



Consultants in Natural Resources and the Environment

File and Literature Review Box Elder Creek Well Field 2 East Quincy Avenue to County Road 194 Arapahoe County, Colorado

Prepared for—

Rangeview Metro District
34501 East Quincy Avenue, Building 65, Suite A
Watkins, Colorado 80137

June 5, 2024

Rangeview Metro District (Rangeview) contracted ERO Resources Corporation (ERO) to perform a cultural resource file and literature review for a proposed well field and associated pipeline infrastructure (project) running south to southeast of East Quincy Avenue to County Road 194 in Arapahoe County, Colorado (project area). The project proposes to install four horizontal wells and portions of a raw water pipeline across Box Elder Creek, which may result in impacts on wetlands and other waters of the U.S. (permit area) and therefore could require a U.S. Army Corps of Engineers' (Corps) Clean Water Act (CWA) Section 404 permit. The remainder of the project would not impact any other potential permit areas. CWA authorization also requires compliance with Section 106 of the National Historic Preservation Act (NHPA). The results of the file and literature review will provide Rangeview planners with information regarding known and potential cultural resources. This file and literature review can also be used by the Corps to determine if any additional efforts are necessary to comply with the NHPA.

Area of Potential Effects

The project area includes a proposed well field and associated pipeline. However, ERO presumes the Corps would limit the area of potential effects (APE) to the permit area along Box Elder Creek. The APE includes a 100-foot buffer around the delineated wetlands to identify potential cultural resources that may be affected by project activities and totals about 1.53 acres. The project area is in Section 8, Section 17, Section 20, Sections 27 through 29, and Section 34, Township 5 South, Range 64 West of the 6th Principal Meridian in Arapahoe County, Colorado (Figure 1 and Figure 2, attached). The APE is in Section 27 and Section 34, Township 5 South, Range 64 West (Figure 3, attached).

Methodology

The purpose of this cultural resource file and literature review is to determine if any previously documented cultural resources listed in or eligible for listing in the National Register of Historic Places (NRHP) or State Register of Historic Places (SRHP) could be impacted by the proposed project. A “cultural resource” is defined as an archaeological site, structure, or building constructed 50 or more years ago (Little et al. 2000). A cultural resource listed in or eligible for listing in the NRHP/SRHP is a “historic property.” To assist with project planning and potential consultation obligations under Section 106 of the NHPA (36 Code of Federal Regulations [CFR] 800) and the State Register Act (Colorado Revised Statutes 34-80.1-104), ERO reviewed previous cultural resource surveys and resource documentation completed in the project area by conducting a file review using the Office of Archaeology and Historic Preservation (OAHP) online Compass database on May 7, 2024.

Results

The file search identified no previous resource surveys or cultural resources that intersect the APE. While no resources intersect the APE, one Isolated Find (IF) (5AH91) and one site (5AH92) are situated on a terrace above Box Elder Creek to the west. The IF is multicomponent, and the site is an Indigenous open lithic scatter. The presence of these resources suggests that the landforms surrounding the APE are intact and have the potential to contain additional cultural resources.

In addition to the OAHP file search, ERO reviewed historical maps, aerial imagery, public records, and General Land Office records to determine if historical buildings or structures may have been present in the APE. ERO reviewed maps dating from 1866 to 1968 (Pierce 1886; USGS 1890, 1953, 1955, 1957, 1960, 1968) and aerial images from 1957 (Nationwide Environmental Title Research 2024).

An unnamed trail is mapped west of the APE on the Original 1866 Survey Plat (Pierce 1886). The trail extends north to south along the western terrace of Box Elder Creek. A road is mapped in this same location in an 1890 map. In 2023 aerial imagery, an unnamed two-track road is still visible on this historical trail/road location (Google, Inc. 2024; Pierce 1886; USGS 1890). According to a 1960 map, the project area, including the APE, is located in the former Lowry Bombing and Gunnery Range (USGS 1960). This range was established in 1938 but was used heavily from 1942 until 1963 and encompassed approximately 100-square miles (Colorado Department of Public Health & Environment 2024; US Army Corps of Engineers: Omaha District 2015). Use began during World War II for military armament and bombing training. It continued to be used as part of the military training for the Air Force, Army, Navy, and Air National Guard through the Korean War and Vietnam Wars. Currently, the range is owned by a variety of public and private landowners (Colorado Department of Public Health & Environment 2024).

Sediments are late Holocene (Qa₁ and Qa₂) and late Pleistocene (Qa₃) in age in and surrounding the APE (Morgan 2014). In addition, the sediments in the APE along the Box Elder Creek terrace do not appear to have been disturbed or developed based on aerial imagery (Google, Inc. 2024; Nationwide

Environmental Title Research 2024). There is potential for buried undocumented Native American resources in the project area; however, their presence or absence cannot be verified through a file and literature review.

Summary

Although no previously documented cultural resources have been recorded in the APE, the file and literature review indicates there is potential for undocumented cultural resources. Historical resources may be present due to a nearby unnamed historical trail and the fact that the APE is in the former Lowry Bombing and Gunnery Range. Native resources, present as Indigenous sites, are present nearby, and intact Holocene-aged sediments are in the APE.

If a permit is required by the Corps, additional work may be necessary to satisfy Section 106 of the NHPA. ERO can assist in any survey, documentation, or reporting required. Please feel free to contact ERO by email at mdinkel@eroresources.com or by phone at (303) 830-1188 with any questions you may have in reference to the file and literature review results and additional work potentially needed for NHPA or State Register Act compliance.

Certification of Results



Michelle Dinkel, Staff Archaeologist

Attachments

- Figure 1. Project Location – (Map 1 of 2. USGS 1:24,000 topographic quadrangle)
- Figure 2. Project Location – (Map 2 of 2. USGS 1:24,000 topographic quadrangle)
- Figure 3. Project Location – (Area of Potential Effects. Aerial Imagery)

References Cited

Colorado Department of Public Health & Environment
2024 Former Lowry Bombing and Gunnery Range. <https://cdphe.colorado.gov/hm/former-lowry-bombing-gunnery-range>.

Google, Inc.
2024 Google Earth Pro. *Google Earth Pro version 7.3.3.7786 (64-bit)*. Online database, <https://earth.google.com/web>.

Little, Barbara, Erika M. Seibert, Jan Townsend, John H. Sprinkle Jr., and John Knoerl
2000 *National Register Bulletin: Guidelines for Evaluating and Registering Archaeological Properties*.
Prepared by the U.S. Department of the Interior.

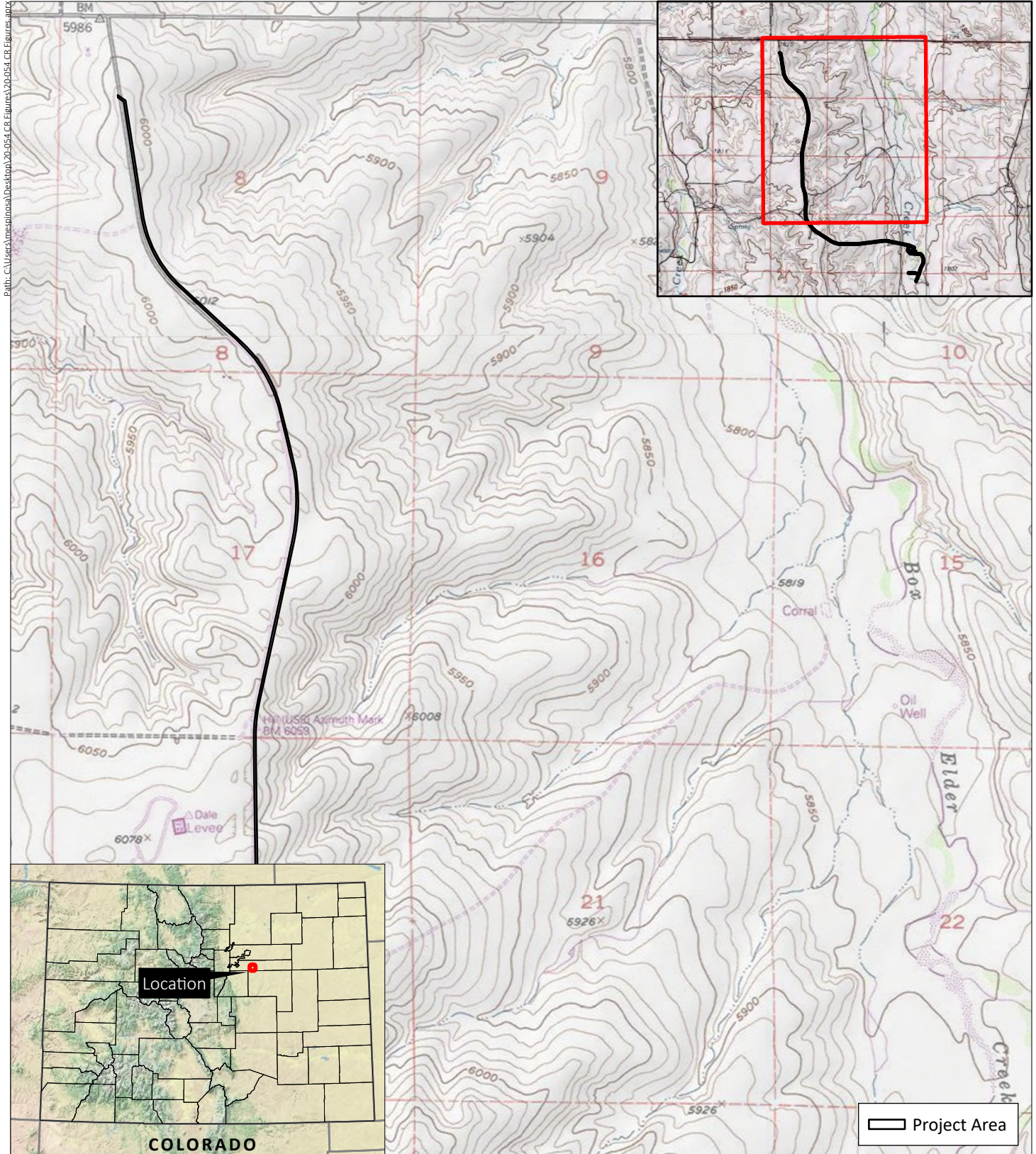
Morgan, Matthew I.
2014 Geologic Map of the Watkins SE Quadrangle, Arapahoe and Elbert Counties, Colorado. United
States Geological Survey.

Nationwide Environmental Title Research
2024 Historic Aerials. *National Environmental Title Research LLC*. Online database,
<https://www.historicaerials.com/viewer>.

Pierce, George E.
1886 Township No. 5 South Range No. 64 West. General Land Office Records, Arapahoe County,
Colorado.

US Army Corps of Engineers: Omaha District
2015 Former Lowry Bombing and Gunnery Range, Colorado: Formerly Used Defense Sites (FUDS)
Program. <https://www.nwo.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/585129/former-lowry-bombing-and-gunnery-range-colorado/#:~:text=Location%20and%20Description%3A%20The%20Former,gunnery%20targets%20across%20the%20site>.

USGS
1890 U.S. Geological Survey, East Denver [map], 1:125000, Topographic Quadrangle Map, East
Denver, CO.
1953 Southeast Watkins, 1:250000, Topographic Quadrangle Map, East Denver, CO. U.S. Geological
Survey.
1955 Southeast Watkins, 1:24000, Topographic Quadrangle Map, East Denver, CO. U.S. Geological
Survey.
1957 Denver, 1:250000, Topographic Quadrangle Map, East Denver, CO. U.S. Geological Survey.
1960 Denver, 1:250000, Topographic Quadrangle Map, East Denver, CO. U.S. Geological Survey.
1968 Southeast Watkins, 1:24000, Topographic Quadrangle Map, East Denver, CO. U.S. Geological
Survey.



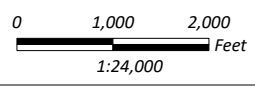
Path: C:\Users\jmespinosa\Desktop\20-054 CR Figures\20-054 CR Figures.aprx

**File and Literature Review
 Box Elder Creek Well Field 2
 East Quincy Avenue to County Road 194
 Arapahoe County, Colorado**

Sections 8, 17, 20, 27-29, and 34, T5S, R64W; 6th PM
 USGS Watkins, and USGS Watkins SE, CO Quadrangles (1:24,000; 1980)
 Arapahoe County, Colorado

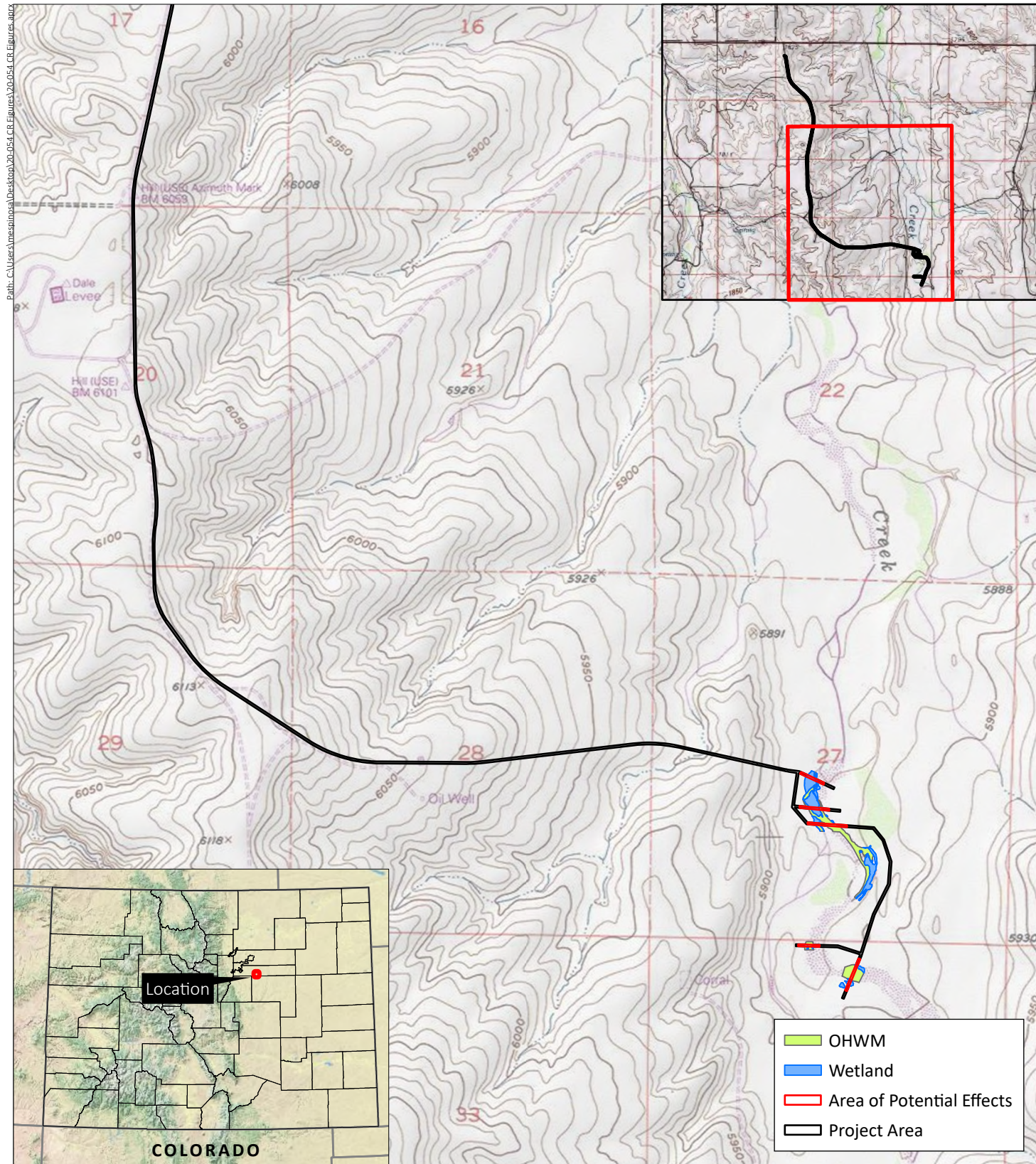


**Figure 1
 Project Location**



Prepared for:
 Rangeview Metro District
 File: 20-054 CR Figures.mxd (ME)
 June 5, 2024





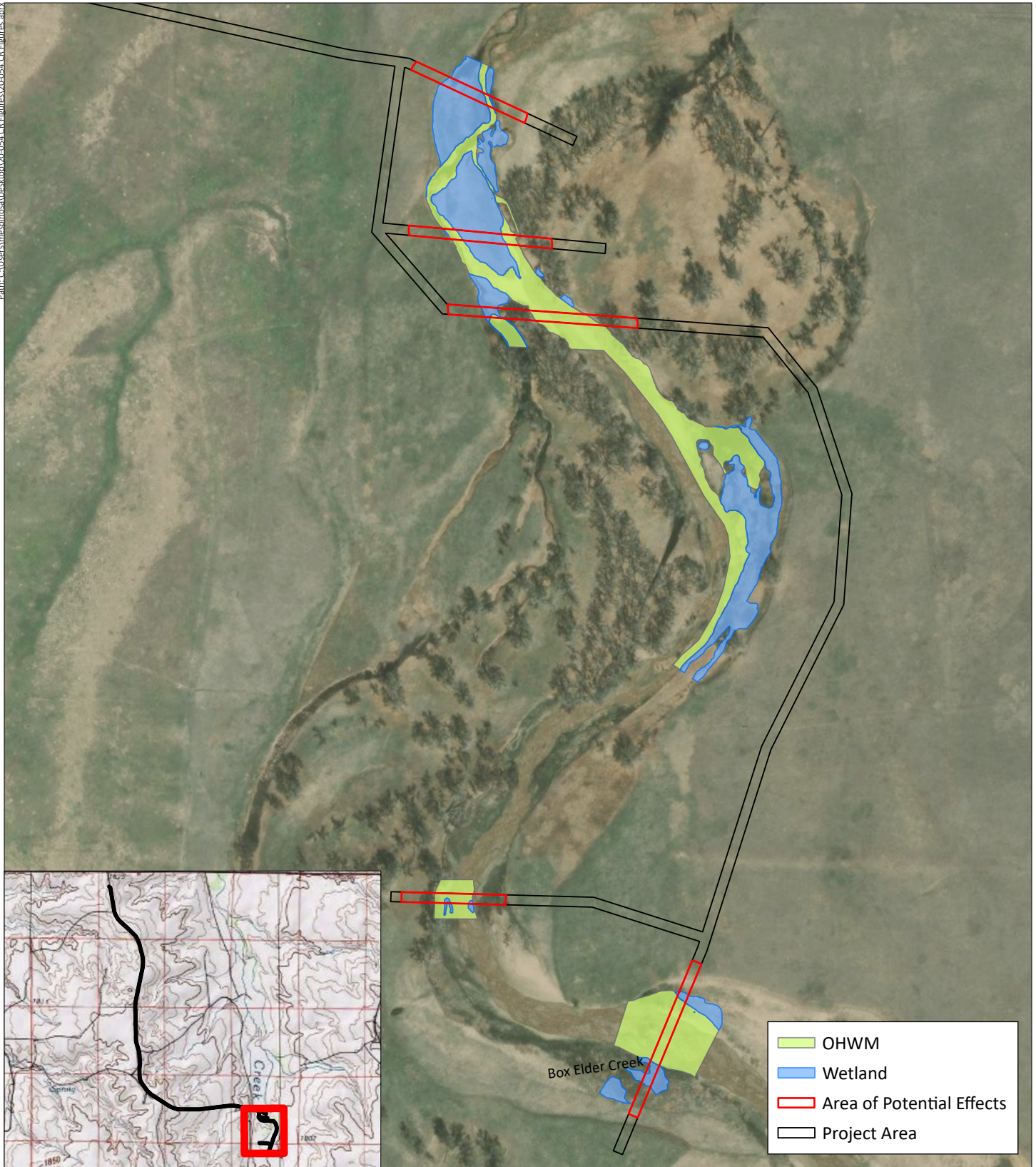
**File and Literature Review
 Box Elder Creek Well Field 2
 East Quincy Avenue to County Road 194
 Arapahoe County, Colorado**

Sections 8, 17, 20, 27-29, and 34, T5S, R64W; 6th PM
 USGS Watkins, and USGS Watkins SE, CO Quadrangles (1:24,000; 1980)
 Arapahoe County, Colorado

**Figure 2
 Project Location**

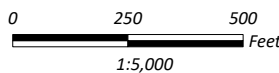
Prepared for:
 Rangeview Metro District
 File: 20-054 CR Figures.mxd (ME)
 June 5, 2024





**File and Literature Review
 Box Elder Creek Well Field 2
 East Quincy Avenue to County Road 194
 Arapahoe County, Colorado**

Sections 8, 17, 20, 27-29, and 34, T5S, R64W; 6th PM
 USGS Watkins, and USGS Watkins SE, CO Quadrangles (1:24,000; 1980)
 Arapahoe County, Colorado



**Figure 3
 Project Location**

Prepared for:
 Rangeview Metro District
 File: 20-054 CR Figures.mxd (ME)
 June 5, 2024

