A 30 Acre Cultural Resources Survey Along Spring Creek in Colorado Springs, El Paso County

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U.S. Army Corps of Engineers

Albuquerque District

Report No. EP.AE.NR15;
USACE-ABQ-2023-002

March 20, 2023

US Army Corps of Engineers ®
Albuquerque District

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Introduction and Project Description

The United States Army Corps of Engineers, Albuquerque District (USACE) is partnering with the City of Colorado Springs, the non-Federal sponsor, to restore degraded wetland and riparian ecosystems along Spring Creek in Colorado Springs, Colorado. The project is being conducted under the authority of Section 206 of the Water Resources Development Act of 1996. The proposed Federal (USACE) action would be within the project area and consistent with the City of Colorado Springs's plan to create a stream corridor along Spring Creek and support the greater vision for the Fountain Creek watershed to create a healthy waterway with appropriate erosion, sedimentation, and flooding that supports diverse economic, environmental, and recreational interests. USACE has the unique opportunity to address problems in the project area by restoring habitat in a rapidly developing urban area.

The project area is located along Spring Creek in Colorado Springs, El Paso County (Figure 1), between Pikes Peak Avenue and Airport Road. The project area is located within 6th Meridian, Township 14 South, Range 66 West, Section 15 in USGS Quad Colorado Springs, CO (map in Appendix I). The Spring Creek basin is within the larger Fountain Creek Watershed (HUC 8: 11020003 - Fountain; HUC 4: 1102 - Upper Arkansas). Spring Creek's headwaters are located in urban Colorado Springs. The defined stream channel generally slopes from the northeast to the southwest approximately 4 miles, from just under half a mile upstream of the project area to its confluence with Fountain Creek.

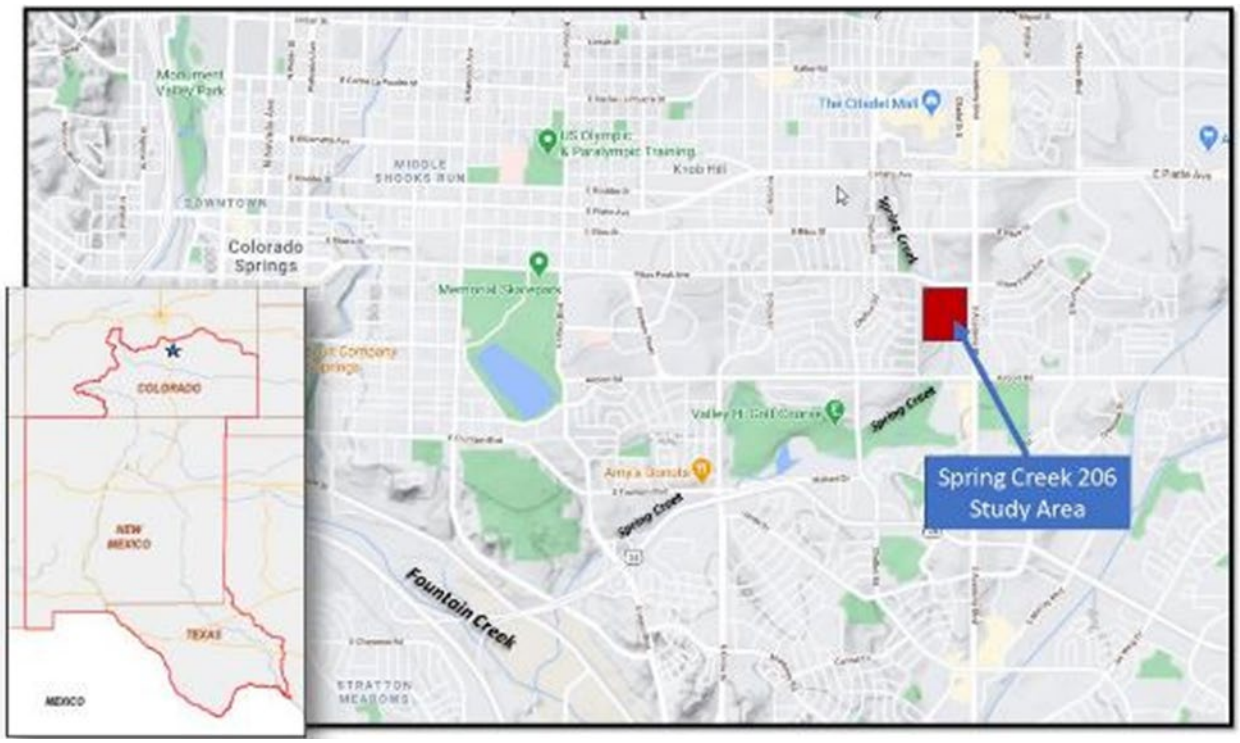

Figure 1: Location of project on the Spring Creek in Colorado Springs, CO.

For the purposes of this study, the area was divided into three reaches (Figure 2):

- **Reach 1: Pikes Peak North** is bordered to the west by Wagner Park, the south by Pikes Peak Ave., the north by a city fire station, and to the east by commercial businesses.
- **Reach 2: Former Wetland** is located southwest of the intersection of Pikes Peak Ave. and S. Academy Blvd and directly south of Reach 1.
- **Reach 3: South Channel** is located directly south of Reach 2 and is bordered to the west and south by private land, to the east by S. Academy Blvd.

In 2017, USACE received a letter of request for assistance from the City of Colorado Springs, City Engineering/Stormwater Division, to determine the feasibility of an aquatic ecosystem restoration project within the project area. A team from USACE met with representatives from the City of Colorado Springs Stormwater Division and Colorado Springs Utilities at the project area location in August 2022 for a site visit. The USACE began collecting necessary background information and existing conditions of the project area. The objective of this survey was to identify existing cultural resources within the project area, in order to develop actions and alternatives.

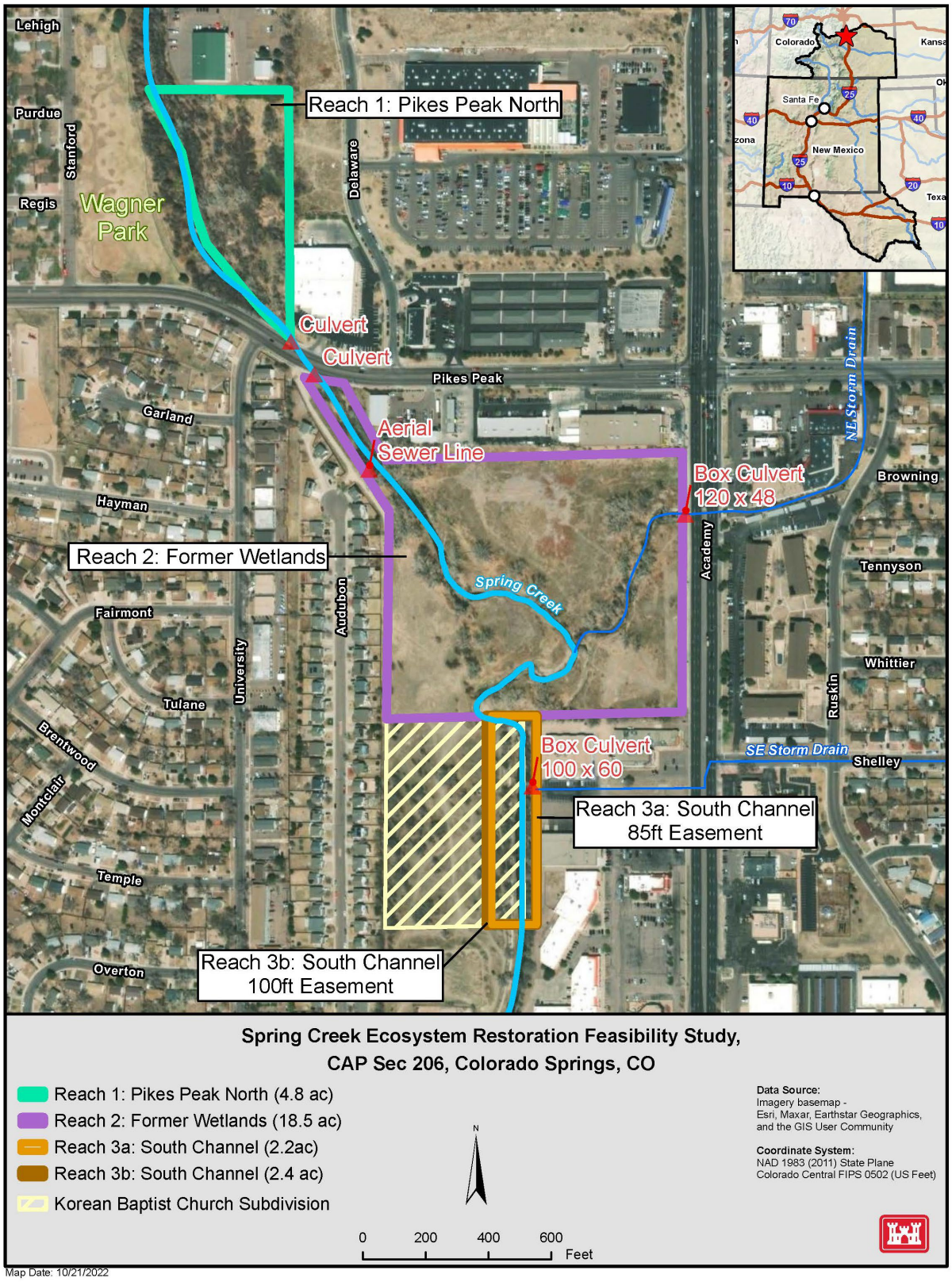

Figure 2: Spring Creek Ecosystem Restoration study reaches.

Environmental Background

Spring Creek's headwaters are located in urban Colorado Springs. The defined stream channel runs approximately 4 miles, from just under half a mile upstream of the project area to its confluence with Fountain Creek. Along the stream's course it transitions between a natural channel to various degrees of channelized, hardened, and culverted reaches. The stream conveys stormwater from development in the watershed which is one of the drivers of degradation of the stream. In several locations the stream corridor has been encroached on and straightened to accommodate development but remains an open earthen channel for over 3.4 miles of its length.

The climate in the project area is a semi-arid, with cool and dry winters. Its location east of the Rocky Mountains provides rapid warming from chinook winds and drastically varied day-to-day conditions. Average annual precipitation amounts to 16.5 inches; however, recent years have had relatively low precipitation, causing the city to enact water restrictions.

The Spring Creek basin slope ranges from 0.5% to 4.0% with most slopes being near 1%. The soil type is mostly variations of sandy soils that are well drained and are susceptible to both wind and water erosion in disturbed areas. The entire Spring Creek basin is underlain by bedrock consisting of the Pierre Shale and active seepage areas have been known to exists in the study area (a nod to the name Spring Creek). Seepage areas are characterized by shallow groundwater conditions and/or seeps and springs which discharge at the ground surface (City of Colorado Springs, 1993). The banks along Spring Creek have steep, eroding slopes, ranging from 25-38% slope (Figure 3).

Historically, cottonwood forests have existed along the stream channel since at least the 1940's with the most mature occurring in expansive floodplains. Herbaceous and emergent wetlands have historically been found along the Spring Creek corridor along with riparian grasslands (City of Colorado Springs, 1993). Mammals inhabiting this area include shrew, eastern mole, western small footed myotis bat, cottontail and jack rabbit, ground squirrel, coyote, bobcat, beaver, weasel, skunk, and mule and white-tailed deer.

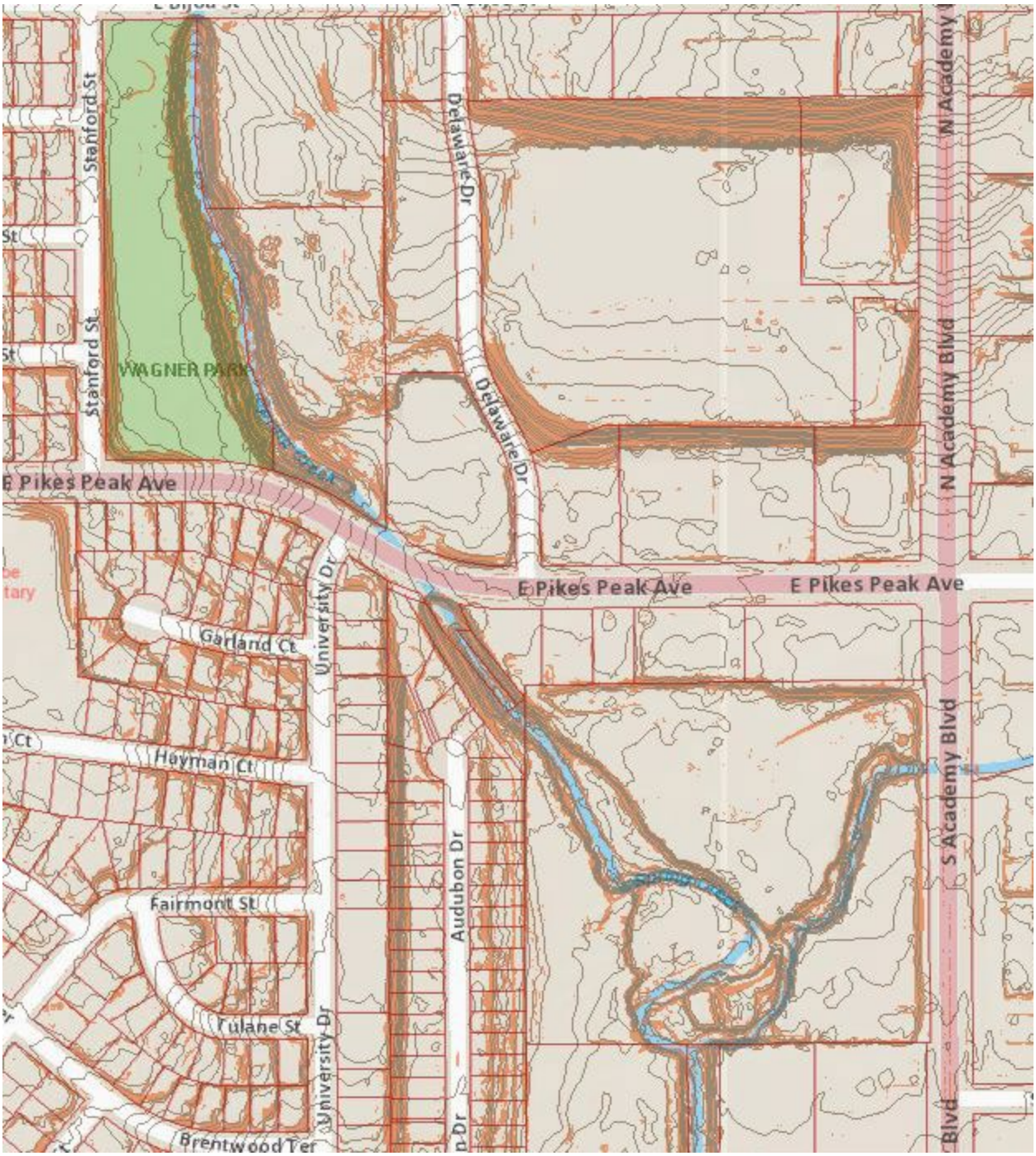

Figure 3: Project area topography and areas with slope of 15% and greater. Data from Colorado Springs SpringsView database.

Reach 1 – Pikes Peak North is approximately 4.8 acres. The site is wooded with a steep 25ft bank down to Spring Creek on the west side and a generally sloping bank to a natural bench with a continued slope up on the east side. Spring Creek flows through a box culvert under

Pikes Peak Avenue and then into Reach 2 – Former Wetland Site (Figure 4). Reach 1 is adjacent to Wagner Park and is currently owned by the City of Colorado Springs.

Figure 4: Box culvert on south end of Reach 1 under Pikes Peak Road. Image is taken facing south. Notice the steep bank on the right (west) side of the photo. (Date: August 2022).

Reach 2 – Former Wetlands is approximately 18.5 acres. This land was previously owned by the Audubon Society and functioned as a wetlands bird sanctuary (Figure 5). The Spring Creek channel, which flows through the riparian wetland (wetland), experienced so much incision that the creek could no longer support the wetland. Subsequently, in 2010 the property was transferred to the City of Colorado Springs (its current owner).

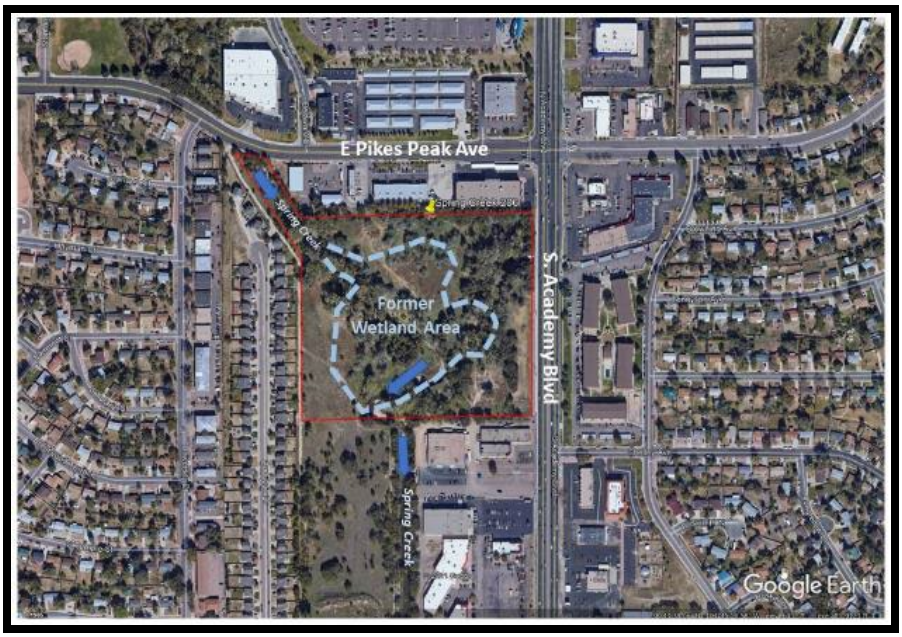

Figure 5: Approximate location of the former Audubon wetland site within Reach 2.

Historically the former wetland site was dominated by sandbar willow, Baltic rush, three square and hairy sedge. Over time, the site went from being classified as an emergent wetland to a riparian grassland due to stream incision.

Currently, the stream within Reach 2 consists of a single incised channel with steep or nearly vertical banks, that are not connected to the former wetland and overbank areas (Figure 6). The box culvert at the northern end of the reach where the stream crosses under Pikes Peak Ave. acts as a grade control structure.

Figure 6: Photos of Reach 2 showing the stream incision. (Top: August 2022, Bottom: December 2022)

There is a second box culvert that deposits urban wasted water (runoff from residential, municipal and industrial parcels) into the site from the east (See Figure 2; Figure 7).

The extent of riparian habitat in the study area has been degraded, confining most riparian herbaceous and shrub species to the immediate streambank. Overstory trees have persisted at the site and have become established in the former wetland area.

Reach 3 – South Channel is approximately 6.7 acres. This narrow strip of land consists mainly of the channelized stream, with some overstory trees but mostly shrubs. The banks have been hardened with concrete. The concrete structure is failing in some areas along the channel and has sloughed off into the channel (Figure 8). Urban wastewater enters Spring Creek in this reach from the east through a box culvert (See Figure 2). Reach 3 is currently owned by the Pikes Peak Real Estate Foundation, Inc., previously owned by the Korean Baptist Church.

Figure 7: Box culvert on east side of Reach 2. Water consists mainly of urban wasted water. (Date: August 2022)

Figure 8: Reach 3 - South Channel image showing the hardening structures along the bank and a piece that has fallen into the stream channel. (Date: August 2022).

The current baseline condition of the Spring Creek Ecosystem Restoration study site is typical of an urban stream. Existing water courses have been greatly modified, via channelization and rerouting of drainage with widespread conversion of native vegetation to residential and commercial tracks, invasive species flourishing, increased debris and trash, increased impervious surface, and increased stream incision. There have been decreases in water quality due to increased runoff containing pollutants from point-sources and non-point sources.

Cultural History

Prehistoric Occupation

The past human occupation of the Arkansas River basin broadly encompasses the vicinity of today's Colorado Springs. Table 1 summarizes the major cultural and temporal constructs of past human occupation in southcentral and southeastern Colorado. Each of these periods is associated with a change in subsistence and settlement patterns, as well as demographic differences.

Table 1. Archaeological Cultures, Periods, and Date Ranges Compiled by Zier and Kalasz (1999).

Period	Subperiod	Dates
Paleoindian	Pre-Clovis	>11,500 BP
	Clovis	11,500-10,950 BP
	Folsom	10,950-10,250 BP
	Plano Period	10,250-7,800 BP
Archaic	Early Archaic	7,800-5,000 BP
	Middle Archaic	5,000-3,000 BP
	Late Archaic	3,000-1,850 BP
Late Prehistoric	Developmental	1,850-900 BP (AD 100-1050)
	Diversification	900-500 BP (AD 1050-1450)
	Protohistoric	500-225 BP (AD 1450-1750)

Paleoindian peoples are thought to have been primarily mobile hunter-gatherers, subsisting on megafauna and utilized seasonal vegetation. As megafauna began declining on the landscape, human subsistence strategies shifted to hunting smaller game and a heavier reliance of plants. The change in subsistence strategies is linked with changes in settlement patterns, lithic technology, and material culture for in the archaeological record (Zier and Kalasz 1999). In the Arkansas River Basin, there is limited archaeological evidence of the Paleoindian period; however, there is abundant evidence of Paleoindian occupation in the South Platte River basin of northeastern Colorado.

Cultures belonging to the Archaic period are thought to have been very mobile, with an increased reliance of gathering, and likely utilized a seasonal migratory pattern in their subsistence strategies (Simmons et al. 1989). Archaeological sites from the Archaic period can be difficult the distinguish, due to lack of diagnostic artifacts or organic material Projectile point typology, settlements type and location are often used to identify Archaic sites; however, relying these criteria can be problematic. Generally, there is little evidence of Early Archaic sites in the central and eastern plains of Colorado (Zier and Kalasz 1999), and some studies suggest a

“cultural hiatus” in the area (Zier and Kalasz 1999). Toward the end of the Archaic period, significant technological shifts are found in the archaeological recording, including the introduction of bow and arrow, and an increased in ground stone (Zier and Kalasz 1999). Excavations at Crows Roost along Black Squirrel Creek, east of Colorado Springs, have dated deposits to the Middle and Late Archaic (McDonald 1992; Wynn et al. 1993).

Zier and Kalasz (1999) divide the Late Prehistoric stage into three periods: Developmental (AD 100-1050), Diversification (AD 1050-1450), and Protohistoric (AD 1450-1725). These terms allow for distinction from the “Woodland” material culture primarily linked with the eastern plains and the “Ceramic” period farther south (Zier and Kalasz 1999). The transition from the Late Archaic and the Developmental Period brought significant changes in the archaeological record, including the appearance of ceramics, bow and arrow technology, and the introduction of maize horticulture (Gunnerson 1987). The geographical boundaries of the Diversification period are not firmly established, and both of its subphases (the Apishapa phase and the Sopris phase) are widespread (Zier and Kalasz 1999). The northern extent of Diversification period population aggregation is evidenced by Apishapa phase sites situated along Turkey Creek south of Colorado Springs (Ireland 1968; Kalasz et al. 1993; Watts 1971; Van Ness et al. 1990; Zier and Kalasz 1985; Zier et al. 1988). The southern extent involves the Sopris phase settlement found almost exclusively in the Park Plateau region south of Trinidad.

Unlike the preceding Developmental period, no new technologies were introduced during the Diversification period. However, there is a significant increase in abundance and distribution of ceramics, specifically Southwestern and Puebloan pottery. Ceramics are well represented at Sopris sites farther south, and less dense among sites with Apishapa phase occupations. Past and present perceptions of the Apishapa phase often remain tied to the larger architectural sites and rockshelters (Baugh 1994:277-278; Eighmy 1984:116-121; Guthrie 1989; Lintz 1989:281; Rhodes 1984; Zier et al. 1988:24). The most diagnostic artifacts at these sites are the small, triangular, side-notched or flange-stemmed Reed/Washita projectile points and cord-marked ceramics (Zier and Kalasz 1999). Notable sites near the project area include the Windy Ridge site and Woodbine Shelter, open-setting and rockshelter sites, respectively, at Fort Carson (Kalasz et al. 1993). Warfare, drought, food stress, and possible conflict with Athapaskans may have been factors in the dispersal of Apishapa phase populations beginning in AD 1400 (Campbell 1969a:491; Lintz 1989; Zier and Kalasz 1999).

Zier and Kalasz (1999) extend their Protohistoric Period to an earlier date, ca. AD 1450-1750, to account for the arrival of Athapaskan groups in the area, rather than initial contact with the Spanish. Zier and Kalasz (1999) note that the terms “Athapaskan” and “Apachean” refer to the same groups of people in this region. The most prominent Protohistoric Apachean occupation of the Central Plains is identified as the Dismal River Aspect, ca. AD 1650-1750 (Church et al. 2007; Gunnerson 2001; Zier and Kalasz 1999). This time frame roughly spans the initial contact between the Spanish and the Plains Indians to the initiation of regular contact between tribes within the Arkansas River drainage, and the Spanish colonists in New Mexico (Church et al. 2007). In the early 18th century, the Apache populations of the Colorado and Kansas Plains gave way to Plains equestrian tribes displaced from eastern homelands, including the Comanche, and the allied Ute (Church et al. 2007).

Historic Occupation

By 1750, the Comanche and the Ute had parted as allies, and the Ute had requested Spanish protection from the Comanche (Hyde 1959). During the early to mid-1800s, the Spanish made several attempts to construct settlements and encampments in the area of present-day Pueblo, Colorado, to confine and assimilate Comanche bands (Church et al. 2007). Many of these attempts failed, and by the mid-1800s, the Comanche had begun to drift farther south. New groups, primarily Cheynne and Arapaho tribes, moved into the Colorado High Plains and Front Range country (between the Wyoming border and the Arkansas River).

From the mid-1600s to early 1800s, Colorado was on the periphery of two European empires, the northern extent of the Spanish territory and the western extent of French influence. This changed in 1803 with the Louisiana Purchase and an increase emphasis on American exploration. In 1810, a young Army lieutenant named Zebulon Montgomery Pike was dispatched to explore the area, and he later published his expedition of “Pike’s Peak”, drawing attention to the natural beauty (Church et al. 2007). After 1820, commercial trade in the region led to settlement in the Arkansas Valley and the next several decades saw a series of trading posts occupying the area of present-day Pueblo, Colorado. This area became a boundary between the United States and Mexico territories, with the Arkansas River serving as the border (Church et al. 2007).

It was not until the discovery of gold in 1859 that the first permanent settlement was established in the present-day Colorado Springs area. This settlement was named Colorado City and remains a distinctive, and historic community on the west side of the current Colorado Springs. Today’s Colorado Springs was established in 1870 by General William Jackson Palmer, and from the beginning, Colorado Springs was planned to support tourism and wealthy residents (Brosnan 2002). Colorado Springs was compared to the Swiss Alps in some literature, and advertisements were targeted toward “high class” Europeans as well as larger and affluent businesses. General Palmer, director of the Kansas Pacific line, built a railroad from Denver to Colorado City, providing a way to funnel tourists into the city and provide an attractive location for large businesses to establish headquarters (Church et al. 2007; Guthrie 1982).

The arrival of the railroads was one of the most influential events that lead to significant economic and social changes in the West. The Santa Fe Trail, a long established transportation route, was supplanted by the Atchison, Topeka and Santa Fe Railroad Company (AT&SF) with tracks being laid along the Arkansas River into eastern Colorado in 1872. The railroad assisted in bringing an end to the nomadic Plains Indian lifestyle and to the vast herds of buffalo upon which they depended. With the arrival of more settlers, the Plains Tribes were removed to reservations by the end of the 1880s.

Many of the permanent settlers began farming and ranching in the areas surrounding Colorado Springs (Guthrie 1982). Despite this, census records show that settlement in Colorado Springs has been primarily urban (Church 2007 et al.). In the early 1900s, the increased frequency of automobile travel and the popularity of recreational skiing in mountainous mining towns increased tourism to Colorado Springs.

The expansion of military facilities in the early 1940s was a boost to local economies being effects by the Great Depression. Camp Carson was established in 1942 just south of Colorado Springs, later to become Fort Carson in 1954 (Connor and Schneck 1996). Camp Carson played an important role in the U.S. Army throughout World War II, training over 104,165 troops during the wartime period. In 1965, Fort Carson acquired an additional 78,700 acres of land

adjacent to the south of the original reservation, and by 1964 the Army had nearly doubled its manpower for Vietnam. With over 30,000 troops stationed at Fort Carson during this period, many were required to find housing off base.

Modern Cultural Climate

Colorado Springs is the second most populous city in Colorado, with a population over 450,000 and is a popular destination for tourists (Church et al. 2007). The city is home to several military installations including Fort Carson (Army), Peterson Air Force Base, Schriever Air Force Base, and the United States Air Force Academy. Between 1965 and 1968, the University of Colorado Colorado Springs, Pikes Peak State College, and Colorado technical University were established in the area. In 1977, the former Ent Air Force Base was used to build a US Olympic training center.

The project area resides in the Spring Creek neighborhood of Colorado Springs. This neighborhood has several schools, some of which participate in science education courses involving Spring Creek. Additionally, the City of Colorado Springs Stormwater Division organizes a Creek Week every year for community cleanup of debris in the creeks within Colorado Springs.

All three reaches in the project area have been heavily disturbed and are currently occupied by unhoused people. Temporary and semi-permanent tents and modern structures with occupants were noted during multiple site visits to the area. All three reaches contain large amounts of modern debris, with Reach 1- Pikes Peak North having the densest concentration of debris. Some of the project area is used for recreation, primarily trail walking and wildlife viewing. Recreation will likely increase with the proposed ecosystem restoration project.

Previous Research and Prefield Records Check

The purpose of this survey was to identify any existing and unknown cultural resources within the project area. An examination of History Colorado records and COMPASS database showed no past surveys of the project area. The entirety of the project area (30 acres) has been determined to be the Area of Potential Effects (APE). An examination of History Colorado records and COMPASS database showed no known sites within 500 meters of the project area (Figure 9).

Figure 9: COMPASS records check of the project area, showing no recorded cultural resources or surveys.

Previous Construction and Disturbance

An aerial sanitary sewer system and manholes was constructed within the project area (Reach #2 and #3) along Audubon Drive, by Colorado Spring Utilities in 2004. Historic imagery of Reach #2 shows some vegetation clearing and grading (Figure 10); however, construction records could not be obtained.

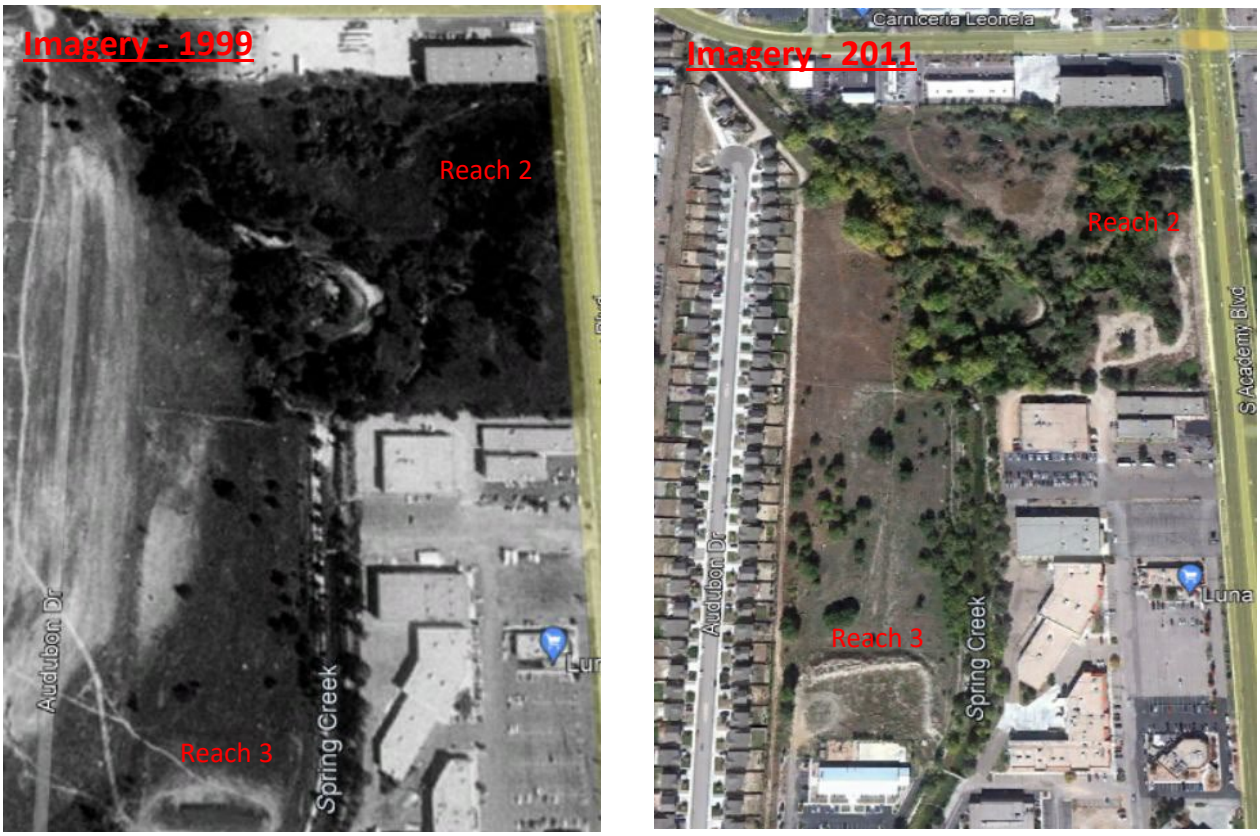

Figure 10: Google Earth historic imagery of the project area (Left: 1999, Right: 2011)

Fieldwork Methods and Limitations

Fieldwork was conducted on December 8, 2022 by Corps archaeologist, Kaitlyn Fuqua. Prior to conducting fieldwork, background maps were loaded into Avenza for recording. A backup Trimble GeoXH handheld GPS unit (2005 series) was brought to document any newly identified sites. Fieldwork was performed under a State of Colorado Archaeological Survey- Non Collection Permit (No. 82083) issued on 9/30/22-2/28/23. Permission for survey was granted from landowners, City of Colorado Springs and Pikes Peak Real Estate Foundation, Inc. Point location data was recorded on Avenza with georeferenced images of the APE and documented resources. Survey began at the northern portion of the project area in Reach 1, proceeding to Reaches 2 and 3. 15 meter transects were walked to ensure coverage; vegetative ground cover was limited due to the season, though the ground visibility was limited by modern debris. Examples of large piles of modern debris are shown in Figure 11.

Figure 11: Representative photo of modern debris and litter within the project area. This photo was taken in Reach 1.

Portions of the project area were not able to be surveyed due to temporary camps with occupants living in the project area. For the safety of the archaeologist, and the privacy of the camp occupants, these areas were avoided (Figure 12). The avoided areas were heavily disturbed by humans, modifying the landscape so extensively that the likelihood of finding cultural resources is low. While much of the project area was covered in modern debris and had evidence of previous modern occupation, current occupants were clustered on the western bank of Reach 1, the southern portion of Reach 2, and Reach 3. In addition, due to the steepness of the stream banks (15-30% slope) and lack of stability due to active erosion, the stream banks were not able to be surveyed (Figure 13).

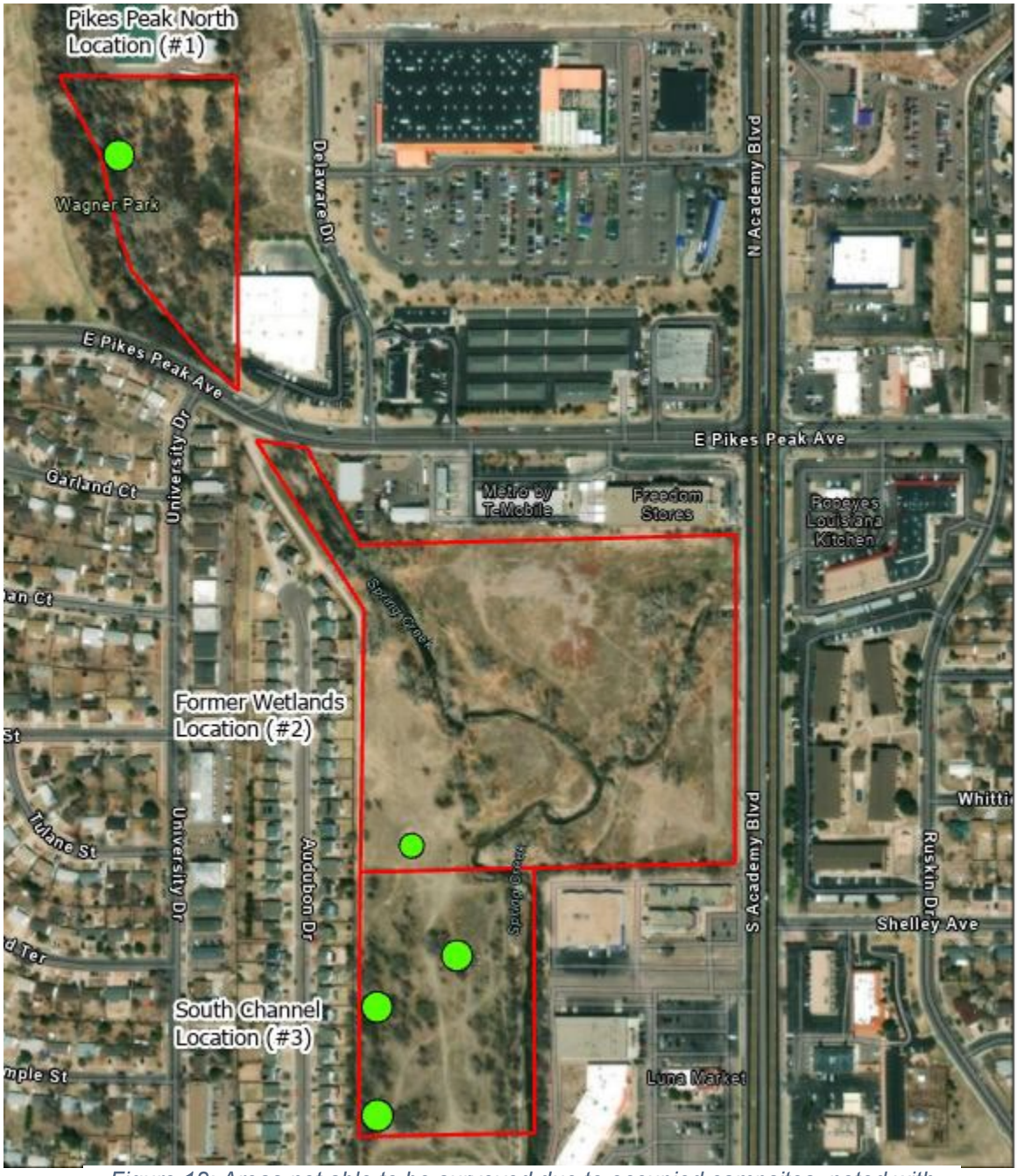

Figure 12: Areas not able to be surveyed due to occupied campsites, noted with green circles.

Figure 13: Eroding stream banks and debris in Reach 2.

Survey Results

No cultural resources were identified within the project area. Please note the limitations to the survey listed above.

Summary and Recommendations

USACE performed a Non-Collection Archaeological Survey of the proposed project area for the ecosystem restoration along Spring Creek, totaling approximately 30 acres. The purpose of this survey was to identify any existing and unknown cultural resources within the project area. No cultural resources identified within the project area. Per 36 CFR 800, USACE will perform Section 106 duties, along with consultation with the Colorado State Historic Preservation Office and tribal consultation, when the undertakings are established for the project. If the scope or the APE changes, an additional survey may be needed.

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