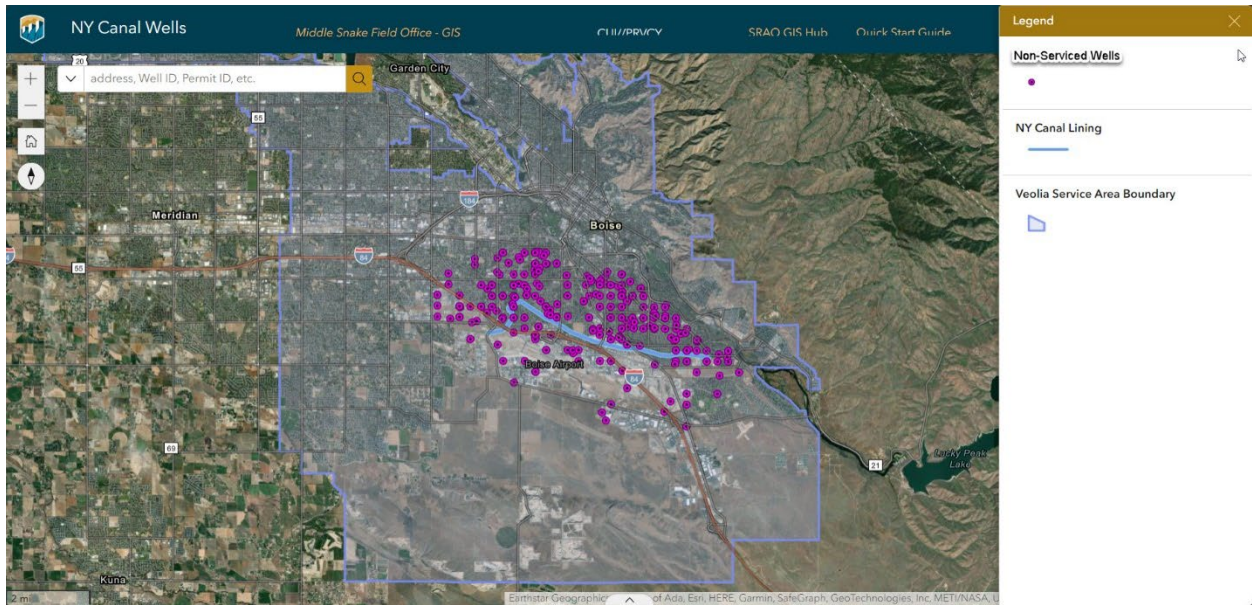


Figure 9. Map of sole source drinking water wells

3.5 Water Quality

3.5.1 Affected Environment

The proposed project is located in the Lower Boise subbasin hydrologic unit (HUC 17050114). The surrounding area can be classified as urbanized, with housing developments and an industrial area; the area is adjacent to the I-84 Interstate Highway.

The New York Canal receives its water from the diversion at Diversion Dam on the Boise River and terminates 41-miles to the west at Lake Lowell. A search of known water quality databases yielded water quality data collected and stored by the USGS for a portion of the canal. The USGS monitored a point on the New York Canal approximately 1.4 miles from Diversion Dam and gathered a variety of water quality and discharge data from 1990-1992 and again in 1995. The data in its entirety is available online (USGS 2023). Water quality data, including nutrients and organics, were collected only in 1992 from April through August. All measured constituents were at very low concentrations, near or below detection limits, indicating that the New York Canal's irrigation water near the point of diversion has good water quality.

An indirect indicator of water quality that is more current than 1992 can be derived from the irrigation source water. Due of the close proximity of the proposed project to Diversion Dam, the water quality is assumed to be similar to the Boise River segment between Lucky Peak Reservoir and Diversion Dam. For that river segment, beneficial uses have been designated by the Idaho Department of Environmental Quality (IDEQ) for domestic water supply, primary and secondary contact recreation, cold water aquatic life, aesthetics, agricultural and industrial water supply, and wildlife habitat (IDEQ 2022). This river segment is not meeting the cold water aquatic life beneficial use due to flow regime modification. All other beneficial uses are meeting or are assumed to be

meeting state water quality standards. Meeting the various state beneficial uses indicates that the water diverted to the New York Canal is clean and of good quality, further validating the 1992 USGS water quality data.

Ground water quality is expected not to be affected in this specific area and was not analyzed in detail. The most current ground water quality information can be accessed by visiting [IDEQ Ground Water Monitoring and Protection \(idaho.gov\)](https://www.idaho.gov/ideq). As identified in the *Influence of Canal Seepage on Aquifer Recharge near the New York Canal* by Hutchings and Petrich (2002) to IDWR, “the presence of nitrate greater than about 2 mg/L⁻¹ is generally associated with agricultural applications of nitrogen fertilizer via deep percolation of irrigation water. Very low dissolved nitrate concentrations in seepage from the New York Canal contrast sharply with elevated nitrate concentrations in percolating irrigation water. The canal transports high-quality water from the upper Boise River drainage, and in its upstream reaches, has no surface water return flows.” Because the area of concern is primarily urban, agricultural applications of fertilizer would not occur, and would not affect groundwater quality. There are other actions that could affect the local groundwater quality such as stormwater runoff, but those effects would be speculative.

3.5.2 Environmental Consequences

Alternative A – No Action

The New York Canal’s irrigation water quality would continue to change in the short and long terms based on anthropogenic and natural watershed inputs, and on snowpack/precipitation events that affect the upper watershed. It is likely the irrigation water quality would continue be of good quality because its source water flows directly from the Boise River. IDEQ monitors the Boise River and ensures it maintains its water quality through various programs such as the Total Maximum Daily Load (TMDL) for non-point source pollutants and Idaho Pollutant Discharge Elimination System for point source pollutants.

As urbanization increases in the future, there may be more anthropogenic influences on the canal segment that could affect irrigation water quality such as increases in stormwater runoff, industrial runoff, etc. Any potential authorized non-agricultural discharges into the New York Canal would have to meet Reclamation’s D&S ENV 06-01 requirements, one of which is ensuring the maintenance of the receiving water quality. This would maintain the irrigation water quality of the New York Canal in the long term.

Alternative B – New York Canal Lining (Proposed Action)

Canal lining construction could temporarily increase turbidity and sediment when irrigation water begins to flow in the spring. This would dissipate and eventually decrease to an equilibrium soon after the initial flows. This impact would likely occur during each segment lining and would be minimized as much as possible to not affect irrigation water deliveries.

After construction, water quality effects would be the same as those described for Alternative A. The lined segments of the canal would retain more irrigation water for downstream users with no appreciable affect to irrigation water quality that have not been noted in the Alternative A effects analysis.

3.6 Environmental Justice and Socioeconomics

Executive Order 12898 (59 FR 7629) requires each federal agency to achieve environmental justice by addressing disproportionately high and adverse human health and environmental effects on minority and low-income populations. The demographics of the action area are examined to determine whether minority populations, low-income populations, and/or Native American tribes are present in the area impacted by a proposed action. If present, the agency must determine if implementation of the proposed action would cause disproportionately high and adverse human health or environmental effects on the populations.

This socioeconomics section describes the affected environment in the area of the Proposed Action alternative as it relates to the overall social and economic character. The key parameters of the social and economic conditions within the proposed action area include population, housing market in the project area, employment, and income. These factors together could influence the position of an individual or group on a socioeconomic scale. The Proposed Action area is within the city of Boise and Ada County, the largest city and largest county in Idaho, respectively.

3.6.1 Affected Environment

Both environmental justice and socioeconomic resources use many of the same affected environment components to analyze the influence or effect of an action. Therefore, this section includes each affected environment component that is used by both resources as described in the environmental consequences analysis.

Population

The Census Bureau estimated a 2020 population of 235,670 for the City of Boise. This is up 1.14 percent from the 2010 census, which estimated a population of 205,671. Boise has experienced a steep increase in population for decades (U.S. Census Bureau 2022).

Racial Minorities

The project construction area is located in Ada County, an urban and populated area; more specifically, the project is within the City of Boise. The general proportions of race and ethnicity in Ada County are similar to Idaho as a whole, with a white population of more than 91 percent. The city of Boise has a slightly lower white population at 86 percent, but this is still a majority of the population according to the Census Bureau's 2017-2021 5-year American Community Survey (Table 3).

Table 3. 2021 Summary of racial and ethnic minority distribution in Idaho, Ada County, and the City of Boise (U.S. Census Bureau 2022)

Race or Ethnicity	Idaho	Ada County	Boise
White	92.8%	91.7%	86.4%
Black or African American	0.9%	1.3%	1.7%
Asian	1.6%	2.8%	3.4%
Native Hawaiian and Other Pacific Islander	0.2%	0.2%	0.3%
American Indian and Alaska Native	1.7%	0.8%	0.7%
Two or More Races	2.7%	3.1%	5.5%
Hispanic or Latino (any race) ^a	13.3%	9.1%	8.8%

^aBy definition from the Federal Office of Management and Budget, race and Hispanic or Latino origin are two separate categories. People who report themselves as Hispanic or Latino can be of any race.

Low-Income Populations

Low-income populations are identified by several socioeconomic characteristics. As categorized by the 2000 census, specific characteristics include income (median family and per capita), percentage of population below poverty (individuals), and unemployment rates. The Census Bureau’s 2017-2021 5-year American Community Survey shows a median household income of \$75,115 for Ada County, slightly higher than the corresponding value of \$63,377 for Idaho (U.S. Census Bureau 2022). The Census Bureau reported that about 8.7 percent of the population of Ada County and 11 percent of the state of Idaho’s population were living in poverty in 2021 (U.S. Census Bureau 2022).

Table 4. 2021 income and poverty status and 2020 unemployment status for Ada County, the State of Idaho, and the City of Boise

Income/Poverty Status	Idaho	Ada County	Boise
Median household income (in 2021 dollars), 2017-2021	\$63,377	\$75,115	\$68,373
Per capita income in past 12 months (in 2021 dollars), 2017-2021	\$31,509	\$39,979	\$40,056
Persons in poverty, percent	11%	8.7%	11.6%
Persons unemployed (2021), percent	3.2%	2.8%	2.4%

Other measures of low income, such as unemployment, characterize demographic data in relation to environmental justice. The 2.4 percent unemployed in Boise and 2.8 percent unemployed in Ada County are only slightly lower than the state of Idaho’s 3.2 percent of unemployed (IDL 2021b).

Employment

Employment measures the number of jobs related to the sector of the economy. In southwest Idaho as of 2021, activities related to healthcare and social assistance generate the largest number of jobs (14.4 percent of the total regional employment). The professional and business services sector ranks second in terms of overall number of jobs in the area at 13.9 percent of the total regional employment. The largest employers in Boise include St Luke's Health, Micron Technology, and grocery chains like Walmart and Albertsons (IDL 2021a).

As shown in Table 4, the city of Boise and Ada County generally have a slightly lower than average unemployment rate compared to the rest of Idaho and the United States as a whole. The data show that 2.4 percent of citizens in Boise and 2.8 percent in Ada County are unemployed, while the State of Idaho's unemployed population is 3.2 percent and the United States' is 3.9 percent (IDL 2021b).

Climate and Economic Justice Screening Tool

In January of 2020, Executive Order 14008 directed the Council on Environmental Quality to develop a new tool titled the Climate and Economic Justice Screening Tool which uses an interactive map and multiple datasets to identify communities that are disadvantaged because they are overburdened and underserved. These communities could be experiencing any of the eight categories of burdens which include climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. Each of these larger categories has sub-categories with burden thresholds and associated socioeconomic thresholds to help determine if the census tract is identified as disadvantaged. A community that is experiencing these categories is highlighted in the interactive map, and a toolbar shows which categories are of concern.

Figure 10 shows which census tracts are experiencing disadvantaged burdens within the project area. One census tract (number 16001001700) within the project area is showing health as a category of concern due to the exceedance of a set percentile. Low life expectancy and low-income are determined to be of concern due to each being above the 90th and 65th percentiles, respectively. Low life expectancy is in the 93rd percentile and is described as the average number of years a person can expect to live with a higher percentile having a lower life expectancy. Low-income is in the 76th percentile and is described as people in households where income is less than or equal to twice the federal poverty level, not including students enrolled in higher education (CEQ 2023).

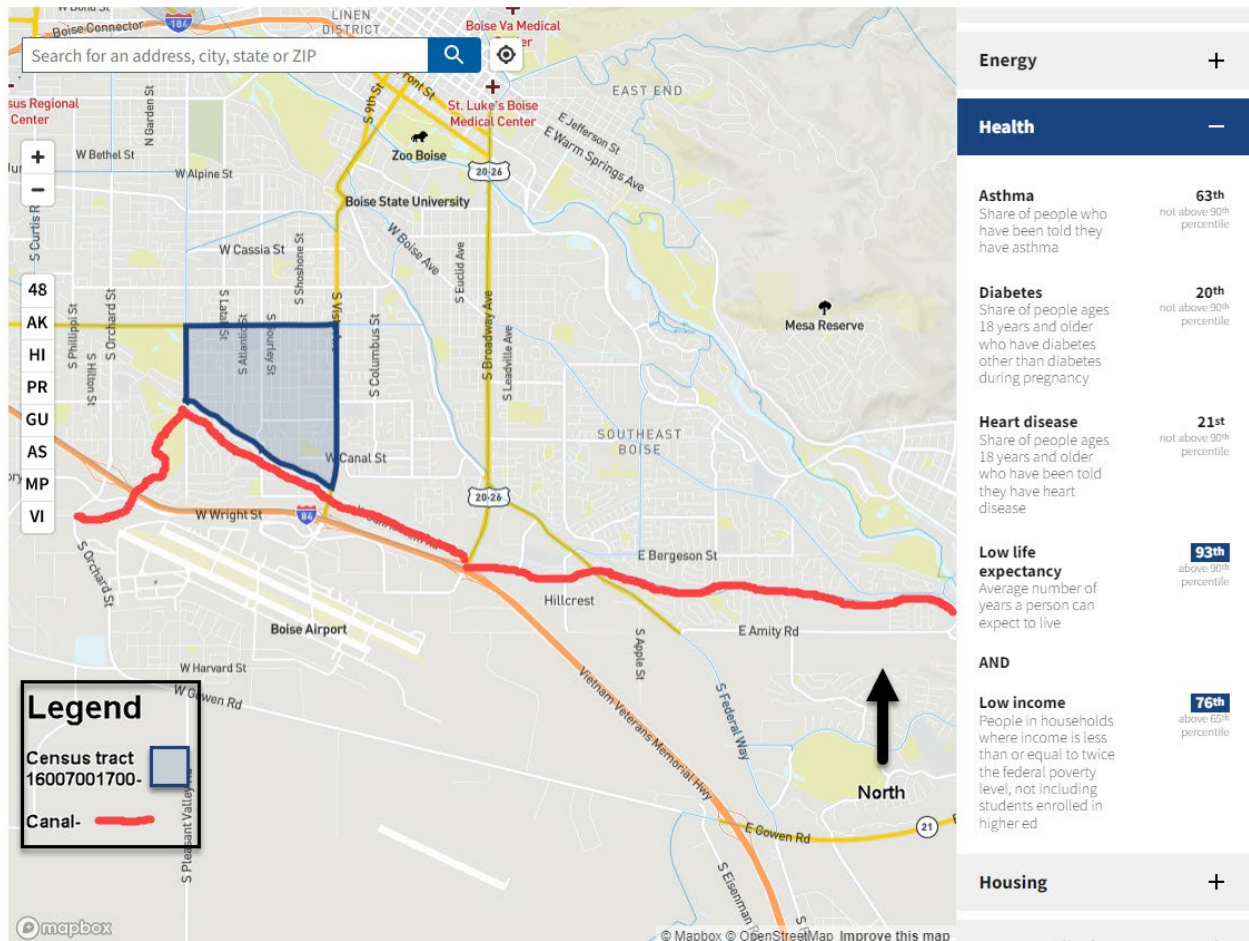


Figure 10. The Climate and Economic Justice Screening Tool shows the project area, the location of overburdened and underserved census tract 16001001700, and the section of the New York Canal that is proposed to be lined

Housing Market

Housing costs can have direct effects on socioeconomic conditions. Housing cost is a category included in the Climate and Economic Justice Screening Tool that shows the share of households that are both earning less than 80 percent of Housing and Urban Development’s Area Median Family Income and are spending more than 30 percent of their income on housing costs. The highest census tract in the project area is number 16001001700 and is in the 61st percentile for the Housing Cost category. The threshold for overburdened and underserved for this category is exceedance of the 90th percentile.

3.6.2 Environmental Consequences

Environmental Justice

Alternative A – No Action

The No Action alternative would not alter the current regional environmental justice status based on the lack of action occurring and the information presented above, and therefore would have no environmental justice effects.

Alternative B – New York Canal Lining (Proposed Action)

Under Alternative B, one census tract fits the Climate and Economic Justice Screening Tool's percentile threshold for low income and therefore is identified for further analysis by Executive Order 12898. However, upon further analysis, this census tract would not be disproportionately affected by health or environmental effects as the result of the implementation of the Proposed Action. The number and types of wells in census tract 16007001700 are similar to other census tracts in the project area, as shown in Figure 10.

Socioeconomics

Alternative A – No Action

The No Action alternative would not alter the current regional socioeconomic status. Due to the lack of action occurring, the No Action alternative would not influence population, the condition of services and housing market in the project area, safety, employment, income, or changes in the visual quality of the community. As a result, it would have no effect on socioeconomics.

Alternative B – New York Canal Lining (Proposed Action)

Under Alternative B, one census tract fits the Climate and Economic Justice Screening Tool's percentile threshold for low-income and low life expectancy and therefore is identified for further analysis due to these being factors that could influence the position of an individual or group on a socioeconomic scale. However, upon further analysis, this census tract would not be disproportionately affected as a result of the implementation of the Proposed Action due to any effects being very minor in nature and equally distributed across the entire action area. The number and types of wells in census tract 16007001700 are similar to other census tracts in the project area, as shown in Figure 10. Additionally, the extraordinary maintenance loan repayment responsibility would be distributed throughout the five irrigation district patrons that make up BPBOC and should not negatively affect an individual or group on a socioeconomic scale because repayment would be shared among all patrons evenly over a 30-year repayment timeline.

3.7 Biota – Vegetation, Wetlands, Fish and Wildlife

3.7.1 Affected Environment

The affected section of the New York Canal is a single channel with restricted access-ways adjacent to the canal. Water flows in the canal each year, generally from April through September, and the

canal is dewatered for the remainder of the year. This portion of the New York Canal is entirely surrounded by urban development and the affected area has been highly altered from a natural state by longstanding activities such as channel lining, fencing, embankment and access road creation and maintenance, landscaping, etc. There are no wetlands associated with this section of the New York Canal.

Vegetation

With the exception of the area where the canal runs past and through the Hillcrest Country Club, where vegetation such as landscaped trees have been allowed to establish at sporadic locations along the southern and eastern bank of the waterway, the canal infrastructure is spatially separated from the surrounding urban landscape, bounded by steeply-angled concrete walls with adjacent compacted earth and gravel access roadways (Figure 11). Access roads for the canal are kept free of vegetation, and any aquatic vegetation that establishes during the irrigation season when the canal is wetted is periodically removed under ongoing routine maintenance protocols.



Figure 11. A stretch of the New York Canal during a period when it has been dewatered. The photograph shows the adjacent gravel access road. This location is just east of where the proposed lining would begin. This view is facing east and shows a segment of canal where lining has already been installed.

Fish

Fish are not stocked in the New York Canal, but species common in the Boise River system can become entrained into the New York Canal and may persist in the summer months; such species include native rainbow trout (*Oncorhynchus mykiss*), kokanee (*Oncorhynchus nerka*), northern pikeminnow (*Ptychocheilus oregonensis*), mountain whitefish (*Prosopium williamsoni*), native suckers (*Catostomus spp.*), and native dace (*Rhinichthys spp.*) (Butts 2023). Fishing rules applicable to the New York Canal are published by the Idaho Department of Fish and Game (IDFG) (IDFG 2022) and canal fishing is not legally prohibited in the New York Canal. However, IDFG does not encourage angling, including “salvage” angling at the time canal diversions are ceased (as promoted each fall in other areas of the state) due to sensitivity to property ownership/trespass issues and liability concerns of irrigators (Butts 2023). No fish persist in the canal through the winter.

Wildlife

The canal provides little in the way of tenable habitat and is isolated from the natural landscape by extensive urban development of the City of Boise. Wildlife found within the city limits would be expected to largely utilize the nearby Boise River greenbelt corridor to move through the urban area, with a low wildlife diversity and abundance expected in the affected area due to the developed nature of the majority of surrounding habitat. However, wildlife that may occasionally use the canal and its adjacent roadways for water access and migration passage includes a variety of migratory songbirds, raptors and game birds, bats, red fox (*Vulpes vulpes*), fox squirrel (*Sciurus niger*) and other small rodents, raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and infrequently mule deer (*Odocoileus hemionus*) and coyote (*Canis latrans*). In spring and summer, birds and bats may hunt insects present above bodies of water, and birds such as swallows seasonally nest under various infrastructure overpasses spanning the canal. Anatidae species such as ducks and geese may inhabit and access the water and adjacent bank vegetation in the Hillcrest Country Club section; however, they would not likely reside in or regularly utilize the surface water in this section of the canal due to the lack of aquatic vegetation, prohibitive bank access, and high rate of flows passed by the canal during irrigation months. Avian species diversity is highest during the spring and summer months when migrant species are nesting in the area. Species diversity decreases markedly during the fall and winter seasons when many nesting species move south, out of the area.

3.7.2 Environmental Consequences

Alternative A – No Action

Under the No Action alternative, the lining of the 6-mile section in question would not occur as a contiguous project. Routine operations and maintenance of the canal and rights-of-way would continue to maintain the affected area largely free of vegetation, and fish and wildlife use of the affected area would continue following current seasonal and sporadic patterns. Any wildlife present in the area during dewatered periods would experience periodic short-term localized effects from smaller (300-600 foot) piecemeal canal lining/re-lining projects that would occur in portions of winter seasons, according to canal management priorities, maintenance needs, and available funding.

Alternative B – New York Canal Lining (Proposed Action)

Under Alternative B, the lining of the 6-mile section in question would occur over approximately six winter seasons, during the timeframe when the canal is dewatered. The canal lining project, including staging areas, would not incorporate any new areas of surface disturbance outside the areas already developed as a part of the canal infrastructure; therefore, effects to vegetation would be minimal. Effects of the project to fish would be minimized by the timing of the action, with annual construction periods occurring when the canal is seasonally dewatered and fish are not present. Effects to other wildlife that utilize the canal and the adjacent access road areas for water access, foraging, and passage could include short-term impacts such as triggering avoidance behavior at the times when human activity is increased in each section of the canal. These effects would be minor, limited in duration to the winter season in which construction activities occur, and spatially limited to approximately 1 mile of canal within the context of the entire 41-mile length of the canal. Effects to wildlife would also be minimized by the fact construction activities would occur when many avian species have seasonally migrated out of the area, and activity by insects and their predators is greatly reduced by both the absence of water and by cold seasonal temperature regimes.

3.8 Threatened and Endangered Species

3.8.1 Introduction and Analysis Area

This section discusses the potential occurrence of and impact to federally designated threatened and endangered species associated with the affected environment. Information regarding species protected under the ESA that have the potential to occur in the project area and vicinity was obtained through the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) online database application (January 2023). The IPaC Resource List generated for this project indicates that three species have the potential to occur in the affected area: yellow-billed cuckoo (*Coccyzus americanus*), designated as threatened; slickspot peppergrass (*Lepidium papilliferum*), designated as threatened; and the monarch butterfly (*Danaus plexippus*), currently classified as a candidate for listing. The full IPaC report is included in Appendix B. No designated critical habitats for any listed species intersect with the affected area.

3.8.2 Affected Environment

Yellow-Billed Cuckoo

The yellow-billed cuckoo (*Coccyzus americanus*) is a neo-tropical migrant bird that winters in South America and summers in North America, where breeding, nesting, and rearing occur from June through August. In the North American part of its range, the species is a riparian obligate, nesting exclusively in willow-cottonwood complexes greater than 50 acres (20 hectares) in extent that occur adjacent to water. While the yellow-billed cuckoo is common east of the Continental Divide, biologists estimate that more than 90 percent of the bird's riparian habitat in the West has been lost or degraded as a result of conversion to agriculture, dams and river flow management, bank protection, overgrazing, and competition from exotic plants such as tamarisk. It is currently listed as

threatened (USFWS Environmental Conservation Online System species profile, accessed January 2023; <http://ecos.fws.gov/ecp0/profile/speciesProfile?sId=3911>).

Occurrence in the Affected Area

Suitable nesting, foraging, or migratory habitats for this species do not occur in the affected area. This species is therefore not likely to be present in the affected area. Furthermore, the seasonal timing of construction activities does not coincide with the time of year this species would be expected to be migrating through the area.

Slickspot Peppergrass

Slickspot peppergrass (*Lepidium papilliferum*) is a small, tap-rooted, flowering plant in the mustard (*Brassicaceae*) family that is endemic to the sagebrush steppe environment of southwestern Idaho. Slickspot peppergrass occurrence is restricted to microhabitats known as slickspots, which are small-scale sites of water accumulation in the gently undulating landscape of the sagebrush steppe vegetation of the Snake River Plains of southwestern Idaho. Slickspots are visually distinct, small-scale (mostly between 10 to 20 square feet) depressions in the soil that collect water. It is believed that slickspots take several thousand years to form; therefore, once degraded, they cannot be recreated. Due to the species' dependence upon these spatially scattered microsites, individual populations of slickspot peppergrass tend to be spatially isolated. Slickspot peppergrass is adapted to an environment characterized by high year-to-year variability in precipitation, existing as a short-lived, ephemeral species with both annual and biennial, but not perennial, life-history strategies. As such, slickspot peppergrass is likely dependent on a long-lived dormant seed bank for population persistence (Brown and Venable 1986). Seed bank and germination studies of slickspot peppergrass have indicated rapidly declining rates of seed viability beyond 12 years (Meyer et al. 2006). It is currently listed as threatened.

Occurrence in the Affected Area

Because of the restriction of this species to the specific microhabitat conditions of slickspots, which do not form spontaneously and would not be present on developed or mechanically altered surfaces, the likelihood of this species currently occurring within the affected area is extremely low to none. Due to the known temporal limitation of this plant's capacity for seed dormancy, it is also highly unlikely that any viable seed bank might still exist from before the establishment of the infrastructure currently present in the affected area.

Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a butterfly species that is globally distributed, with the North American populations being well-known for long-distance migration. They are obligate to their larval host plant, milkweed (primarily *Asclepias spp.*, ten species of which occur in Idaho (USDA NRCS 2021), on which they lay eggs and larvae emerge in 2-5 days. Multiple generations of monarchs are produced in a breeding season; most individuals live approximately 2-5 weeks, but overwintering adults enter reproductive diapause (suspended reproduction) and may live 6-9 months. Migratory individuals in western North America generally fly shorter distances south and west to overwintering groves along the California coast into northern Baja California. In the spring in western North America, monarchs migrate north and east over multiple generations from coastal

California toward the Rockies and to the Pacific Northwest. Adult monarch butterflies during breeding and migration require a diversity of blooming nectar resources, which they feed on throughout their migration routes and breeding grounds (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat. The correct phenology, or timing, of both monarchs and nectar plants and milkweed is important for monarch survival. In western North America, nectar and milkweed resources are often associated with riparian corridors, and milkweed may function as the principal nectar source for monarchs in more arid regions. It is currently a candidate for listing.

Occurrence in the Affected Area

Suitable breeding habitat (i.e., milkweed) or nectar resources (i.e., flowering plants) for this species do not occur in the affected area. This species is therefore not likely to be present in the affected area.

3.8.3 Environmental Consequences

Alternative A – No Action and Alternative B- New York Canal Lining (Proposed Action)

The No Action alternative and Alternative B would have no effect to threatened and endangered species or their habitats, as they are not present in the affected area.

3.9 Cultural Resources

3.9.1 Affected Environment

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 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. This section addresses all cultural resources in the project area, regardless of eligibility, as required by NEPA.

Evidence of Native American occupation in southwestern Idaho dates as early as 14,500 years B.P. (before present). Archaeologists have defined three prehistoric cultural periods in southwest Idaho. These are the Paleo-Indian period (14,500 to 7,000 B.P.), the Archaic period (7,000 to 300 B.P.), and the Protohistoric period (300 B.P. to European contact).

Shoshone and Bannock peoples and Northern Paiute groups occupied the Boise River and Payette River basins at the time of European movement into the area that is now Idaho. Early explorers reported the Boise River and vicinity was an important seasonal meeting and trading location for nonresident groups from the Columbia River, northern Idaho, the Oregon deserts, and Wyoming.

The subsistence strategy observed by the early 1800s included exploitation of plant, animal, and raw material resources obtained by traveling seasonally. Multiple family groups spent winters in small villages along the lower and middle areas of the Payette and Boise Rivers.

The discovery of commercially profitable amounts of gold in Grimes Creek in 1862 spurred permanent American settlement in southwest Idaho. The boom was instant but short-lived, as the easily mined placers were soon exhausted. However, it stimulated development of agricultural communities that flourished along the rivers in the Boise, Payette, and Weiser Valleys. Boise City was established in 1863, and other smaller towns soon sprang up. A second agricultural boom occurred with the completion of the Oregon Short Line Railroad through southern Idaho in 1883; access to regional markets caused an influx of new settlers who wished to farm the fertile bench lands below Boise and Emmett.

The rapid settlement of southwest Idaho after 1863 had catastrophic impacts upon resident Indian populations. Lands in the lower valleys, where the native populations were densest, were settled and closed to the Indians, and miners and grazers penetrated upland areas. Friction rapidly developed between the resident Indians and newly arrived settlers, leading to raids from both sides. The native culture suffered under the agricultural developments that destroyed their lowland plant food base, denial of access to areas essential in the food collecting seasonal round, and the need to congregate for protection. In 1863, the Federal Government began to negotiate treaties to place the Shoshone and Paiute on reservations removed from their Boise and Payette Valley homelands. Ultimately, most of the southwest Idaho Indian populations were moved to the Fort Hall or the Duck Valley Indian Reservations.

After 1863, settlers flocked to the Boise Valley to establish farms and businesses. In arid Idaho, irrigation was essential for successful agriculture. By 1880, the seasonal water supply was insufficient to meet existing needs and prohibited expansion. After 1883, out-of-state investors attempted to build ambitious water systems, but most were only partially successful. Not until 1905, when the fledgling U.S. Reclamation Service was authorized to build the Payette-Boise Project, could the agricultural potential of the Boise and Payette drainages be fully realized.

Cultural Resource Investigations

Cultural resource investigations for the project included pre-field records research, field survey, and development of a cultural resources report used for consultation with the Idaho State Historic Preservation Office (SHPO) and associated tribes. All aspects of the cultural resource study were conducted in accordance with the Secretary of the Interior's Guidelines for Identification of Cultural Resources (48 CFR 44720-44723).

Reclamation identified two federally recognized tribes with which to consult for this project—the Shoshone-Bannock Tribes of the Fort Hall Reservation and the Shoshone-Paiute Tribes of the Duck Valley Reservation. Several forms of outreach to both tribes resulted in no specific cultural resources of tribal significance being identified to the agency.

For cultural resource concerns, the project area was defined on either side of the New York Canal's outer embankments on either side of the canal prism—including canal-adjacent access roads atop the banks—and the previously-cleared ground surfaces within the two major staging areas. Pre-field

research included a cultural resource record search (Record Search #23130) from the SHPO, in-house documents and maps reviews, and archival research. Much of the information found regarding the New York Canal was gleaned from the Boise Project Histories on file at Reclamation's Snake River Area Office. Seven previously documented cultural resources are known to exist within or across the project area, including three canals (the New York Canal, Bennett Lateral, and Booth Lateral), two highways (Old U.S. Highway 30, U.S. Highway 20), a railroad (the Oregon Short Line), an historic emigrant trail and subsequent wagon road (the Oregon Trail/Goodale's Cutoff/Kelton Road), and an historic-era trash dump. No pre-contact archaeological resources have been documented in the project area.

A pedestrian survey identified four additional canals (Thompson 2.1 Lateral, Booth Lateral, Eagleson Lateral, and Penninger Lateral) that have headgates at the New York Canal within the project area and required documentation on Idaho historic resources forms.

Consultation with tribes and the State Historic Preservation Office resulted in a Finding Of Adverse Effect to the unlined portions of the New York Canal due to their change in material, design, setting, and feeling. A Memorandum of Agreement (MOA) defining tasks to mitigate the adverse effect was developed with the Idaho SHPO. The Advisory Council on Historic Preservation was notified of the adverse effect and declined to participate in the development of the mitigation MOA.

3.9.2 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

Under the No Action alternative, Reclamation would not approve the reimbursable funding through Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law and the WaterSMART WEEG Grant to perform maintenance on the New York Canal. Maintenance and operations would continue to occur on the New York Canal as they have previously. It is likely that short canal segments would continue to be lined via other funding means (WaterSMART grants, etc.) over a period of many years as funding became available. The canal would continue to function in its historic capacity of water delivery, receiving routine maintenance, suffering no direct effects (adverse or beneficial) from continuing with business-as-usual. Extraordinary circumstances may occur in the form of a natural disaster or human action that could cause damage to the New York Canal, possibly resulting in a failure of the water conveyance structure within the current project area that would require emergency corrective activities. However, pursuing the No Action alternative would not directly or indirectly trigger a failure event.

Under the No Action alternative, the other cultural resources identified within and/or crossing the project area would experience no effects either directly or indirectly. The laterals with headgates at the New York Canal would continue to operate and function as intended. The roads and railroad that cross the project area would continue in their normal transportation functions. The emigrant trail is a non-visible, non-extant segment within the project area so nothing would change with that documented route; the historic trash dump that has been identified within one of the major staging areas, and previously evaluated as non-significant, would remain in place and remain culturally insignificant.

Alternative B – New York Canal Lining (Proposed Action)

Under the Proposed Action alternative, Reclamation would approve BPBOC's request to perform maintenance by providing reimbursable funding through Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law. The project includes installing a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete, known as a Huesker liner, on 6 miles of the New York Canal within a dense urban area. The lining system would be installed on the canal invert and both canal walls. New fill dirt would be added to the canal and graded to the appropriate elevation as a base for the lining. Installation of the lining would occur when the canal is dewatered during the non-irrigation season over approximately 6 years.

Some cultural resources within, or originating in, the project area would see two direct effects, one beneficial and one adverse. The New York Canal itself, and the laterals that originate at it, would benefit from the addition of the Huesker liner in that the canal walls would have the most up-to-date, modern engineered treatment for water retention and structural safety, ensuring continuing function and integrity. The headgates of the primary laterals that begin from the updated New York Canal would be unchanged, but their surrounds would be reinforced and updated, a benefit to that equipment. Several segments of the New York Canal that have never been lined in the past would receive Huesker lining. The canal function and structural integrity would have a beneficial direct effect in that the waterway would be uniformly upgraded and reinforced in the project area. From a

cultural resource standpoint, the addition of the new material on the earthen components could be considered an adverse direct effect due to the change in original materials of the historic resource. However, the characteristics that qualify the New York Canal as eligible for listing in the National Register of Historic Places would not be affected by activities under the Proposed Action.

The linear cultural resources that cross the project area, including the two highways, the railroad, and the emigrant trail would not be affected either directly or indirectly by the activities in Alternative B. There would be no direct interaction of project equipment with the linear resources that cross the New York Canal because they have no physical contact with the New York Canal. Installation of the new canal lining would not impact or change the roads, railroad, or non-extant trail in any way.

A possible beneficial indirect effect of the installation of the Huesker liner is a reduction in the need to perform extensive regular maintenance, thus having a lesser impact to the cultural resource over the next several decades. Less frequent and smaller interactions with the canal prism could result in less wear-and-tear of the canal prism and adjacent access roads, as well as the earthen embankments on either side, thus prolonging the condition and integrity of that historically significant space. The indirect effect of the actions involved with Alternative B, when assessed in their context and intensity, could beneficially impact the sustained good condition of the canal.

Combined impacts from the ongoing and upcoming projects in the vicinity of the New York Canal, which at this point in time have been identified as additional lining, would be the same as the aforementioned direct and indirect effects to the longevity of the canal's ability to function as historically intended.

3.10 Indian Sacred Sites

A sacred site, as defined in Executive Order 13007, means any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site. During consultation efforts, no sacred sites were identified, discussed, or delineated within the defined project area by the associated tribes. If such sites exist near the project area, but were not divulged specifically, it is assumed that project activities as described during scoping would not be sufficient to deny or limit access for Native American religious practitioners.

3.10.1 Affected Environment

The project area of the New York Canal Lining effort has been significantly altered from its natural state by large-scale construction activities. This 6-mile section was desert land prior to construction of the canal, and residential and industrial construction has encroached up to the canal base in many areas. There is no record of this particular location (as a whole or in part) having served as a sacred site prior to the canal's construction, although such records would most likely not exist in any written form and tribes may choose not to share their own knowledge of such sites.

3.10.2 Environmental Consequences

Alternative A – No Action

Reclamation has no information of any sacred sites within or near the project area and no sacred sites were identified by tribes during the scoping process. Under the No-Action alternative, the canal would not be lined and the proposed actions would not occur. There would be no direct, indirect, or combined impacts to sacred sites.

Alternative B – New York Canal Lining (Proposed Action)

Reclamation has no information of any sacred sites within or near the project area and no sacred sites were identified by tribes during the scoping process. Under the Proposed Action alternative, the lining of this 6-mile segment of the New York Canal would occur. However, there would be no direct, indirect, or combined impacts to sacred sites.

3.11 Tribal Interests

3.11.1 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States for Indian tribes or individual Indian trust landowners. ITAs include trust lands, natural resources, trust funds, or other assets held by the federal government in trust. An Indian trust asset has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. Treaty-reserved rights (e.g., fishing, hunting, and gathering rights on and off reservation) are usufructuary² rights that do not meet the Department of the Interior's (DOI) definition of an ITA. The United States does not own or otherwise hold these resources in trust. ITAs do not normally include usufructuary rights alone (i.e., rights to access for hunting or fishing). Rather, they require first a possessory interest; that is, the asset must be held or owned by the Federal Government as trustee.

The DOI requires that all impacts to trust assets, even those considered nonsignificant, must be discussed in a trust analysis in NEPA documents and appropriate compensation and/or mitigation implemented. Additionally, Reclamation's NEPA Handbook (2012) recommends a separate ITA section in all NEPA documents, including a Record of Decision. These sections should be prepared in consultation with potentially affected tribal and other trust beneficiaries.

Affected Environment

No Indian trust land assets were identified in the Proposed Action area or staging areas during the scoping process, such as those held in trust by the Bureau of Indian Affairs for the benefit of tribes or individual Indian trust landowners. As part of the scoping process, Reclamation researched Tessel, a federal GIS land database that includes federal lands held in trust for tribes and individual Indian trust landowners. This research indicated there are no Indian trust land assets in the

² A usufruct is the legal right to use and derive profit or benefit from property that belongs to another person.

Proposed Action area or staging areas. The Proposed Action area, including staging areas, is contained wholly within a federally owned project.

ITAs in the closest proximity to the Proposed Action area are the Shoshone-Paiute Tribes of the Duck Valley Reservation, which is situated approximately 96 miles south of the Proposed Action area. The Shoshone-Paiute Tribes have a water right in the East Fork of the Owyhee River, a tributary of the Snake River (Public Law 111-11 §10801; 123 Stat. 1411 (2009)).

ITAs in the second closest proximity to the Proposed Action area are the Nez Perce Tribe, situated approximately 164 miles north of the Proposed Action area. The Nez Perce Tribe has a water right in the Snake River basin, as described in the Snake River Basin Adjudication, Case No. 39576, paragraph 3 of the Commencement Order issued by the Snake River Basin Adjudication Court on November 19, 1987 (118 Stat. 3433 (2004)).

The Shoshone-Bannock Tribes of the Fort Hall Reservation are situated approximately 174 miles east of the Proposed Action area. The Shoshone-Bannock Tribes have a water right in that portion of the Snake River basin upstream from Hells Canyon Dam, the lowest of the three dams authorized as Federal Energy Regulatory Commission Project No. 1971 (Fort Hall Indian Water Rights Act of 1990; 104 Stat 3059 (1990)). The Shoshone-Bannock have water storage rights in Palisades Reservoir and American Falls Reservoir, which are reserved under the Michaud Flats project for irrigation in the State of Idaho (68 Stat. 741 at 1027 (1954)).

Environmental Consequences

Alternative A – No Action

Under the No Action alternative, Reclamation would not approve the request to perform maintenance by providing reimbursable funding through Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law. Maintenance and operations would continue to occur on the New York Canal as they have previously. It is likely that small canal segments would continue to be lined via other funding means (WaterSMART grants, etc.) over a period of many years as funding became available. Existing short-term or long-term effects, either beneficial or adverse, or effects on public health and safety in relationship to nearby ITAs would remain unchanged.

Alternative B – New York Canal Lining (Proposed Action)

Under Alternative B, the Proposed Action, Reclamation would install a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete, known as a Huesker liner. The lining system would be installed on the canal invert and both canal walls. New fill dirt would be added to the canal and graded to the appropriate elevation as a base for the lining. Installation of the lining would occur when the canal is dewatered during the non-irrigation season. If the Proposed Action occurs, there are no known beneficial or adverse effects to ITAs.

Reclamation requested information from the Shoshone-Bannock Tribes of the Fort Hall Reservation, Nez Perce Tribe, Burn Paiute Tribes, and the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation, who traditionally or currently use the area under their reserved treaty rights; 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 responses, Reclamation assumes that

there would be no adverse effects to Indian Trust Assets, such as adverse impacts to water, water rights, or land held in trust for the tribes.

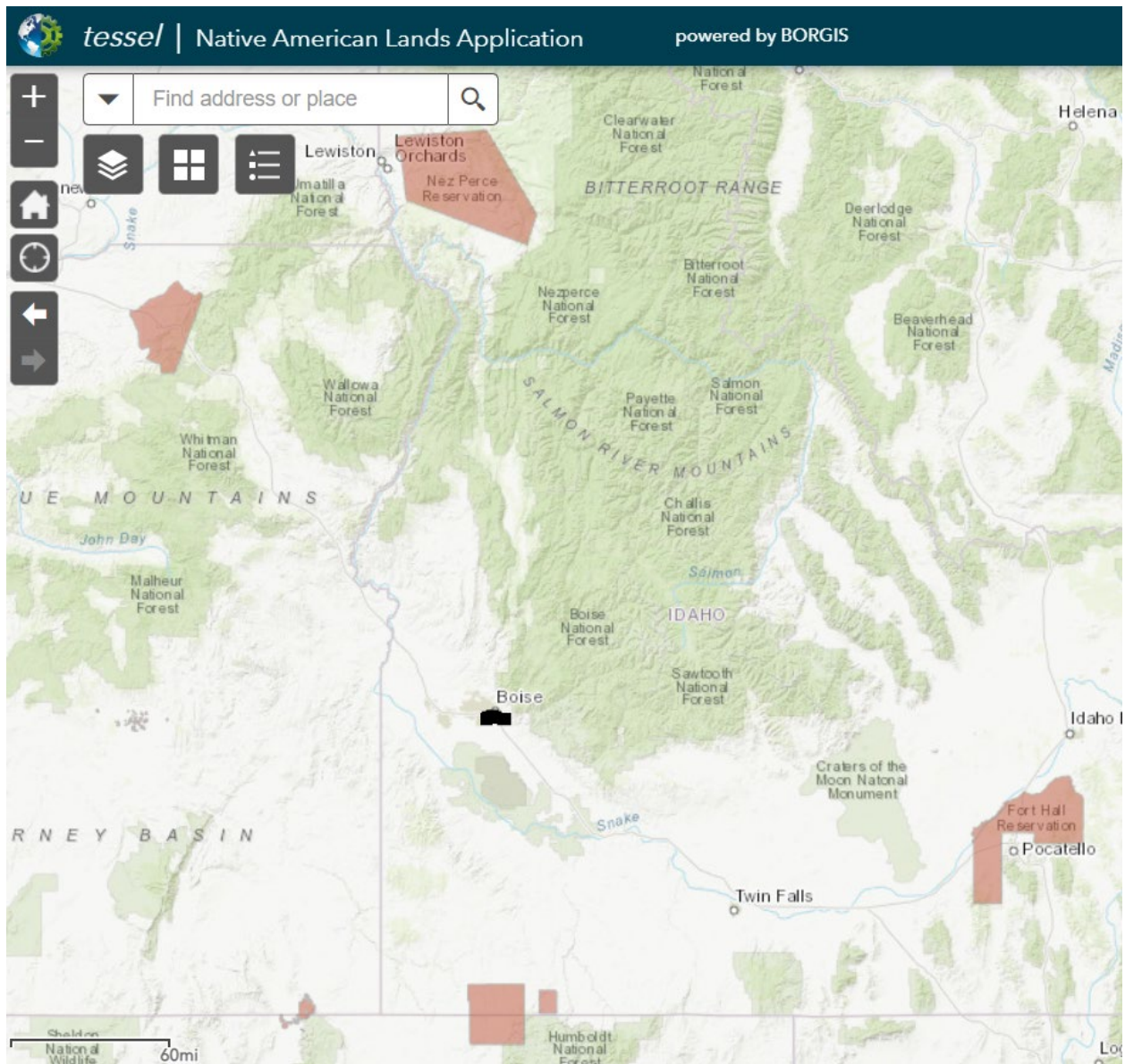


Figure 12. Map of Native American lands compared to the project location

3.11.2 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, statues, executive orders, and allotments. These rights are sometimes further interpreted through court decisions and regulations.

The Proposed Action area is surrounded by areas historically used by many tribes. Treaty rights at issue here are access and impacts to off-reservation hunting, fishing, gathering rights, livestock

grazing rights, and cultural or ceremonial use rights. Although the Proposed Action area is wholly situated within a federally owned project, courts have ruled that members of federally recognized tribes with reserved treaty rights have the right to cross private or state lands in order 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 174 miles east 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 96 miles south of the Proposed Action area. The reservation was established by Executive Orders 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 executive orders 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 executive orders that established the Duck Valley Reservation (Cherokee Nation of Oklahoma and Shoshone-Paiute Tribes of the Duck Valley Reservation v. Leavitt 2005).

The Nez Perce Tribe of the Nez Perce Reservation are a federally recognized tribe in northern Idaho; the reservation is situated approximately 164 miles north of the Proposed Action area. The United States and the Tribe entered into three treaties (Treaty of 1855, Treaty of 1863, and Treaty of 1868) and one agreement (Agreement of 1893). The rights of the Nez Perce Tribe include the right to hunt, gather, and graze livestock on open and unclaimed lands, and fish in all usual and accustomed places.

Environmental Consequences

It is likely that the ratified or unratified treaties listed above include areas surrounding Boise River westward toward Lake Lowell in Nampa, Idaho, the proposed action area.

Alternative A – No Action

Under the No Action alternative, Reclamation would not approve the request to perform maintenance by providing reimbursable funding through Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law. Maintenance and operations would continue to occur on the New York Canal as they have previously. It is likely that small canal segments would continue to be lined via other funding means (WaterSMART grants, etc.) over a period of many years as funding became available. 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 – New York Canal Lining (Proposed Action)

Under Alternative B, the Proposed Action, Reclamation would install a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete, known as a Huesker liner. The lining system would be installed on the canal invert and both canal walls. New fill dirt would be added to the canal and graded to the appropriate elevation as a base for the lining. Installation of the lining would occur when the canal is dewatered during the non-irrigation season.

Reclamation requested information from the Shoshone-Bannock Tribes of the Fort Hall Reservation, Nez Perce Tribe, Burn Paiute Tribes, 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, or for livestock grazing.

3.12 Greenhouse Gas Emissions

Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, states that scientific means will be followed to advance public health and the environment. As a result of the Executive Order, CEQ has issued interim NEPA guidance on consideration of Greenhouse Gas Emissions and Climate Change. This guidance directs federal agencies to analyze greenhouse gas and climate change effects of their proposed actions under NEPA.

3.12.1 Affected Environment

Greenhouse gases are gases that trap heat in the Earth's atmosphere such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). These gases act like glass walls of a greenhouse (hence the name greenhouse gas) and the emission of these gases within the Earth's

atmosphere makes the planet warmer. Larger quantities of greenhouse gases have been released into the atmosphere at a higher rate since the American industrial revolution. The largest source of greenhouse gases in the United States comes from human activities such as burning fossil fuels for electricity, heat, and transportation (EPA 2023a). The most prominent of those gases and the ways they enter the atmosphere are as follows:

- Carbon dioxide: This gas enters the atmosphere naturally through processes like volcanic eruptions and wildfires. There are also processes such as burning fossil fuels (coal, natural gas, and oil), cement production, and burning solid waste that release carbon dioxide into the atmosphere.
- Methane: Emissions of methane are a result of raising livestock, land use, and the decay of organic waste in municipal solid waste landfills.
- Nitrous oxide: This gas is emitted in activities such as agriculture, land use, and industry, as well as treatment of wastewater and combustion of fossil fuels and solid waste.

For the New York Canal lining project, equipment use would be the only relevant greenhouse gas emissions considered to complete the project. Table 5 below shows estimates of each type of equipment that would be used, the duration of time and the amount of fuel used to complete 1 mile of canal lining, and a combined fuel total for all six miles.

Table 5. Equipment usage for 1-mile section of canal lining

Equipment Type	Quantity	Hours of Use	Gallons/Hr	Total Fuel Used (gallons)
CAT 374F Excavator	2	418.5	14	5,859
CAT CR306 Mini-Excavator	2	930	2.5	2,325
CAT CP34 Sheep's Foot Compactor	2	372	3	1,116
CAT CS34 Smooth Roller Compactor	2	372	3	1,116
CAT D3 Crawler Dozer	2	279	3.5	977
CAT C9.3 Articulated Dump Truck	5	2325	6.2	14,415
Concrete Pump Truck	1	65.1	10	651
Water Truck	1	46.5	3	140
Power Trawls	4	297.6	1	298
Backhoe	2	930	3	2,790
F-250 Pickups	10	3720	2.5	9,300
Total for 1-mile section				38,986
Total for 6 miles				233,914

Assumptions and sources:

- Construction window from Oct. 15 - March 1
- 93 work days, excluding 38 Saturdays/Sundays and six federal holidays
- 93 days with 10-hour shifts equals 930 hours of construction time
- Assumed all fuel consumed was diesel
- <https://www.jscole.com/fueltables>

The EPA's Greenhouse Gas Equivalencies Calculator is a tool that converts emissions to the equivalent amount of carbon dioxide emissions. This tool aids in the explanation of abstract measurements into more understandable terms. The total amount of gallons of diesel fuel estimated to be used for lining a 1-mile section of the New York Canal is approximately 38,986 gallons. This would be equivalent to approximately 400 metric tons of carbon dioxide emitted, or enough energy to supply 50 homes' energy use for 1 year according to the greenhouse gas equivalencies calculator (EPA 2023b).

3.12.2 Environmental Consequences

Alternative A-No Action

The No Action alternative would result in no changes to the project area because Reclamation would not fulfill the funding that is designed to support BPBOC completing the lining project. There would be no greenhouse gas emissions emitted; therefore, there would be no significant effect.

Alternative B-New York Canal Lining (Proposed Action)

Under Alternative B, 1 mile of the New York Canal would be lined each year. Each mile of canal lining is estimated to emit approximately 400 metric tons of carbon dioxide, or the equivalent energy use of 50 houses in 1 year. This year-long timeline for both the project and the conversion of greenhouse gas emissions works well for comparison between the action and effect. The greenhouse gases emitted as a result of this project would be considered negligible due to the localized area in which the project would occur and short duration of the action with October to April being the timeframe of construction for a set number of years. The population of the Boise area is 235,670 people and growing, as stated in Section 3.6.1. The energy use equivalent of 50 homes per year being added to emission levels of a population this size would be inconsequential. This effect can also be shown when expanded to the energy use equivalent of 300 homes over a 6-year period.

Chapter 4 Consultation and Coordination

On November 18, 2022, Reclamation mailed a scoping document, including a letter, project information, and a map, to agencies, Indian tribes, members of Congress, organizations, and individuals, soliciting their help in identifying any issues and concerns related to the Proposed Action. Reclamation received five comments during the scoping period. The comments were received from IDEQ, the Ada County Commission, the Nampa and Meridian Irrigation District, the City of Boise, and the Idaho Water Resource Board. IDEQ sent a standard information letter containing the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. Ada County asked for additional maps for the project than the one included in the scoping document. Nampa and Meridian Irrigation District stated they don't foresee any environmental issues and see this action as routine maintenance that minimizes risk. The City of Boise included a letter of support and stated that the project will occur within the Southeast Boise Groundwater Management Area, which is in the vicinity of the South Ada County Groundwater Area of Concern. Therefore, the EA should state any potential short- and long-term impacts to the shallow and deep aquifer levels in the vicinity of the project. The mailing list, scoping letters, and comments received are presented in Appendix D.

4.1 Agency Consultation and Coordination

4.1.1 National Historic Preservation Act

Reclamation initiated consultation with the Idaho SHPO on April 6, 2023. SHPO concurrence with Reclamation's finding of Adverse Effects to Historic Properties for the action area was received on April 11, 2023. An MOA was signed by SHPO, BPBOC, and Reclamation to perform mitigation for this adverse effect.

4.1.2 Endangered Species Act

Reclamation generated a preliminary endangered species report through the USFWS IPaC site (Appendix B). The report indicated that three species are expected to be present in the action area for the proposed project, yellow-billed cuckoo (*Coccyzus americanus*), slickspot peppergrass (*Lepidium papilliferum*), and monarch butterfly (*Danaus plexippus*). Since the Proposed Action would not adversely affect any listed species, no need exists for formal Section 7 consultation under the ESA.

4.2 Tribal Consultation and Coordination

Reclamation mailed scoping letters to the Shoshone-Bannock Tribes and the Shoshone-Paiute Tribes on November 18, 2022 (Appendix C). No responses or concerns from the Tribes were brought forward during or after the scoping period.

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Appendices

Appendix A – Technical Memorandum: New York Canal 6-Mile Relining Groundwater Modeling of Potential Effects

Appendix B – Information for Planning and Conservation (IPaC) Report

Appendix C – Cultural Resources and Sacred Sites Consultation with State Historic Preservation Office and Shoshone-Bannock Tribes

Appendix D – Scoping Documents, Mailing List, and Scoping Comments Received

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**Appendix A – Technical Memorandum: New
York Canal 6-Mile Relining Groundwater
Modeling of Potential Effects**

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— BUREAU OF —
RECLAMATION

Technical Memorandum

New York Canal 6-Mile Relining: Groundwater Modeling of Potential Effects

**Boise Project, Idaho
Columbia-Pacific Northwest Region**

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.

Table of Contents

Acronyms and Abbreviations.....	iii
1. Introduction	1
1.1. Background	1
2. Modeling Methods and Assumptions.....	3
2.1. Model Structure	3
2.1.1. Waterways.....	3
2.1.2. Seepage	4
2.1.3. Extent and Boundary Conditions	5
2.1.4. Aquifer Properties.....	5
3. Scenario Results.....	5
4. Conclusions	11
5. References	12

List of Figures

Figure 1. Map of the upper Boise Valley showing the NYC, Boise River, and approximate extents of the groundwater model and area of anticipated potential effects, based on preliminary modeling.....	2
Figure 2. Modeled groundwater contours using current seepage rates, before relining. Water table contours are modeled estimates that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results.....	7
Figure 3. Modeled groundwater with seepage for the 6-mile section turned off, to simulate relining. Water table contours are modeled estimates that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results.....	8
Figure 4. Difference in groundwater level contours with and without seepage (i.e., after relining). Contours are every 5 feet, starting at 5 feet. Contours of drawdown extent and magnitude are modeled estimates of potential effects that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results.....	9
Figure 5. Close-up map of modeled potential groundwater effects, including locations of wells. Contours of drawdown extent and magnitude are modeled estimates of	

potential effects that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results. Wells and locations are subject to the accuracy of the source data (<https://data-idwr.hub.arcgis.com/datasets/IDWR::wells>; accessed February 28, 2023).10

List of Tables

Table 1. Summary of wells within 5-foot drawdown extent. Wells and locations are subject to the accuracy of the source data (<https://data-idwr.hub.arcgis.com/datasets/IDWR::wells>; accessed February 28, 2023).11

Appendices

Appendix A – Seepage Measurements

Acronyms and Abbreviations

Acronym or Abbreviation	Definition
AEM	Analytical Element Model
AnAqSim	Analytic Aquifer Simulator
BPBC	Boise Project Board of Control
cfs	Cubic feet per second
IDWR	Idaho Department of Water Resources
NYC	New York Canal
Reclamation	Bureau of Reclamation
USGS	United States Geological Survey

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1. Introduction

The purpose of this study was to conduct a modeling assessment of potential groundwater effects from relining a 6-mile section of the New York Canal (NYC). The NYC is the largest canal of the Boise Project in southwest Idaho, delivering water to irrigation users and Lake Lowell. The Boise Project Board of Control (BPBC) operates and maintains the canal and has proposed to reline the 6 miles of the canal near its upper end. The relining project is expected to reduce seepage that recharges the underlying surficial aquifer and could affect groundwater levels (i.e., the water table). A modeling study was conducted using a new groundwater model of the upper Boise Valley developed to specifically assess the potential groundwater effects from relining the 6 miles of canal. The model simulates anticipated reductions in seepage based on measurements of current seepage from a field study completed in 2022. This report summarizes the modeled estimates of the magnitude and extent of potential groundwater effects for use in an environmental assessment.

1.1. Background

The NYC is the first and largest canal in the Boise Valley (Figure 1) and carries water diverted from the Boise River at the Boise Diversion Dam downstream of three storage reservoirs (i.e., Anderson Ranch, Arrowrock, and Lucky Peak Reservoirs). Natural flow and water released from reservoir storage is diverted into the canal, which runs along the southeast margin of the upper Boise Valley. Water is diverted from the canal into smaller canals and laterals that supply irrigation for a large part of the valley. Some water right holders also pump water directly from the canal. Additionally, the canal supplies water to Lake Lowell, which serves as a reregulating reservoir. Diversions into the canal mainly occur during April through September, with flow rates up to around 2,400 cubic feet per second (cfs), but diversions can also occur during the non-irrigation season to deliver water to Lake Lowell.

The canal has been lined to varying degrees, from the diversion dam through approximately the first 8 miles as well as other sections downstream, but the condition and completeness of the lining varies and seepage losses still occur. The BPBC intends to replace 6 miles of the lining at the upper end of the canal with a new concrete lining underlain with an impermeable membrane, which should reduce seepage to insignificant amounts. Since this seepage acts as a source of recharge to the surficial aquifer below and along the canal, there may be groundwater effects associated with relining the canal. This modeling study was conducted to estimate the potential extent and magnitude of groundwater effects.

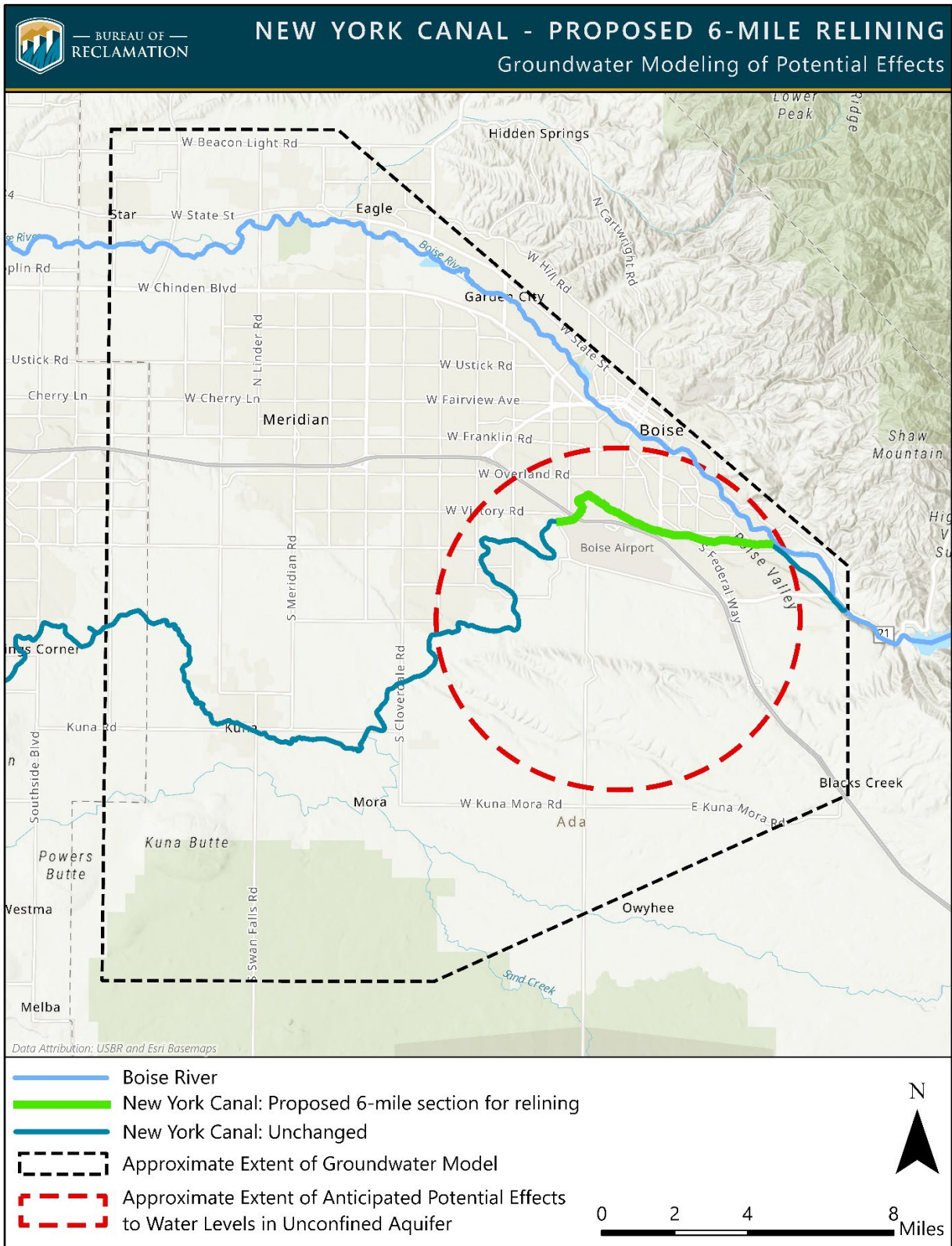


Figure 1. Map of the upper Boise Valley showing the NYC, Boise River, and approximate extents of the groundwater model and area of anticipated potential effects, based on preliminary modeling

2. Modeling Methods and Assumptions

An analytical element model (AEM) was used to develop a groundwater model for the upper Boise Valley. The model was developed in AnAqSim version 2022-2. Existing MODFLOW-based groundwater models for the region (e.g., Reclamation 2013; Hundt 2023) are inherently coarser scale (e.g., 1-mile grid cells), more complex, do not explicitly model NYC seepage, and could not produce meaningful results at the smaller scales of interest along the canal, which were necessary for assessing potential effects. AEM modeling allows for discrete representation of key elements of an aquifer system at much smaller scales, such as sources of recharge (e.g., rivers, canals, and land surface infiltration) and areas of discharge (e.g., wells and seepage exfiltration to drains and waterways). The aquifer can be represented using one or more layers with different properties (e.g., hydraulic conductivity). The extent of the model, which defines the area within which groundwater is modeled, is set by defining boundary conditions that specify what happens to water at the edge of the model (e.g., constant inflow/outflow rates; constant water levels).

The AEM methodology iteratively solves the groundwater equations governing groundwater flow among all defined elements until it converges on a steady-state solution. AEM models can also solve for transient conditions, but simulating transient conditions is inherently more complex and was not necessary to assess potential effects. Instead, a simpler steady-state model was used as it provides an estimate of the maximum potential effects because the aquifer is allowed to fully equilibrate to specific seepage conditions. In this study, the AEM that was developed was run and allowed to equilibrate to conditions both with and without seepage for the 6-mile section, and the difference in groundwater levels (i.e., water tables) between these runs was used to represent the maximum potential change. The approach is purposely simplified to isolate the variable of interest (i.e., canal lining seepage reductions) and get high level results on potential effects.

2.1. Model Structure

The groundwater model is structured to include several major waterways, with representations of seepage, general aquifer properties, and aquifer conditions along the model boundaries. The model network represents the elements of the AEM. These variables are described in the following subsections.

2.1.1. Waterways

The Boise River, NYC, and nearby Ridenbaugh canal were considered the key elements affecting water levels in the area and were represented in the model as ‘River line boundary’ objects with constant head elevations taken from 30-meter resolution digital elevation model data (USGS 2019) at points along the waterways. The model interpolates a linear slope between the points and assumes constant water levels. Where the water table falls below the river objects’ water levels, water seeps into the groundwater; where the water table is above the river objects’ water levels, water exfiltrates from groundwater into the waterway and drains away. The rate that water seeps into or out of the groundwater is specified using a conductance term and was based on estimates of actual seepage from flow measurements during the 2022 irrigation season.

2.1.2. Seepage

Throughout the 2022 irrigation season, a seepage survey was conducted to quantify the amount of seepage lost in a 7.7-mile stretch of the NYC. This 7.7-mile study area encompassed the 6-mile section correlating to the portion of the NYC which the BPBC is proposing to reline. The survey began in July and extended into late September when the NYC was taken out of service due to a lack of irrigation water.

A total of 7 days' worth of surveying was conducted. Each survey began between 7:00 and 8:00 a.m.; this was to help control for evaporation losses and ambient air temperatures ranged from 55-72 °F at these times. The survey was started in the canal downstream of the diversion dam location each day and subsequent surveys progressed downstream throughout the day. Diversions into the canal were verified as not changing during the period of measurements. A SonTek RiverSurveyor S5 was utilized to quantify the volumetric flow in the canal at each given location and instance in time. At each location, a minimum of four flow measurements were taken and recorded.

To calculate the seepage loss for each section, the measured flow volumes were subtracted from the known volumetric flows being diverted into the canal from the Boise River at the Boise Diversion Dam, or subsequent sections, along with any minor diversions within each section (see Appendix A). Four primary survey locations were used. Additional survey locations were investigated but later discontinued due to the roughness of the water surface which produced inconsistent readings.

After all surveys were completed, the data was reviewed and summarized (see Appendix A). The average seepage loss for the 7.7-mile length of the canal (the distance from Boise Diversion Dam to Wright Ave. Bridge) was found to be 206 acre-feet per day. For an average 183-day irrigation season, the yearly seepage loss is estimated to be 37,691 acre-feet. There is confidence to this finding as it aligns with estimates of 34,844 acre-feet of annual seepage loss based on measurements for 1997 at lower flows (Berenbrock 1999) scaled to full flow for the same 7.7-mile canal stretch. Although the upper 1.7 miles are already lined, much of the other 6-mile section has also been relined to varying degrees, and the condition of the existing lining is variable. Given the uncertainty about where seepage was occurring, and the difficulty in representing this variability in the model, it was assumed that the measured seepage was distributed evenly along the canal, and that the seepage for the 6-mile section was 78 percent of the total for the 7.7 miles, based on relative length (i.e., $6/7.7$), resulting in a yearly seepage loss estimate of 29,370 acre-feet per year.

The total annual seepage rate was converted to a daily average seepage rate during the 183-day irrigation season for the whole 6-mile section: 80.9 cfs. To estimate the vertical conductance, the daily average total seepage rate was divided by the 6 miles of length to yield a conductance rate of 221 square feet per day. Ridenbaugh Canal conductance was estimated as 83 square feet per day, which is about 38 percent of the conductance for the NYC, based on their relative widths (i.e., 30 feet/80 feet). We estimated a conductance for the Boise River twice as large as the NYC, or 221 square feet per day, based on its relative width. These values were used in the model to represent current seepage rates before relining. To simulate groundwater after relining and estimate maximum potential effects, seepage for the 6-mile section was turned off since the new liner should be impermeable.

2.1.3. Extent and Boundary Conditions

The extent of the model defines the area within which effects are simulated. The boundary conditions along the edge of the model define the general aquifer water levels. An extent much larger than the anticipated area of effects was used to avoid having the boundary conditions limit the extent of effects. Points along the boundaries were defined where data was available for wells with continuous measurements of water levels. Well water levels were used to define constant head levels for the wells along the boundary, and the model interpolates between wells to create a constant head boundary where water levels are not allowed to change. High water levels from recent years (i.e., 2021) were used to avoid the effects of pumping on aquifer drawdown. The northeastern extent was necessarily limited by the availability of well data and the rise of the foothills of the mountains near Boise. However, since recharge from the mountains in that direction is relatively high, and because the Boise River also serves to stabilize water levels in that direction, the limited extent was considered acceptable.

2.1.4. Aquifer Properties

The model assumed a homogenous isotropic unconfined single-layer aquifer extending down to 2,350 feet, which was the average elevation of the boundary between layers from the MODFLOW model for the Treasure Valley (Reclamation 2013). This boundary and other aquifer properties (discussed below) were specified as average values from the MODFLOW model within the area of anticipated effects (Figure 1). The porosity was set to 0.1, the horizontal hydraulic conductivity was set to 330 feet per day, and the vertical hydraulic conductivity was set to 0.000089 feet per day. A surface recharge grid was not included as precipitation in the valley averaged only about 11.5 inches annually over the recent 30 years (1991-2020; <https://www.weather.gov/boi>) and contributes relatively little to groundwater recharge. Recharge values from the MODFLOW model were based on distributed estimates of recharge estimated during model calibration that may have already accounted for some of the recharge from the NYC. Adding the MODFLOW recharge values did not significantly change the results. Since we wanted to explicitly represent the NYC, isolate effects, and keep the model as simple as possible, we chose not to use distributed recharge estimates in the model.

3. Scenario Results

The scenario simulating the current seepage rates produced steady-state water levels that agree with our understanding of groundwater in the area (Figure 2). The NYC seepage produces a ridge of elevated groundwater along the canal, with water tables sloping downward away from the 6-mile section. To the north, the gradient is relatively steep where the water table slopes down to the Boise River, demonstrating that the Boise River acts as a drain in the model by preventing water levels from rising above the river. To the south, the water table slopes downward more gently towards the lower water levels along the southern boundary. The highest water levels are along the 6-mile section of canal that would be relined.

The scenario simulating relining produced lower steady state water levels in the area around the 6-mile section of the NYC (Figure 3). This results in a saddle, or low point, in the elevated groundwater ridgeline along the rest of the canal, but groundwater levels below the 6-mile section were still generally higher than adjacent areas to the north and south. Changes are difficult to assess from the groundwater levels alone, so the relining scenario was subtracted from the current conditions scenario to show the differences in water table (Figure 4; Figure 5). These values represent how much the water table might be lowered. The maximum differences occurred immediately under the 6-mile section, with drawdown of up to about 50 feet. A cutoff of 5 feet was used as a confidence limit, as model uncertainties increase beyond this point. The area of effect extended around 2 miles to the north and 6 miles to the south, with effects diminishing with distance from the 6-mile section.

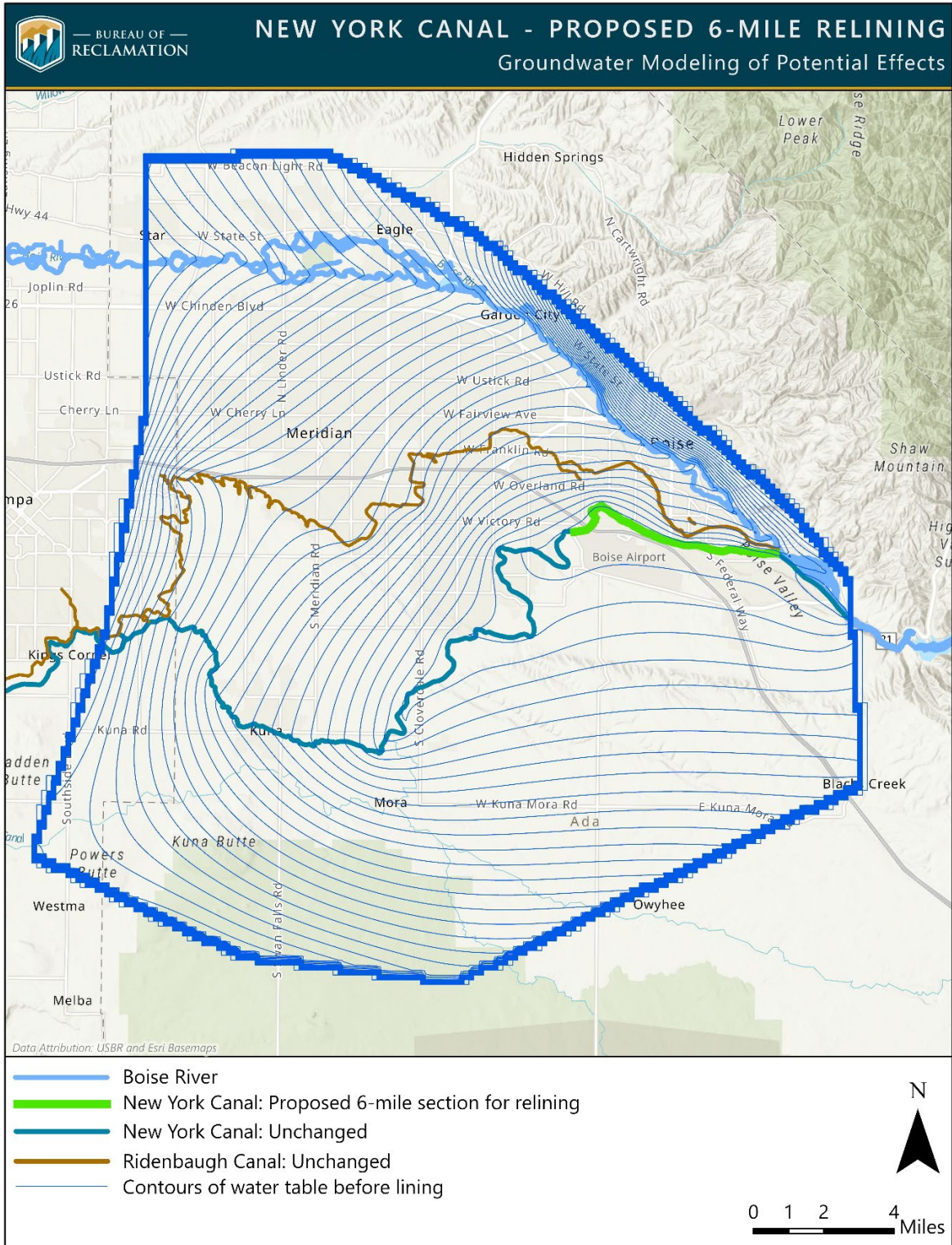


Figure 2. Modeled groundwater contours using current seepage rates, before relining. Water table contours are modeled estimates that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results.

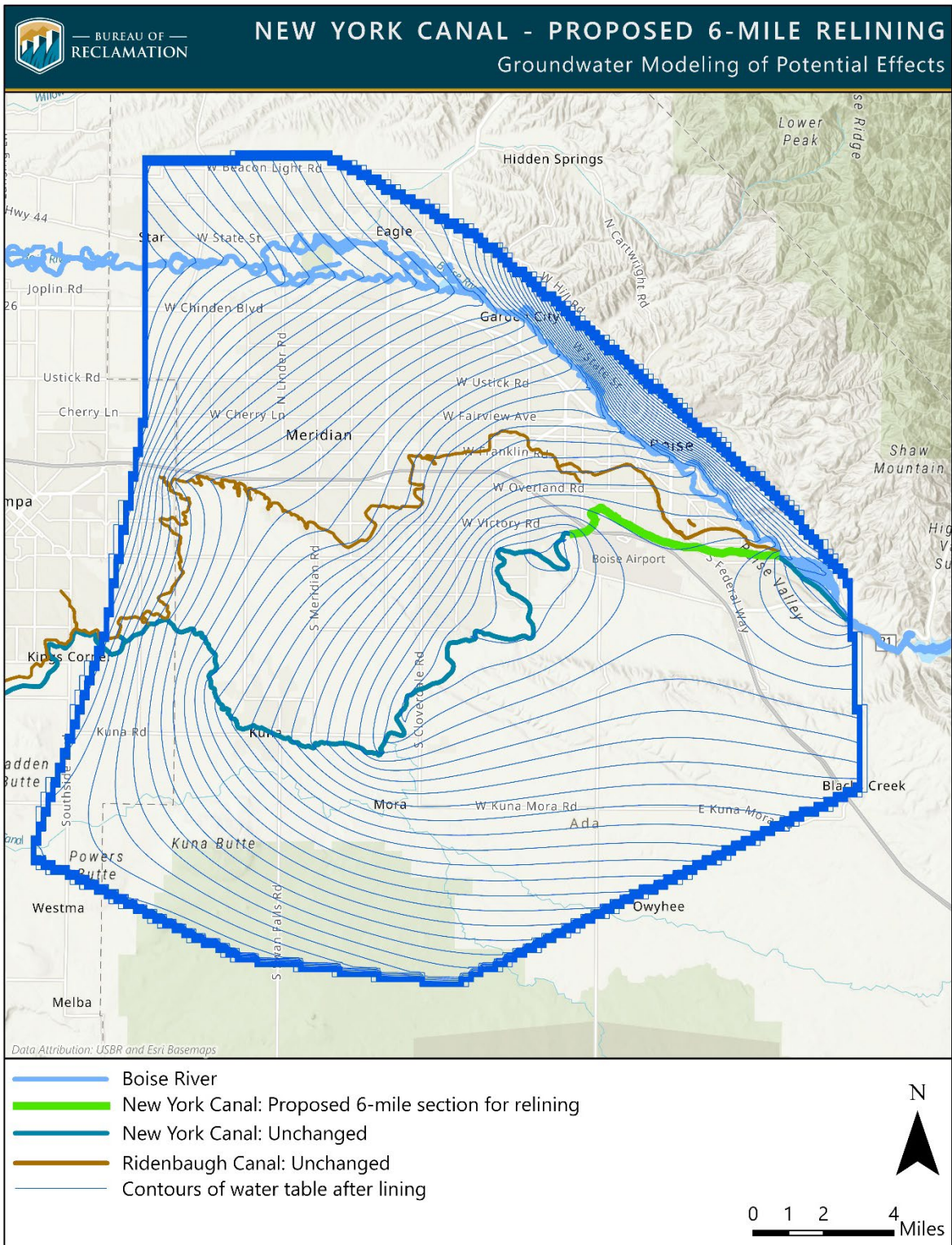


Figure 3. Modeled groundwater with seepage for the 6-mile section turned off, to simulate relining. Water table contours are modeled estimates that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results.

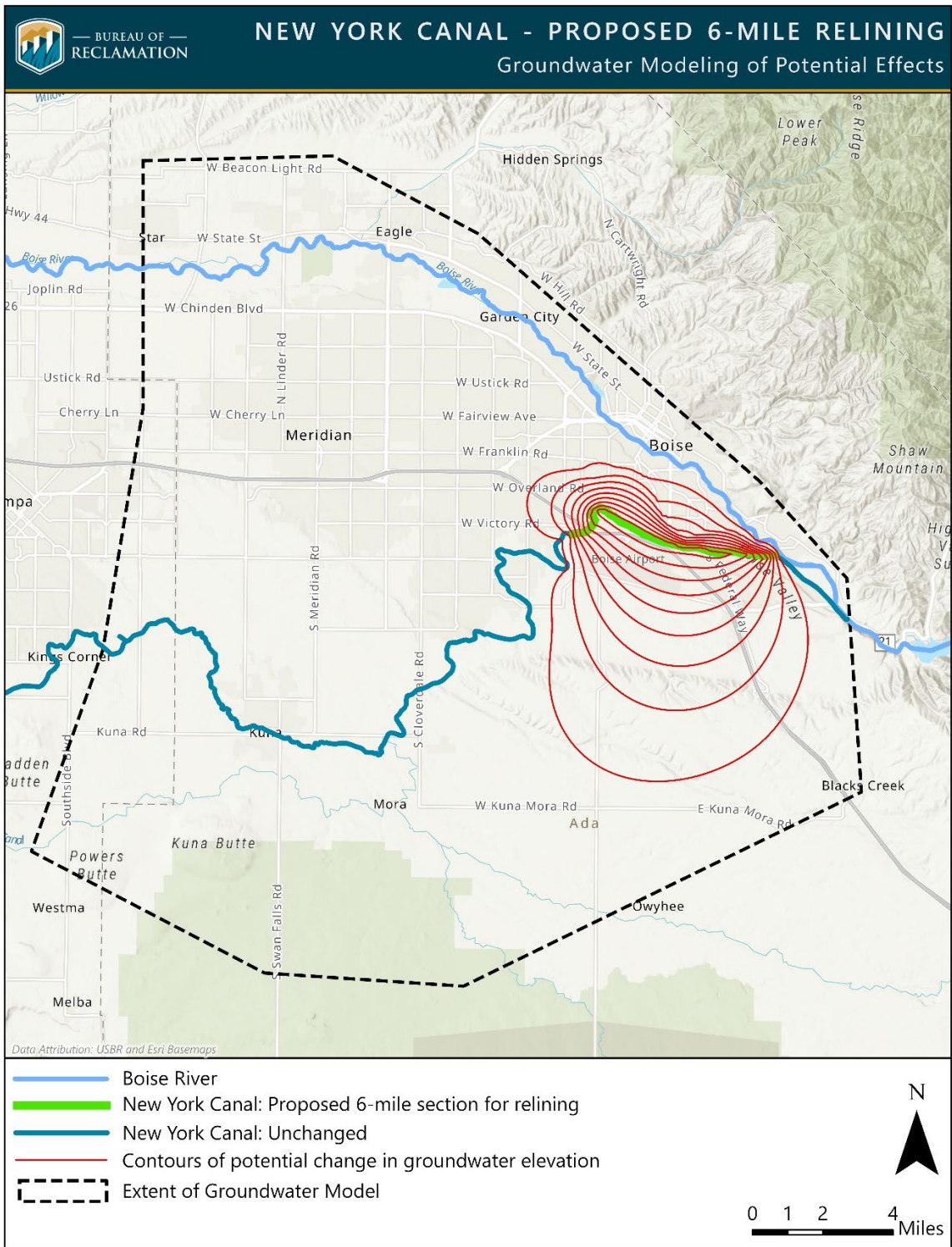


Figure 4. Difference in groundwater level contours with and without seepage (i.e., after relining). Contours are every 5 feet, starting at 5 feet. Contours of drawdown extent and magnitude are modeled estimates of potential effects that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when interpreting results.

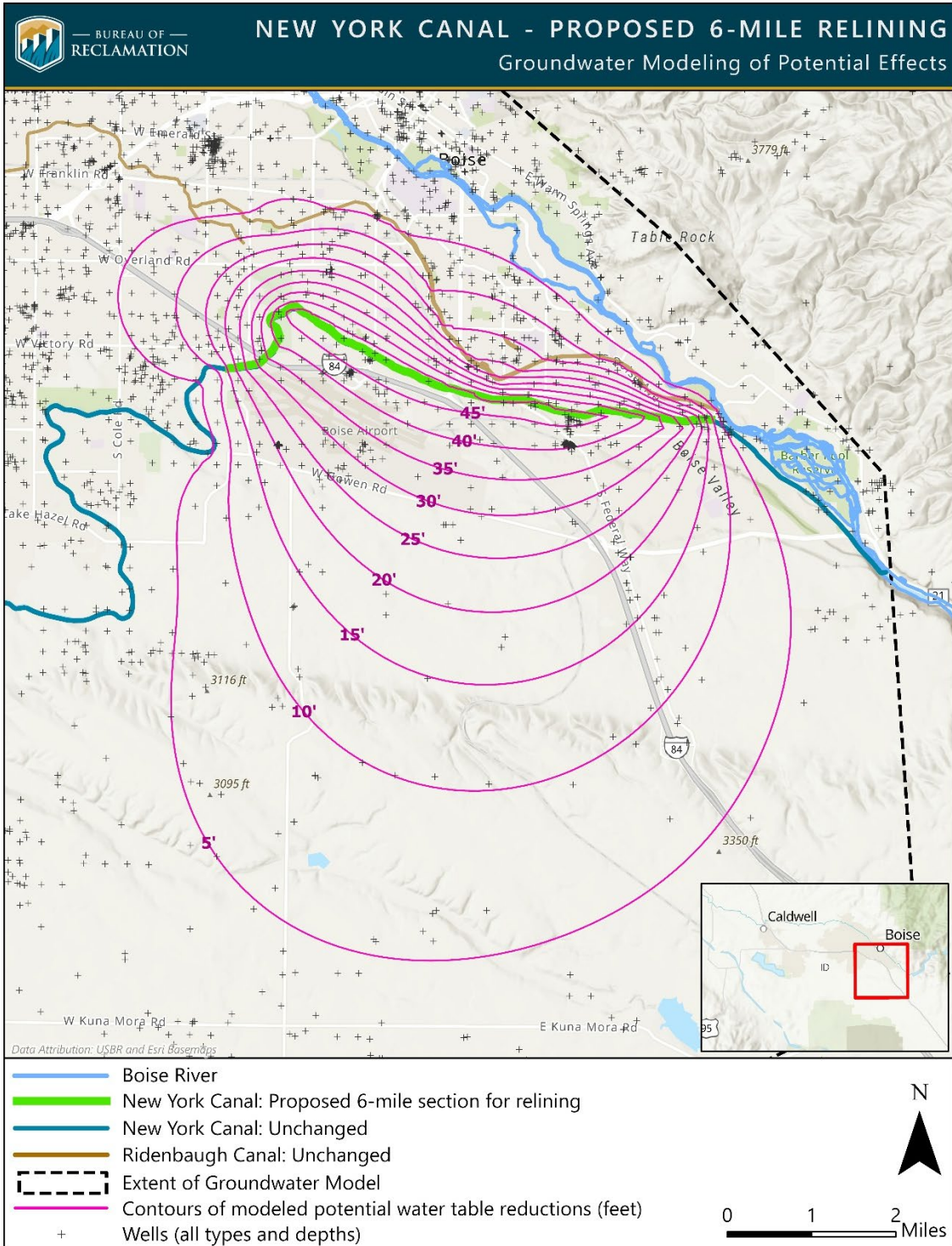


Figure 5. Close-up map of modeled potential groundwater effects, including locations of wells. Contours of drawdown extent and magnitude are modeled estimates of potential effects that do not account for aquifer heterogeneity, transient groundwater conditions, and interactions with other local sources of recharge or withdrawal, all of which introduce inherent and unquantifiable uncertainty. Discretion should be used when

interpreting results. Wells and locations are subject to the accuracy of the source data (<https://data-idwr.hub.arcgis.com/datasets/IDWR::wells>; accessed February 28, 2023).

Within the 5-foot drawdown extent, there are about 1,500 wells that could be affected (Table 1). However, about 300 of these wells were monitoring wells and 900 had no information. The wells also vary in depth and wells deeper than the potential drawdown would likely still be able to pump water. Wells and locations are subject to the accuracy of the source data (<https://data-idwr.hub.arcgis.com/datasets/IDWR::wells>; accessed February 28, 2023). Determining how many of these wells might be affected and unable to provide water will require more analysis on well depths, location accuracy, use purposes, and whether they are still used. Analysis of the wells was beyond the scope of this modeling study but is addressed in the corresponding environmental assessment.

Table 1. Summary of wells within 5-foot drawdown extent. Wells and locations are subject to the accuracy of the source data (<https://data-idwr.hub.arcgis.com/datasets/IDWR::wells>; accessed February 28, 2023).

Well Type	Number of Wells
Irrigation	28
Domestic/Public/Municipal	144
Monitoring	299
Injection	61
Other	74
Unknown	900
Total	1,506

4. Conclusions

The groundwater modeling provided estimates for the magnitude and extent of potential water table drawdown in the unconfined surface aquifer in the vicinity of the 6-mile section of the NYC that would be relined. Effects were greatest immediately below and near the canal, with drawdown of up to around 50 feet, and diminished with distance from the canal and interaction with other waterways. The area of potential drawdown over 5 feet extended about 2 miles north of the canal and 6 miles to the south. Potential effects could be somewhat limited by the Ridenbaugh Canal and the Boise River to the north; more assessment would be required to understand potential effects to, and because of, the Ridenbaugh Canal. Potential effects are greater to the south where there are fewer sources of recharge.

Groundwater modeling results involve a high amount of uncertainty. The approaches used here represent conservative estimates of maximum potential effects based on a model which greatly simplifies the natural complexity of the aquifer. Heterogeneities in aquifer materials and hydraulic properties, as well as local recharge sources and withdrawals (e.g., pumping wells) of groundwater, will cause actual effects to vary dramatically. Additionally, groundwater is transient and fluctuates seasonally with varying inputs, withdrawals, and transit times. Multi-year increasing/decreasing trends and intra-annual variability in

groundwater, along with localized pumping and heterogeneity, increase the uncertainty of effects. While modeling these complexities was not possible, and was beyond the scope of the work, the complexities should be considered as sources of uncertainty when interpreting the results. Quantifying actual effects after relining would also be difficult, as many other factors can affect groundwater levels and responses.

5. References

Parenthetical Reference	Bibliographic Citation
Reclamation 2013	Bureau of Reclamation. 2013. <i>Development of a Transient Groundwater Model of the Treasure Valley Aquifer, Idaho</i> .
Berenbrock 1999	Berenbrock, C. 1999. <i>Streamflow Gains and Losses in the Lower Boise River Basin, Idaho, 1996-97</i> . U.S. Geological Survey, Water-Resources Investigations Report 99-4105.
Hundt 2023	Hundt, S.A. 2023. <i>Data and archive for a groundwater flow model of the Treasure Valley aquifer system, southwestern Idaho, 1986-2015</i> . U.S. Geological Survey data release, available online at: https://doi.org/10.5066/P9U6OOPH .
USGS 2019	U.S. Geological Survey. 2019. <i>USGS 3D Elevation Program Digital Elevation Model</i> . Available online at: https://elevation.nationalmap.gov/arcgis/rest/services/3DEPElevation/ImageServer

Appendix A – Seepage Measurements

This appendix presents locations, data, and calculated values for the 2022 seepage measurements.

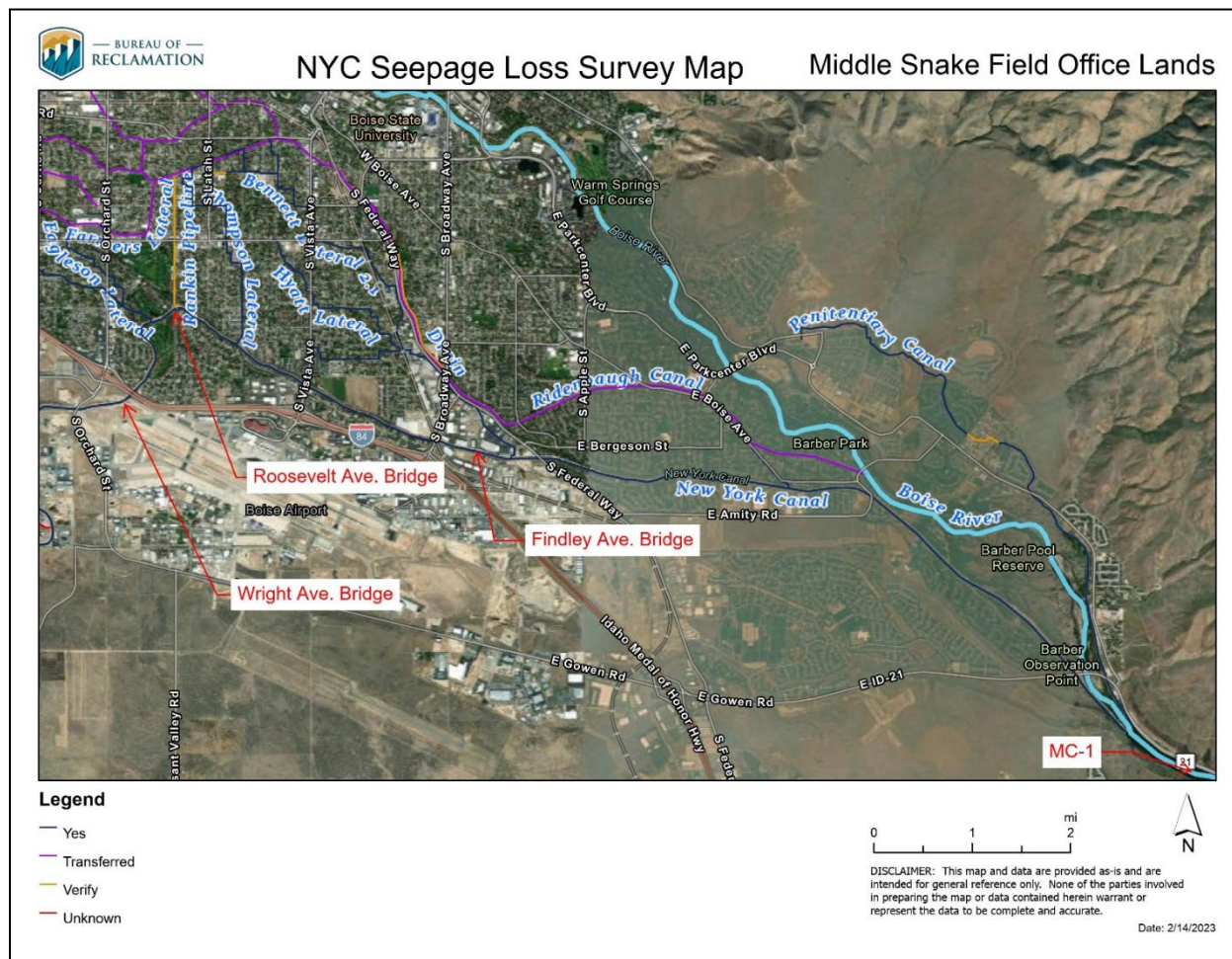


Figure A-1. Locations of seepage measurements

Table A-1. Summary of flow measurements.

Measurement Point	Average Flow cfs)							
	7/14/2022	8/11/2022	9/1/2022	9/8/2022	9/14/2022	9/21/2022	9/27/2022	Average
MC-1	2,188	2,160	2,126	2,092	2,120	2,036	2,009	2,104
Bennett Check	2,122	2,081	--	--	--	--	--	--
Findley Ave. Bridge	--	2,044	2,126	2,038	2,044	1,946	1,943	2,023
Penninger Check	1,665	--	--	--	--	--	--	--
Roosevelt Bridge	--	2,121	2,126	2,108	2,090	1,964	1,947	2,059
Wright Bridge	--		2,126	2,057	1,992	1,973	1,941	2,018

Table A-2. Summary of seepage rates in cubic feet per second, based on flow measurements.

Measurement Point	Loss (cfs)							
	7/14/2022	8/11/2022	9/1/2022	9/8/2022	9/14/2022	9/21/2022	9/27/2022	Average
MC-1	12	40	-55	-2	-28	14	-3	-3
Bennett Check	68	109	--	--	--	--	--	--
Findley Ave. Bridge	--	146	-37	43	41	93	53	57
Penninger Check	515	--	--	--	--	--	--	--
Roosevelt Bridge	--	59	-29	-37	-15	65	39	14
Wright Bridge	--	--	35	4	84	57	45	45

Table A-3. Summary of seepage rates in acre-feet per day, based on flow measurements

Measurement Point	Loss (acre-feet/day)							Average
	7/14/2022	8/11/2022	9/1/2022	9/8/2022	9/14/2022	9/21/2022	9/27/2022	
MC-1	24	80	-109	-3	-49	28	-6	-5
Bennett Check	135	217	--	--	--	--	--	--
Findley Ave. Bridge	--	290	-75	85	81	185	105	112
Penninger Check	1,022	--	--	--	--	--	--	--
Roosevelt Bridge	--	116	-57	75	-49	110	57	42
Wright Bridge	--	--	29	7	127	74	49	57

The following values summarize seepage results for the 7.7-mile section of the NYC:

- 207 acre-feet per day
- 37,692 acre-feet per season (183-day season)
- 4,895 acre-feet per mile
- 29,370 acre-feet for 6 miles

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Appendix B – Information for Planning and Conservation (IPaC) Report

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IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Ada County, Idaho



Local office

Idaho Fish And Wildlife Office

☎ (208) 378-5243

📅 (208) 378-5262

1387 South Vinnell Way Suite 368

1007 South Union Way, Suite 200
Boise, ID 83709-1657

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is no critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Slickspot Peppergrass <i>Lepidium papilliferum</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4027	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American White Pelican <i>pelecanus erythrorhynchos</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6886	Breeds Apr 1 to Aug 31

<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p>	Breeds Dec 1 to Aug 31
<p>Black Rosy-billed <i>Leucosticte atrata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9460</p>	Breeds Jun 15 to Aug 31
<p>California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 1 to Jul 31
<p>Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462</p>	Breeds May 15 to Jul 15
<p>Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 1 to Aug 31
<p>Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10
<p>Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Jul 31
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere
<p>Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408</p>	Breeds Apr 20 to Sep 30

Olive-sided Flycatcher *Contopus cooperi*

Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Rufous Hummingbird *selasphorus rufus*

Breeds Apr 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Sage Thrasher *Oreoscoptes montanus*

Breeds Apr 15 to Aug 10

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9433>

Western Grebe *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

- To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
- The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

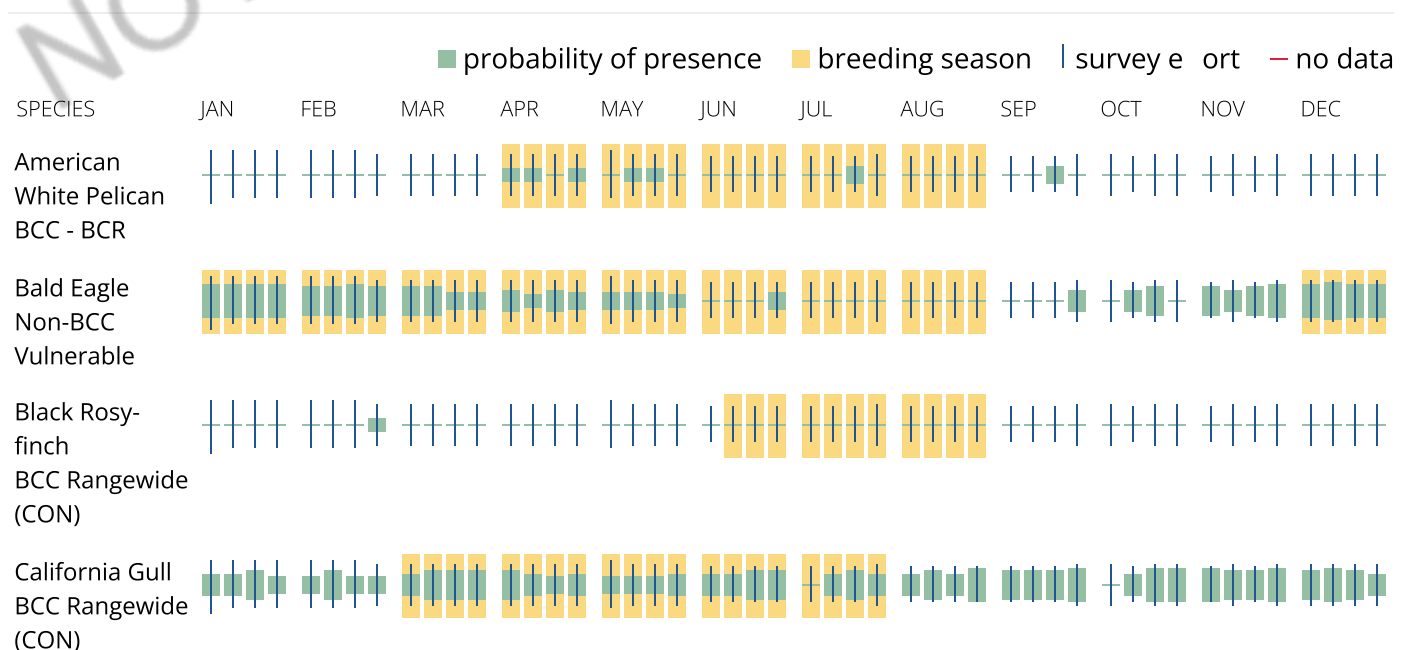
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

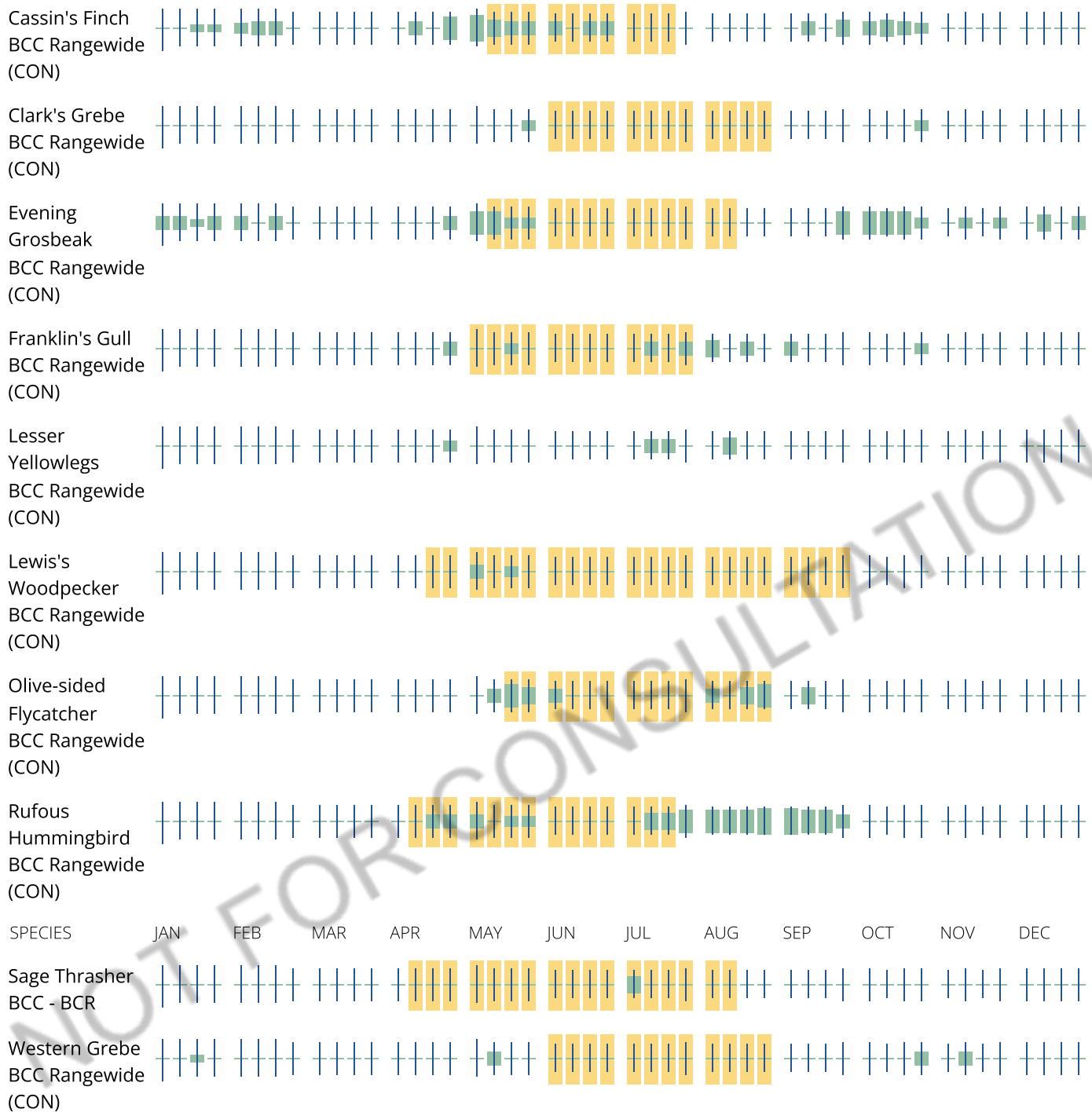
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas of the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

**Appendix C – Cultural Resources and Sacred
Sites Consultation with State Historic
Preservation Office and Shoshone-Bannock
Tribes**

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IDAHO STATE
HISTORICAL
SOCIETY

11 April 2023



Brad Little
Governor of Idaho

Janet Gallimore
Executive Director
State Historic
Preservation Officer

Administration:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2682
Fax: 208.334.2774

Idaho State Museum:
610 Julia Davis Dr.
Boise, Idaho 83702
208.334.2120

**Idaho State Archives
and State Records
Center:**
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2620

**State Historic
Preservation Office:**
210 Main St.
Boise, Idaho 83702
208.334.3861

**Old Idaho Penitentiary
and Historic Sites:**
2445 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2844

HISTORY.IDAHO.GOV

Melanie Paquin
Area Manager
Bureau of Reclamation
jrilk@usbr.gov

Via Email

RE: New York Canal Lining / SHPO Rev. No. 2023-431

Dear Ms. Paquin:

Thank you for consulting with our office on the above-referenced project. The Idaho State Historic Preservation Office (SHPO) is providing comments to the Bureau of Reclamation pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR § 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

It is our understanding that the scope of the undertaking will include Reclamation funding the Boise Project Board of Control to line or reline 6.25 miles of the New York Canal (01-955). This will involve installing a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete, known as Huesker liner.

After review of the documentation provided, we concur with the following proposed National Register of Historic Places (NRHP) eligibility determinations: New York Canal is eligible for listing; and that the Booth, Thompson, Penninger, and Eagleson laterals are not eligible for listing.

Pursuant to 36 CFR § 800.5, we have applied the criteria of effect to the proposed undertaking. Based on the information received 6 and 11 April 2023, we concur the proposed project actions will have **an adverse effect to historic properties, specifically the New York Canal (01-955)**.

If cultural material is inadvertently encountered during the implementation of this project, work shall be halted in the vicinity of the finds until they can be inspected and assessed by the appropriate consulting parties.

Thank you for the opportunity to comment. Please note that our response does not affect the review timelines afforded to other consulting parties.

Additionally, the information provided by other consulting parties may cause us to revise our comments. We look forward to working with you, as well as other consulting parties (including Preservation Idaho, Boise City Historic Preservation Commission, etc.) to avoid, minimize or mitigate these adverse effects. To learn more about the mitigation process please visit: <https://history.idaho.gov/section-106/mitigation-process>. If you have any questions or the scope of work changes, please contact me via phone or email at 208.488.7463 or ashley.molloy@ishs.idaho.gov.

Sincerely,



cn=Ashley L. Molloy,
o=Idaho State Historical
Society, ou=State Historic
Preservation Office,
email=ashley.molloy@ishs.id
aho.gov, c=US
2023.04.11 15:17:55 -0600

Ashley L. Molloy, M.A.
Historical Review Officer
Idaho State Historic Preservation Office

FedEx Delivery for Tribal Consultation Letters

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Carolyn Smith

Frances Roy

Candon Tanaka

Christina Cutler

Cleve Davis

Claudeo Broncho

Chad Colter

Shoshone -Paiute Tribes:

Buster Gibson

Honorable Brian Mason

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Nez Perce Tribe:

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November 28, 2022

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770538722346	FORT HALL, ID
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770539831190	BURNS, OR
770538876988	BURNS, OR
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770536832648	FORT HALL, ID
770540487028	OWYHEE, NV
770539932937	BURNS, OR
770540982924	LAPWAI, ID
770538881006	FORT HALL, ID
770538986552	FORT HALL, ID
770540517489	OWYHEE, NV
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		Delivery date:	Nov 21, 2022 09:50

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Tracking number:	770540996655	Ship Date:	Nov 18, 2022
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Recipient:
Mr. Keith Patrick Baird, Nez Perce Tribe
109 LO LO ST
LAPWAI, ID, US, 83540

Shipper:
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Boise, ID, US, 83702

Reference Jackson NYC Maint Scoping



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		Delivery date:	Nov 21, 2022 15:27

Shipping Information:

Tracking number:	770540661137	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Ms. Maurissa Bigjohn, Shoshone-Paiute Tribes
1036 Idaho State Highway 51
OWYHEE, NV, US, 89832

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

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Special Handling:	Deliver Weekday; Adult Signature Required		FORT HALL, ID, 83203
		Delivery date:	Nov 21, 2022 10:25

Shipping Information:

Tracking number:	770536953373	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Claude Broncho, Shoshone-Bannock Tribes
85 W. Agency Road
Building #82
FORT HALL, ID, US, 83203

Shipper:
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230 Collins Road
Boise, ID, US, 83702

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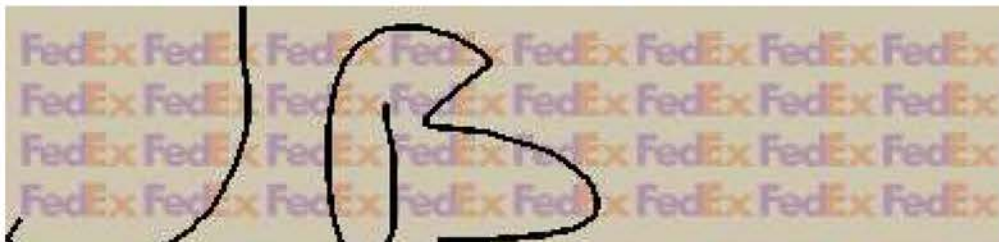
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Tracking number:	770535745031	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Chad Colter, Shoshone-Bannock Tribes
85 W. Agency Rd.
Building #82
FORT HALL, ID, US, 83203

Shipper:
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Shipping Information:

Tracking number:	770536395855	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Ms. Christina Cutler, Shoshone-Bannock Tribes
85 W. Agency Road
Building #82
FORT HALL INDIAN RESERVATION, ID, US, 83203

Shipper:
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Special Handling:	Deliver Weekday; Adult Signature Required		OWYHEE, NV, 89832
		Delivery date:	Nov 21, 2022 15:27

Shipping Information:

Tracking number:	770540583210	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Ms. Nancy Egan, Shoshone-Paiute Tribes
1036 Idaho State Highway 51
OWYHEE, NV, US, 89832

Shipper:
Katy Hennequin,
230 Collins Road
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Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		OWYHEE, NV, 89832
		Delivery date:	Nov 21, 2022 15:27

Shipping Information:

Tracking number:	770540561465	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Buster Gibson, Shoshone-Paiute Tribes
1036 Idaho State Highway 51
OWYHEE, NV, US, 89832

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

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Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		BURNS, OR, 97720
		Delivery date:	Nov 21, 2022 15:10

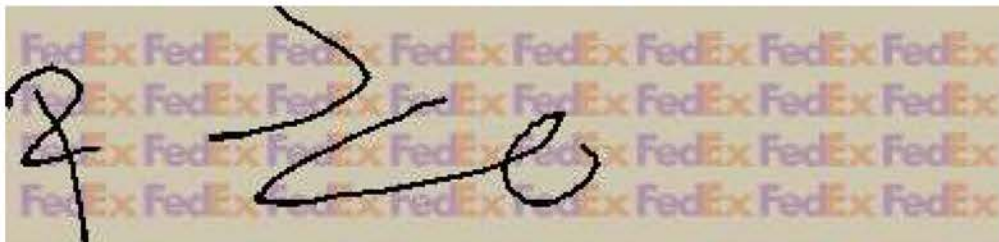
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Tracking number:	770539831180	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Calla Hagle, Burns Paiute Tribe
71210 Foley Drive
BURNS, OR, US, 97720

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Boise, ID, US, 83702

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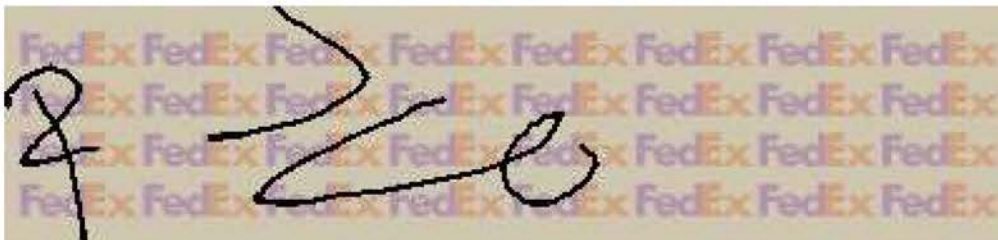
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Tracking number:	770539876988	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Brandon Haslick, Burns Paiute Tribe
71210 Foley Drive
BURNS, OR, US, 97720

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

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Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		LAPWAI, ID, 83540
		Delivery date:	Nov 21, 2022 09:42

Shipping Information:

Tracking number:	770541206172	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. David Johnson, Nez Perce Tribe
104 Lo Lo Street
LAPWAI, ID, US, 83540

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

Reference Jackson NYC Maint Scoping



Dear Customer,

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Signed for by:	J.BALDWIN	Delivery Location:	85 W AGENCY RD 82
Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		FORT HALL, ID, 83203
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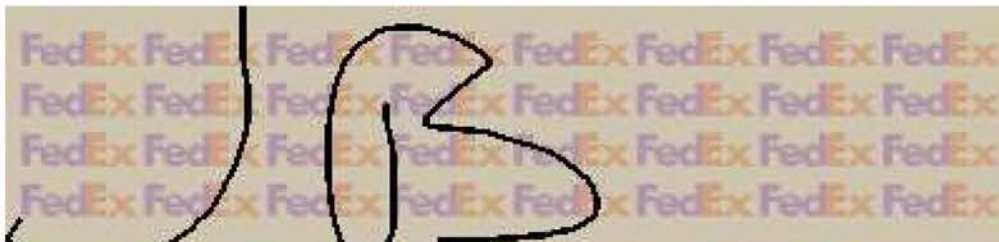
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Tracking number:	770535684139	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Wes Jones, Shoshone-Bannock Tribes
85 W. Agency Road
Building #82
FORT HALL, ID, US, 83203

Shipper:
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Boise, ID, US, 83702

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Special Handling:	Deliver Weekday; Adult Signature Required		LAPWAI, ID, 83540
		Delivery date:	Nov 21, 2022 09:56

Shipping Information:

Tracking number:	770540982924	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Honorable Samuel N. Penney, Nez Perce Tribe
100 AGENCY RD
LAPWAI, ID, US, 83540

Shipper:
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Boise, ID, US, 83702

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		Delivery date:	Nov 21, 2022 10:25

Shipping Information:

Tracking number:	770536881006	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Frances Roy, Shoshone-Bannock Tribes
85 W. Agency Road
Building #82
FORT HALL, ID, US, 83203

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

Reference Jackson NYC Maint Scoping



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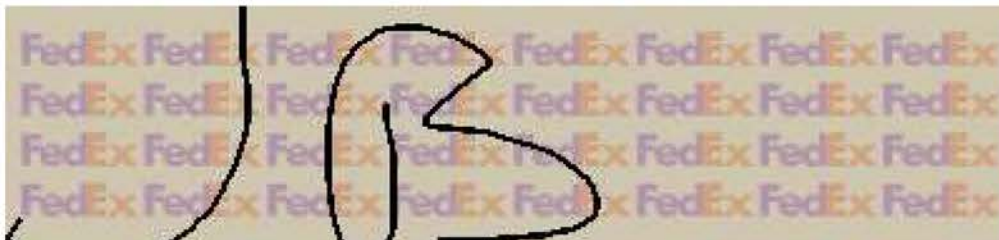
Shipping Information:

Tracking number:	770536998552	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Ms. Carolyn B. Smith, Shoshone-Bannock Tribes
85 W. Agency Rd.
Building #82
FORT HALL, ID, US, 83203

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

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Special Handling:	Deliver Weekday; Adult Signature Required		OWYHEE, NV, 89832
		Delivery date:	Nov 21, 2022 15:27

Shipping Information:

Tracking number:	770540517469	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Ms. Marissa Snapp, Shoshone-Paiute Tribes
1036 Idaho State Highway 51
OWYHEE, NV, US, 89832

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

Reference Jackson NYC Maint Scoping



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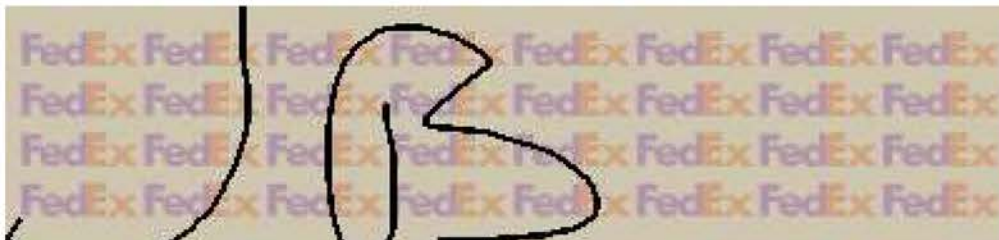
Shipping Information:

Tracking number:	770536341936	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Candon Tanaka, Shoshone-Bannock Tribes
85 W. Agency Road
Building #82
FORT HALL, ID, US, 83203

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

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Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		LAPWAI, ID, 83540
		Delivery date:	Nov 21, 2022 09:47

Shipping Information:

Tracking number:	770541175787	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Mr. Emmet Taylor, Nez Perce Tribe
114 Veterans Drive
LAPWAI, ID, US, 83540

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

Reference Jackson NYC Maint Scoping



Dear Customer,

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Signed for by:	B.BEERS	Delivery Location:	100 PASIGO ST
Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		BURNS, OR, 97720
		Delivery date:	Nov 21, 2022 15:19

Shipping Information:

Tracking number:	770540338818	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Honorable Diane Teeman, Burns Paiute Tribe
100 PASIGO ST
BURNS, OR, US, 97720

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

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Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday; Adult Signature Required		FORT HALL, ID, 83203
		Delivery date:	Nov 21, 2022 10:25

Shipping Information:

Tracking number:	770536979189	Ship Date:	Nov 18, 2022
		Weight:	0.5 LB/0.23 KG

Recipient:
Ms. Yvette Tuell, Shoshone-Bannock Tribes
85 W. Agency Rd.
Building #82
FORT HALL, ID, US, 83203

Shipper:
Katy Hennequin,
230 Collins Road
Boise, ID, US, 83702

Reference Jackson NYC Maint Scoping



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Pawan Upadhyay PhD, Shoshone-Paiute Tribes
1036 Idaho State Highway 51
OWYHEE, NV, US, 89832

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Katy Hennequin,
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Appendix D – Scoping Documents, Mailing List, and Scoping Comments Received

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United States Department of the Interior
BUREAU OF RECLAMATION
Snake River Area Office
230 Collins Road
Boise, ID 83702-4520



IN REPLY REFER TO:

SRA-1214
2.1.4.17

Subject: Request for Public Comments Regarding the Proposed Maintenance on the New York Canal, Arrowrock Division, Boise Project, Ada County, Idaho

Dear Interested Party:

The Bureau of Reclamation is proposing to provide funding through Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law for Boise Project Board of Control to install a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete. The purpose of this letter is to inform interested and affected public of the proposal and to solicit comments pursuant to the National Environmental Policy Act of 1969. Enclosed is a Scoping Information Package describing the project proposal.

Scoping is a public involvement process used to determine the scope of issues to be addressed and identify issues related to a proposed action. Analysis of the proposal is ongoing and will be documented in an environmental assessment with an estimated completion in the fall of 2023. Comments received in response to this solicitation will be used to identify potential environmental issues related to the proposed action and to identify alternatives to the proposed action that meet the purpose of and need for the project.

Please help us identify important issues and concerns regarding the proposed action by providing your written comments by **December 21, 2022**. Written comments should be submitted electronically to sra-nepa-comments@usbr.gov, or mailed or hand-delivered to:

Ms. Rochelle Ochoa
Natural Resources Specialist
Bureau of Reclamation
Snake River Area Office
230 Collins Road
Boise, Idaho 83702

There will be a public open house held during the scoping period to provide information and to answer questions about the proposed action. The meeting will be held on December 13, 2022, from 6:00–8:00 p.m. at the following location:

Holiday Inn Boise Airport
2970 West Elder Street
Boise, Idaho 83705

Before including your address, phone number, email address, or other personal identifying information in your comment, be advised that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

If you have additional questions about this proposal or its analysis, please contact Ms. Rochelle Ochoa, Natural Resources Specialist, at (208) 383-2277. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

Sincerely,

Melanie Paquin
Area Manager

Enclosure

Scoping Information Package

Proposal for Maintenance on the New York Canal, Arrowrock Division, Boise Project, Ada County, Idaho

This information package summarizes the proposal from the Boise Project Board of Control to perform construction activities necessary to install a canal lining system on six miles of the New York Canal approximately 3.3 miles downriver from the Boise Diversion Dam (from approximately station 175+00 to approximately station 495+00).

Federal actions must be analyzed in accordance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations to determine potential environmental consequences. Reclamation is seeking input to better identify issues and concerns associated with this proposal further detailed below.

Background and Existing Condition

The New York Canal is 41 miles long, conveying water from the Boise River westward toward Lake Lowell in Nampa, Idaho. The canal provides irrigation water to about 165,000 acres in the Boise Valley. Construction of the canal began in the late 1800s and it was enlarged between 1909 and 1912 by the Bureau of Reclamation. In 1926, Reclamation transferred operation, care, and maintenance of the canal to the Boise Project Board of Control. The canal's current operating capacity is approximately 2,450 cubic feet per second (cfs).

The Boise Project Board of Control is the operating agent for five irrigation districts: Boise-Kuna Irrigation District, Big Bend Irrigation District, Nampa and Meridian Irrigation District, New York Irrigation District, and Wilder Irrigation District. Its purpose is to manage the irrigation facilities and other works transferred by Reclamation to these five irrigation districts and to deliver water to their landowners.

Throughout the years, the Boise Project Board of Control has relined several short segments of the canal, typically in sections between 300 to 600 linear feet. The materials used for the lining are superior to the original lining and improve the canal's water holding and transfer ability and have an approximately 50-year lifespan.

Need for Action

The New York Canal's existing concrete and asphalt lining in the six-mile segment is inefficient and has had irrigation water loss through seepage. Seepage loss from the canal has been estimated up to 8.9 cfs per mile. Additionally, urban development in the Boise area has occurred immediately adjacent to the New York Canal where some sections of the canal embankment rise nearly 50 feet immediately above residential and commercial areas. Although the canal is in good condition overall, a breach of the canal adjacent to an urbanized area has the potential for flooding with substantial consequences. Relining the canal in these areas with a more substantial lining system would significantly reduce risk and seepage.

Proposed Action

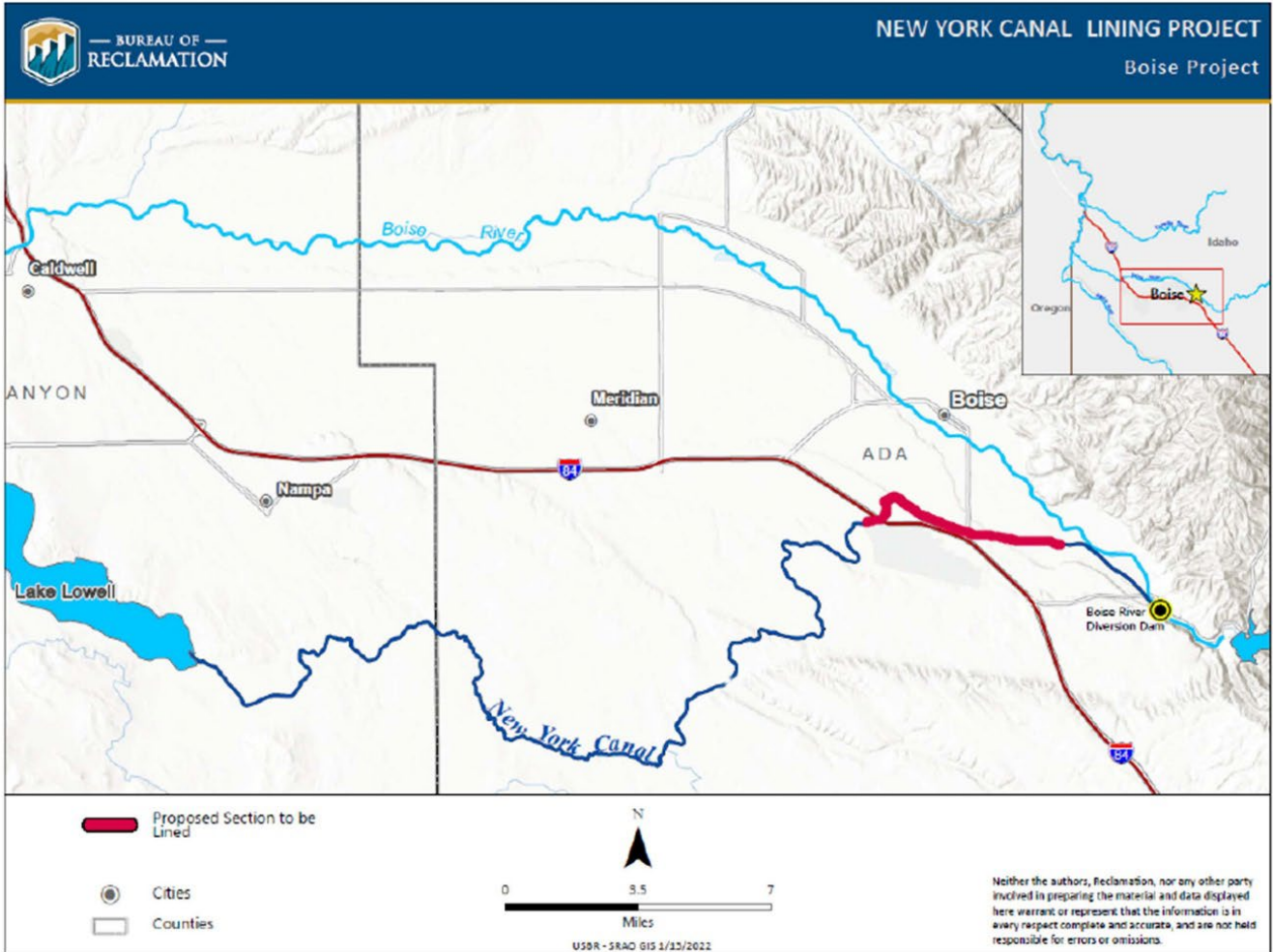
Reclamation proposes to provide funding through Reclamation's Aging Infrastructure Account, funded by the Bipartisan Infrastructure Law for Boise Project Board of Control to install a canal lining system composed of a multi-layer geosynthetic membrane covered by reinforced concrete. The lining system would be installed on the canal invert and both canal walls. Installation of the lining would occur when the canal is dewatered during the non-irrigation season. This season typically spans from October to March each year. One mile of lining could occur each non-irrigation season. This project would likely begin in 2023 and end in 2029 assuming a mile would be completed in consecutive years.

Preliminary Alternative Development

The environmental assessment would include consideration of the Proposed Action Alternative and the No Action Alternative. Additionally, alternatives would be developed with the identified issues throughout the NEPA process.

Exhibits

1. Project Area Map



PRIMOWNER	LASTNM	ADDCONCAT	STATCONCAT	CITY	STATE	ZIPCODE	ADDRESS	CITY_STATE
J B SCOTT	J	501 E BAYBROOK CT	BOISE, ID 83706-3915	BOISE	ID	83706-3915	2081 W COMMERCE AVE	BOISE, ID 83709-0000
ASHLEIGH COMMONS HOA INC	ASHLEIGH	PO BOX 1246	MERIDIAN, ID 83680-0000	MERIDIAN	ID	83680-0000	S GEKELER LN	BOISE, ID 83706-0000
KOCH STERLING	KOCH	5063 E BANDSAW ST	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1515 W TARGEE ST	BOISE, ID 83705-0000
SCHULTE MARK E	SCHULTE	PO BOX 50211	BOISE, ID 83705-0964	BOISE	ID	83705-0964	1502 S ROVIAN ST	BOISE, ID 83705-0000
KALACHE JESSICA	KALACHE	2200 S ANNETT ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2200 S ANNETT ST	BOISE, ID 83705-0000
HOPE DALE J & O'LANDA L REVOCABLE LIVING TRUST	HOPE	1400 W SUNRISE RIM RD	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3926 S CURTIS RD	BOISE, ID 83705-0000
DUNN LUCY	DUNN	3607 W KOOTENAI ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3607 W KOOTENAI ST	BOISE, ID 83705-0000
CUCCIA JO DEAN	CUCCIA	1322 JOHNSON ST	BOISE, ID 83705-6024	BOISE	ID	83705-6024	1322 S JOHNSON ST	BOISE, ID 83705-0000
WHITE JENNIFER R	WHITE	2270 S SUMAC ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2270 S SUMAC ST	BOISE, ID 83706-0000
HONEYSUCKLE ENTERPRISES LLC	HONEYSUCKLE	2404 W BANK DR STE 300	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2404 W BANK DR	BOISE, ID 83705-0000
SMITH ROGER CRAIG FAMILY TRUST 09/14/2012	SMITH	6568 S FEDERAL WAY # 384	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4060 S SUNTREE WAY	BOISE, ID 83706-0000
EPPICH ANTON P	EPPICH	3905 S SUNTREE WAY	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3905 S SUNTREE WAY	BOISE, ID 83706-0000
CITY OF BOISE (AIR TERMINAL)	CITY	PO BOX 500	BOISE, ID 83701-0500	BOISE	ID	83701-0500	2049 W COMMERCE AVE	BOISE, ID 83705-0000
KENWORTH SALES COMPANY	KENWORTH	2125 S CONSTITUTION BLVD	WEST VALLEY CITY, UT 84119-0000	WEST VALLEY CITY	UT	84119-0000	4100 S TRANSPORT ST	BOISE, ID 83705-0000
HPT TA PROPERTIES LLC	HPT	24601 CENTER RIDGE RD # 200	WESTLAKE, OH 44145-0000	WESTLAKE	OH	44145-0000	4115 S BROADWAY AVE	BOISE, ID 83705-0000
ADC IDAHO LLC	ADC	777 N FIRST ST FL 5	SAN JOSE, CA 95112-0000	SAN JOSE	CA	95112-0000	1125 W BOEING ST	BOISE, ID 83705-0000
RUSH TRUCK CENTERS OF IDAHO INC	RUSH	PO BOX 34630	SAN ANTONIO, TX 78265-0000	SAN ANTONIO	TX	78265-0000	770 W AMITY RD	BOISE, ID 83705-0000
OVERLAND LEASING LLC	OVERLAND	PO BOX 2471	ST GEORGE, UT 84737-0000	ST GEORGE	UT	84737-0000	665 W AMITY RD	BOISE, ID 83705-0000
KISSLER ENTERPRISES L P	KISSLER	1121 W AMITY RD	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1125 W AMITY RD	BOISE, ID 83705-0000
UNITED WATER IDAHO INC	UNITED	PO BOX 71970	PHOENIX, AZ 85050-0000	PHOENIX	AZ	85050-0000	4725 S MARKET ST	BOISE, ID 83705-0000
BLACK ENTERPRISES LLC	BLACK	PO BOX 16627	BOISE, ID 83715-6627	BOISE	ID	83715-6627	6750 W VICTORY RD	BOISE, ID 83709-0000
OAK PARK LIMITED PARTNERSHIP	OAK	PO BOX 108	BOISE, ID 83701-0000	BOISE	ID	83701-0000	2888 W CHERRY LN	BOISE, ID 83705-0000
EDL MICHELE D	EDL	1432 E PINERIDGE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1432 E PINERIDGE DR	BOISE, ID 83716-0000
SCHMIDT KEITH	SCHMIDT	1412 E PINERIDGE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1412 E PINERIDGE DR	BOISE, ID 83716-0000
STACK AMY K	STACK	1396 E PINERIDGE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1396 E PINERIDGE DR	BOISE, ID 83716-0000
BOLZ DEVIN	BOLZ	4414 S TIMRIDGE WAY	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4414 S TIMRIDGE WAY	BOISE, ID 83716-0000
PARK MEE JU	PARK	4212 S RIMVIEW WAY	BOISE, ID 83705-0000	BOISE	ID	83705-0000	4204 S RIMVIEW WAY	BOISE, ID 83716-0000
MILLER DANA LIVING TRUST	MILLER	1322 E PINERIDGE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1322 E PINERIDGE DR	BOISE, ID 83716-0000
MANCINI FAMILY TRUST 10-8-2015	MANCINI	393 E TRAILSIDE DR	EAGLE, ID 83616-0000	EAGLE	ID	83616-0000	1338 E PINERIDGE DR	BOISE, ID 83716-0000
MURRILLO MIGUEL	MURRILLO	1350 E PINERIDGE DR	BOISE, ID 83716-5776	BOISE	ID	83716-5776	1350 E PINERIDGE DR	BOISE, ID 83716-0000
WALDEN ROBERT & PAMALA REVOCABLE LIVING TRUST 7/16/2001	WALDEN	1208 E OAKRIDGE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1208 E OAKRIDGE DR	BOISE, ID 83716-0000
MCCLUNG MERRI L	MCCLUNG	1780 E PINERIDGE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1780 E PINERIDGE DR	BOISE, ID 83716-0000
LYONS CYRUS DEWEY	LYONS	1009 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1009 E BOISE AVE	BOISE, ID 83706-0000
ROBINSON WILLIAM BRADLEY	ROBINSON	2906 S MONTEVISTA DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2906 S MONTEVISTA DR	BOISE, ID 83706-0000
DRYDEN HOLLEY J	DRYDEN	2812 S MONTEVISTA DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2812 S MONTEVISTA DR	BOISE, ID 83706-0000
927 E BOISE AVE LLC	927	802 W BANNOCK ST STE 303	BOISE, ID 83702-0000	BOISE	ID	83702-0000	955 E BOISE AVE	BOISE, ID 83706-0000
WAYDA JULIE R FAMILY TRUST 8/22/1996	WAYDA	21941 SEACREST LN	HUNTINGTON BEACH, CA 92646-0000	HUNTINGTON BEACH	CA	92646-0000	1014 E CARTER ST	BOISE, ID 83706-0000
D'ORAZI JESSICA R	D'	1107 E CARTER ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1107 E CARTER ST	BOISE, ID 83706-0000
TK AVENUE LLC	TK	250 S 5TH ST # 200	BOISE, ID 83702-0000	BOISE	ID	83702-0000	3562 S T K AVE	BOISE, ID 83705-0000
BURKHART MARCUS WAYNE	BURKHART	2330 W CANAL ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2330 W CANAL ST	BOISE, ID 83705-0000
3BAR BOISE LLC	3BAR	1148 N 450 W	SPRINGVILLE, UT 84663-0000	SPRINGVILLE	UT	84663-0000	2178 E SUMMERSWEET DR	BOISE, ID 83716-0000
AMYX CHERYL & DUANE LIVING TRUST	AMYX	6184 W HOLLILYNN DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6184 W HOLLILYNN DR	BOISE, ID 83709-0000
PETERSON JAN M	PETERSON	5960 W HOLLILYNN DR	BOISE, ID 83709-7831	BOISE	ID	83709-7831	5960 W HOLLILYNN DR	BOISE, ID 83709-0000
MCCARNEY ERIC	MCCARNEY	5930 W HOLLILYNN DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5930 W HOLLILYNN DR	BOISE, ID 83709-0000
PLADSEN ALAN L	PLADSEN	5780 W HOLLILYNN DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5780 W HOLLILYNN DR	BOISE, ID 83709-0000
HARRIS JOY L	HARRIS	5702 W HOLLILYNN DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5702 W HOLLILYNN DR	BOISE, ID 83709-0000
BROWN JOE M	BROWN	5899 W HOLLILYNN DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5899 W HOLLILYNN DR	BOISE, ID 83709-0000
THATCHER RICHARD H & NATALIE J TRUST	THATCHER	5785 W HOLLILYNN DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5785 W HOLLILYNN DR	BOISE, ID 83709-0000
EDWARDS REVOCABLE TRUST 2003	EDWARDS	101 INDIAN HILLS DR	NOVATO, CA 94949-0000	NOVATO	CA	94949-0000	4101 S MINUTEMAN WAY	BOISE, ID 83706-0000
BOREN GIB E	BOREN	1398 E HANCOCK DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1398 E HANCOCK DR	BOISE, ID 83706-0000
PARKCENTER COMMUNITY CHURCH OF THE ASSEMBLIES OF GOD IN	PARKCENTER	270 E PENNSYLVANIA ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	270 E PENNSYLVANIA ST	BOISE, ID 83706-0000
COLLINS CAROLYN C	COLLINS	704 S OWYHEE ST	BOISE, ID 83705-1745	BOISE	ID	83705-1745	704 S OWYHEE ST	BOISE, ID 83705-0000
HADRICK MARK K	HADRICK	204 E BOISE AVE	BOISE, ID 83706-4304	BOISE	ID	83706-4304	204 E BOISE AVE	BOISE, ID 83706-0000
BOISE INDEPENDENT SCHOOL DISTRICT	BOISE	8169 W VICTORY RD	BOISE, ID 83709-0000	BOISE	ID	83709-0000	1740 E BERGESON ST	BOISE, ID 83706-0000
CITY OF BOISE (BOISE PARKS & RECREATION)	CITY	1104 W ROYAL BLVD	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3450 S LAW AVE	BOISE, ID 83706-0000
HOUGH PAUL	HOUGH	3244 S BRAMPTON WAY	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3244 S BRAMPTON WAY	BOISE, ID 83706-0000
HUNT ANTHONY	HUNT	4001 S CANFIELD AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	4001 S CANFIELD AVE	BOISE, ID 83706-0000
MITCHELL JANET E	MITCHELL	PO BOX 5923	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3388 S NORFOLK WAY	BOISE, ID 83706-0000
BERRY GEORGE E	BERRY	3397 E AUBRIETTA CT	BOISE, ID 83716-0000	BOISE	ID	83716-0000	3397 E AUBRIETTA CT	BOISE, ID 83716-0000
GENTRY AMANDA ROSE	GENTRY	4020 E APHRODITE DR	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4020 E APHRODITE DR	BOISE, ID 83716-0000
COLUMBIA VILLAGE OA INC	COLUMBIA	2180 W SR 434 STE 5000	LONGWOOD, FL 32779-0000	LONGWOOD	FL	32779-0000	4751 E GRAND FOREST DR	BOISE, ID 83716-0000
GUERRICABEITIA SANTIAGO	GUERRICABEITIA	1633 S PHILLIPPI ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1633 S PHILLIPPI ST	BOISE, ID 83705-0000
WILSON HOLLY	WILSON	5321 SHAUN CIR	ANCHORAGE, AK 99507-6616	ANCHORAGE	AK	99507-6616	1777 S PHILLIPPI ST	BOISE, ID 83705-0000
OWENS CHAD	OWENS	2153 S RETRIEVER WAY	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	2107 S PHILLIPPI ST	BOISE, ID 83705-0000
STATE OF IDAHO (DEPT OF LANDS)	STATE	PO BOX 83720	BOISE, ID 83720-0000	BOISE	ID	83720-0000	2780 S EAGLESON RD	BOISE, ID 83705-0000

LAMOTT DONALD E	LAMOTT	5321 W MALAD ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	5321 W MALAD ST	BOISE, ID 83705-0000
BRADLEY B LLC	BRADLEY	2777 S ORCHARD ST	BOISE, ID 83707-0000	BOISE	ID	83707-0000	2721 S HILTON ST	BOISE, ID 83705-0000
SIESTA ASSOCIATES LLC	SIESTA	430 S SAN DIMAS AVE	SAN DIMAS, CA 91773-0000	SAN DIMAS	CA	91773-0000	5209 W TARGEE ST	BOISE, ID 83705-0000
MOON ADAM R	MOON	1922 S HILTON ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1922 S HILTON ST	BOISE, ID 83705-0000
PLEASANT VALLEY SOUTH LLC	PLEASANT	1075 N CURTIS RD # 300	BOISE, ID 83706-0000	BOISE	ID	83706-0000	4971 W OVERLAND RD	BOISE, ID 83705-0000
RA2 BOISE-OVERLAND LLC	RA2	PO BOX 3165	HARRISBURG, PA 17105-3165	HARRISBURG	PA	17105-3165	5005 W OVERLAND RD	BOISE, ID 83705-0000
RADFORD GAYLAN A & STOVER MARK	RADFORD	2819 S POND ST	BOISE, ID 83705-3844	BOISE	ID	83705-3844	2819 S POND ST	BOISE, ID 83705-0000
PAGANO FAMILY TRUST	STOVER	4719 W VICTORY RD	BOISE, ID 83705-0000	BOISE	ID	83705-0000	4719 W VICTORY RD	BOISE, ID 83705-0000
ELY PATRICIA A	PAGANO	3340 W CATALINA LN	BOISE, ID 83705-0000	BOISE	ID	83705-0000	4330 W HILLCREST DR	BOISE, ID 83705-0000
ROBERTS QUINN L	ELY	4400 W HILLCREST DR	BOISE, ID 83705-0000	BOISE	ID	83705-0000	4400 W HILLCREST DR	BOISE, ID 83705-0000
NICHOL CHRISTOPHER	ROBERTS	2724 S MEADOWBROOK DR	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2724 S MEADOWBROOK DR	BOISE, ID 83705-0000
OAKES BETTY L	NICHOL	3608 W CATALINA RD	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3608 W CATALINA RD	BOISE, ID 83705-0000
SCHULTE MATTHEW J	OAKES	3995 NORMANDIE DR	BOISE, ID 83705-4732	BOISE	ID	83705-4732	3995 W NORMANDIE DR	BOISE, ID 83705-0000
ALLISON STEPHEN J	SCHULTE	1010 E VALENCIA ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1010 E VALENCIA ST	BOISE, ID 83706-0000
STONE BARBARA J	ALLISON	622 S PEARL ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2079 S CRYSTAL WAY	BOISE, ID 83706-0000
SCHUECK LINDA SUE	STONE	3111 S LINDSAY AVE	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3111 S LINDSAY AVE	BOISE, ID 83705-0000
DAY SIDE LP	SCHUECK	922 S DAY DR	BOISE, ID 83705-5959	BOISE	ID	83705-5959	922 S DAY DR	BOISE, ID 83705-0000
WALTON LUKE	DAY	726 S VISTA AVE	BOISE, ID 83705-0000	BOISE	ID	83705-0000	710 S VISTA AVE	BOISE, ID 83705-0000
NEWHOUSE MASON J	WALTON	3226 S LINDSAY AVE	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3226 S LINDSAY AVE	BOISE, ID 83705-0000
WRIGHT LANE S	NEWHOUSE	1471 W SAINT PATRICK ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1471 W SAINT PATRICK ST	BOISE, ID 83705-0000
STRYKER GINA D'ORAZIO	WRIGHT	1626 WILLIAMS ST	BOISE, ID 83706-3576	BOISE	ID	83706-3576	1626 W WILLIAMS ST	BOISE, ID 83706-0000
KERFOOT MATTHEW J	STRYKER	1520 W GARFIELD ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1520 W GARFIELD ST	BOISE, ID 83706-0000
LAMET AMANDA MICHELLE	KERFOOT	1817 S DENVER AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1817 S DENVER AVE	BOISE, ID 83706-0000
MILTON LAVANDA J	LAMET	2117 S EUCLID AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2117 S EUCLID AVE	BOISE, ID 83706-0000
PALMER KENNETH L	MILTON	1120 W CHAMBERLIN ST	BOISE, ID 83706-4106	BOISE	ID	83706-4106	1120 W CHAMBERLIN ST	BOISE, ID 83706-0000
CORNELIA PARTNERS LLC	PALMER	1916 GRANT AVE	BOISE, ID 83706-4146	BOISE	ID	83706-4146	1916 S GRANT AVE	BOISE, ID 83706-0000
GRAY STEPHEN C	CORNELIA	44 MONTGOMERY ST STE 3200	SAN FRANCISCO, CA 94101-0000	SAN FRANCISCO	CA	94101-0000	1421 W GARFIELD ST	BOISE, ID 83706-0000
BENSON LEON W	GRAY	1507 W GARFIELD ST	BOISE, ID 83706-4141	BOISE	ID	83706-4141	1507 W GARFIELD ST	BOISE, ID 83706-0000
A & R PROPERTIES LLC	BENSON	3310 W PALOUSE ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3310 W PALOUSE ST	BOISE, ID 83705-0000
DCMSJ LLC	A	PO BOX 1553	BOISE, ID 83701-0000	BOISE	ID	83701-0000	2411 S SHOSHONE ST	BOISE, ID 83705-0000
BENNETT LAYNE CHARLES	DCMSJ	5065 N WILDRIE DR	BOISE, ID 83703-0000	BOISE	ID	83703-0000	3871 W NEZ PERCE ST	BOISE, ID 83705-0000
ELEMENT CONSTRUCTION CORP	BENNETT	3905 PALOUSE ST	BOISE, ID 83705-3251	BOISE	ID	83705-3251	3905 W PALOUSE ST	BOISE, ID 83705-0000
JACKSONS FOOD STORES INC	ELEMENT	182 W WAUKESHA ST	MERIDIAN, ID 83646-0000	MERIDIAN	ID	83646-0000	1304 E ECHELON RIDGE LN	BOISE, ID 83716-0000
ROCHE KENNETH P	JACKSONS	3450 E COMMERCIAL CT	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	3205 S VISTA AVE	BOISE, ID 83705-0000
ESCHEN ERIC	ROCHE	PO BOX 15101	BOISE, ID 83715-0000	BOISE	ID	83715-0000	2824 W SUNRISE RIM RD	BOISE, ID 83705-0000
FWCC #2 LLC	ESCHEN	109 E PROVIDENT DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	109 E PROVIDENT DR	BOISE, ID 83706-0000
LINHART ERIC L	FWCC	250 S 5TH ST FL 2ND	BOISE, ID 83702-0000	BOISE	ID	83702-0000	743 W MCGREGOR CT STE 120	BOISE, ID 83705-0000
COSMAX LLC	LINHART	3998 S VALLEY FORGE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3998 S VALLEY FORGE AVE	BOISE, ID 83706-0000
AMICK TAMMY	COSMAX	PO BOX 385	KUNA, ID 83634-0000	KUNA	ID	83634-0000	6801 S FEDERAL WAY	BOISE, ID 83716-0000
MIGEL SHARON	AMICK	3468 E BOISE AVE	BOISE, ID 83706-5742	BOISE	ID	83706-5742	3468 E BOISE AVE	BOISE, ID 83706-0000
LOEHR ALEXANDER	MIGEL	321 W BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	321 W BOISE AVE	BOISE, ID 83706-0000
MYHRE LON E	LOEHR	306 W CHESTER DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	306 W CHESTER DR	BOISE, ID 83706-0000
DONAHUE MCNAMARA PROPERTIES LLC	MYHRE	101 E DEMMING LN	BOISE, ID 83706-0000	BOISE	ID	83706-0000	101 E DEMMING LN	BOISE, ID 83706-0000
DIXON CONTAINER CO	DONAHUE	PO BOX 2837	HAILEY, ID 83333-0000	HAILEY	ID	83333-0000	1330 E EXCHANGE ST	BOISE, ID 83716-0000
GUERDON PROPERTIES LLC	DIXON	2255 E BRANIFF	BOISE, ID 83716-0000	BOISE	ID	83716-0000	2255 E BRANIFF ST	BOISE, ID 83716-0000
MITCHELL WILLIAM E	GUERDON	2264 E BLUE STEM LN	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2264 E BLUE STEM LN	BOISE, ID 83706-0000
WILSON BRETT	MITCHELL	5608 RANDOLPH DR	BOISE, ID 83705-0000	BOISE	ID	83705-0000	5608 W RANDOLPH DR	BOISE, ID 83705-0000
PERSCHON BENJAMIN	WILSON	2621 S GREENWOOD CIR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2621 S GREENWOOD CIR	BOISE, ID 83706-0000
STEVENS RONALD D	PERSCHON	2626 S GREENWOOD CIR	BOISE, ID 83706-5114	BOISE	ID	83706-5114	2626 S GREENWOOD CIR	BOISE, ID 83706-0000
NEWMAN BRUCE	STEVENS	2794 S GREENWOOD CIR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2794 S GREENWOOD CIR	BOISE, ID 83706-0000
GARCIA RUTH A	NEWMAN	2707 S GREENWOOD CIR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2707 S GREENWOOD CIR	BOISE, ID 83706-0000
LANE MARTHA	GARCIA	2619 S GREENWOOD CIR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2619 S GREENWOOD CIR	BOISE, ID 83706-0000
CONCORD MAHIUS J	LANE	1003 E GREENWOOD CIR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1003 E GREENWOOD CIR	BOISE, ID 83706-0000
TOKITA AKIKO	CONCORD	1538 LYLE AVE	BREMERTON, WA 98312-2112	BREMERTON	WA	98312-2112	2322 W LEMHI ST	BOISE, ID 83705-0000
GRANT JAMES K	TOKITA	923 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	923 E BOISE AVE	BOISE, ID 83706-0000
NEVILLE THOMAS F	GRANT	4622 W HILLCREST VIEW DR	BOISE, ID 83705-0000	BOISE	ID	83705-0000	9205 S FEDERAL WAY	BOISE, ID 83716-0000
HENRIKSON SCOTT HOWARD	NEVILLE	3122 W EDSON TER	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3122 W EDSON TER	BOISE, ID 83705-0000
WALTZ JOHN S & JULIE ANN FAMILY TRUST 10/7/2003	HENRIKSON	2621 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2621 E BOISE AVE	BOISE, ID 83706-0000
ARNOLD MICHAEL	WALTZ	2575 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2575 E BOISE AVE	BOISE, ID 83706-0000
SPIES SHANNON M REVOCABLE TRUST	ARNOLD	2551 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2551 E BOISE AVE	BOISE, ID 83706-0000
VICTORY PLACE LLC	SPIES	2515 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2515 E BOISE AVE	BOISE, ID 83706-0000
ALPERS RYAN C	VICTORY	2590 S CURTIS RD	BOISE, ID 83705-0000	BOISE	ID	83705-0000	6805 W VICTORY RD	BOISE, ID 83709-0000
BREWER RICHARD K	ALPERS	3219 S RAYMOND ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	3219 S RAYMOND ST	BOISE, ID 83709-0000
FORSCH ERIC	BREWER	6757 W ELDER ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6757 W ELDER ST	BOISE, ID 83709-0000
CHAPMAN JAMES M	FORSCH	3300 S BEVERLY ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	3300 S BEVERLY ST	BOISE, ID 83709-0000
	CHAPMAN	6832 W WRIGHT ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6832 W WRIGHT ST	BOISE, ID 83709-0000

URICH MOLLY	URICH	6798 W WRIGHT ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6798 W WRIGHT ST	BOISE, ID 83709-0000
LEE BENJAMIN K	LEE	6700 W WRIGHT ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6700 W WRIGHT ST	BOISE, ID 83709-0000
VISTA PROPERTY LLC	VISTA	2430 S EAGLESON RD	BOISE, ID 83705-3717	BOISE	ID	83705-3717	2867 S VISTA AVE	BOISE, ID 83705-0000
ROJAS MATLAZOMATLI	ROJAS	2703 S SHOSHONE ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2703 S SHOSHONE ST	BOISE, ID 83705-0000
PERKINS KYLE J	PERKINS	2605 S KERR ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2605 S KERR ST	BOISE, ID 83705-0000
GRAYBUL SKYLINE LLC	GRAYBUL	200 E BROAD ST STE 220	GREENVILLE, SC 29601-0000	GREENVILLE	SC	29601-0000	2120 S HUDSON AVE	BOISE, ID 83705-0000
HENDERSON JACK BRETT	HENDERSON	970 E SARATOGA DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	970 E SARATOGA DR	BOISE, ID 83706-0000
INTERMOUNTAIN PATHLAB PLLC	INTERMOUNTAIN	906 N HOUSTON RD	BOISE, ID 83706-0000	BOISE	ID	83706-0000	7475 S FEDERAL WAY	BOISE, ID 83716-0000
SCHAEFER ROBERT ALLEN	SCHAEFER	2917 S MATTHEWS ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2917 S MATTHEWS ST	BOISE, ID 83706-0000
BRICKEY JENNIFER A	BRICKEY	700 W RICHMOND ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	700 W RICHMOND ST	BOISE, ID 83706-0000
VAN GUNDY REVOCABLE TRUST	VAN	PO BOX 34035	TRUCKEE, CA 96160-0000	TRUCKEE	CA	96160-0000	6799 W OVERLAND RD	BOISE, ID 83709-0000
KINNICK PLACE SUBDIVISION HOMEOWNERS ASSOCIATION	KINNICK	2190 S WYOMING LN	BOISE, ID 83706-0000	BOISE	ID	83706-0000	S WYOMING LN	BOISE, ID 83706-0000
SCHAECHER DEAN E	SCHAECHER	4145 S STARGAZER PL	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4145 S STARGAZER PL	BOISE, ID 83716-0000
BARBERO ANTHONY M	BARBERO	3127 S SNOWFLAKE WAY	BOISE, ID 83706-5257	BOISE	ID	83706-5257	210 W ARROWROCK LN	BOISE, ID 83706-0000
KINTIGH HAL SCOTT	KINTIGH	3221 S RAINDROP DR	BOISE, ID 83706-5253	BOISE	ID	83706-5253	3221 S RAINDROP DR	BOISE, ID 83706-0000
COLLINS DOUGLAS P	COLLINS	1735 RAINER ST	IDAHO FALLS, ID 83402-0000	IDAHO FALLS	ID	83402-0000	3080 S RAINDROP DR	BOISE, ID 83706-0000
ANDREWS ROBERT M JR	ANDREWS	2787 S FALLING BROOK WAY	BOISE, ID 83706-4963	BOISE	ID	83706-4963	2787 S FALLING BROOK WAY	BOISE, ID 83706-0000
LAKEWOOD UNIT 06 & 07 HOA INC	LAKEWOOD	PO BOX 1350	MERIDIAN, ID 83680-1350	MERIDIAN	ID	83680-1350	2918 S FALLING BROOK WAY	BOISE, ID 83706-0000
LAKEWOOD NO 09 HOA	LAKEWOOD	929 S ALLANTE PL	BOISE, ID 83709-0000	BOISE	ID	83709-0000	204 E CARTER ST	BOISE, ID 83706-0000
LAWLESS PATRICK H	LAWLESS	297 E OLD SAYBROOK DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	297 E OLD SAYBROOK DR	BOISE, ID 83706-0000
LAKEWOOD UNIT 10A/10B HOA INC	LAKEWOOD	PO BOX 50132	BOISE, ID 83705-0000	BOISE	ID	83705-0000	290 E CARTER ST	BOISE, ID 83706-0000
HEADRICH LISA BONG	HEADRICH	4220 W 3RD ST # 105	LOS ANGELES, CA 90020-0000	LOS ANGELES	CA	90020-0000	1307 S ORCHARD ST	BOISE, ID 83705-0000
WYMORE MATTHEW AARON	WYMORE	3229 S YORKTOWN LN	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3229 S YORKTOWN LN	BOISE, ID 83706-0000
1518 SOUTH ROBERT STREET HOLDINGS LLC	1518	1518 S ROBERT ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1518 S ROBERT ST	BOISE, ID 83705-0000
MICRON TECHNOLOGY INC	MICRON	8000 S FEDERAL WAY MS 109	BOISE, ID 83707-0006	BOISE	ID	83707-0006	3165 E EASTGATE DR	BOISE, ID 83716-0000
FISCHER LORI K	FISCHER	2847 E TYBALT ST	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	513 E PROVIDENT DR	BOISE, ID 83706-0000
BAKERS LIGHTHOUSE PROPERTIES LLC	BAKERS	1722 LAMBERT DR # 1	CLARKSTON, WA 99403-0000	CLARKSTON	WA	99403-0000	1617 S LONGMONT AVE	BOISE, ID 83706-0000
KOPRAL FAMILY REVOCABLE TRUST	KOPRAL	8830 LUND HILL LN	COTATI, CA 94931-0000	COTATI	CA	94931-0000	329 W WARREN ST	BOISE, ID 83706-0000
BOISE STORAGE PARTNERS LLC	BOISE	349 LAKE HAVASU AVE S STE 106	LAKE HAVASU CITY, AZ 86403-0000	LAKE HAVASU CITY	AZ	86403-0000	7199 S FEDERAL WAY	BOISE, ID 83716-0000
WATERS JOHN EDWARD	WATERS	812 TERRY DR	EMMETT, ID 83617-3171	EMMETT	ID	83617-3171	3824 W PALOUSE ST	BOISE, ID 83705-0000
DYKMAN PROPERTIES LLC	DYKMAN	2323 S FEDERAL WAY	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2505 S FEDERAL WAY	BOISE, ID 83705-0000
GUILLE SHARRELL A	GUILLE	1509 W SALEM ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1509 W SALEM ST	BOISE, ID 83705-0000
THREE G BOISE LLC	THREE	1160 GAHANNA PKWY	COLUMBUS, OH 43230-6615	COLUMBUS	OH	43230-6615	5405 W ALBATROS LN	BOISE, ID 83705-0000
PS MOUNTAIN WEST LLC	PS	PO BOX 25025	GLENDALE, CA 91221-5025	GLENDALE	CA	91221-5025	7202 W VICTORY RD	BOISE, ID 83709-0000
PEALY SARA	PEALY	603 S MICHAEL ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	603 S MICHAEL ST	BOISE, ID 83705-0000
SELVAGE DAVID P	SELVAGE	1216 S ARCADIA ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1216 S ARCADIA ST	BOISE, ID 83705-0000
LYTLE JANSON H	LYTLE	1300 S ARCADIA ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1300 S ARCADIA ST	BOISE, ID 83705-0000
HERBERT MARI J	HERBERT	1820 S PHILLIPPI ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1820 S PHILLIPPI ST	BOISE, ID 83705-0000
MONTGOMERY PAUL G	MONTGOMERY	220 E PROVIDENT DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	220 E PROVIDENT DR	BOISE, ID 83706-0000
CHADWICK GARY L	CHADWICK	221 E PROVIDENT DR	BOISE, ID 83706-4019	BOISE	ID	83706-4019	221 E PROVIDENT DR	BOISE, ID 83706-0000
NORRIS TIMOTHY	NORRIS	205 E PARKWAY DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	205 E PARKWAY DR	BOISE, ID 83706-0000
SMITH STEVEN C	SMITH	PO BOX 941	BOISE, ID 83701-0000	BOISE	ID	83701-0000	205 E MELROSE ST	BOISE, ID 83706-0000
TURNER MICHAEL N	TURNER	2422 W CHERRY LN	BOISE, ID 83705-0000	BOISE	ID	83705-0000	2422 W CHERRY LN	BOISE, ID 83705-0000
CLAYTON PROPERTIES GROUP INC	CLAYTON	2275 S EAGLE RD STE 185	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	1717 S FEDERAL WAY	BOISE, ID 83705-0000
PORI FAMILY TRUST	PORI	4000 S OLD OAK AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	4000 S OLD OAK AVE	BOISE, ID 83706-0000
DUNHAM MELISSA K	DUNHAM	3623 S OXBOW DR	NAMPA, ID 83686-0000	NAMPA	ID	83686-0000	1316 W MELROSE ST	BOISE, ID 83706-0000
OTTO HERBERT & CAROL FAMILY TRUST	OTTO	299 E PROVIDENT DR	BOISE, ID 83706-4019	BOISE	ID	83706-4019	299 E PROVIDENT DR	BOISE, ID 83706-0000
OTTO BRUCE & KAREN FAMILY TRUST 01/14/2021	OTTO	333 E PROVIDENT DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	333 E PROVIDENT DR	BOISE, ID 83706-0000
COLTER DONALD B JR	COLTER	3419 W GROVER CT	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3419 W GROVER CT	BOISE, ID 83705-0000
KRAUS ELIZABETH M	KRAUS	6415 W GRANDVIEW DR	BOISE, ID 83709-3128	BOISE	ID	83709-3128	6415 W GRANDVIEW DR	BOISE, ID 83709-0000
COOPER ROBERT W	COOPER	2128 VISTA AVE	BOISE, ID 83705-3471	BOISE	ID	83705-3471	2962 S OWYHEE ST	BOISE, ID 83705-0000
PIER POINTE HOA INC	PIER	1120 S RACKHAM WAY	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	1497 E PARKCENTER BLVD	BOISE, ID 83706-0000
NEWTON ANTHONY	NEWTON	1793 E SPINNAKER CT	BOISE, ID 83706-0000	BOISE	ID	83706-0000	1793 E SPINNAKER CT	BOISE, ID 83706-0000
RAYASAM SHASHANK	RAYASAM	4466 S CONSTITUTION AVE	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4466 S CONSTITUTION AVE	BOISE, ID 83716-0000
HILL TERREL	HILL	1180 E OPUS ST	BOISE, ID 83716-0000	BOISE	ID	83716-0000	1180 E OPUS ST	BOISE, ID 83716-0000
DSM UNLIMITED LLC	DSM	3128 HIDDEN TRAIL	DARBY, MT 59829-0000	DARBY	MT	59829-0000	2406 S LIBERTY ST	BOISE, ID 83709-0000
FISCHBUT LLC	FISCHBUT	PO BOX 191037	BOISE, ID 83719-0000	BOISE	ID	83719-0000	2403 S LIBERTY ST	BOISE, ID 83709-0000
PECK ANTHONY D	PECK	644 N SPYGLASS WAY	EAGLE, ID 83616-0000	EAGLE	ID	83616-0000	2410 S RAYMOND ST	BOISE, ID 83709-0000
KAYE INVESTMENTS LLC	KAYE	PO BOX 985	MERIDIAN, ID 83680-0985	MERIDIAN	ID	83680-0985	2779 S LIBERTY ST	BOISE, ID 83709-0000
CORNERSTONE COMMUNITY CHURCH INC	CORNERSTONE	1023 S CURTIS RD	BOISE, ID 83705-1842	BOISE	ID	83705-1842	1023 S CURTIS RD	BOISE, ID 83705-0000
PISHUE ROBERT	PISHUE	5923 W ROBERTSON DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5923 W ROBERTSON DR	BOISE, ID 83709-0000
VONK MARTEN J	VONK	6311 W RANDOLPH DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6311 W RANDOLPH DR	BOISE, ID 83709-0000
PEARCE FAMILY TRUST	PEARCE	6816 W ASHLAND DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	6816 W ASHLAND DR	BOISE, ID 83709-0000
YOUNG JEFFREY C	YOUNG	4522 CAMAS ST	BOISE, ID 83705-5829	BOISE	ID	83705-5829	4522 W CAMAS ST	BOISE, ID 83705-0000
MOSS SHIRLEY A	MOSS	4015 KOOTENAI ST	BOISE, ID 83705-2147	BOISE	ID	83705-2147	4015 W KOOTENAI ST	BOISE, ID 83705-0000
WIGHT BRIAN & LIBBY FAMILY LIVING TRUST 4/24/2019	WIGHT	4550 S OREGON TRAIL PL	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4550 S OREGON TRAIL PL	BOISE, ID 83716-0000

RONHOVDEE KIMBERLY J	RONHOVDEE	4540 S OREGON TRAIL PL	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4540 S OREGON TRAIL PL	BOISE, ID 83716-0000
GREENE GREGORY MARC & TERESA BETH LIVING TRUST	GREENE	4541 S OREGON TRAIL PL	BOISE, ID 83716-5658	BOISE	ID	83716-5658	4541 S OREGON TRAIL PL	BOISE, ID 83716-0000
WERTH DOUGLAS	WERTH	402 W IOWA ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	402 W IOWA ST	BOISE, ID 83706-0000
ARC INC THE	ARC	4402 ALBION ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	4402 W ALBION ST	BOISE, ID 83705-0000
HITESMAN JERRY N	HITESMAN	711 S ROOSEVELT ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	711 S ROOSEVELT ST	BOISE, ID 83705-0000
FPA SHOPPES AT HILLCREST LLC	FPA	433 E LAS COLINAS BLVD # 300	IRVING, TX 75039-0000	IRVING	TX	75039-0000	5100 W OVERLAND RD	BOISE, ID 83705-0000
JRS PROPERTIES III L P	JRS	PO BOX 27	BOISE, ID 83707-0000	BOISE	ID	83707-0000	6297 S SCOTCH WAY	BOISE, ID 83716-0000
FITZGERALD ELIZABETH R	FITZGERALD	1401 E SILVERTON LN	BOISE, ID 83706-5398	BOISE	ID	83706-5398	1401 E SILVERTON LN	BOISE, ID 83706-0000
HARLIN TYSON T	HARLIN	4385 S PINEREST WAY	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4385 S PINEREST WAY	BOISE, ID 83716-0000
BOYD RYAN	BOYD	4454 S AXIOM AVE	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4454 S AXIOM AVE	BOISE, ID 83716-0000
SOPATYK BRIAN	SOPATYK	2176 TOLUKA WAY	BOISE, ID 83712-8549	BOISE	ID	83712-8549	2419 W SPAULDING ST	BOISE, ID 83705-0000
SATTERWHITE KATHRYN M	SATTERWHITE	7145 W VICTORY RD	BOISE, ID 83709-0000	BOISE	ID	83709-0000	7145 W VICTORY RD	BOISE, ID 83709-0000
BERG LYNNE R	BERG	1811 W TENDROY DR	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1811 W TENDROY DR	BOISE, ID 83705-0000
COX ELDON EUGENE	COX	377 W DUNDEE CT	BOISE, ID 83706-4308	BOISE	ID	83706-4308	377 W DUNDEE CT	BOISE, ID 83706-0000
SHOEBRIDGE BRADLEY P & LINDA SUE TRUST	SHOEBRIDGE	7165 W AMBLESIDE DR	BOISE, ID 83709-0000	BOISE	ID	83709-0000	2050 S CENTURY WAY	BOISE, ID 83709-0000
PETERSON LINDA COLLEEN	PETERSON	2189 S WHITE PINE PL	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2189 S WHITE PINE PL	BOISE, ID 83706-0000
ALBERTSONS LLC	ALBERTSONS	PO BOX 800729	DALLAS, TX 75380-0729	DALLAS	TX	75380-0729	1001 E PARKCENTER BLVD	BOISE, ID 83706-0000
CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS	CHURCH	50 E NORTH TEMPLE ST FL 22	SALT LAKE CITY, UT 84150-0000	SALT LAKE CITY	UT	84150-0000	3200 W CASSIA ST	BOISE, ID 83705-0000
JACKSON TROY	JACKSON	5253 S ACHERON AVE	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	625 S VISTA AVE	BOISE, ID 83705-0000
HOYNAK BRYAN C	HOYNAK	1117 S OWYHEE ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1117 S OWYHEE ST	BOISE, ID 83705-0000
RAE DAVID SCOTT	RAE	810 S ROOSEVELT ST	BOISE, ID 83705-2150	BOISE	ID	83705-2150	810 S ROOSEVELT ST	BOISE, ID 83705-0000
SIMPLOT JOSEPH WILLIAM	SIMPLOT	904 S OWYHEE	BOISE, ID 83705-0000	BOISE	ID	83705-0000	3261 W EDSON ST	BOISE, ID 83705-0000
SYRINGA NETWORKS LLC	SYRINGA	12301 W EXPLORER DR STE 100	BOISE, ID 83713-1573	BOISE	ID	83713-1573	3795 S DEVELOPMENT AVE STE 101	BOISE, ID 83705-0000
CARRIAGE CROSSING APARTMENTS LLC	CARRIAGE	17 E WINCHESTER ST STE 200	MURRAY, UT 84107-0000	MURRAY	UT	84107-0000	2401 S APPLE ST	BOISE, ID 83706-0000
GARZA DIANA	GARZA	4348 S WAGON TRAIN LN	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4348 S WAGON TRAIN LN	BOISE, ID 83716-0000
BREWER WILLIAM M	BREWER	4403 S CRUZATTE LN	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4403 S CRUZATTE LN	BOISE, ID 83716-0000
THOMSEN MELISSA MARELL	THOMSEN	4424 S CRUZATTE LN	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4424 S CRUZATTE LN	BOISE, ID 83716-0000
STODDARD LORENA R REVOCABLE LIVING TRUST	STODDARD	8919 W ARDENE ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	2163 S STEPHEN AVE	BOISE, ID 83706-0000
VALMORE TOWNHOMES HOA INC	VALMORE	6149 N MEEKER PL STE 150	BOISE, ID 83713-0000	BOISE	ID	83713-0000	S CRABAPPLE LN	BOISE, ID 83706-0000
LOYD RACHEL K	LOYD	2401 S GEKELER LN	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2401 S GEKELER LN	BOISE, ID 83706-0000
COX MERRI	COX	2699 E OAKLAND ST	GILBERT, AZ 85295-0000	GILBERT	AZ	85295-0000	2804 S VIRGINIA AVE	BOISE, ID 83705-0000
SPUD SR INC	SPUD	PO BOX 5099	BOISE, ID 83705-0000	BOISE	ID	83705-0000	4204 W OVERLAND RD	BOISE, ID 83705-0000
PARTEN PATRICK	PARTEN	1402 S WILCOMB ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	1402 S WILCOMB ST	BOISE, ID 83705-0000
WINDSTREAM HOMEOWNER ASSOCIATION	WINDSTREAM	1500 W BANNOCK ST	BOISE, ID 83702-0000	BOISE	ID	83702-0000	1849 E OLD SAYBROOK LN	BOISE, ID 83706-0000
FISK JASON R	FISK	202 E GETTYSBURG ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	202 E GETTYSBURG ST	BOISE, ID 83706-0000
MOONEY ANGELA Y	MOONEY	217 E LEXINGTON ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	217 E LEXINGTON ST	BOISE, ID 83706-0000
ROWLAND ZACHARY EMORY	ROWLAND	322 E GETTYSBURG ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	322 E GETTYSBURG ST	BOISE, ID 83706-0000
MOONEY LOREN M	MOONEY	323 E LEXINGTON ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	323 E LEXINGTON ST	BOISE, ID 83706-0000
NAMPA & MERIDIAN IRRIGATION DISTRICT	NAMPA	1503 1ST ST S	NAMPA, ID 83651-4324	NAMPA	ID	83651-4324	E BOISE AVE	BOISE, ID 83716-0000
HEYER L LEX	HEYER	4008 E BOISE AVE	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4008 E BOISE AVE	BOISE, ID 83716-0000
HEYER WILLIAM JAMES	HEYER	4114 E BOISE AVE	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4114 E BOISE AVE	BOISE, ID 83716-0000
AMITY PARTNERS LLC	AMITY	2910 E AMITY RD	BOISE, ID 83716-0000	BOISE	ID	83716-0000	2910 E AMITY RD	BOISE, ID 83716-0000
ADA COUNTY - TREASURERS OFFICE	ADA	200 W FRONT ST	BOISE, ID 83702-0000	BOISE	ID	83702-0000	4055 S ECKERT RD	BOISE, ID 83706-0000
ADA COUNTY - PARKS DEPT	ADA	4049 S ECKERT	BOISE, ID 83706-5721	BOISE	ID	83706-5721	4049 S ECKERT RD	BOISE, ID 83706-0000
JOPLIN FAMILY TRUST	JOPLIN	PO BOX 627	MCCALL, ID 83638-0000	MCCALL	ID	83638-0000	3462 E AMITY RD	BOISE, ID 83716-0000
SMITH NATE	SMITH	225 POOR FARM RD	GRANGEVILLE, ID 83530-0000	GRANGEVILLE	ID	83530-0000	3805 E BOISE AVE	BOISE, ID 83706-0000
THIEL JOHN L	THIEL	3773 E BOISE AVE	BOISE, ID 83706-5747	BOISE	ID	83706-5747	3773 E BOISE AVE	BOISE, ID 83706-0000
IDAHO POWER COMPANY	IDAHO	PO BOX 70	BOISE, ID 83707-0070	BOISE	ID	83707-0070	E AMITY RD	BOISE, ID 83716-0000
COBBLEY FAMILY TRUST	COBBLEY	1835 S RIDGE POINT WAY	BOISE, ID 83712-0000	BOISE	ID	83712-0000	4221 E AMITY RD	BOISE, ID 83716-0000
HOMECREST MOBILE ASSOC LLLP	HOMECREST	14751 PLAZA DR STE H	TUSTIN, CA 92780-0000	TUSTIN	CA	92780-0000	815 S CURTIS RD	BOISE, ID 83705-0000
SOUTHMINSTER UNITED BOISE ID	SOUTHMINSTER	6500 W OVERLAND RD	BOISE, ID 83709-2028	BOISE	ID	83709-2028	6500 W OVERLAND RD	BOISE, ID 83709-0000
HILLCREST COUNTRY CLUB INC	HILLCREST	4610 W HILLCREST DR	BOISE, ID 83705-2886	BOISE	ID	83705-2886	4646 W HILLCREST DR	BOISE, ID 83705-0000
JACK SHERRILL LIMITED PARTNERSHIP	JACK	415 ADDISON AVE STE 3	TWIN FALLS, ID 83301-0000	TWIN FALLS	ID	83301-0000	1275 W FLEETWOOD LN	BOISE, ID 83706-0000
BALBAS MICHAEL A	BALBAS	2179 S WHITE PINE PL	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2179 S WHITE PINE PL	BOISE, ID 83706-0000
JLI INC	JLI	PO BOX 140055	GARDEN CITY, ID 83714-0000	GARDEN CITY	ID	83714-0000	1000 E GREENWOOD CIR	BOISE, ID 83706-0000
BAUER CHARLES	BAUER	2700 S HARMONY ST	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2700 S HARMONY ST	BOISE, ID 83706-0000
WINN RICK R	WINN	2107 E BOISE AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	2107 E BOISE AVE	BOISE, ID 83706-0000
BUNTING BUILDING CORP	BUNTING	4503 S FEDERAL WAY	BOISE, ID 83716-5502	BOISE	ID	83716-5502	4503 S FEDERAL WAY	BOISE, ID 83716-0000
TROUT STEVEN S	TROUT	3907 S MESA VIEW LN	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3907 S MESA VIEW LN	BOISE, ID 83706-0000
SP BRENTWOOD LLC	SP	2203 S MANITOU AVE	BOISE, ID 83706-0000	BOISE	ID	83706-0000	3165 S APPLE ST	BOISE, ID 83706-0000
FEDERAL WAY ZAMZOWS LLC	FEDERAL	1201 FRANKLIN BLVD	NAMPA, ID 83687-0000	NAMPA	ID	83687-0000	3691 S FEDERAL WAY	BOISE, ID 83716-0000
FRED MEYER STORES INC	FRED	1014 VINE ST	CINCINNATI, OH 45202-0000	CINCINNATI	OH	45202-0000	3231 S FEDERAL WAY	BOISE, ID 83705-0000
PILOT TRAVEL CENTERS LLC	PILOT	PO BOX 54470	LEXINGTON, KY 40555-0000	LEXINGTON	KY	40555-0000	3353 S FEDERAL WAY	BOISE, ID 83705-0000
YANKE MACHINE SHOP INC	YANKE	PO BOX 5405	BOISE, ID 83705-0405	BOISE	ID	83705-0405	S GEKELER LN	BOISE, ID 83705-0000
LPF MONTERRA LLC	LPF	37 GRAHAM ST STE 200B	SAN FRANCISCO, CA 94129-0000	SAN FRANCISCO	CA	94129-0000	3960 S FEDERAL WAY	BOISE, ID 83716-0000
USA (BUREAU OF RECLAMATION)	USA	230 N COLLINS RD	BOISE, ID 83702-4520	BOISE	ID	83702-4520	3904 S GEKELER LN	BOISE, ID 83716-0000

BOEING LANE VENTURES LLC	BOEING	555 E BOEING LN	BOISE, ID 83716-0000	BOISE	ID	83716-0000	555 E BOEING LN	BOISE, ID 83716-0000
THURMAN CURTIS ALLEN	THURMAN	1203 W WRIGHT ST	BOISE, ID 83705-5244	BOISE	ID	83705-5244	1203 W WRIGHT ST	BOISE, ID 83705-0000
SIMUNICH LAND LLC	SIMUNICH	4300 W FRANKLIN RD	BOISE, ID 83705-0000	BOISE	ID	83705-0000	W VICTORY RD	BOISE, ID 83705-0000
NATIONAL RETAIL PROPERTIES LP	NATIONAL	450 S ORANGE AVE # 900	ORLANDO, FL 32801-0000	ORLANDO	FL	32801-0000	2580 W AIRPORT WAY	BOISE, ID 83705-0000
USA (BUREAU OF LAND MANAGEMENT)	USA	1387 S VINNELL WAY	BOISE, ID 83709-0000	BOISE	ID	83709-0000	3948 S DEVELOPMENT AVE	BOISE, ID 83705-0000
MOODIE INVESTMENTS LP	MOODIE	7040 W RIM ACRES LN	BOISE, ID 83709-0000	BOISE	ID	83709-0000	S EAGLESON RD	BOISE, ID 83705-0000
MERRILL LYDIA REVOCABLE LIVING TRUST	MERRILL	PO BOX 18969	SPOKANE, WA 99228-0969	SPOKANE	WA	99228-0969	6101 S PLEASANT VALLEY RD	BOISE, ID 83709-0000
KTMAC INVESTMENTS LLC	KTMAC	5559 W GOWEN RD	BOISE, ID 83709-0000	BOISE	ID	83709-0000	5700 W GOWEN RD	BOISE, ID 83709-0000
PLEASANT VALLEY LAND HOLDINGS LLC	PLEASANT	2775 W NAVIGATOR DR STE 220	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	S PLEASANT VALLEY RD	BOISE, ID 83705-0000
4099 FEDERAL WAY LLC	4099	4301 FEDERAL WAY	BOISE, ID 83716-0000	BOISE	ID	83716-0000	505 E AMITY RD	BOISE, ID 83716-0000
BROLLIER RUTH K REVOCABLE TRUST	BROLLIER	1512 S CHRISWAY DR	BOISE, ID 83706-0000	BOISE	ID	83706-0000	5115 S HOLCOMB RD	BOISE, ID 83716-0000
223 ROEDEL AVENUE LLC	223	4600 S APPLE ST	BOISE, ID 83716-0000	BOISE	ID	83716-0000	4600 S APPLE ST	BOISE, ID 83716-0000
J M T PROPERTIES LLC	J	PO BOX 12668	OGDEN, UT 84412-2668	OGDEN	UT	84412-2668	1625 E YAMHILL RD	BOISE, ID 83716-0000
COSTCO WHOLESALE CORPORATION	COSTCO	999 LAKE DR	ISSAQUAH, WA 98027-8990	ISSAQUAH	WA	98027-8990	2051 S COLE RD	BOISE, ID 83709-0000
USA (POSTAL SERVICE)	USA	200 CHESTNUT AVE	MOORESTOWN, NJ 08057-0999	MOORESTOWN	NJ	08057-0999	2201 S COLE RD	BOISE, ID 83709-0000
BOISE LAND & CATTLE LLC	BOISE	6633 S FEDERAL WAY	BOISE, ID 83716-0000	BOISE	ID	83716-0000	6633 S FEDERAL WAY	BOISE, ID 83716-0000
SHOEMAKER PROPERTIES LLC	SHOEMAKER	601 W GOWEN RD	BOISE, ID 83717-0000	BOISE	ID	83717-0000	601 W GOWEN RD	BOISE, ID 83705-0000
OLD DOMINION FREIGHT LINE INC	OLD	500 OLD DOMINION WAY	THOMASVILLE, NC 27360-0000	THOMASVILLE	NC	27360-0000	1175 W LAKE HAZEL LN	BOISE, ID 83705-0000
MCNABB NANCY	MCNABB	1333 W LAKE HAZEL LN	BOISE, ID 83705-5332	BOISE	ID	83705-5332	1333 W LAKE HAZEL LN	BOISE, ID 83705-0000
SMITH VICTORIA H ESTATE OF	SMITH	PO BOX 369	PRIEST RIVER, ID 83856-0000	PRIEST RIVER	ID	83856-0000	6310 S ORCHARD ST	BOISE, ID 83705-0000
CITY OF BOISE	CITY	150 N CAPITOL BLVD	BOISE, ID 83701-0500	BOISE	ID	83701-0500	S COLE RD	BOISE, ID 83709-0000
ROEDER JOHN	ROEDER	6854 W WRIGHT ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	S COLE RD	BOISE, ID 83709-0000
PEREGRINE FUND INC THE	PEREGRINE	5668 W FLYING HAWK LN	BOISE, ID 83709-7289	BOISE	ID	83709-7289	5668 W FLYING HAWK LN	BOISE, ID 83709-0000
SRS PROPERTIES LP	SRS	1213 W RANCH RD	BOISE, ID 83707-0000	BOISE	ID	83707-0000	S PLEASANT VALLEY RD	BOISE, ID 83705-0000
B & L COMPANY LLC	B	PO BOX 8126	BOISE, ID 83707-0000	BOISE	ID	83707-0000	9050 S PLEASANT VALLEY RD	BOISE, ID 83705-0000
MTN PROPERTIES LLC	MTN	4501 S BANNER ST	BOISE, ID 83709-0000	BOISE	ID	83709-0000	9400 S PLEASANT VALLEY RD	BOISE, ID 83705-0000
PEDA INVESTMENTS LP	PEDA	3487 E ADLER HOF LN	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	8170 S EISENMAN RD	BOISE, ID 83716-0000
AJB PROPERTIES LLLP	AJB	1157 N SUMMERBROOK AVE STE 100	MERIDIAN, ID 83642-0000	MERIDIAN	ID	83642-0000	S EISENMAN RD	BOISE, ID 83716-0000
BLACK CREEK LTD PARTNERSHIP	BLACK	PO BOX 690	MERIDIAN, ID 83680-0690	MERIDIAN	ID	83680-0690	S PLEASANT VALLEY RD	KUNA, ID 83634-0000
SUNROC CORPORATION	SUNROC	730 N 1500 W	OREM, UT 84057-0000	OREM	UT	84057-0000	11795 S PLEASANT VALLEY RD	KUNA, ID 83634-0000
J & M SOLID ROCK LLC	J	1974 S EAGLESON RD	BOISE, ID 83705-3615	BOISE	ID	83705-3615	W AMYX LN	KUNA, ID 83634-0000
LEADER 1993 REVOCABLE TRUST	LEADER	8970 W DUCK LAKE DR	GARDEN CITY, ID 83714-1814	GARDEN CITY	ID	83714-1814	S PLEASANT VALLEY RD	BOISE, ID 83716-0000
STATE OF IDAHO (BOARD CORRECTIONS)	STATE	1299 N ORCHARD ST STE 110	BOISE, ID 83706-0000	BOISE	ID	83706-0000	13440 S PLEASANT VALLEY RD	KUNA, ID 83634-0000
TREE TOP RANCHES LP	TREE	101 S CAPITOL BLVD STE 1801	BOISE, ID 83702-0000	BOISE	ID	83702-0000	13032 S PLEASANT VALLEY RD	KUNA, ID 83634-0000
ADA COUNTY HIGHWAY DISTRICT	ADA	3775 N ADAMS ST	GARDEN CITY, ID 83714-6447	GARDEN CITY	ID	83714-6447	5650 W TENMILE CREEK RD	KUNA, ID 83634-0000
RISCH JAMES E	RISCH	5400 S COLE RD	BOISE, ID 83709-6401	BOISE	ID	83709-6401	S PLEASANT VALLEY RD	KUNA, ID 83634-0000
EISENMAN PETE	EISENMAN	7533 S FEDERAL WAY	BOISE, ID 83716-0000	BOISE	ID	83716-0000	7533 S FEDERAL WAY	BOISE, ID 83716-0000
PHOTRONICS INC	PHOTRONICS	15 SECOR RD	BROOKFIELD, CT 06804-0000	BROOKFIELD	CT	06804-0000	10136 S FEDERAL WAY	BOISE, ID 83716-0000
BRYSON JASON L	BRYSON	10143 S FEDERAL WAY	BOISE, ID 83716-0000	BOISE	ID	83716-0000	10143 S FEDERAL WAY	BOISE, ID 83716-0000
BLUE CLOUD PARTNERS LLC	BLUE	PO BOX 1271	KETCHUM, ID 83340-0000	KETCHUM	ID	83340-0000	9700 S BLUE CLOUD LN	BOISE, ID 83716-0000
IDAHO TRANSPORTATION DEPARTMENT	IDAHO	PO BOX 8028	BOISE, ID 83707-0000	BOISE	ID	83707-0000	S FEDERAL WAY	BOISE, ID 83716-0000
DAY DONALD M & MARJORIE D FAMILY TRUST	DAY	1015 ROBERTS ST	BOISE, ID 83705-0000	BOISE	ID	83705-0000	S HOLCOMB RD	BOISE, ID 83716-0000

Info Verified?	Type	Greeting	First Name	Last Name	Position	Organization	Address1	Address2	City	State	Zip	Phone	E-mail
	County	Mr.	Ryan	Davidson	County Commissioner	Ada County	200 West Front Street, 3rd Floor		Boise	ID	83702	208-287-7000	bocc1@adaweb.net
	County	Mr.	Rod	Beck	County Commissioner	Ada County	200 West Front Street, 3rd Floor		Boise	ID	83702	208-287-7000	bocc1@adaweb.net
	County	Mr.	Kendra	Kenyon	County Commissioner	Ada County	200 West Front Street, 3rd Floor		Boise	ID	83702	208-287-7000	bocc1@adaweb.net
	Federal	Mr.	John	Williams	Constituent Account Executive	Bonneville Power Administration	950 W. Bannock Street, Suite 805		Boise	ID	83702	208-338-3017	jjwilliams@bpa.gov
	Federal	Mr.	Jim	Fincher	District Manager	Bureau of Land Management	3948 Development Avenue		Boise	ID	83705		
	other					Cat Creek Energy, LLC	1989 S 1875 E		Gooding	ID	83330		
	City / Town	Honorable	Lauren	McLean	Mayor	City of Boise	150 North Capitol Boulevard		Boise	ID	83702	208-384-4422	
	City / Town	Mr.	John	Roldan	Strategic Water Resources Manager	City of Boise	150 North Capitol Boulevard		Boise	ID	83702	208-608-7551	jroldan@cityofboise.org
	other	Ms.	Liisa	Itkonen	Planning Team Lead, Transportation	COMPASS	700 NE 2nd Street, Suite 200		Meridian	ID	83642		litkonen@compassidaho.org
	Congressional	Mr.	Dirk	Mendive		Congressman Fulcher's Office	33 E. Broadway Avenue, Suite 251		Meridian	ID	83642		
	Congressional	Mr.	Craig	Quarterman		Congressman Simpson's Office	802 W. Bannock, Suite 600		Boise	ID	83702-5820		
	other	Ms.	Golden	Kala	Project Manager	IDWR	322 E. Front Street		Boise	ID	83702		kalamgolden@outlook.com
	County	Mr.	Phil	McGrane	County Clerk	Ada County	200 W. Front street		Boise	ID	83702		
	County	Mr.			Commissioner	Ada County Board of County Commissioners	200 W. Front street		Boise	ID	83702		
	Federal	Mr.	James H.	Wernitz	Director	Environmental Protection Agency	950 West Bannock Suite 900	Idaho Operations Office	Boise	ID	83702		
	Federal					Fort Hall Agency-BIA	PO Box 220		Fort Hall	ID	83202		
	Environmental	Ms.	Marie	Kellner	Conservation Programs Director	Idaho Conservation League	PO Box 844		Boise	ID	83701	208-345-6933	
	State	Mr.	Jess	Byrne	Director	Idaho Department of Environmental Quality	1410 N. Hilton		Boise	ID	83706		
	State					Idaho Department of Fish and Game	4279 Commerce Circle		Idaho Falls	ID	83401	208-525-7290	
	State	Mr.	Dustin	Miller	Director	Idaho Department of Lands	300 N 6th Street #103		Boise	ID	83702	208-334-3488	dmiller@idl.idaho.gov
	State	Ms.	Susan	Buxton	Director	Idaho Department of Parks and Recreation	PO Box 83720		Boise	ID	83720-0065	208-334-4199	
	State	Mr.	Gary	Spackman	Director	Idaho Department of Water Resources	322 East Front Street		Boise	ID	83720		Gary.Spackman@idwr.idaho.gov
	Environmental	Mr	Ken	Lewis	Executive Director	Idaho Rivers United	3380 W Americana Ter Ste 140		Boise	ID	83706		
	State	Mr.	Dave	Jones	District Engineer	Idaho Transportation Department	P.O. Box 7129	3311 W. State Street	Boise	ID	83707		
	State	Mr.	Roger	Chase	Chairman	Idaho Water Resource Board	322 East Front Street, Box 83720		Boise	ID	83720		
	State	Mr.	Paul	Arrington	Executive Director and General Counsel	Idaho Water Users Association	1010 West Jefferson Suite 101		Boise	ID	83701		
	Environmental	Mr.	Brian	Brooks	Executive Director	Idaho Wildlife Federation	1020 W Main Street Suite 450		Boise	ID	83702		
	Federal	Mr.	Tom	Nelson	Generation Supervisor	Lucky Peak Power Plant	9731 East Highway 21		Boise	ID	83716	208-344-2845	
	Federal	Mr.	Will	Whelan	Director of Government Relations	Nature Conservancy	950 Bannock Street Suite 210		Boise	ID	83702	208-343-8826	
	Federal	Mr.	Kenneth	Troyer	Branch Chief	NOAA Fisheries	800 E. Park Blvd, PLAZA IV Suite 220		Boise	ID	83712-7768		kenneth.troyer@noaa.gov
	State	Ms.	Katrine	Franks		Office of the Governor	PO Box 83720		Boise	ID	83720-0001		
	Congressional		Casey	Attebery		Senator Crapo's Office	251 East Front Street, Suite 205		Boise	ID	83702		
	Congressional	Mr.	Mitch	Silvers		Senator Crapo's Office	251 East Front Street, Suite 205		Boise	ID	83702		
	Congressional	Ms.	Rachel	Burkett		Senator Risch's Office	350 North 9th Street Suite 302		Boise	ID	83702-5470		
	Congressional	Mr.	Mike	Roach		Senator Risch's Office	350 North 9th Street Suite 302		Boise	ID	83702-5470	208-342-7985	
	Tribes	Honorable	Devon	Boyer	Chairman	Shoshone- Bannock Tribal Council	PO Box 306		Fort Hall	ID	83203		
	Tribes	Honorable	Brian	Thomas	Chairman	Shoshone-Paiute Tribal Council	PO Box 219		Owyhee	NV	89832		
	Environmental	Ms.	Lisa	Young	Chapter Director	Idaho Chapter Sierra Club	503 W. Franklin		Boise	ID	83702		lisa.young@sierraclub.org
	State	Governor	Brad	Little	Governor	State of Idaho	PO Box 83720		Boise	ID	83720-0001		