# Mountain View Corridor Real Estate Exchange

Utah County, Utah

## Draft Environmental Assessment

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US Army Corps of Engineers®
Sacramento District

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# Mountain View Corridor Real Estate Exchange, Utah County, Utah
# Draft Environmental Assessment

## TABLE OF CONTENTS

## LIST OF FIGURES



## LIST OF TABLES



## APPENDICES

## Acronyms and Abbreviations

| | |
|---|---|
| ACHP | Advisory Council on Historic Preservation |
| AR | Army Regulation |
| AASHTO | American Association of State Highway and Transportation Officials |
| AOR | Area of Responsibility |
| APN | Assessor Parcel Number |
| ASTM | American Society for Testing and Materials International |
| bgs | Below ground surface |
| BMP | Best management practice |
| CAA | Clean Air Act |
| CatEx | Categorical exclusion |
| CEQ | President's Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| CO | Carbon monoxide |
| DASA IH&P | Deputy Assistant Secretary of the Army for Installations, Housing, and Partnerships |
| dB | decibel |
| dBA | A-weighted decibel scale |
| DoA | Department of the Army |
| DoD | Department of Defense |
| EA | Environmental Assessment |
| EBS | Environmental Baseline Survey |
| EIS | Environmental Impact Assessment |
| EBS | Environmental Baseline Survey |
| ECOP | Environmental Condition of Property |
| EISA | Energy Independence and Security Act |
| EO | Executive Order |
| EPA | United States Environmental Protection Agency |
| ESA | Endangered Species Act |
| FPPA | Farmland Protection Policy Act of 1981 |
| FOST | Finding of Suitability to Transfer |
| $ft^2$ | Square foot (feet) |
| FTA | Federal Transit Administration |
| FNSI | Finding of No Significant Impact |
| HTRW | Hazardous, Toxic, and Radiological Waste |
| NEPA | National environmental policy act |
| NHPA | National Historic Preservation Act |
| $NO_2$ | Nitrogen dioxide |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSA | National Security Agency |
| $O_3$ | Ozone |
| $PM_{2.5}$ | Particulate matter less than 2.5 micrometers in diameter |
| $PM_{10}$ | Particulate matter less than 10 micrometers in diameter |
| RPA | Registered Professional Archaeologist |
| REC | Record of Environmental Conditions |
| SHPO | State Historic Preservation Office |
| SR | State route |
| UANG | Utah Army National Guard |
| UDC | Utah Data Center |

| | |
|---|---|
| UDOT | Utah Department of Transportation |
| UDNR | Utah Department of Natural Resources |
| UDWR | Utah Division of Wildlife Resources |
| USACE | United States Army Corps of Engineers |
| USC | United States Code |
| USDA | United States Department of Agriculture |
| USACE | United States Army Corps of Engineers |
| VdB | Vibration velocity level in decibels |

# 1 Purpose and Need for the Proposed Action

## 1.1 Introduction

This Environmental Assessment (EA) has been prepared to evaluate potential environmental, cultural, and socioeconomic effects that could occur due to the proposed Mountain View Corridor Real Estate Exchange, Utah County, Utah. The Proposed Action is an exchange of lands between the U.S. Army Corps of Engineers (USACE) and the State of Utah through the Utah Department of Transportation, (UDOT). The exchange would occur under the authority of 10 United States Code (USC) § 2869 which provides authority for military lands to be exchanged for other lands. Lands acquired by the Department of the Army (DoA) in this exchange would thereafter be permitted to the National Security Agency (NSA). USACE is the lead agency pursuant to the National Environmental Policy Act (NEPA). The NSA and the UDOT have special expertise pertaining to the Proposed Action and its potential environmental effects and are Cooperating Agencies under NEPA. In this draft EA, "action area" refers to the parcels being considered for exchange; specifically Parcels A, B, C, D, E, and F (see Figure 3).

### 1.1.1 Background

The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009, Public Law 110-417, Section 2846, authorized the conveyance by the Secretary of the Army of 982.30 acres of land located within the boundaries of Camp Williams, Utah from the United States to the State of Utah, on behalf of the Utah National Guard. The Army retained 207.57 acres on behalf of the NSA for construction of the Utah Data Center (UDC). An additional 107.87 acres was also retained for future NSA use. Subsequently, USACE North Atlantic Division, Baltimore District permitted the retained parcels to the NSA.

In April 2020, the NSA requested USACE, as the landholding agency for Camp Williams, Utah, and related property, exchange certain lands with UDOT. As the USACE liaison to the NSA, Baltimore District subsequently engaged USACE South Pacific Division, Sacramento District Real Estate Division. Sacramento District Real Estate is the lead agent for the proposed land exchange between the NSA and UDOT because it falls within the Sacramento District's Area of Responsibility (AOR).

Prior to the Duncan Hunter National Defense Authorization Act the parcels proposed for transfer to UDOT and the parcels where the UDC is located were within the boundary of Camp Williams. Those lands were federally owned but licensed to Camp Williams (State of Utah).

### 1.1.2 Location of the Parcels

The parcels of interest are located near Lehi and Bluffdale, Utah (Figure 1). They include about 93 acres just east of the NSA's UDC and about 90 acres immediately adjacent to, and south of, the UDC. Table 1 identifies these parcels. Figure 2 shows the general location of the proposed Mountain View Corridor Real Estate Exchange. Figure 3 shows the specific parcels proposed for exchange.

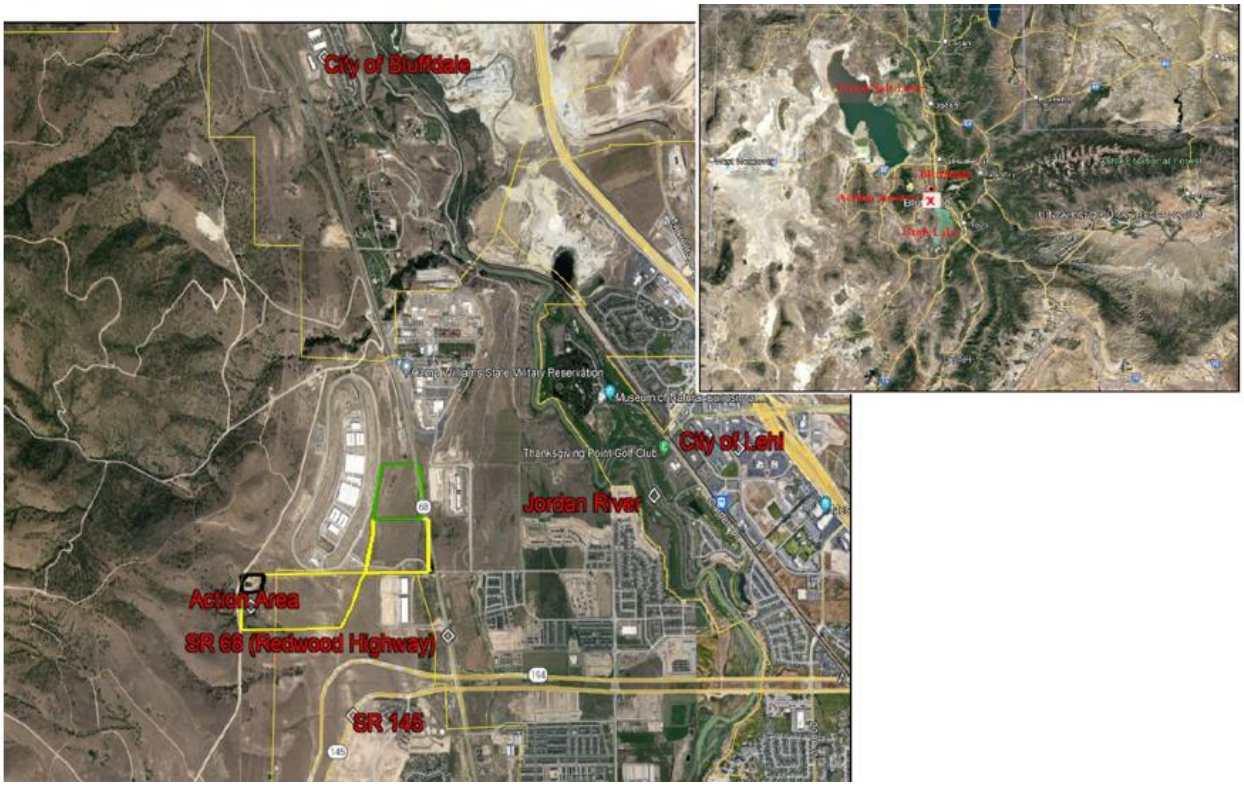
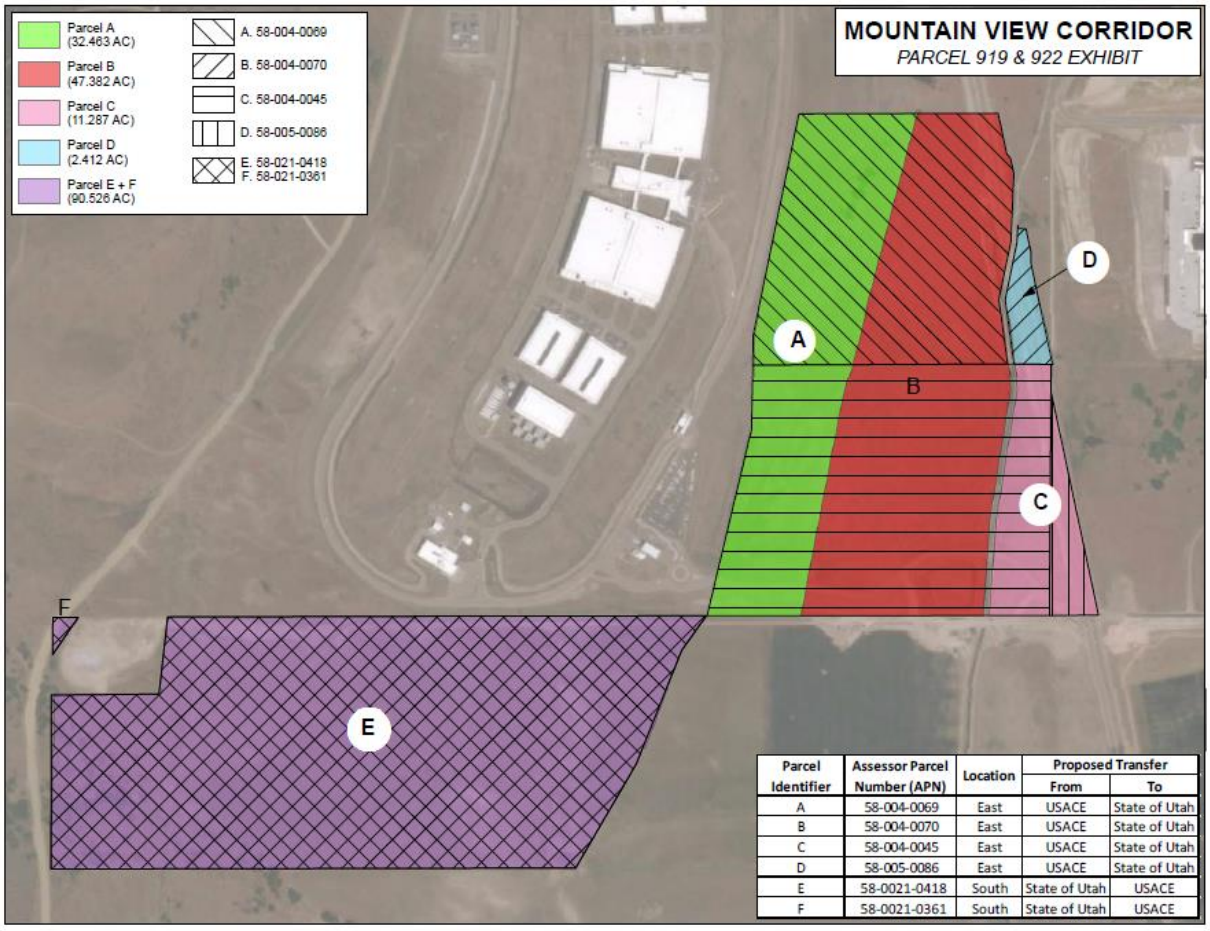



**Figure 1.** Vicinity Map.

**Table 1. Parcels Proposed for Exchange Under the Proposed Action**

| Parcel Identifier | Assessor Parcel Number (APN) | Location | Proposed Transfer | |
|---|---|---|---|---|
| | | | From | To |
| A | 58-004-0069 | East | USACE | State of Utah |
| B | 58-004-0070 | East | USACE | State of Utah |
| C | 58-004-0045 | East | USACE | State of Utah |
| D | 58-005-0086 | East | USACE | State of Utah |
| E | 58-0021-0418 | South | State of Utah | USACE |
| F | 58-0021-0361 | South | State of Utah | USACE |


**Figure 2.** General Location of the Lands Proposed for Exchange.




| Parcel Identifier | Assessor Parcel Number (APN) | Location | Proposed Transfer | |
|---|---|---|---|---|
| | | | From | To |
| A | 58-004-0069 | East | USACE | State of Utah |
| B | 58-004-0070 | East | USACE | State of Utah |
| C | 58-004-0045 | East | USACE | State of Utah |
| D | 58-005-0086 | East | USACE | State of Utah |
| E | 58-0021-0418 | South | State of Utah | USACE |
| F | 58-0021-0361 | South | State of Utah | USACE |

**Figure 3.** Parcels Proposed for Exchange.

## 1.2 Purpose and Need

The purpose of the Proposed Action is to facilitate implementation of UDOT's Mountain View Corridor Transportation Project, reduce security risks to the NSA's UDC, and allow room for the potential future expansion of the UDC campus. The UDOT project responds to recent and projected regional growth in population and commerce that requires additional transportation infrastructure. A segment of the UDOT project is planned to cross lands currently owned by USACE. Options for alternate locations are limited in this area. The rapid urban development has also highlighted concerns for security at the UDC and the importance of ensuring that the federal government has control over lands immediately adjacent to, and south of, the facility. In addition, the NSA anticipates the potential future expansion of its facilities to meet the needs of the nation. The NSA's long-term vision for expansion at the UDC includes modified ingress/egress routes and new structures to consolidate other Utah-based NSA operations at this campus. Expansion onto federally held undeveloped lands immediately adjacent to the existing facility would be preferable. The lands proposed for transfer to the State of Utah are not used to directly support Army activities or mission.

## 1.3 Scope of Analysis

### 1.3.1 Introduction

This EA describes the results of our environmental review and documents the potential environmental effects of the Proposed Action. Two alternatives are evaluated: No Action and Proposed Action. The EA focuses on Parcels A, B, C, D, E, and F (see Table 1 and Figure 3). Potential environmental effects have been evaluated consistent with the NEPA regulations (40 CFR §1501.3). In considering environmental effects, measures to reduce potential adverse effects are identified and described where warranted.

### 1.3.2 Consideration of Categorical Exclusions

Consistent with 40 CFR §1501.4, and prior to preparing this EA, USACE reviewed available categorical exclusions (CatEx) for applicability to the Proposed Action. U.S. Army CatEx's relating to real estate transactions like the Proposed Action cannot be used because they only apply to transactions where reasonably foreseeable use will not change. Therefore, an environmental assessment has been prepared.

### 1.3.3 Limited Scope of Analysis

Although the purpose of the Proposed Action is to facilitate implementation of UDOT's Mountain View Corridor Transportation Project, reduce security risks to the NSA's UDC, and allow room for the potential future expansion of the UDC campus, the highway project, specific security enhancements near the UDC, and the UDC expansion are not analyzed in this EA. At the appropriate point in its development, UDOT's transportation project must independently comply with all applicable environmental laws and regulations. UDOT must also secure funding for the planned project. It is unknown whether USACE or Army will have any future action with respect to UDOT's project. NSA's long-term vision for the UDC, including specific security measures on any newly acquired lands, is conceptual and future site-specific planning would be years in the future. Implementation would require an independent planning, approval, and funding processes. Therefore, the focus of this environmental review is solely on the land exchange itself.

This EA has been prepared consistent with the 2022 NEPA implementing regulations which specify that "effects or impacts means changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and include" direct, indirect, and cumulative effects; beneficial and detrimental effects; and ecological, aesthetic, historic, cultural, economic, social, or health effects (40 CFR §1508.1(g)).

### 1.3.4 Resources Considered and Those Analyzed in Detail

Scoping identified resources for consideration in this environmental review. Those resources considered are listed below. An asterisk highlights those resources analyzed in detail in Chapter 4.

- Land use*
- Air Quality
- Noise
- Geology, Topography and Soils
- Water Resources
- Biological Resources

- Cultural Resources*
- Socioeconomics and Environmental Justice
- Infrastructure
- Hazardous and Toxic Materials/Wastes (HTMW)*

## 1.4 Decision-making

Per Army Regulation (AR) 405-10, paragraph 2-6, approval authority for acquisition of non-Government-owned real estate by purchase, condemnation, exchange, lease, lease renewal or extension is the Deputy Assistant Secretary of the Army for Installations, Housing, and Partnerships (DASA IH&P). The exchange of lands must be in the best interest of the Federal Government. This EA is part of the information that will be considered in making the land exchange decision. Following a 30-day public review of the draft EA and draft Finding of No Significant Impact (FNSI), and after reviewing and considering all substantive comments received, the Chief of Environmental Division, Headquarters USACE will decide to either sign a FNSI or prepare an environmental impact statement.

## 1.5 Public and Agency Involvement

### 1.5.1 Public Participation

In accordance with NEPA, the draft EA is being released for a 30-day public review. All substantive comments received will be reviewed and the final EA will be revised as appropriate. Comments and USACE responses will be included in an appendix to the final EA. The draft EA and draft FNSI are available for review at https://www.nab.usace.army.mil/Missions/Regulatory/Public-Notices/. The review period for the document will be advertised in the *Salt Lake Tribune*, *Deseret News* and *Daily Herald* newspapers.

### 1.5.2 Interagency Consultation and Coordination

Federal, state, and local agencies consulted during preparation of this draft EA are identified in Chapter 7. Individual landowners with knowledge of the area were also consulted. Information collected through the coordination process was used to inform the description of the affected environment and environmental consequences. A site visit and in-person meeting were held at Camp Williams on the 29th of June 2021. USACE (Headquarters, Baltimore District, and Sacramento District), NSA/UDC, and UDOT participated. The purpose of the meeting and site visit was to discuss the proposed land exchange; the purpose and need for the exchange; known environmental and cultural issues on any of the properties; known prior use of the properties; the environmental review process and timeline.

As part of this process, USACE requested input from federally recognized Native American tribes under the National Historic Preservation Act (NHPA), Section 106, and as required under the Department of Defense (DoD) Annotated Policy Document (27 October 1999 Memorandum) for the DoD American Indian and Alaska Native Policy. USACE also consulted with the Utah Office of Historic Preservation and the State Historic Preservation Office (SHPO). Correspondence with tribal governments and with the SHPO is included in Appendix B.

### 1.5.3 Related NEPA, Environmental, and Other Documents and Processes

The Environmental Assessment for the Maneuver Trail System Improvement Project, Camp Williams, Utah (UANG, 2020) provided a framework for this EA. This document is incorporated by reference herein and may be accessed at https://ut.ng.mil/Portals/40/Documents/Environmental/Maneuver%20Trails_EA_Final_Signed_20200610.pdf?ver=2020-06-16-105419-327. Section 3.7 Cultural Resources of the Final Environmental Assessment addressing the Construction and Operation of the Utah Data Center Army Garrison Camp Williams, Utah is also incorporated herein by reference.

## 1.6 Regulatory Framework

A decision on whether to proceed with the Proposed Action will be based on numerous factors, including the information in this EA and compliance with all applicable federal laws, regulations, and policies. The status of the Proposed Action's compliance with applicable federal regulations and executive orders is provided in Tables 2 and 3, respectively. The final decision will be based upon the benefit the proposed land exchange would provide to the Federal Government, which includes addressing the purposes and needs identified in Section 1.2.

**Table 2. Status of the Proposed Action's Compliance with Applicable Federal Regulations**

| Federal Regulation | Compliance Status for Proposed Action |
|---|---|
| Bald and Golden Eagle Protection Act of 1940 (16 USC 668-668c) | *Full compliance.* Bald and golden eagles may be present in the action area. Golden eagles are known to nest in the vicinity. The land exchange would not affect bald or golden eagles or their habitat. |
| Clean Air Act (CAA) (42 USC 7401 et seq., as amended) | *Full compliance.* Utah county is a nonattainment area for $PM_{10}$, $PM_{2.5}$, and $O_3$ and a maintenance area for CO (Provo City only). The proposed land exchange would have no impact on air quality. |
| CAA General Conformity Rule (40 CFR Parts 6, 51, and 93) | *Full compliance.* No impact on air quality. |
| Clean Water Act of 1977 and the Water Quality Act of 1987 (33 USC 1251 et seq., as amended) | *Full compliance.* The land exchange would not affect surface or ground waters. |
| Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (as amended by the Superfund Amendments and Reauthorization Act of 1986 [42 USC9601 et seq.]) | *Full compliance.* A Phase I site assessment was completed. No or de minimis levels of hazardous, toxic, and radiological waste (HTRW) were identified on the parcels proposed for exchange. |
| Endangered Species Act (ESA) of 1973, as amended by The National Defense Authorization Act of 2004 (Public Law 93-205; 16 USC 1531 *et seq*.) | *Full compliance.* Potential habitat may be present for the federally listed as Threatened, Yellow-billed cuckoo and the Candidate Columbia spotted frog. The land exchange would have no effect on these species or their habitat. |
| Farmland Protection Act of 1981 (7 USC 4201 et seq., as amended) | *Full compliance.* Prime farmlands are not present. There are no NRCS conservation easements on or immediately adjacent to the parcels. |
| Army Regulation (AR) 200-1, Environmental Protection and Enhancement; 32 CFR 651 | *Partial compliance*. Full compliance will be achieved once a FNSI is signed, or a decision is made to prepare an EIS and that analysis is completed. |
| CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR, Parts 1500-1508) | *Partial compliance*. Full compliance will be achieved once a FNSI is signed, or a decision is made to prepare an EIS and that analysis is completed. |

| Federal Regulation | Compliance Status for Proposed Action |
|---|---|
| Migratory Bird Treaty Act (16 USC 703-712)) | *Full compliance.* The Proposed Action would not affect birds protected under the Migratory Bird Treaty Act. |
| National Historic Preservation Act (NHPA, 54 USC 300101 et seq.) Protection of Historic Properties (36 CFR Part 800) | *Full compliance.* The State Historic Preservation Officer (SHPO) concurred with our determination of No Adverse Effect to historic properties (6 October 2021). Consultation letters were sent to representatives of the Northern Band of Shoshone Nation, Shoshone-Bannock Tribes, Skull Valley Band of the Goshute Indians, Uintah and Ouray Ute Indian Tribe. No responses have yet been received. |

**Table 3. Status of the Proposed Action's Compliance with Applicable Federal Executive Orders**

| Executive Order | Compliance Status for Proposed Action |
|---|---|
| EO 11593, Protection and Enhancement of the Cultural Environment | *Full compliance* |
| EO 11988, Floodplain Management | *Full compliance.* The proposed land exchange would not change the floodplains or construct facilities in a flood plain. |
| EO 11990, Protection of Wetlands | *Full Compliance*. No wetlands would be affected by the Proposed Action. |
| EO 12898, Federal Actions to Address Environmental Justice in Minority Populationsand Low-Income Populations, EO 14008 amends EO 12898 | *Full compliance.* The proposed land exchange would not affect any minority or low-income populations. Subsistence hunting and fishing are not known to occur on any of the lands proposed for exchange. |
| EO 13112, Invasive Species | *Full compliance.* The Proposed Action to exchange lands between USACE and the State of Utah would not introduce new invasive species or change the type, location, or abundance invasive species currently present on these lands. |
| EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds | *Full compliance.* The Proposed Action to exchange real estate between USACE and the State of Utah would not affect migratory birds. |
| EO 13287, Preserve America | *Full compliance* |

# 2 Proposed Action and Alternatives

## 2.1 Introduction

This EA considers two alternatives. No other alternatives were considered since USACE is evaluating a specific land exchange proposal made by the NSA and UDOT and no other alternative meets the purpose and need.

- **Alternative 1:** Proposed Action Alternative – Implement the proposed land exchange between USACE and UDOT.

- **Alternative 2**: No Action Alternative – No exchange of lands between USACE and UDOT would occur. Land ownerships would remain as currently recorded.

## 2.2 Proposed Action

The Proposed Action is to exchange about 93 acres of USACE held lands just east of the NSA's UDC for about 90 acres immediately adjacent to, and south of, the UDC in Utah County, Utah. Parcels A, B, C, and D are currently owned by USACE and would be transferred to the State of Utah in exchange for Parcels E and F. Table 1 and Figure 3 identify the parcels to be exchanged. In this EA, the "eastern parcels" are the USACE-owned parcels (Parcels A, B, C and D) that would be transferred to UDOT under the Proposed Action. The "southern parcels" are the UDOT-owned parcels (Parcels E and F) that would be transferred to the DoD under the Proposed Action. Table 1 and Figure 3 provide additional information about these parcels. "Action area" refers to the parcels under consideration for exchange; specifically, Parcels A, B, C, D, E, and F.

# 3 Resources Considered but Dropped from Detailed Analysis

## 3.1 Introduction

This section briefly describes the resources that initial NEPA scoping identified as warranting initial consideration in this environmental review. After further review these resources were dropped from detailed consideration because the Proposed Action would have no effect on them.

## 3.2 Air Quality

The Air Quality section (Section 3.3) of the Environmental Assessment from the Maneuver Trail System Improvement Project, Camp Williams, Utah (UANG, 2020) provides a thorough description of applicable air quality standards and existing air quality and greenhouse gases. Section 3.3 is incorporated by reference herein and summarized below.

Utah's air quality is regulated by the Utah Department of Air Quality (UDAQ), as well as the U.S. Environmental Protection Agency (EPA) Region 8. Utah county is designated by the EPA as a nonattainment area for particulate matter less than 10 micrometers in diameter ($PM_{10}$), particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$), and ozone ($O_3$). The county is a maintenance area for carbon monoxide (CO) (Provo City only). Utah County is considered an attainment area for sulfur oxides, $O_3$, lead and nitrogen dioxide ($NO_2$). The proposed action of lands exchange would not cause impacts to air quality; however, any potential future changes in land use on any of the parcels would require full analysis and would be required to comply with all applicable laws, regulations, and policies.

## 3.3 Noise

Existing noise on and adjacent to the eastern and southern parcels varies somewhat with location and type of land use. The eastside parcels experience noise and vibration from: SR 68; routine maintenance of Welby Jacob Canal and dirt roads; and management of the generally undeveloped lands. The southern parcels are exposed to noise from operation of agricultural equipment and from periodic maintenance of the water systems, roads, and electrical infrastructure. The natural sounds of birds and insects are intermittently present on both the eastern and southern parcels. Training activities at Camp Williams can generate noise from explosives, artillery, aircraft, and other equipment used in military training. Training related noise for Camp Williams is described in the Environmental Assessment for the Maneuver Trail System

Improvement Project, Camp Williams, Utah (UANG, 2020), which is incorporated by reference herein. No sensitive receptors are present on or adjacent to the eastern and southern parcels. The proposed action of lands exchange would not cause impacts to noise; however, any potential future changes in land use on any of the parcels would require full analysis and would be required to comply with all applicable laws, regulations, and policies.

## 3.4 Geology, Topography, and Soils

Regional geology, general topography, and geologic hazards are well described in Section 3.5 of the Environmental Assessment for the Maneuver Trail System Improvement Project, Camp Williams, Utah (UANG, 2020) and Section 3.5 of the Environmental Assessment for Lower Garrison Development Camp Williams Utah National Guard (UANG, 2016), which are incorporated by reference herein and summarized below.

The action area is located in north central Utah on the western edge of Utah Valley at the base of the Traverse Mountains. These mountains began to form more than 570 million years ago. They are composed of Late Paleozoic shallow-marine rocks, outcropping as large northwest-trending folds and middle Tertiary intrusions, associated volcanic rocks, and younger basin-fill strata (UGS, 2005). The base of the Traverse Mountains is comprised of lacustrine deposits from ancient lakes which expanded and contracted multiple times between 30,000 and 12,000 years ago. Geologic hazards in this region include faults and earthquakes, landslides, and rockslides, liquefaction, and erosion.

The eastern parcels increase in elevation from east to west and from the south to the north, gaining about 2050 to 280 feet from east to west and 20 to 90 feet from south to north (Google Earth, 2021). Ephemeral drainages are noticeable in some locations and particularly in the southwestern corner of the southern parcel. The eastern parcels are dominated by Kidman-Sterling complex (3-15% slopes) and Hillfield-Sterling complex (8-25% slopes). The southern parcels include these same soils and also Rawnjay-Kidman-Sterling complex (5-20% slopes) in the southwest corner, and Parleys loam (5-15% slopes). Hydric soils are not mapped for these parcels but are likely present in association with the Welby Jacob Canal and possibly other isolated areas.

### 3.4.1 Prime Farmland

Prime farmlands are not present on either the eastern or southern parcels (USDA, 2021). There are no Natural Resources Conservation Service (NRCS) conservation easements on or immediately adjacent to these parcels (NRCS, 2021). The National Commodity Crop Productivity Index considers estimated productivity in terms of soil, site, and climatic features that affect crop productivity. Ratings range from 1.00 for soils with the greatest positive impact on inherent productivity and 0.01 which indicates the soil features are very unfavorable. The highest rating in the area of interest is for Parleys loam on the southern parcel, which has a rating of 0.260. This is a low rating for commodity crop productivity.

## 3.5 Water Resources

The Water Resources section (Section 3.6), of the Environmental Assessment for the Maneuver Trail System Improvement Project, Camp Williams, Utah (UANG, 2020) provides a thorough description of applicable water resources definitions and data for analysis. Section 3.6 is incorporated by reference herein and summarized below.

### 3.5.1 Surface Water

The Jordan River is largest regional body of surface water near the action area. A segment of this river lies approximately one mile to the north and west of the Parcels B and D (see Figure 1). The river is perennial and conveys water from Utah Lake in Utah County north into Salt Lake County, Utah, and ultimately discharges into the Great Salt Lake. The Provo Reservoir Canal (also known as the Welby Jacob Canal or Jacob Canal) is a surface water canal running north to south on Parcels A and C (see Figure 4). This canal transports water extracted from the Jordan River at a point north of the parcels to Salt Lake County in the north and Utah County in the south (UTARNG, 2000). Typically, the canals only convey surface water during portions of spring, summer, and fall (UTARNG, 2008b). Although the Welby Jacob Canal crosses the USACE-held eastern parcels, the canal is not owned by USACE, and it is not part of the proposed land exchange.

A stormwater drainage ditch is located on the north side of Parcel E that captures and directs flow from the UDC property (see Figure 4). A detention basin south of Parcel E appears to capture stormwater from Highway 145 (Mountain View Corridor). The detention basin is not on Parcel E. There are no other surface water features in the action area or immediate vicinity.

In Utah, water rights are separated from land exchanges. No water rights would be affected by the proposed land exchange.

### 3.5.2 Groundwater

The Proposed Action is located in the Utah Lake Valley. Two primary aquifer systems are present: 1) the principal aquifer that consists of three hydraulically connected deep confined margins, and 2) a shallow unconfined water table aquifer system. The principal aquifer typically occurs at depths greater than 75 feet below ground surface in the valley center, with a maximum aquifer thickness greater than 1,000 feet. The deep-water table aquifer is present at depths below 150 feet below ground surface on the margins of the valley where it is the first groundwater encountered. The shallow water table aquifer typically occurs between five and twenty feet below ground surface. Groundwater flow in the water table aquifer is generally toward the discharge areas of Utah Lake, the Provo River, and other surface water canals. Groundwater flow in the deep confined aquifers is towards the valley center from the mountains. The direction of groundwater flow in the action area is most likely to the west, toward the Jordan River. Based on the proximity of the river the depth to groundwater is likely less than 20 feet below ground surface.

### 3.5.3 Wetlands and Waters of the United States

Two waterways are in the action area (Figure 4). The Welby Jacob Canal on the eastern parcels and an unnamed ephemeral waterway on the southern parcels. The unnamed water becomes the stormwater drainage ditch noted in Section 3.5.1 and then flows eastward. Both waterways are identified on the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory Wetlands Mapper (accessed December 16, 2021). The Welby Jacob Canal is classified as Riverine, Intermittent, Streambed, Seasonally Flooded, and Excavated (R4SBCx). The unnamed waterway is classified as Riverine, Intermittent, Streambed, and Seasonally Flooded (R4SBC). No other wetlands are located within the Proposed Mountain View Corridor Real Estate Exchange action area (Figure 4). The Jordan River is located west of the Proposed Action and would not be affected by the Proposed Action.


**Figure 4.** Waterways in the Action Area.

### 3.5.4 Floodplains

The Federal Emergency Management Agency (FEMA) Flood Map Service Center provides floodplain maps online (http://msc.fema.gov/portal/home). All parcels considered in the proposed land exchange are mapped as "Area of Minimal Flood Hazard" (see Appendix E) (FEMA, 2022).

## 3.6 Biological Resources

### 3.6.1 Regional Vegetation

Regional vegetation includes native or naturalized plants and the habitats in which they exist. Plant communities in the action area and vicinity are generally the same as those described in Section 3.7 of the Environmental Assessment for the Maneuver Trail System Improvement Project, Camp Williams, Utah (UANG, 2020), which is incorporated by reference herein and summarized below.

Woodland and shrubs are present in some parts of the landscape. These communities often occur as a mosaic of clumps of a single shrub, some woodland species, and large expanses of grasses and forbs. The most common plants are grasses, big sagebrush (*Artemisia tridentata*) and a small component of Gambel oak (*Quercus gambelii*).

Grass communities in the region are comprised of short grasses, mixed grasses, and native bunchgrass. The short grasses are dominated by cheatgrass. The mixed grasses are a patchwork of short and taller native bunchgrasses. The native bunchgrass communities are dominated by perennial bunchgrass vegetation, such as *Pseudoroegneria spicata*. A few communities in more disturbed areas are dominated by various herbaceous, weedy plant species.

### 3.6.2 Vegetation in the Action Area and Immediate Vicinity

Based upon a literature review, Google Earth imagery (Google, 2021), and photo documentation, vegetation in the action area and immediate vicinity includes three major woodland communities: juniper, oak, and mixed trees. Four major shrub communities are expected to be present: sagebrush, oak, mixed shrubs, and mixed shrubs and grasses. The one major herbaceous (non-woody, not trees or shrubs) component is comprised of different grasses.

The herbaceous communities are divided into four main types: native bunchgrasses, short grasses, mixed grasses, and other herbaceous plants. Appendix A, Table A-1 provides a list plant species that have the potential to be on all parcels. Figures 5 and 6 show typical vegetation found on Parcel C.

Parcel E falls under the farmland classification of *not prime farmland* (Web Soil Survey, 2021). Figure 7 shows a portion of Parcel E that is currently being farmed as wheat. Figure 8 shows a clump of big Sagebrush in the background on Parcel E.

**Figure 5.** Vegetation on Parcel C. Looking East (Photo courtesy of Kerkhove-Peltier, 2021.)

**Figure 6.** Vegetation on Parcel C. Looking East. (Photo courtesy of Kerkhove-Peltier, 2021)

**Figure 7.** Vegetation on Parcel E. Note that this parcel is currently being farmed in wheat. Lands are classified as *not prime farmland* (Web Soil Survey, 2021). (Photo courtesy of Kerkhove-Peltier, 2021.)

**Figure 8.** Vegetation on Parcel E. Note the clump of big sagebrush in the background. (Photo courtesy of Kerkhove-Peltier, 2021.)

### 3.6.3 Birds

Between 1994 and 2005, regular spring bird surveys were conducted at Camp Williams (adjacent to Parcels A, B, C, and D and in close proximity to Parcel E). These surveys identified 137 species of birds. Of these, 128 species are on the Migratory Bird List and are protected under the Migratory Bird Treaty Act (UANG, 2020). Eight bird species are designated by USFWS as Birds of Conservation Concern in the Great Basin Conservation Region 9 (USFWS, 2008) (see Appendix A, Table A-2). Nine bird species are identified as Utah Sensitive Species. Breeding on Camp Williams was documented for 51 species, and suspected for an additional 30 species (UANG, 2020). A review of the U.S. Fish and Wildlife Service Information for Planning and Consultation System (USFWS, 2022) identified thirteen migratory birds of conservation concern that are likely to be present in the action area during some months (Appendix A). Several migratory birds, particularly shrub- and ground-nesting species, would be expected to use the action area for nesting purposes. The proposed land exchange would not affect any bird species. No construction, earth moving, or vegetation clearing is included in the Proposed Action, although current routine operation and maintenance activities, which includes road and utility maintenance and some vegetation management for the purposes of reducing fire risk, are expected to continue if the Proposed Action is implemented.

### 3.6.4 Mammals

Common mammalian species found at Camp Williams and expected to be present in the action area include mule deer (*Odocoileus hemionus*), bobcat (*Felis rufus*), coyote (*Canis latrans*), mountain lion (*Felis concolor*), striped skunk (*Mephitis mephitis*), Northern pocket gopher (*Thomomys talpoides*) and rock squirrel (*Spemophilus variegates*). Thirty-one mammalian species have been identified on Camp Williams in the vicinity of the action area, including twelve species of rodents, seven medium-sized mammals (e.g., rabbits, raccoon, and striped skunk),

five predators (coyote, bobcat, mountain lion, weasel, and red fox (*Vulpes vulpes*), four species of bats, and three ungulates (UANG, 2020). Figures 9 and 10 show the presence of dens on Parcels C and E, respectively.

As of December 2005, 28 adult and juvenile mountain lions had been captured and marked on Camp Williams as part of an ongoing radiotelemetry study initiated in January 1997 (UANG, 2020). Mule deer are also well documented on Camp Williams. During the reconstruction of Highway 68, the main vehicle underpass was enlarged to facilitate mule deer crossing and to mitigate vehicle accidents. Mule deer are regularly observed across portions of the action area. A large extent of important mule deer winter habitat is located nearby on Camp Williams.

### 3.6.5 Reptiles and Amphibians

Eight reptilian and three amphibian species have been identified on Camp Williams and may be present in the action area. Reptiles include western yellowbelly racer (*Coluber constrictor*), Great Basin rattlesnake (*Crotalus viridis*),striped whipsnake (*Masticophis taeniatus*), Great Basin gopher snake (*Pituophis melanoleucus*), Utah Milksnake (*Lampropeltis triangulum talori*) short-horned lizard (*Phrynosoma douglassii*), northern sagebrush lizard (*Sceloporus graciousus*), and northern side-blotched lizard (*Uta stansburiana*). Amphibians that may be present in the action area include Woodhouse's toad (*Bufo woohousii*), northern leopard frog (*Rana pipiens*), and Great Basin spadefoot toad (*Scaphiopus intermontana*) (UANG, 2020).

**Figure 9:** Possible Animal Burrow on Parcel C (photo courtesy of Kerkhove-Peltier, 2021)

**Figure 10:** Animal Den on Parcel C (photo courtesy of Kerkhove-Peltier, 2021).

### 3.6.6 Fish

According to the 2009 Salt Lake Countywide Watershed—Water Quality Stewardship Plan (Salt Lake County, 2009), surveys of fish through the Jordan Narrows (downstream of the Turner Dam and CampWilliams) identified 17 fish species, including carp (*Cyprinus carpio*), black crappie (*Pomoxis nigromaculatus*), black bullhead (*Ameiurus melas*), fathead minnow (*Pimephales promelas*), mountain sucker (*Catostomus platyrhynchus*), rainbow trout (*Oncorhynchus mykiss*), cutthroat trout (*Oncorhynchus clarki*), brown trout (rare) (*Salmo trutta*), Utah sucker (*Catostomus ardens*), walleye (*Sander vitreus*), white bass (*Morone chrysops*), yellow perch (*Perca flavescens*), bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), largemouth bass (*Micropterus salmoides*),smallmouth bass (*Micropterus dolomieu*), and channel catfish (*Ictalurus punctatus*). No documentation of fish species in the Jordan River adjacent to Camp William is provided in the Camp Williams Integrated Natural Resource Management Plan (INRMP) (UANG, 2009). Likewise, data for fish that may be present in the Welby Jacob Canal and irrigation ditches in the action area are not available. It is expected that only common, hardy, warm water species would likely be present.

### 3.6.7 Invertebrates

Four species of invertebrates were documented during a 2009 site survey adjacent to Parcels A, B, C, and D, and may also be present on these parcels. These are darkling beetle (*Eleodes obscures*), harvester ants (*Pogonomyrmex* sp.), mourning cloak (*Nymphalis antiopa*), and sagebrush checkerspot (*Chlosyne acastus*). None of these species are federal- or state-listed species or species receiving special management. Parcels E and F are expected to be host a similar set of common invertebrate species.

### 3.6.8 Listed, Sensitive and Protected Species

#### Federally Listed Species

Habitat suitable for two federally listed species and one species that is a candidate for listing is present on Parcels A, B, C, and D. These are the Threatened yellow-billed cuckoo (*Coccyzus americanus*) and the June sucker (*Chasmistes liorus*), and the Candidate monarch butterfly (*Danaus plexippus*). Suitable habitat for the monarch butterfly is present on Parcel E (USFWS, 2022). None of these species have been observed on these parcels during any planning level survey, avian or other wildlife monitoring, or any other natural resources work. The proposed land exchange involves a change in land ownership. No construction or change in land management is proposed as part of the land exchange; therefore, the land exchange would have no effect on any federally listed species. No designated critical habitat is present on, or in the immediate vicinity of, the lands proposed for exchange.

#### State-Recognized Species of Conservation Concern

The Utah Department of Natural Resources manages and protects the state's natural resources. Within this department, the Utah Division of Wildlife Resources (UDWR) is responsible for managing wildlife, defined as "crustaceans, mollusks, and vertebrate animals living in nature" (Utah Code 23-13-2(49). Utah has no state counterpart to the Federal Endangered Species Act. The State of Utah works through partnerships and cooperative actions to achieve conservation goals. In 1997, the Utah Legislature created the Endangered Species Mitigation Fund (Utah Code 63-34-14) which expanded the funding base for conservation of wildlife species designated as Utah Sensitive Species or listed under the Federal Endangered Species Act. In 2000, Congress established the Wildlife Conservation and Restoration Account (the source of State Wildlife Grants). States seeking grant funds must complete Wildlife Action Plans (or "wildlife conservation strategies"). The "Utah Wildlife Action Plan; A plan for managing native wildlife species and their habitats to help prevent listing under the [Federal] Endangered Species Act; 2015-2025" is the current plan for the State of Utah. As part of plan development, the UDWR led development and implementation of a process to identify the states Species of Greatest Conservation Need (SGCNs). The methods are consistent with those used by NatureServe. Plants, fungi, all invertebrate animals other than mollusks and crustaceans are not included in the plan since they are beyond the management jurisdiction of the UDWR. State ranks are assigned and maintained by state natural heritage programs and conservation data centers. The Utah Natural Heritage Program (UNHP) is located within the UDWR, which updates state ranks periodically – every 5 years or so. (UDWR, 2015).

Of those species that could be present in the action area, nine bird species, three mammals, and one amphibian are recognized as species of concern in Utah and Salt Lake Counties (see Appendix A, Table A-4). One additional species, the Columbian spotted frog (*Rana luteiventris*), receives special management under a Conservation Agreement in order to preclude the need for federal listing. Five of these species of concern have been documented in the vicinity of the action area on Camp Williams and are potentially present on the parcels being considered for exchange (UANG, 2020). These are all birds: American white pelican (*Pelecanus erythrorhynchos),* short-eared owl (*Asio flammeus*), Western burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), and bald eagle (*Haliaeetus leucocephalus*). Most of Utah's sensitive species are native to grassland and shrubland habitats found in the intermountain valleys and foothills. This habitat type is common on Camp Williams and may be present in some parts of the action area.

The American white pelican has been occasionally observed flying above the Jordan River, most likely traveling between the Great Salt Lake and Utah Lake (UANG, 2020). There is no suitable habitat for this species in the action area, and it has not been observed on the ground. Short-eared owls are irregularly observed in the vicinity of the action area on Camp Williams. The most recent observations were in the spring of 2019 in lower Beef Hollow. Suitable habitat for the short-eared owl is present on the eastern and southern perimeters of Camp Williams (UANG, 2020). The western burrowing owl has been observed on the NSA property west of Redwood Road. Ferruginous hawks have also been observed within the Camp Williams Installation, particularly near the southeast corner of the camp. Bald eagles are infrequently seen along the Jordan River but not in the last several years.

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act, which prohibits the "take" of bald or golden eagles in the United States. Typically, golden eagles are found in open country, especially in mountainous regions, and feed primarily on small mammals, especially rabbits, marmots, and ground squirrels. Nesting occurs from late February to early March in Utah.

Bald eagles have been observed irregularly by environmental resources management staff and civilian observers on Camp Williams and roosting in trees on the NSA property east of Redwood Road. This area and the taller trees along the Jordan River are suitable habitat for the bald eagle. As of 2018, five golden eagle nests have been documented on Camp Williams. Golden eagle nests are located near the windmills east of Redwood Road. Camp Williams has been part of a Utah Department of Natural Resources (UDNR), Utah Division of Wildlife Resources (UDWR) Golden Eagle Nesting Survey since 1995. This study indicated that eagle populations are tied to their largest prey base, which includes jackrabbits (*Lepus* spp.), which comprise 59 percent of their diet, and cottontail rabbits (*Sylvilagus* spp.), which comprise 9 percent of their diet. A key threat to this prey base is the loss of sagebrush habitat because of development, or the conversion of sagebrush habitat to vegetation that does not support rabbit populations. The most recent active eagle nest on Camp Williams property was observed in 2017 (UANG, 2020).

## 3.7 Socioeconomics and Environmental Justice

For the socioeconomics and environmental justice analysis, the project area and adjacent lands are referred to as the Region of Influence, or ROI. The ROI is comprised of Utah County census tracts 0101.08 and 0101.09 and Salt Lake County census tracts 1128.10 and 1151.06. For purposes of comparison, reference populations are defined as those in Salt Lake County, Utah County, and the State of Utah. Data are from the U.S. Census Bureau (USCB) website (http://www.census.gov, accessed February 2022) and the Federal Financial Institutions Examination Council's (FFIEC) website (http: ffiec.gov, accessed February 2022).

The population of the ROI is 33,183 as compared to Utah County (659,399), Salt Lake County (1,185,238), and the state of Utah (3,271,616). Most (87.5%) of the population in the ROI identifies as White. This is higher than the reference populations. Persons identifying as Hispanic or Latino comprise 7.6% of the population in the ROI as compared to 19.6% in Salt Lake County, 13.4% in Utah County, and 15.1% in the state of Utah. The percent of the population in the ROI below the poverty level is very low (0.1%). The percent of each of the reference populations is about 7%. Table 4 provides population demographics and poverty levels for the ROI, Salt Lake and Utah Counties, and the State of Utah.

Using the 50% threshold methodology (Environmental Justice Interagency Working Group, 2019), the ROI does not include environmental justice populations. A total of 12.6% of the

population is minority and 0.1% of the population is below the poverty level. Overall, this is less than for the reference populations in Salt Lake County, Utah County, and the State of Utah.

The primary industry (21.3 percent of the working population) in the ROI is educational services and healthcare and social assistance followed by professional, scientific, and management, and administrative and waste management services (14.4 percent). The construction industry accounts for 9.5 percent of the employed population. Table 5 summarizes employment information for the ROI, the counties of Utah and Salt Lake, and the State of Utah.

Public access is restricted on all parcels being considered in the proposed land exchange. No recreation or provisioning activities occur on these parcels. This would not change as a result of the proposed land exchange.

**Table 4. Population Demographics and Poverty Levels for the ROI, Utah County, Salt Lake County, and the State of Utah**[1]

| | ROI[2] | Salt Lake County | Utah County | State of Utah |
|---|---|---|---|---|
| Total Population | 33,183 | 1,185,238 | 659,399 | 3,271,616 |
| Black or African American alone (%) | 0.6 | 1.9 | 0.6 | 1.1 |
| American Indian and Alaska Native alone (%) | 0.1 | 0.6 | 0.4 | 0.9 |
| Asian alone (%) | Not available | 4.2 | 1.5 | 2.4 |
| Native Hawaiian and Other Pacific Islander alone (%) | 2.1 | 1.8 | 1.0 | 1.1 |
| Two or More Races (%) | 2.2 | 3.9 | 4.0 | 3.7 |
| Hispanic or Latino[2] (%) | 7.6 | 19.6 | 13.4 | 15.1 |
| White alone, not Hispanic or Latino (%) | 87.5 | 67.6 | 78.6 | 75.4 |
| Percentage of population below poverty level (%) | 0.1 | 7.0 | 7.8 | 7.3 |

**Notes:**
[1] 2020 Census data and extrapolations source https://www.census.gov/quickfacts/fact/table/, accessed 2 February 2022.
[2] Percentage value is the average of 2020 Utah County Census Tracts 0101.08 and 0101.09, and Salt Lake County Census Tracts 1128.10 and 1151.06.
[2] Hispanic origins could be of any race.
**Sources:** USCB, 2022; FFIEC, 2022 (For ROI).

**Table 5. Employment by Industry for the ROI, Utah County, Salt Lake County, and the State of Utah**

| | ROI | Salt Lake County | Utah County | State of Utah |
|---|---|---|---|---|
| Total employed population | 22,612 | 618,705 (2019) | 309,211 | 1,598,530 (2019) |
| Agriculture, forestry, fishingand hunting, and mining | 1.2 | 1.1 | 0.9 | 1.7 |
| Construction | 9.5 | 8.2 | 7.3 | 7.9 |
| Manufacturing | 7.9 | 8.9 | 9.4 | 9.7 |

| | ROI | Salt Lake County | Utah County | State of Utah |
|---|---|---|---|---|
| Wholesale trade | 2.7 | 2.4 | 2.6 | 2.3 |
| Retail trade | 13.4 | 10.7 | 12.0 | 11.4 |
| Transportation and warehousing, and utilities | 4.7 | 6.5 | 2.3 | 5.2 |
| Information | 3.5 | 2.3 | 2.1 | 1.8 |
| Finance and insurance, andreal estate and rental and leasing | 9.3 | 9.6 | 6.3 | 7.4 |
| Professional, scientific, andmanagement, and administrative and waste management services | 14.4 | 13.1 | 16.1 | 12.5 |
| Educational services, and health care and social assistance | 21.3 | 20.9 | 25.5 | 22.2 |
| Arts, entertainment, and recreation, and accommodation and food services | 4.8 | 8.5 | 7.7 | 8.8 |
| Other services, except public administration | 3.8 | 4.4 | 4.2 | 4.4 |
| Public administration | 3.6 | 3.2 | 2.7 | 4.6 |

**Note:**

[1]Percentage value is the average of 2020 Utah County Census Tracts 0101.08 and 0101.09, and Salt Lake County Census Tracts 1128.10 and 1151.06. **Sources:** USCB, 2022; FFIEC, 2022 (For ROI).

## 3.8 Infrastructure

### 3.8.1 Water System

According to *The Salt Lake Tribune (November 30, 2013)*, the city of Bluffdale finalized a 10-year contract with the NSA on Sept. 30, 2011, to supply water to the UDC which is adjacent the eastern parcels. Bluffdale also has an agreement to take used water from the UDC. The city uses that supply to water the grass at its parks according to the article.

The Provo Reservoir Canal is the only surface water feature adjacent to or on Parcels A and C. There is a stormwater drainage ditch on the north side of Parcel E that captures and directs flow from the UDC property. There are no other surface water features.

### 3.8.2 Energy Distribution System

Rocky Mountain Power is the main source of power supply to the nearby UDC. At present, there are no structures on Parcels A, B, C, D, E, or F. Underground fiber optic cables and above ground power lines were present on Parcel E.

### 3.8.3 Traffic and Transportation

A single dirt road is present on Parcels A and C. This road is used for canal maintenance and is restricted from general public access. Redwood Road/SR-68 (see Figure 2) crosses Parcels D and B. There are dirt and gravel roads on Parcel E. Access to these roads is for construction and agricultural purposes only.

# 4 Affected Environment, Environmental Consequences and Mitigation Measures

## 4.1 Introduction

This section discusses how significance is determined under NEPA, effects determinations considered in this NEPA review, and the chapter structure.

### 4.1.1 Determining Significance Under NEPA

NEPA requires that the environmental effects of a Proposed Action be analyzed for significance. Potential effects are assessed in relation to the conditions described in the No Action Alternative. Impacts are considered significant because of their degree effect on the potentially affected environment. Short- and long-term effects, beneficial and adverse effects, effects on public health and safety, effects that would violate federal, state, Tribal, or local law protecting the environment, and cumulative effects, are considered (40 Code of Federal Regulations [CFR] Section § 1501.3 and § 1508.1(g)). Agencies should consider connected actions consistent with § 1501.9(e)(1). UDOT's Mountain View Corridor Project was the subject of an FEIS and Record of Decision in 2008. A "re-evaluation" of the 2008 FEIS was completed in 2019 and an updated ROD was signed in 2020. Further NEPA related to that project may be completed in the future depending on decisions made by UDOT. This real estate exchange is proceeding independently of the Mountain View Corridor project and does not meet the definition of a connected action (1501.9(e)(1)).

The following significance criteria apply to all resources considered in this environmental review and are not repeated for each resource:

- Significance based on institutional recognition means that the importance of the effects is acknowledged in the laws, adopted plans, and other policy statements of public agencies and private groups. Institutional recognition is often in the form of specific criteria.
- Significance based on public recognition means that some segment of the general public recognized the importance of the effect. Public recognition may take the form of controversy, support, conflict, or opposition expressed formally or informally. Significance based on the technical or scientific criteria related to critical resource characteristics.

### 4.1.2 Effect Determinations Used in this Report

An overall effect determination is identified, by alternative, for each resource. The effect determinations used in this report are described below. In making the effect determination for each resource USACE has considered short- and long-term effects, beneficial and adverse effects, effects on public health and safety, effects that would violate federal, state, Tribal, or local law protecting the environment, and cumulative effects (40 Code of Federal Regulations [CFR] Section § 1501.3 and § 1508.1(g)).

- **Beneficial**. Would provide benefit to the environment as defined for that resource.
- **No Effect**. Would cause no discernible change in the environment.
- **Less Than Significant**. Would cause no substantial adverse change in the environment. Incorporation of mitigation measures may be considered in making this determination.
- **Significant**. Would cause a substantial adverse change in the physical conditions of the environment.

### 4.1.3 Chapter Structure

The section covering each resource includes the following elements:

- **Affected Environment.** The existing conditions and trends.
- **Effects of the No Action Alternative**. The adverse and beneficial effects the No Action Alternative would have on the resource under consideration (40 CFR § 1501.3 and § 1508.1(g)).
- **Effects of the Proposed Action**. The adverse and beneficial effects of the preferred alternative, which is the Proposed Action, would have on the resource under consideration (40 CFR § 1501.3 and § 1508.1(g)).
- **Mitigation Measures**. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, or compensate) adverse effects accompany each effect discussion. NEPA regulations require identification of mitigation for any adverse impact but does not require implementation of specific measures (40 CFR § 1508.1(s)).

## 4.2 Land Use

### 4.2.1 Affected Environment

The eastern parcels are owned by the U.S. Government (USACE). The southern parcels are owned by the State of Utah through UDOT. The parcels are in Utah County, which zones both the eastern and southern parcels within the incorporated city limits of Lehi, UT. Lands to the east and south are also zoned within the Lehi city limits. Lands west of the UDC are zoned as mining and grazing. Lands north of the eastern parcels are zoned within the Bluffdale city limit. Figure 11 shows zoning in the action area and vicinity. Camp Williams is a Utah National Guard training facility. The UDC is a data acquisition and storage facility. The NSA is the executive agent for the Office of the Director of National Intelligence (ODNI) and is the lead agency at the data center.

Development pressure is high in this geographic area. Between 2010 and 2020 population in the State of Utah increased from 2,776,469 to 3,271,616, an increase of 18%. Salt Lake County increased from 1,003,910 to 1,185,238, an increase of 18%. Utah County increased from 520,049 to 659,399, an increase of 27% (USCB, 2010, 2020). Consequently, development of

lands for residential and supporting urban infrastructure has expanded. This trend is expected to continue.

The Camp Williams Joint Land Use Plan highlights the importance of buffers around Camp Williams lands to reduce conflicts between military training and civilian urban uses and to reduce incidence of trespass onto the installation (Matrix, 2012). The NSA UDC also recognizes the importance of buffers around their UDC. UDOT is constructing the Mountain View Corridor highway in phases (Figure 12). A portion of this highway is envisioned to occupy portions of the eastern parcels. The 2016 Environmental Assessment for Lower Garrison Development Camp Williams Utah National Guard (UANG, 2016), in Appendix A, Figure titled Utility Master Plan (and other figures in the appendix), identifies the location of the "future Mountain View Corridor Highway" on the eastern parcels. A Record of Decision (ROD) for the Mountain View Corridor Transportation Project was signed by UDOT in November 2008 and updated in January 2020.

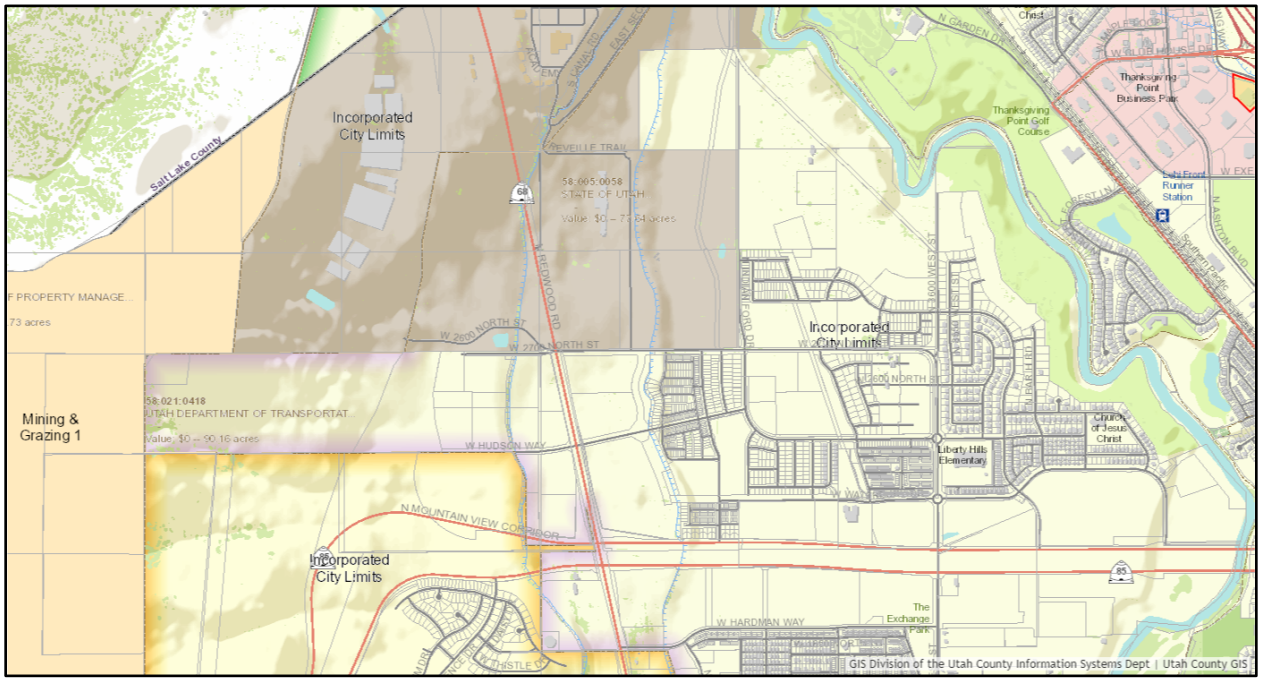



**Figure 11.** Zoning Map for the Action Area and Adjacent Lands. (Source: Utah County Zoning Map, https://maps.utahcounty.gov/zoning/zoningmap.html, accessed 2 September 2021)

### Eastern Parcels

The eastern parcels are positioned between the developed NSA UDC facilities on the west, Army Garrison Camp Williams (particularly the southern garrison) on the east, Camp Williams lands to the north, and private agricultural lands on the south. The eastern parcels include land occupied by about a half mile stretch of State Route (SR) 68 and a few feet just east of the road. There is no clear landmark that defines the northern extent of the eastern parcels; however, the property line is approximately where Reveille Road would be if it extended west across SR 68. In the south the properties are bound by Mink Road. The eastern parcels are disturbed but generally undeveloped. The exception is the presence of energy and water infrastructure, dirt roads, Welby Jacob Canal, and a portion of SR 68. The City of Lehi land use map identifies these parcels as "Public Facilities."

**Southern Parcels**

The southern parcels are adjacent to, and south of, the UDC. They are located west of Watts Road. There is no clear landmark on the eastern boundary, which is about half mile west of SR 68. It is bound by Mink Road in the north and an unnamed, unpaved agricultural road on the south. If West Hudson Way extended westward, it would form the southern boundary of these parcels.

About half of Parcel E has been farmed. The most recent crop was wheat (pers. com., 2021). The remainder of this parcel is undeveloped except for an access road to the Utah County water facility, unpaved agricultural roads, and electrical infrastructure. The southwestern corner has some natural drainage areas and vegetation. To the east and south adjacent properties have been recently farmed. To the west lands are undeveloped and zoned for mining and grazing. The City of Lehi land use map identifies these parcels as “Business Park” and “Low Density Residential”.

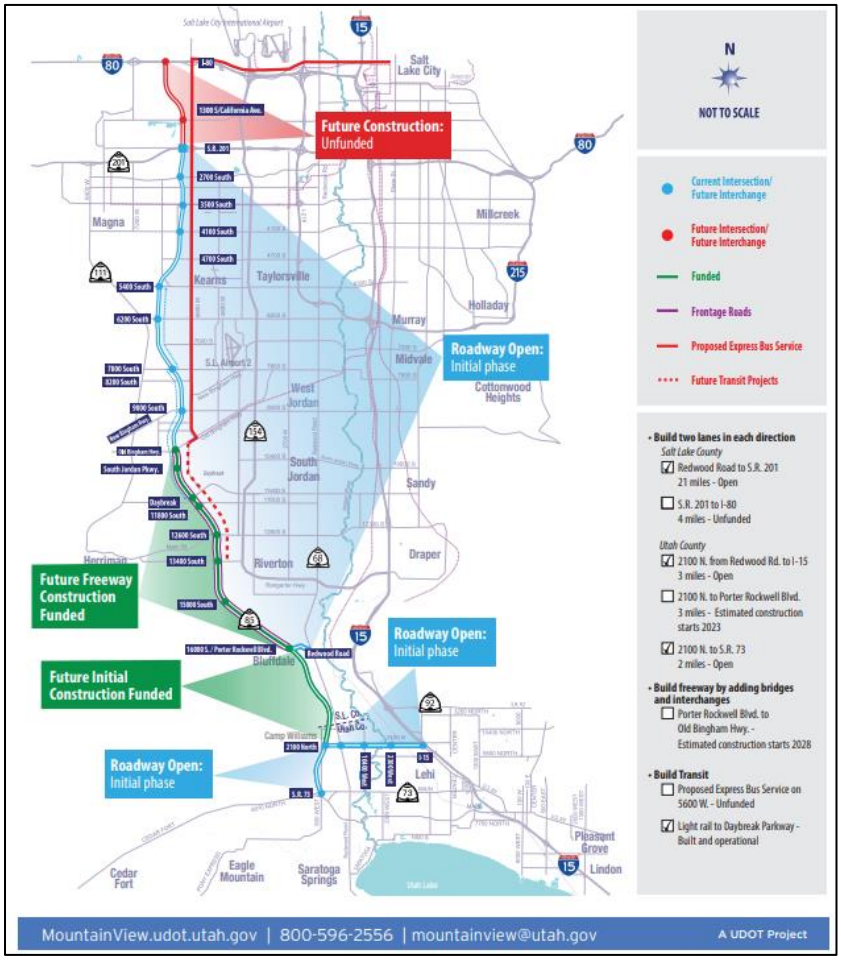



**Figure 12**. Mountain View Corridor Plan Overview.

### 4.2.2 Effects of the No Action Alternative

Under the No Action Alternative, USACE would not exchange the eastern parcels for the UDOT-held southern parcels. Conditions in the action area would remain as described in Section 4.2, affected environment. Lands outside southern boundary of the UDC would remain vulnerable to development and increased trespass, which could create a security risk. Under this alternative the eastern parcels would remain in USACE ownership and UDOT would need to relocate the segment of the Mountain View Corridor highway that is envisioned to run through the eastern parcels, approximately parallel to SR 68. The No Action Alternative would have **no effect** on land use. Any potential future changes in land use on any of the parcels would require full analysis and would be required to comply with all applicable laws, regulations, and policies.

### 4.2.3 Effects of the Proposed Action

Implementing the Proposed Action would ensure that land just outside the southern border of the UDC would be held by DoD, creating a buffer between these facilities and encroaching urban development. This would reduce security risks to the facility but would be inconsistent with the City of Lehi land use plan, which zones the currently undeveloped southern parcels as Business Park and Low Density Residential. The transfer of the eastern parcels from USACE to UDOT would be consistent with the City of Lehi's land use zoning for these parcels, which is "Public Facilities." The national security interests associated with reducing risks to the NSA's UDC and securing adjacent lands for potential future expansion of this campus, considered together with the transfer of the eastern parcels from USACE to UDOT, which would be consistent with the City's land use plan for Public Facilities on the eastern parcels, result in a **less than significant effect** on land use. The Proposed Action does not incrementally contribute to a significant cumulative effect on land use.

### 4.2.4 Mitigation Measures

No mitigation is available that would further reduce effects on land use and still accomplish the purpose of the Proposed Action.

## 4.3 Cultural Resources

### 4.3.1 Definition of the Resource

The following definition of cultural resources and cultural context were summarized from the *Final Environmental Assessment addressing the Construction and Operation of the Utah Data Center Army Garrison Camp Williams, Utah* (UANG 2009), specifically section 3.7 Cultural Resources, which is incorporated herein by reference.

Cultural resources can include prehistoric (i.e., pre-contact), protohistoric (i.e., contact), and historic (i.e., post-contact) sites, structures, districts, or any other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. Depending on their condition and use, such resources can provide insight into living conditions of previous civilizations or retain cultural and religious significance to contemporary groups, referred to as Traditional Cultural Properties (TCPs).

NEPA instructs federal agencies to assess the probable impacts of their actions on the human environment, defined as the natural and physical environment and the relationship of people with that environment (40 CFR § 1508.1). Similarly, under 36 CFR § 800, the implementing

regulations of the National Historic Preservation Act (NHPA) (1966, as amended in 2000), federal agencies must take into consideration the potential effect of an undertaking on historic properties, which refers to cultural resources listed in, or eligible for inclusion in, the National Register of Historic Places (NRHP). To be determined a historic property, the resource must meet one or more of the criteria established by the National Park Service, and outlined in 36 CFR § 60.4, that make the resource eligible for inclusion in the NRHP. Procedures for the identification, evaluation, and treatment of cultural resources are contained in a series of federal and state laws and regulations and agency guidelines. Archaeological, architectural, and Native American resources are also protected by a variety of laws and their implementing regulations: the Archaeological and Historic Preservation Act of 1974, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Native American Graves Protection and Repatriation Act of 1990.

As stipulated in 36 CFR § 800.8, Section 106 can be coordinated with the requirements of NEPA. Preparation of this EA can be sufficient in fulfilling the required determination of effects for Section 106 compliance. Section 106 requires federal agencies to afford the Advisory Council on Historic Preservation (ACHP) and other interested parties a reasonable opportunity to comment.

Typically, cultural resources are subdivided into archaeological resources (pre-contact, contact, and post-contact sites where human activity has left physical evidence) or architectural resources (buildings or other structures or groups of structures that are of historic or aesthetic significance). Archaeological resources comprise areas where human activity has measurably altered the earth or intact deposits of physical remains are found.

Architectural resources include standing buildings, bridges, dams, and other structures of historic or aesthetic significance. Generally, architectural resources must be more than 50 years old to be considered potentially eligible for nomination to the NRHP, as stated in National Register Bulletin 15. More recent structures, such as Cold War-era resources, might warrant protection if they are associated with exceptionally significant events or persons, represent remains that are so fragile that examples of any kind are extremely rare, or have the potential to gain significance in the future, as stated in National Register Bulletin 22.

TCPs or sacred sites can include archaeological resources, structures, neighborhoods, prominent topographic features, habitats, or areas where plants, animals, or minerals exist that Native Americans or other cultural groups consider to be essential for the preservation of traditional cultural practices, as stated in National Register Bulletin 38.

To identify cultural resources that could be potentially affected by the Proposed Action, the area within which archaeological, architectural, and Native American resources would have the potential to be affected must be determined. As defined by 36 CFR § 800.16(d), the area of potential effects (APE) represents the "…geographic area or areas within which an undertaking could cause changes in the character or use of historic properties, if any such exists." In delineating the APE, factors considered include the elements of the Proposed Action and the existence of buildings, vegetation, and terrain with respect to potential visual or audible impacts. The APE for archaeological resources for the Proposed Action is the footprint of the land that would be exchanged under the Proposed Action. The APE for architectural resources includes the viewshed surrounding the land that would be exchanged.

### 4.3.2 Cultural Context

The cultural resources in the APE were identified through a review using the Utah Department of Heritage and Art's archaeology mapping and content management system: Sego. The search area included the APE and a quarter-mile buffer for previously conducted surveys for archaeological sites and recordings of buildings, structures, objects, sites, districts, and isolates. As a result of the records search, 30 surveys for cultural resources and 13 site records were identified. Of the 30 surveys identified, 10 surveys overlapped the APE. Of the 13 site records identified, eight of these sites are within the APE.

The pre-contact contexts consist of the Paleoindian (12,000 – 9000 BP), the Early Archaic (8500 – 5500 BP), the Middle Archaic (5500 – 3500 BP), the Late Archaic (3500 – 2000 BP), and the Sevier/Fremont (1600 – 650 BP). The contact-era Native American contexts are defined as the Paiute-Shoshoni Period (750 BP – Present) and the Protohistoric Period (1776 – 1847). The period following contact between Native Americans and Anglos is defined as the Historic Period (i.e., post-contact) (1847 – present).

### 4.3.3 Archeological Resources

Of the eight sites within the APE, only five were found potentially eligible for the NRHP. Two sites consist of segments of the Provo Reservoir Canal. These sites are part of an active canal system that continues to supply agricultural lands with water. Two sites are multicomponent sites that consist of pre-contact and post-contact components. One site consists of a historic-era transmission line known as the Jordan Narrows to Mercur Power Transmission Line.

During a site visit that took place from 28 to 30 June, USACE personnel tried to relocate the five sites within the APE. The two canal segments were relocated and appear to be intact. No site updates were prepared as these sites are constantly being maintained as part of the Provo Reservoir Canal and no significant changes were noted. The two multicomponent sites could not be relocated. Appropriate updates were completed for each site noting they could not be relocated. Additionally, the historic-era Jordan Narrows to Mercur Power Transmission Line could not be relocated. Evidence of this site (e.g., pole stumps and ceramic and glass insulators) were not identified during the site visit.

An International Harvester disc harrow was identified during the survey of part of the APE. This disc harrow was used during the planting of the wheat field that was grown by the previous landowner. The disc harrow itself has the "man on tractor" logo showing a large lowercase "i" superimposed in front of a capital "H" denoting a man sitting between two big wheels of a tractor. The words "International Harvester" can be seen below these letters.

The disc harrow was owned by the previous landowner who farmed the property. The date of the logo indicates the object is potentially over 50 years old. The landowner indicated it was left in its current location sometime during the 1990s. A site record was prepared for this object, though it is not considered eligible for the NRHP as it does not qualify for any of the criteria or retain any historical integrity.

### 4.3.4 Consultation

As part of the effort to identify cultural resources within the APE, consultation was carried out with UANG, nearby private property owners, and the Utah Department of Transportation (UDOT). Additionally, the Utah State Historic Preservation Office (SHPO) and the Utah

Geological Survey (UGS) were also consulted. Additionally, four Native American tribes (Tribes) with ancestral claims over the general project area were consulted as part of the project. These four Tribes include the following: the Northwestern Band of Shoshone Nation, the Shoshone-Bannock Tribes, the Skull Valley Band of the Goshute Indians, and the Uintah and Ouray Ute Indian Tribe. Consultation letters to the Tribes were sent on 1 September 2021.

Consultation with the SHPO, the UANG, and the Tribes focused on soliciting information regarding the known or potential presence of cultural resources within the APE. None of the agencies or Tribes identified any specific cultural resources of concern within the APE. On 6 October 2021, the SHPO concurred with the USACE determination that the Proposed Action would have No Adverse Effect to historic properties. This finding is based on the fact that under State law (Utah Code 9-8-404), the State is required to afford historic properties considerations prior to conducting an undertaking. Utah Code provides legally enforceable restrictions which will ensure long term preservation of historic properties (per 36 CFR § 800.5(a)(2)(vii)).

### 4.3.5 Paleontological Resources

An email was sent on 15 July 2021 to UGS (Hayden, pers. comm., 2021) to ask if there are any recorded paleontological resources or soils sensitive for paleontological resources within the APE. UGS staff responded the same day indicating there are no previously recorded paleontological resources in the APE. Furthermore, quaternary alluvial and lacustrine deposits that are exposed within the APE have a low potential for yielding significant fossil localities (PFYC 2). Therefore, UGS stated the project is cleared for paleontological resources.

### 4.3.6 Effects of the No Action Alternative

The No Action Alternative would have no effect on cultural resources as no ground-disturbing activities would occur and Parcels A, B, C, and D would continue to be owned by USACE and Parcels E and F would continue to be owned by the State of Utah. The No Action Alternative would have **no effect** on cultural resources.

### 4.3.7 Effects of the Proposed Action

Transferring properties with known sites out of federal control is considered an adverse effect "without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance" (36 CFR § 800.5(a)(2)(vii)). After review of the records and literature search results and an attempt by a USACE archeologist to relocate the sites in the field, USACE reached a determination of **No Adverse Effect** to historic properties. This finding is based on the fact that under Utah State law (Utah Code 9-8-404), the State is required to afford historic properties considerations prior to conducting an undertaking. Utah Code provides legally enforceable restrictions which would ensure long-term preservation of historic properties. On 6 October 2021, the SHPO concurred with our determination.

#### Native American Consultation

Native American consultation was started on 1 September 2021 with an email transmitting a formal letter (Appendix B). No response was received from this initial round of correspondence. Follow-up was conducted by email on 24 September 2021. If any responses are received, they will be included in Appendix B of the final EA.

#### Paleontological Resources

There are no previously recorded paleontological resources within the APE and the soil types do not indicate the APE is sensitive for paleontological resources. No further investigation is required.

### 4.3.8 Mitigation Measures

No mitigation measures are proposed as the Proposed Action will not cause any ground disturbing activities.

## 4.4 Hazardous and Toxic Materials/Wastes

In accordance with the American Society for Testing and Materials International (ASTM) Standard Practices for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527 - 13) a Phase I Site Assessment was completed to characterize HTRW issues on the eastern and southern parcels being considered for exchange under the Proposed Action. The USACE Sacramento District conducted the phase I environmental site assessment of Parcels A, B, C, D, and E on 29 June 2021 in Lehi, Utah. Representatives from USACE, the Utah U.S. Army National Guard, NSA, and UDOT were present. Upon completion of the site reconnaissance and review of environmental document records there is no evidence supporting a release of contaminants or Recognized Environmental Conditions (RECs). The subject property consists of five parcels with a total of about 200 acres located at 2700 North and Redwood Road Lehi, Utah. The Phase I Site Assessment and the Environmental Baseline Survey are included in Appendix C of the EA.

### 4.4.1 Former Use

Parcel E was acquired in the 1940's and was part of a working farm for approximately 74 years. Onsite activities were limited to crop production. Wheat, safflower, hay, and grass crops were grown. Herbicides 2-4-D, Banville, and Roundup were used. There are no known spills or deviations of herbicides from intended manufacturer use have been identified. Pesticides were not used per interviews with the former landowner (See Appendix C of this EA, in the Environmental Baseline Survey, Appendix VI for interview transcript). Also, pesticide use is uncommon with the crop production of wheat, safflower, hay, and grass crops.

Parcels A and C have been undeveloped open space since the 1930's. Occasionally the land was used for military bivouacking exercises.

Parcels B and D are currently part of Redwood Road/SR-68. SR-68 became a state highway in 1931.

### 4.4.2 Present Conditions

Four one-gallon 15w-40 motor oil bottles were discarded in Parcel E, likely the result of illegal dumping. The bottles were likely discarded from the access road to the detention basin. There were no signs of chemical release or soil staining.

### 4.4.3 Findings and Recommendations

USACE Sacramento District completed a site reconnaissance of Parcels A, B, C, D, and E on 29 June 2021, in Lehi, Utah to evaluate the proposed site use. Upon completion of the site reconnaissance and review of environmental document records there is no evidence supporting

a release of contaminants and the environmental condition is de minimis. De minimis conditions do not generally do not present a threat to human health or the environment and are not considered as a recognized environmental condition.

De minimis conditions are defined by ASTM as environmental conditions that "generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." A de minimis condition is not considered a recognized environmental condition. An example of a de minimis condition might be a small, superficial spill of oil that is not anticipated to cause a significant concern.

The onsite reconnaissance and records review were used to determine whether a release or potential release of contaminants has occurred and if additional investigation or action is required. During the onsite reconnaissance there were no signs of release or potential release of contaminants. In addition, the records review analyzed the subject parcels and adjacent properties for release, potential release, or migration of contaminants. There were no records of release, potential release, or migration of contaminants.

Further action is not required.

### 4.4.4 Effects of the No Action Alternative

HTRW is not present or is present at de minimis levels in the action area (i.e., Parcels A, B, C, D, E, and E). Under the No Action Alternative conditions would remain as described in Section 3.12, Affected Environment. This alternative would have **no effect** on HTRW.

### 4.4.5 Effects of the Proposed Action

Under the Proposed Action conditions would remain as described in Section 3.12, Affected Environment and Section 4.11.1, Effects of the No Action Alternative. HTRW is not present or is present at de minimis levels in the action area and implementing the Proposed Action would have **no effect** on HTRW on the parcels of interest. An Environmental Baseline Survey (EBS) (Appendix C) and a draft Finding of Suitability to Transfer (FOST) (Appendix D) have been prepared for the Proposed Action.

### 4.4.6 Mitigation Measures

No mitigation would be required.

# 5 Conclusions

This draft EA describes the environmental review of the existing conditions and environmental consequences of implementing the Proposed Action and the No Action Alternatives, as required by NEPA. The Proposed Action would have a less than significant effect on Land Use, no effect on any of the other environmental resources evaluated in this draft EA, and would not contribute to an incrementally significant effect on any environmental resources. Since the Proposed Action would have no significant effect on to the environment, preparation of an environmental impact statement is not required. A draft Finding of No Significant Impact (FNSI) has been prepared to accompany this draft EA.

# 6 List of Preparers and Key Reviewers

This draft EA has been prepared by USACE to evaluate the potential environmental, cultural, and socioeconomic consequences of the proposed land exchange. It has been prepared in accordance with NEPA. In addition to those listed below, contributors and reviewers included team members from Sacramento District Office of Counsel, Baltimore District USACE, Headquarters USACE, NSA, and UDOT.

| Name | Education and Experience | Primary Responsibilities |
|---|---|---|
| Rena Eddy | B.S. in Environmental Biology with emphasis in Conservation; 14 years NEPA practitioner. | Supervisory Review |
| Kelly Bowdoin | B.S. in Forestry: Forest Resource Conservation and 19 years of forestry-related field work and 3 years of experience with writing simplified EAs. | Analysis and writing affected biological environment and environmental consequences |
| Brumbaugh, Mariah | B.S. in Biology, M.S. in Biology and aquatic ecology. 17 years of experience in NEPA, 21 years of experience in biological resources. | District Quality Control Review |
| Jacques Kerkhove-Peltier | M.A. in Anthropology, specializing in Archaeology; B.A. in Anthropology; certificate in Cultural Resources Management, 9 years of experience in cultural resources management, R.P.A. | Conducted records search, initiated tribal consultation, conducted a pedestrian survey/field check, preparation of appropriate site forms/updates, and submission of Finding of Effect to SHPO |
| John Knirr | Senior Chemist | HTRW, EBS, Phase I ESA |
| Brandon Nguyen | M.S. Environmental Resources Management, B.A.S. Emergency Management. Six years environmental project management | Team lead. Analysis and writing water resources; socioeconomics; environmental justice; infrastructure. |
| Josh Gulsby | Real Estate Specialist | Real estate (parcel) information and maps. |
| Tanis Toland | M.S. Wildland Resource Science, B.A. Biology. 30 years of environmental planning and compliance USACE. | Analysis and writing land use; air quality; noise and vibration; geology, topography, soils. |

# 7 Agencies, Organizations, and Native American Tribes Consulted

The following agencies and organizations were contacted regarding the Proposed Action. Copies of agency coordination documentation are provided in Appendix F.

- City of Bluffdale, Department of Planning and Community Development
- City of Lehi, Department of Planning and Zoning
- Utah County, Planning
- Utah Department of Natural Resources
- Welby Jacobs Irrigation Company

- Utah Army National Guard
- Utah State Historic Preservation Office (SHPO)
- U.S. Fish and Wildlife Service

The following Native American tribes were contacted regarding the project. Copies of correspondence with tribal agencies are provided in Appendix B.

- Northern Band of Shoshone Nation
- Shoshone-Bannock Tribes
- Skull Valley Band of the Goshute Indians
- Uintah and Ouray Ute Indian Tribe

# 8 References


American Association of State Highway and Transportation Officials (AASHTO). 1990. *Standard recommended practice for evaluation of transportation -related earthborne vibrations*. Washington, DC.

Cowan, Nelson. 1984. *On short and long auditory stores* in Psychological Bulletin, 96(2), 341- 370.

Environmental Resources Management, Utah National Guard. June 2020. *Environmental Assessment for the Maneuver Trail System Improvement Project, Camp Williams, Utah*. https://ut.ng.mil/Portals/40/Documents/Environmental/Maneuver%20Trails_EA_Final_Signed_20200610.pdf?ver=2020-06-16-105419-327

Federal Financial Institutions Examination Council (FFIEC). Http://ffiec.gov. Accessed 3 February 2022.

Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. Prepared by Carl E. Hanson, David A. Towners, and Lance D. Meister, Harris Miller Miller & Hanson Inc. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf

Google Earth Pro. 2021. Image copyright CNES/Airous. Imagery and measurement tools accessed September 2021.

Hayden, Martha. 2021. U.S. Geological Survey representative. Discussed paleontological resources. Personal communication by email, July 15, 2021.

Hoover, R. M., and R.H. Keith. 1996. *Noise control for buildings, manufacturing plants, equipment, and products*. Houston, TX: Hoover & Keith, Inc.

Kerkhove-Peltier, Jacques. 2021. Photo credits. Sacramento District Archeologist.

Matrix Design Group (Matrix). 2012. *Camp WG Williams Joint Land Use Study*. Prepared under contract with Eagle Mountain City. October.

Natural Resources Conservation Service (NRCS). 2021. Stewardship Lands Easement Locations Public Viewer. Accessed at https://nrcs.maps.arcgis.com/apps/webappviewer/index.html?id=60cb4564f7b4461ca9a61fa224c066ba on 23 September 2021.

Salt Lake County. 2009. Salt Lake Countywide Watershed-Water Quality Stewardship Plan.

Utah Division of Wildlife Resources (UDWR). 2015. Utah Wildlife Action Plan; A plan for managing native wildlife species and their habitats to help prevent listings under the Endangered Species Act; 2015-2025. DWR publication 15-14, available at https://wildlife.utah.gov/pdf/WAP/Utah_WAP.pdf

U.S. Census Bureau (USCB). 2020. http://www.census.gov. Accessed 3 February 2022.

U.S. Department of Agriculture (USDA). 2021. Web Soil Survey. Accessed at websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx on 27 September 2021.

Utah Code 9-8-404 Agency Responsibilities – State Historic Preservation Officer to Comment on Undertaking Public Lands Policy Coordinating Office May Require Joint Analysis

Utah County. 2021. Utah County Zoning Map. Accessed at https://maps.utahcounty.gov/zoning/zoningmap.html on 2 September 2021.

USFWS (United States Fish and Wildlife Service). 2021a. *Birds of Conservation Concern 2021*. Division of Migratory Bird Management, Arlington, Virginia. Retrieved from: https://www.fws.gov/migratorybirds/pdf/management/birds-of-conservation-concern-2021.pdf. Accessed 29 September 2021.

USFWS. 2021b. Ute-ladies'-tresses orchid (*Spiranthes diluvialis*), https://www.fws.gov/mountain-prairie/es/uteLadiestress.php accessed 29 November 2021.

USFWS. 2022. Information, Planning and Conservation System (IPAC). Accessed 4 February 2022.

Utah Army National Guard (UANG). 2020. *Environmental Assessment from the Maneuver Trail System Improvement Project, Camp Williams, Utah*.

UANG. 2016. *Environmental Assessment for Lower Garrison Development Camp Williams Utah National Guard*.

UANG (Utah Army National Guard). 2009. *Integrated Natural Resources Management Plan Update, Camp W.G. Williams*. Environmental Resources Management.

UANG. 2009. *Final Environmental Assessment Addressing the Construction and Operation of the Utah Data Center Army Garrison Camp Williams, Utah*. September 2009.

UANG. 2009. Integrated Natural Resources Management Plan for Camp Williams.

U.S. Army Corps of Engineers (USACE). 2021. Final Draft Camp Williams Environmental Baseline Survey. Sacramento District. June.

USACE. 2021. Phase I Environmental Site Assessment, Camp Williams NSA & UDOT Land Acquisition, 2700 North and Redwood Road Lehi, Utah. Sacramento District. July.

Web Soil Survey. 2021. Soil Survey Staff, Natural Resources Conservation Service, U.S. Department of Agriculture. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/ . Accessed September 2021.

Whiffen, A.C., Leonard, D.R. 1971. *A Survey of Traffic Induced Vibrations*. Transport and Road Research Laboratories, Report LR 418.