

# Fountain Creek Watershed District In-Lieu Fee Program Prospectus

December 2024





## **Fountain Creek Watershed District In-Lieu Fee Program Prospectus**

El Paso and Pueblo Counties, Colorado

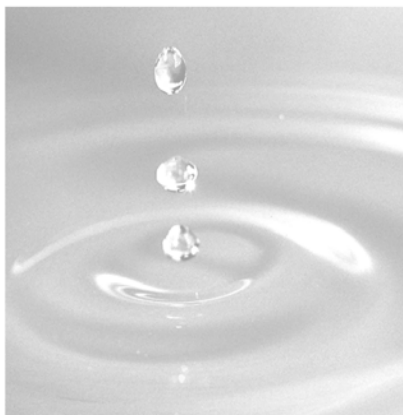
### **ILF Program Sponsor:**

Allison Schuch, Executive Director  
Fountain Creek Watershed District  
PO Box 8100  
Colorado Springs, CO, 80933  
719.650.7474  
[fountainckdist@gmail.com](mailto:fountainckdist@gmail.com)

### **Prepared by:**

Lucy Harrington, Sr. Regulatory Specialist  
GEI Consultants, Inc.  
4601 DTC Blvd Suite 325  
Denver, CO, 80237  
[lharrington@geiconsultants.com](mailto:lharrington@geiconsultants.com)  
720.955.3029

December 17, 2024  
Project No. 2204108  
U.S. Army Corps of Engineers File: SPA-2024-00404



## Contributor List

---

### **Fountain Creek Watershed District**

Steve Rodriguez  
Operations Manager  
Fountain Creek Watershed District  
[fcwdoperations@gmail.com](mailto:fcwdoperations@gmail.com)

Darren Adame  
Pueblo County  
[adamed@pueblocounty.us](mailto:adamed@pueblocounty.us)

### **ILF Subcommittee Members**

Erin Powers  
Stormwater Compliance Program Manager  
City of Colorado Springs  
[Erin.powers@coloradosprings.gov](mailto:Erin.powers@coloradosprings.gov)

Jonathan Griffen  
Pueblo County  
[griffenj@pueblocounty.us](mailto:griffenj@pueblocounty.us)

Annie Berlemann  
Fountain Creek Watershed Project Manager  
Colorado Springs Utilities  
[aberlemann@csu.org](mailto:aberlemann@csu.org)

Kevin Binkley  
Linear Water and Wastewater Supervisor  
Colorado Springs Utilities  
[kbinkley@csu.org](mailto:kbinkley@csu.org)

Mark Shea  
Watershed Planning Supervisor  
Colorado Springs Utilities  
[mshea@csu.org](mailto:mshea@csu.org)

Jeff Rice  
Senior Engineer  
El Paso County  
[jeffrice@elpasoco.com](mailto:jeffrice@elpasoco.com)

## Distribution List

---

U.S. Army Corps of Engineers, Albuquerque District  
Pueblo Regulatory Field Office  
201 West 8<sup>th</sup> Street, Suite 350  
Pueblo, CO 81003  
719-543-9459

U.S. Fish and Wildlife Service  
134 Union Boulevard, Suite 675  
Lakewood, CO 80228-1807  
303-236-4216

U.S. Environmental Protection Agency, Region 8  
1595 Wynkoop Street  
Denver, CO 80202  
303-312-6312

Colorado Parks and Wildlife, Colorado Springs Office  
4255 Sinton Road  
Colorado Springs, CO 80907  
719-227-5200

Colorado Division of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246  
303-692-2000

Division of Water Resources, Division 2  
310 East Abriendo Avenue, Suite B  
Pueblo, CO 81004  
719-542-3368

# Table of Contents

---

<b>Contributor List</b>	<b>i</b>
<b>Distribution List</b>	<b>ii</b>
<b>Acronyms and Abbreviations</b>	<b>v</b>
<b>Fountain Creek Watershed District In-Lieu Fee Program Prospectus</b>	<b>vi</b>
<b>1. Introduction</b>	<b>0</b>
<b>2. Goals and Objectives</b>	<b>2</b>
<b>3. Proposed Service Area</b>	<b>3</b>
<b>4. Need and Feasibility</b>	<b>5</b>
4.1. Mitigation Need	5
4.2. Ecological Suitability	6
4.3. Historical Land Use	8
4.4. Wildlife and Fisheries	10
<b>5. Establishment and Operation</b>	<b>12</b>
5.1. Site Selection	12
5.2. Land Protection	13
5.3. Initial Example Projects	13
5.3.1. Fountain North	14
5.3.2. Frost	15
5.3.3. BJ Ranches	17
5.3.4. T-Cross	18
5.4. Short-Term Maintenance and Adaptive Management	19
5.5. Performance Standards	20
5.6. ILF Program Reporting	20
<b>6. Long-Term Management</b>	<b>21</b>
<b>7. Qualifications of the Sponsor</b>	<b>23</b>
<b>8. Water Rights</b>	<b>24</b>
<b>9. Program Accounting</b>	<b>25</b>
9.1. Financial Accounting	25
9.1.1. Crediting and Implementation Timeline	25
9.2. RIBITS	26
<b>10. References</b>	<b>27</b>

## List of Tables

Table 1. Federal and State Sensitive Species Evaluated for the Fountain Creek ILF Program.	10
Table 2. Fountain North credit to cost summary.	14
Table 3. Frost credit to cost summary.	16
Table 4. BJ Ranches credit to cost summary.	17
Table 5. T-Cross credit to cost summary.	18

## List of Figures

Figure 1. Proposed Service Area, Fountain Creek ILF Program.	4
Figure 2. Site location and conceptual design for Fountain North project.	15
Figure 3. Site location and conceptual design for Frost project.	16
Figure 4. Site location and conceptual design for BJ Ranches project.	18
Figure 5. Site location and conceptual design for T-Cross project.	19

## Appendices

- Appendix A Initial Example Projects Costing
- Appendix B USFWS Species Map

Reviewer Initials: LH

ILF Prospectus Fountain Creek

## Acronyms and Abbreviations

---

ALTA	American Land Title Association
CCAA	Candidate Conservation Agreement with Assurances
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CFR	Code of Federal Regulations
CNHP	Colorado Natural Heritage Program
CO	Colorado
CPI	Consumer Price Index
CPF	Compensation Planning Framework
CPW	Colorado Parks and Wildlife
CSQT	Colorado Stream Quantification Tool
District Engineer	USACE Albuquerque District Engineer
ESA	Endangered Species Act
FACWet	Functional Assessment of Colorado Wetlands
FCWD	Fountain Creek Watershed District (also called Fountain Creek District)
FDIC	Federal Deposit Insurance Corporation
GEI	GEI Consultants, Inc.
HUC	Hydrologic Unit Code
ILF	In-Lieu Fee
Instrument	Enabling Instrument
IRT	Interagency Review Team
Mitigation Rule	2008 Compensatory Mitigation for Losses of Aquatic Resources, 33 C.F.R. 332
MLRA	Major Land Resource Area
MMF	Monetary Mitigation Fund
NFWF	National Fish and Wildlife Foundation
NRCS	Natural Resources Conservation Service
PFAS	Per- and polyfluoroalkyl substances
PRM	Permittee-Responsible Mitigation
RIBITS	Regulatory In-Lieu Fee and Bank Information Tracking System
SB-270	Senate Bill 270 – Projects to Restore Natural Stream Systems, 2023
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WOTUS	Waters of the U.S.

# Fountain Creek Watershed District In-Lieu Fee Program Prospectus

---

## *Executive Summary*

The Fountain Creek Watershed District (FCWD; Fountain Creek District) is pleased to propose the Fountain Creek In-Lieu Fee Program (ILF Program) for the mitigation of unavoidable impacts to Waters of the U.S. (WOTUS) and Waters of the State, as regulated by the U.S. Army Corps of Engineers (USACE) and Colorado Department of Public Health and Environment (CDPHE), respectively, that occur within El Paso County and Pueblo County, Colorado (CO). If approved, the ILF Program will also provide credits for impacts to certain species designated as threatened or endangered under the Endangered Species Act. The proposed Service Area, or area in which the ILF Program will collect funds and provide offsets, consists of El Paso and Pueblo counties, as dictated by the boundaries of legislative authority for the Fountain Creek District, the ILF Sponsor.

The region included in the Service Area consists of a highly degraded watershed which has resulted from the instability of the natural composition of the stream corridors and the human-driven changes to the natural hydrologic regime in the area. A history of agriculture, mining, urban runoff, and military activity have created long-term water quality challenges, and increased surface flows from alterations in land use and water management shifts have led to the deterioration of the riparian corridors and stream-associated floodplains. The nine-member governments of the Fountain Creek District are all directly affected by these impacts and have a vested interest in the restoration of the watershed, both for the benefits of the greater ecosystem viability and the human populations that live in the area. Over the past 15 years, FCWD has established itself as a reputable, resourceful, and responsive organization with an established history and record of leadership, collaboration, consensus building, and programmatic success throughout the Fountain Creek Watershed. The Fountain Creek District is experienced in managing programs and projects with significant financial assets, that balance the legislative directives of the Fountain Creek District with restoration of the environment.

Currently there are no commercial mitigation options within the Service Area, which necessitates Permittee-Responsible Mitigation (PRM) or purchasing credits at a high ratio from mitigation banks outside of the watershed. ILF programs are generally preferred to PRM, due to more rigorous scientific analysis and the opportunity to plan projects on a watershed scale. The FCWD ILF Program intends to keep impacts and mitigation projects within the same watershed, maximizing the benefits for the local ecosystem. As such, the Fountain Creek District requests a crediting ratio of 1:1.25 for impacts to mitigation for wetland and stream credits, and a 1:3 ratio for impacts to certain species habitats, as described herein. The credit determination for each specific site included in the ILF Program will be tied to observable and measurable functional lift tools such as the Functional Assessment of Colorado Wetlands (FACWet) or the Colorado Stream Quantification Tool (CSQT). Additional consideration will be given for State-selected functional assessment tools, if and once identified. In addition, while the Fountain Creek District intends to minimize administrative costs by utilizing previously completed watershed plans to select initial projects, in order to maximize the success of the program, the Fountain Creek District requests a five-year timeline from the Albuquerque District Engineer (District Engineer)

from fee collection to project implementation, as conversations with other ILF sponsors from across the United States have indicated that the typical three-year timeline is often insufficient to complete high quality mitigation projects that comply with all aspects of the 2008 Compensatory Mitigation for Losses of Aquatic Resources – Final Rule. The ILF Program is intended to provide a mitigation option in the Service Area that simplifies the process of purchasing credits for permit applicants, while utilizing a holistic approach to watershed improvement that will create resilient complementary landscapes that benefit the ecosystem as a whole.

# 1. Introduction

---

The purpose of this prospectus is to provide guidelines and responsibilities for the establishment, use, operation, and maintenance of the proposed Fountain Creek District In-Lieu Fee Program (ILF Program) within the boundaries of legislative authority for the Fountain Creek Watershed District, or Fountain Creek District or FCWD (ILF Sponsor), which include El Paso County and Pueblo County, Colorado. The ILF Program would provide compensatory mitigation for unavoidable adverse impacts on Waters of the U.S. or WOTUS (e.g., streams, wetlands, and other regulatory bodies of water) as regulated by the U.S. Army Corps of Engineers (USACE), pursuant to Section 404 of the Clean Water Act, and Waters of the State (e.g., wetlands, streams, and other bodies of water regulated by the State of Colorado) as regulated by the Colorado Department of Public Health and Environment (CDPHE), pursuant to Colorado House Bill 24-1379, provided such activities have met all applicable requirements and are authorized by the appropriate authority. The ILF Program would also provide compensation credits for unavoidable impacts to certain species designated as endangered or threatened under the Endangered Species Act (ESA), as regulated by the U.S. Fish and Wildlife Service (USFWS). Precedent for including species within an ILF has been established within the South Pacific Division of the USACE through the Sacramento District ILF, as Amended (National Fish and Wildlife Foundation [NFWF] 2022).

Pursuant to the federal 2008 Compensatory Mitigation for Losses of Aquatic Resources (2008 Mitigation Rule; 33 C.F.R. 332), the Fountain Creek District is requesting the establishment of the ILF Program that would encompass a proposed Service Area consisting of the entirety of El Paso and Pueblo counties within the Upper Arkansas 6-digit Hydrologic Unit Code (HUC) 110200. This includes portions of nine 8-digit HUCs but would not include the portions of El Paso County that cross the 6-digit HUC line. The Fountain Creek District's legislative authority is restricted to these two counties and, as the ILF Sponsor, the Fountain Creek District would be unable to conduct work outside of these boundaries. Thus, the ILF Program will be limited to the counties' political lines and the HUC 6 boundary (Service Area) (Figure 1). El Paso County in particular is experiencing a period of rapid growth, with further expansion projected for the next 20 years (CO State Demography Office 2024), and this population growth will result in ongoing and significant residential and commercial development. This increased growth has and will continue to alter the historic hydrology and associated aquatic and wildlife resources throughout the Fountain Creek watershed. In the lower portion of the Fountain Creek watershed, where population growth is not as prevalent, a history of agriculture and industrial impacts has led to significant impacts to water quality and the integrity of the stream corridor. The Fountain Creek District is uniquely attuned to the needs of the Fountain Creek corridor, as it is composed of nine member governments with a direct stake in the improvement of the integrity and ecological function of the primary stream corridor and its tributaries. The Fountain Creek District is experienced in handling large mitigation programs with significant financial assets, and has the expertise, either internally or through partnerships, to oversee high quality and ecologically sound restoration projects in the proposed Service Area. To date, the District has completed over \$35 million dollars in creek restoration projects on the mainstem of Fountain Creek, south of Colorado Springs.

Currently, there are no commercial mitigation banking options available within the proposed Service Area. As such, the groups with the most need of mitigation, such as the Colorado Department of

Transportation (CDOT), residential developers, and public utility providers, do not have a regionally appropriate mitigation option available within the watershed, and therefore must engage in Permittee-Responsible Mitigation (PRM) or purchase credits at a higher ratio outside of the watershed. An ILF Program in the Service Area will provide more localized mitigation, which aligns with the watershed-approach championed in the 2008 Mitigation Rule, as well as the Fountain Creek District’s mission.

Under the ILF Program, permittees required by USACE to compensate for losses to WOTUS or regulated Waters of the State, as proposed, would purchase compensatory mitigation credits through the Fountain Creek District ILF Program instead of implementing PRM or purchasing credits from banks outside of the Fountain Creek watershed. Additionally, credits for unavoidable impacts to threatened or endangered species protected under the ESA could be purchased for compensatory mitigation for unavoidable project impacts to certain sensitive species or their habitats. The ILF Program would be managed to provide a source of credits for projects of all types and sizes, in order to mitigate both small and large-scale impacts. This prospectus describes the ILF Program and how it will be developed by the ILF Sponsor in compliance with the federal 2008 Mitigation Rule and developing state and USFWS policies.

## 2. Goals and Objectives

---

The primary goals and objectives of the Fountain Creek District ILF Program are as follows:

- Provide an effective and holistic watershed-based compensatory mitigation program for unavoidable impacts to WOTUS as permitted by USACE, Waters of the State as proposed by CDPHE, and special status species as regulated by the USFWS, in El Paso and Pueblo counties.
- Restore and preserve stream corridors, wetlands, and riparian areas in order to attenuate damaging flows within the Fountain Creek watershed, and to re-establish or rehabilitate wetlands as is practicable for improved water quality, bank stability, and wildlife habitat.
- Provide reliable and streamlined permitting and high-quality mitigation for communities and regional stakeholders in El Paso and Pueblo counties.
- Provide opportunities for ecologically valuable mitigation projects that will maintain the aquatic resource values consistent with existing regional plans such as the Fountain Creek Corridor Master Plan, the Fountain Creek Corridor Floodplain Management Opportunities Study, the Upper Fountain Creek and Cheyenne Creek Flood Restoration Plan, the Monument Creek Watershed Restoration Plan, and other relevant plans.
- Manage the mitigation provided by this ILF Program in perpetuity through collaboration between the Sponsor, USACE, CDPHE, USFWS, and the Interagency Review Team (IRT); and
- Further develop community confidence in, and visibility of, the Fountain Creek District's ability to provide robust protection, coordinated restoration, and continuity of desired conditions throughout the Fountain Creek Watershed.

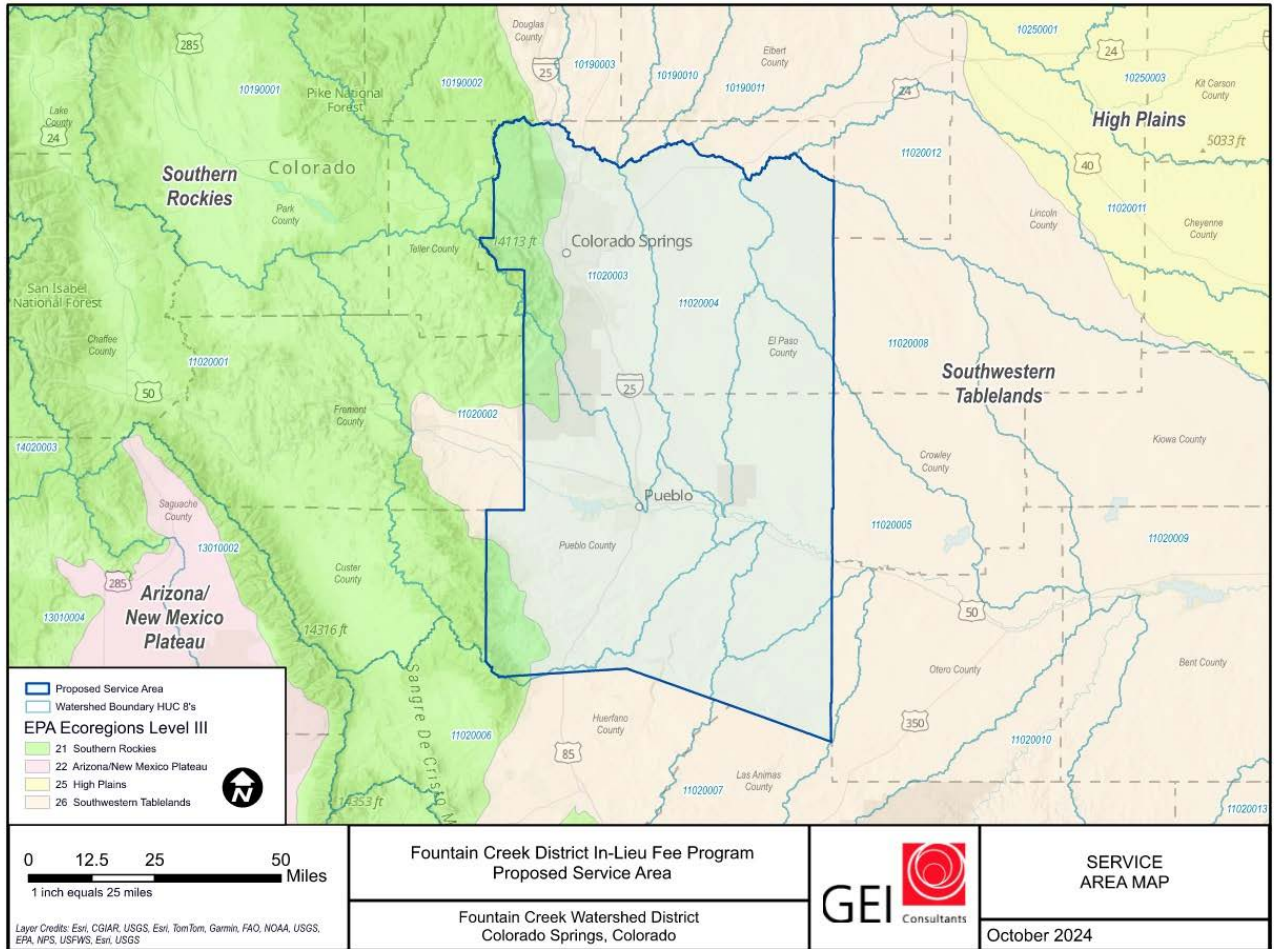
### **3. Proposed Service Area**

---

The Fountain Creek District has legislative authority within the counties of El Paso and Pueblo in southern Colorado. This encompasses the vast majority of the Colorado Springs metropolitan area, as well as the City of Pueblo, and most of the surrounding development of both cities. The very northern edge of El Paso County crosses the 6-digit HUC line; as such, the proposed Service Area will only include those portions of the County within the Arkansas Basin 6-digit HUC (110200). The Service Area includes the Fountain 8-digit HUC (11020003) within El Paso County and the Chico 8-digit HUC (11020004) in its entirety, approximately half of the Upper Arkansas 8-digit HUC (11020002) and Upper Arkansas-Lake Meredith 8-digit HUC (11020005), and smaller portions of three other 8-digit HUCs including Apishapa (11020007), Huerfano (11020006), and Horse (11020008). Most of this Service Area is in the Southwestern Tablelands Level III Ecoregion, with a small portion along the western edge located in the Southern Rockies Level III Ecoregion (Figure 1).

While ecoregion lines are typically used as boundaries for service areas, the two ecoregions present within this Service Area are separated by a steep transition of over 10,000' elevation change from the mountainous Rampart Range down the plains. The rapid elevation change facilitates a seamless interconnectivity for wildlife, vegetation, and waters throughout the region. Large and small animals can readily move between the two areas within the course of a single day, in contrast with other areas where a similar decrease in elevation is often separated by long distances. Tributaries also flow rapidly out of the mountains and onto the plains, presenting similar challenges and opportunities to the closely interlinked first to significantly higher-order streams within the Service Area. These systems interconnect the two ecoregions and provide a corridor for continuous species, sediment, and hydrologic interaction. The steep topography and associated corridors result in a rapid transmission of ecological functions between the two ecoregions, justifying a cross-ecoregion-based boundary for the proposed Service Area.

**Figure 1. Proposed Service Area, Fountain Creek ILF Program.**



## 4. Need and Feasibility

---

### 4.1. Mitigation Need

Prior to preparation of this prospectus, the ILF Sponsor conducted thorough research regarding likely credit consumers and credit demand in the Fountain Creek watershed and concluded that sufficient demand would be present to support the operation of the ILF Program. In particular, conversations with CDOT, residential developers, Special Districts, public utility providers, and consulting firms indicated that there would be significant demand for credits related to projects planned within the next ten years, especially in the transportation and residential development sectors. Further discussions with the City of Colorado Springs and other member governments of the Fountain Creek District, as well as the IRT, suggest that there will be growing demand for wetland, stream, and species mitigation as the region continues to develop.

In addition to these conversations, there is clear data that the Service Area is in the midst of significant growth, particularly in El Paso County. The I-25 corridor between Colorado Springs and Pueblo has experienced exponential growth in the past 50 years. Data from the Colorado State Demography website reveals that, by population, El Paso County was the largest county in Colorado in 2022, while Pueblo County was the 10<sup>th</sup> (out of 64 total counties). In addition, during the past 20 years, the Colorado Springs metropolitan area has experienced a 35% increase in population, which is an increase of over 200,000 people. A similar number of people (211,000) are projected to move into the Colorado Springs area in the next 20 years. Growth is not limited to the city of Colorado Springs, however, as eastern El Paso County is also under development to provide housing for the many military families stationed in the Colorado Springs area, as well as commuters to both the Colorado Springs and Denver metro areas. Rapid urbanization has contributed to residential and commercial development, as well as expanded impervious surfaces and stormwater runoff that has increased the frequency and size of storm flows in the Fountain Creek drainage and adjacent tributaries. This increased hydrology has had dramatic impacts on many of the regional stream corridors, changing these systems from ephemeral or intermittent drainages to perennial waterways. In addition to increased flows associated with residential development, local hydrology has been altered due to the import and use of water supplies from outside of the Fountain Creek watershed. This modified hydrology has further contributed to the land use changes from historic impacts related to agricultural practices, mining, and military base development. These factors combined have created significant challenges within the Fountain Creek watershed, particularly because of the shallow soils and steep gradients in the upper parts of the watershed and the soft clay and sandy substrates in the lower watershed areas which, in combination with "flashy" hydrology, has resulted in significant channel incision, erosion, and sediment transport leading to disconnected floodplains and riparian corridors as well as augmented flood risks that threaten local ecology, private and public property, and vital infrastructure. While many projects will focus on the main Fountain Creek corridor, projects in the eastern portions of both counties, particularly in El Paso County at the top of the watershed, will allow for downstream benefits on a watershed scale.

Despite these challenges and ongoing anticipated demand, there are no commercial mitigation options in the Service Area for most sectors. The El Paso County Umbrella Bank is in the Service Area, but it is a

single-client bank that exclusively provides offsets for County impacts. Therefore, aside from PRM, which is the least preferential option as described in the 2008 Mitigation Rule, there is no other source for compensatory mitigation located within the proposed Service Area. The next nearest mitigation bank is the Maria Lakes Mitigation Bank, which does have available wetland credits, but it is several watersheds away from Fountain Creek. Because of this, the USACE currently requires the purchase of credits at a high impact-to-mitigation ratio for projects completed in the Fountain Creek watershed. This increased credit ratio likely reflects the distance between the northern extents of the Fountain Creek watershed and the Maria Lakes Mitigation Bank, over 100 miles, which results in distinct climactic shifts between these areas, and the resulting significant differences in hydrology and ecology within this region. Additionally, there are no stream or species credits available through the Maria Lakes Bank.

Compared to a single-site bank or PRM, an ILF Program would provide a holistic approach to stream and wetland restoration on a watershed scale and leverage existing approved watershed plans developed in partnership with federal, state, and local partners. This would create an overarching approach that would allow mitigation projects to be selected that complement one another and share consistent goals and performance standards, focused on previously identified and high priority needs on a watershed scale. Completing compensatory mitigation projects through the ILF Program will also allow for more rigorous technical analysis, planning, implementation, and consistent long-term site management than is generally associated with PRM projects. These benefits of the ILF Program, as proposed, align with the watershed approach outlined in the federal 2008 Mitigation Rule and would provide more robust and consistent mitigation than what is currently available in the area.

## **4.2. Ecological Suitability**

Most of the proposed Service Area is in the Southwestern Tablelands Level III Ecoregion, while the western edge of both counties passes into the Southern Rockies Level III Ecoregion. The Southwestern Tablelands Ecoregion is characterized by semi-arid grasslands and rangeland crossed by rugged mesas and canyons, and a lack of arable land, in contrast to the High Plains ecoregion to the east. Most of the Service Area sees little precipitation, 10 to 16 inches annually, with the lowest amount of precipitation along the Arkansas River east of Pueblo (Chapman et al. 2006). Despite this low precipitation, the Arkansas River floodplain has high levels of both historic and current agricultural development, which presents opportunities for both restoration and mitigation. The Southern Rockies Ecoregion is a high elevation terrain composed of steep mountains and coniferous forests. Further subcategorization reveals that the plant communities and land uses follow an elevational pattern, with more grazing and grasslands at the warmer lower elevations and land use limited to wildlife habitat and recreation in the coldest alpine areas (Chapman et al. 2006). The portions of this ecoregion that are within the Service Area are mid-to-low elevation foothills areas that experience greater infrastructure development than the higher elevation portions, which are historically mining and tourism-based economies.

Using a different classification system, the USDA maps the service area primarily within the southern half of the Southern Rocky Mountain Foothills Major Land Resource Area (MLRA), which consists of the foothills east of the Southern Rocky Mountains, and the Upper Arkansas Valley Rolling Plains MLRA, which is characterized by a dry prairie typical of the eastern plains in Colorado. These boundaries do not align with the ecoregion lines, with the majority of El Paso County falling into the Southern Rocky Mountains Foothills MLRA while most of Pueblo County is in the Upper Arkansas Rolling Plains MLRA, in

contrast to the ecoregion line that places the majority of both counties in the same ecoregion. The discrepancies between the two classification systems emphasizes that the boundaries are not as concrete as an ecoregion-based Service Area might indicate – rather, there is significant overlap between the ecosystems and, depending on which metrics are most emphasized, the lines between these classifications are ecologically porous.

The climate of the Southern Rocky Mountain Foothills MLRA is generally cold, with average temperatures ranging from 34°F in the winter to 52°F in the summer, with lower winter temperatures in the mountains. Elevation ranges from 5,000 to 8,000 feet across most of the MLRA, with isolated mountains over 10,000 feet. There are an average of 120 freeze-free days, with the number of freeze-free days increasing as elevation decreases, and from north to south. Precipitation ranges from 12 to 25 inches annually on average, while some higher elevation areas see up to 32 inches, and the precipitation largely falls as large, short-duration thunderstorms in the summer, although the higher elevation areas in the mountains see more precipitation as snow. The habitat types range from grasslands to shrub-grasslands and forested areas, supporting various species of wildlife and native plant species. Land uses range from agricultural to timber use and recreation, with 75% of the MLRA owned privately, 14% forested, and less than 3% cropland (USDA and NRCS 2022).

The Upper Arkansas Rolling Plains MLRA is composed of 11,892 square miles of dry, short grasses, ranging in elevation from 3,500 to 7,220 feet. The MLRA experiences 11 to 20 inches of annual precipitation, falling primarily in spring and early summer frontal storms and high-intensity thunderstorms in the late summer. These flashy rainfall events result in a wide fluctuation in rainfall amounts from year to year, with a smaller amount of precipitation falling as snow in the winter. Average temperatures are 48°F to 54°F. Over 75% of the MLRA is primarily composed of shortgrass prairies used for rangeland and grazing, although the Arkansas River and its tributaries are used for irrigation of agricultural fields as well. Very little of the MLRA is used for purposes aside from agriculture (USDA and NRCS 2022). There is also anecdotal evidence that recreational activities, such as hiking and mountain biking, are increasing in this portion of the watershed.

According to studies by the U.S. Geological Survey, Fountain Creek itself starts at high-elevation near Woodland Park, and is generally considered to be a meandering step-pool system until the confluence with Monument Creek in Colorado Springs, where it spreads out into a wide alluvial floodplain. Historically, Fountain Creek was a multi-channel braided streambed over an alluvial system resulting in large, dynamic floodplains. Tributaries to Fountain Creek would be single-thread but sinuous, and all of the systems would be subject to flashy rainstorms and spring runoff that would result in changes to morphology. Many of the smaller channels would be ephemeral. Today, increased storm flows created by impervious surfaces, increased wastewater discharges, and imported water to support the growing population have changed these natural processes, resulting in greater flows year-round, and channelization necessary to protect infrastructure has combined with these increased flows to disconnect the channel from the floodplain and change sediment transport. Parts of the stream system have been lined with concrete or rock to prevent meandering, and bank erosion is prevalent throughout the stream corridor. In those areas where the stream does widen, aggradation has contributed to further floodplain degradation (Stogner, Sr. 2000). These processes create downstream water quality issues and present a large pool of sites that can benefit from restoration efforts funded through the ILF Program.

Fountain Creek joins the Arkansas River in the City of Pueblo. The Arkansas River is a larger system than Fountain Creek, and where this system overlaps the Service Area, it historically would have been a wide, slow-moving river with some meander and significant connections to the floodplain. These floodplain areas would have been a highly active successional system comprised of gallery cottonwood (*Populus* spp.) forests, willow (*Salix* spp.) thickets, and newly exposed sandbars that constantly adjusted as seasonal runoff, heavy monsoons, and large winter storm events introduced ongoing change throughout the watershed. The wide and well-connected floodplains associated with the river's edge absorbed this change and provided natural stream stability to the region. Since modern land-use development, channelization and incision have dramatically affected the Arkansas River, as the flashy stormflows and spring runoff that once supported the ecologically diverse floodplain ecosystem now results in damage to the banks and bed. The most significant impacts to the Arkansas River have been water-quality related, however, both from historic mining contamination and from sediment transport from its tributaries and the upstream reaches of the Arkansas River (Stroud 2023).

These upstream impacts and their close correlation with challenges in downstream rivers emphasize the interconnectedness of river systems within the region. The tributaries within the greater watershed also contain characteristics of higher areas due to the rapid elevation changes along the Rampart Range, and these characteristics create a fluidity between the floral and faunal ecosystems throughout the area. Implementation of ILF Program projects will therefore address the similar and interconnected challenges, such as sedimentation, floodplain disconnection, and riparian habitat loss, throughout the watershed and provide ecological and human benefits to the region.

### **4.3. Historical Land Use**

The southern portion of Colorado was settled in the 1500's by Spanish colonists, with the United States acquiring the land following the Mexican-American War in the late 1840s. Prior to colonization, indigenous tribes lived in the area and engaged in agriculture, creating dams, canals, and terraces on most of the major rivers and tributaries in southern Colorado. Following the discovery of gold in the Pikes Peak area in 1858, miners settled the area, with Old Colorado City forming in 1859 and serving as the seat of El Paso County. By 1860, over 300 dwellings were in Old Colorado City, and the Territory of Colorado was officially created in 1861. Miners that didn't make it rich turned to agriculture, with the first water rights established in 1860. Farming was variably successful, due in part to the arid environment. Much of the farmland in El Paso and Pueblo counties was not irrigated, and consisted of wheat, oats, barley, rye, corn, potatoes, timothy, and alfalfa. The portions of the land that were irrigated, primarily in the lower Fountain Creek area and along the Arkansas River, also produced notably large amounts of various fruits, especially the Pueblo Chile. Pueblo County remains a major agricultural producer in Colorado for both crops and animal products. El Paso County was historically more productive with animal products than crops, using the eastern grasslands for rangeland and forage. Even today, El Paso County is most known for producing horses, goats, and chickens (Palmer Land Conservancy 2022).

Most of the historical mines in the Fountain Creek watershed are located in Teller County, which split from El Paso County in 1899, but these historical mines are upstream of many portions of the watershed and likely have effects on downstream water quality, particularly in the Arkansas River. Several large gold mines are outside of the Service Area but in the upstream portions of the Upper Arkansas watershed.

Some small uranium mines were present in the foothills region in the western portions of the Service Area, but most are now abandoned. Coal mining was prevalent in the Colorado Springs area up until 1957, with two significant coal fields producing moderate amounts of coal between 1882 and 1957, although this coal was of limited value and could not compete with the coal from the Western Slope. Of more consequence, industrial minerals are still mined in the watershed to this day, with many gravel mines present throughout the Fountain Creek drainage along with clay, gypsum, sandstone, and large amounts of crushed limestone for aggregate uses (Colorado Geological Society 2003).

Other historical impacts to the watershed include military impacts, and a human-driven water regime. Four military bases are in the Colorado Springs area, including the largest base in Colorado, Fort Carson, and the United States Air Force Academy. The military presence has shaped the landscape in various ways, including through development and recreation, but the most notable impacts that could be limited through restoration in this area are related to downstream effects on water quality. Unfortunately, military bases have been known to contaminate ground water and surface water, negatively impacting drinking water wells and downstream communities. The recent emphasis on perfluoroalkyl or polyfluoroalkyl substances (PFAS) has led to monitoring efforts on multiple bases in Colorado, but other chemical exposures and sediment transport from degraded waterways can also have downstream effects. There is not currently a water quality crediting system in Colorado, but these downstream effects can still be at least partially remedied through restoration, as wetlands are known for slowing sediment transport, storing chemical compounds, and improving water quality, as well as attenuating destructive flows.

Anthropogenic changes to the water regime in the Arkansas River watershed are largely due to water imported from the Western Slope, which increased the overall flows in Fountain Creek starting in the 1950s and 60s (Baxter 2017). Rapid urban development in the Colorado Springs metropolitan area has led to a substantial increase in impervious surfaces, wastewater return flows, and stormwater runoff into Fountain Creek, which has increased base flows. In parts of the Fountain Creek watershed, previously ephemeral streams are now perennial, fed by these flows out of developed areas. Clay soils in the stream channel prevent permeation of water into the ground water, and previous stream stabilization projects that cannot withstand storm flows contribute to the bank instability that has led to the need for restoration in the area (Fountain Creek Vision Task Force 2009). These factors contribute to the downstream effects of stormwater flooding, and the degradation of water quality, wildlife habitat, and public recreation that extend into Pueblo County and create a large area in need of restoration.

These historic land uses and current impacts represent a significant opportunity for restoration in the proposed Service Area. There is extensive development in the urban areas along the stream corridor, along with agricultural development in the more rural parts of the Service Area. However, the corridor is not so developed as to restrict restoration – ample areas of open space adjacent to the river corridors are still present, as well as opportunities to improve incision and bank stability in the main channel. Reconnecting floodplains attenuates destructive flows as well as reduces shear stress on alluvial banks, and wetlands improve water quality. All of these processes also contribute important wetland and riparian habitat for the various species that should be present in the corridor. With a Service Area that encompasses the entire stream corridor and downstream reaches, projects can be prioritized and implemented in such a way as to provide watershed-level benefits and increase the integrity of projects to promote achievement of performance standards and long-term function.

## 4.4. Wildlife and Fisheries

ILF Program-funded projects within the Service Area will benefit species across the watershed, both those for which species compensation credits will be sought and also for the other resident species in the watershed. ESA-listed species with habitat in the Service Area that will be incorporated into the ILF Program include Preble’s Meadow Jumping Mouse (*Zapus hudsonius preblei*), Eastern Black Rail (*Laterallus jamaicensis jamaicensis*), Tricolored Bat (*Perimyotis subflavus*), and Ute Ladies’-Tresses (*Spiranthes diluvialis*). A map of USFWS species ranges within the proposed Service Area for each of these species is available in Appendix B. Currently, Monarch Butterfly (*Danaus plexippus*) is not federally listed, but the USFWS has developed a voluntary Candidate Conservation Agreement with Assurances (CCAA) that outlines actions that linear-based projects may utilize in order to avoid further regulation should the monarch butterfly be listed in the future. These actions include planting milkweed species or nectar-rich plants, managing mowing to provide habitat, and reducing pesticide use (Cardno 2020). When appropriate, projects implemented in the ILF Program might be designed to provide this pollinator habitat for ecological benefit, even in the absence of regulatory pressure. In addition, several species identified by Colorado Parks and Wildlife (CPW) as Tier I and Tier II Species of Greatest Conservation Need are present in both Fountain Creek and the Arkansas River (Table 1). There are not currently any mitigation programs focused on state-listed species of concern, but many projects completed for the benefit of stream function will also provide benefits for the various species of native fish which reside within Fountain Creek.

Many of the species listed in Table 1 are wetland- and riparian corridor-dependent and therefore projects focused on restoration of these habitat areas will be beneficial to multiple species. Fish species of concern that are adapted to turbid streams like Fountain Creek but require slow-moving backwater areas are no longer commonly found in the incised channel. Restoration projects that focus on restoring stream function, floodplain reconnection, and aquatic habitat diversity will not only benefit these fish species but will also contribute to the health of adjacent aquatic resources, which will benefit upland wildlife species as well, such as Preble’s Meadow Jumping Mouse and the Eastern Black Rail. Projects intended to generate credits for ESA-listed species will focus on the best course of action for the benefit of the species, whether that is preservation of existing habitat or restoration of degraded habitats paired with wetland and stream restoration approaches.

**Table 1. Federal and State Sensitive Species Evaluated for the Fountain Creek ILF Program.**

Species	Listing Status	Preferred Habitats/Range	Current Presence in Service Area
<b>Federal Species</b>			
Preble’s Meadow Jumping Mouse ( <i>Zapus hudsonius preblei</i> )	Federally threatened	Wet meadows with dense vegetation adjacent to intact riparian corridors	Species known to occur in El Paso and Pueblo counties. Some portions of the stream corridor still support intact riparian corridors with suitable habitat, but much of the area has been degraded.
Eastern Black Rail ( <i>Laterallus jamaicensis jamaicensis</i> )	Federally threatened	Shallow wetlands with consistent water levels and tall emergent	An isolated but robust population is present in the Arkansas River Valley in Pueblo County.

Species	Listing Status	Preferred Habitats/Range	Current Presence in Service Area
		vegetation (cattails or bulrush)	
<b>Tricolored bat</b> <i>(Perimyotis subflavus)</i>	Proposed federally endangered	Forested areas with live and dead deciduous trees, with nearby caves, mines, or man-made hard structures for hibernating	Colorado represents the western edge of their range, but most riparian corridors within the Service Area would be suitable habitat.
<b>Ute Ladies'-Tresses</b> <i>(Spiranthes diluvialis)</i>	Federally threatened	Wetlands with consistent hydrological regimes, open canopy, and nearby flowering plants for attracting pollinators	A population was previously documented in the Colorado Springs area, but as of 2023 <sup>1</sup> it is considered extirpated in the Upper Arkansas Basin. However, this species is not well understood and is known to remain dormant underground for up to 11 years.

**State Species**

<b>Arkansas Darter</b> <i>(Etheostoma cragini)</i>	Tier I, State Threatened	Shallow, clear sandy streams with abundant rooted aquatic vegetation	Fountain Creek, Arkansas River
<b>Flathead Chub</b> <i>(Platygobio gracilis)</i>	Tier I	Large river systems with turbid, fast-flowing water	Fountain Creek
<b>Southern Redbelly Dace</b> <i>(Phoxinus erythrogaster)</i>	Tier I, State Endangered	Stream channels and off-channel wetlands	Fountain Creek, Arkansas River
<b>Orangespotted Sunfish</b> <i>(Lepomis humilis)</i>	Tier I	Streams, beaver ponds and other ponds, oxbows, floodplain pools, and sloughs	Arkansas River

Notes:

1. Species Status Assessment Report for Ute Ladies'-Tresses (*Spiranthes diluvialis*) from June 2023 (USFWS 2023).
2. All information courtesy of CPW and USFWS, see references.

## **5. Establishment and Operation**

---

### **5.1. Site Selection**

The ILF Sponsor will develop mitigation projects that are consistent with federal mitigation guidelines and to the extent possible, identified within the existing watershed plans for the Fountain Creek watershed. These projects will be implemented as opportunities in the Service Area become available, prioritizing projects based on anticipated impacts and watershed needs. The selection of potential mitigation projects will focus on a watershed approach and address watershed priorities based on historic and current land uses and threats as identified in the various watershed management plans already created for the Fountain Creek watershed and the minor watersheds within. These existing plans include example projects or stream reaches already identified as areas that are in need of restoration and will be evaluated on a project-by-project basis for inclusion in the ILF Program as part of the development of the Compensation Planning Framework (CPF) which will be incorporated into the Draft ILF Instrument. Development of the overarching CPF will entail review by the ILF Sponsor of priority projects and/or specific reaches identified in each of the previous plans to prioritize projects consistent with the twelve elements of the 2008 Mitigation Rule. This will include, but will not be limited to, those projects that are tied to performance standards that can demonstrate observable or measurable increases in ecological functions, are sustainable over the long-term with limited human intervention, are amenable to permanent site protections, and upon which long-term site management and monitoring agreements can be established, including the ability to access reliable and consistent water through legal water right agreements. Where feasible, Low-Tech Process Based Restoration designs will be considered to minimize costs and promote natural processes. Additionally, the CPF, as included within the Draft ILF Instrument, will address historic and baseline conditions to assure pragmatic restoration goals can be achieved as described in 33 CFR §332.8(c).

Not all of the projects within the existing plans mentioned above will be suitable for inclusion in the ILF Program, but starting with these projects will significantly reduce planning costs and increase agency review efficiency, as conceptual designs and construction plans have often already been created and, in the case of certain Fountain Creek restoration plans, reviewed by the Fountain Creek District with input from the USACE. Suitable projects identified from the existing plans will be prioritized within the Draft ILF Instrument based on quantity of functional lift and costs in order to create an initial list of projects for inclusion within the CPF that will be ready for further investigations as the ILF Program collects sufficient funds for implementation. For all projects, title reports and American Land Title Association (ALTA) surveys will be considered as part of the site selection process to ensure restoration work is possible. For those projects on private land, early and frequent communication with the private landowners will be necessary to ensure that landowners are interested in having a mitigation project on their property, and that both parties understand the requirements of mitigation projects (including site access for necessary surveying and monitoring) and the expectations regarding the completed work.

For each compensatory mitigation project, whether identified in existing plans or at a later date, the following site selection criteria will be considered:

- Functional lift
- Replacement of resource losses resulting from regional historic and current land use impacts
- Ability to function without human intervention
- Project size
- Land ownership/willingness of private landowners to engage in projects
- Water rights
- Mineral rights
- Expected credit types and quantity generation – wetlands vs streams vs species (bundling)
- Drainage basin
- Cost

Additionally, recreational opportunities may also be considered. One of the objectives of the FCWD is the protection and creation of greenways within the FCWD jurisdictional boundaries. In order to balance this objective with the implementation of mitigation projects, it is the intention of the FCWD to allow for non-contact recreation near mitigation projects, while still maintaining protection of the mitigation project footprint and conservation values. Examples of recreation adjacent to mitigation areas may include raised boardwalks over restored wetland areas, bike trails along a stream corridor outside of the mitigation footprint, or walking trails through a protected area with limited access. As is possible, interpretative signage will be included in recreational access areas to explain the purposes and benefits of the projects. Projects that occur on private land will likely not allow for recreation.

## **5.2. Land Protection**

The Fountain Creek Watershed District does not intend to purchase or hold land in fee-title for the purposes of ILF Program implementation. Rather, the Fountain Creek District expects that there will be opportunities to complete projects on lands owned by the member governments that are a part of the FCWD, and those member governments will maintain ownership. For projects on private lands, the Fountain Creek District will work with the landowners in order to balance the desires of the landowners with the Fountain Creek District and ILF Program goals. In all cases, the credited portions of the lands where projects occur will be protected under a permanent conservation easement or deed restriction, as approved by the IRT. Conservation easements will be held by an IRT-approved 501(c)(3) nonprofit organization that focuses on benefits to aquatic and wildlife resources. Some examples of suitable organizations include the Palmer Land Conservancy, Colorado Open Lands, and/or the Colorado Cattleman's Agricultural Land Trust, although other organizations might be identified as necessary.

## **5.3. Initial Example Projects**

As mentioned above, it is the intention of the ILF Sponsor to investigate projects already identified in the various watershed plans first for inclusion within the Draft ILF Instrument, in order to reduce administrative costs and support the goals of all of the member organizations of the Fountain Creek District. Four of these potential projects have been conceptually evaluated for the purposes of

incorporation within the ILF Program and include high level design drawings and estimated costs necessary to offset historic and current impacts throughout the watershed. Conceptual credit types and quantities have also been assessed, as detailed below. The concepts of “rehabilitation” and “re-establishment” used in these conceptual designs are defined in the 2008 Mitigation Rule. For any projects identified for inclusion in the ILF Instrument, site-specific documentation will be provided to the IRT for review. This will include mitigation plans to the USACE that will describe project objectives and designs, land restrictions, the expected credits generated from the project, performance standards tied to FACWet, the CSQT, or other functional assessment methodology approved by the District Engineer and the IRT, and long-term management plans, as well as any other required information as detailed in the 2008 Mitigation Rule.

### 5.3.1. Fountain North

The Fountain North project is located approximately halfway between Colorado Springs and the El Paso/Pueblo county line on the Fountain Creek main stem (Figure 2). This area is a largely undeveloped floodplain with wide meander belts that are inherently unstable, creating an opportunity for improvement. The project would also be visible from the Fountain Creek Regional Trail, which would allow for educational kiosks or signage. Mitigation work in this area would therefore require careful consideration of site protections that would be necessary given the proximity to recreational areas. The focus for this project location is re-establishing wetlands with surface water connections and rehabilitating existing aquatic features. This will be achieved through excavation and limited breaching of the existing levees. There is likely too much stream power to be able to create stable side channels that are active during all flows, therefore the flows will be restricted to limit velocity through the wetland complex for project stability. The existing trail network (social or otherwise) would be left intact and improved and surface water connections and connectivity channels would be graded to convey water through the site and allow for fish passage, nutrient exchange, and to satisfy holding restrictions of water rights. This project includes 53.5 acres of re-established wetlands and 15.2 acres of wetland rehabilitation. A conceptual drawing of this design is provided below in Figure and associated costs and crediting for all projects is included in Appendix A.

**Table 2. Fountain North credit to cost summary.**

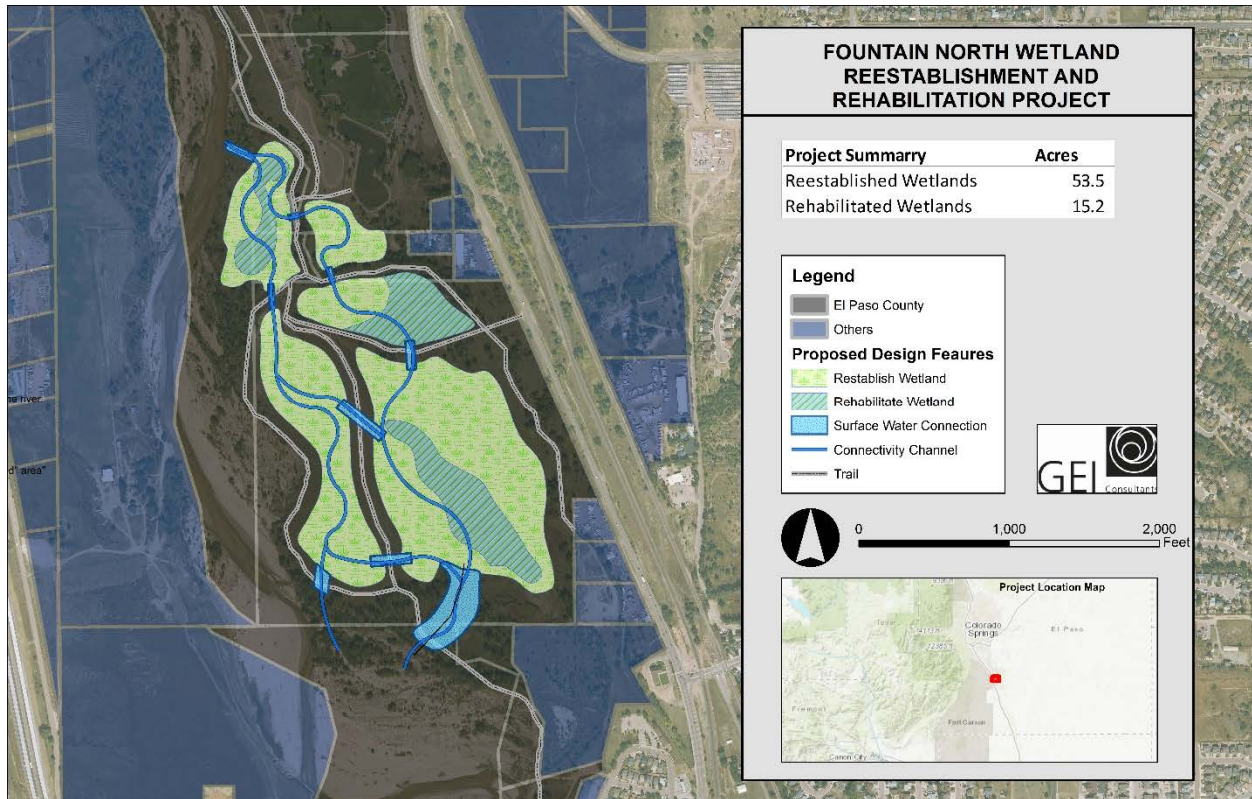
Project Summary	Acres
Re-established Wetlands	53.5
Rehabilitated Wetlands	15.2
Total Costs (rounded)	\$16 million
Cost per credit	\$259,000 (wetland only)

Design elements associated with the Fountain North project include the following key items:

- The notch levee on the north and south side of the site will allow water to enter the site during high flows while also allowing water to drain back to Fountain Creek, which may help to prevent fish stranding.
- Propose development of a controlled, stabilized inlet on the north levee to allow for the maintenance of existing and future recreation facilities, bird watching, and educational areas.

- Propose re-establishment of high flow channels throughout the floodplain to provide habitat for native small stream fishes. These areas would connect with the existing pond area to provide year-round habitat and opportunities for fish to move into wetland areas while the area is inundated.

**Figure 2. Site location and conceptual design for Fountain North project.**



### 5.3.2. Frost

The Frost project is located south of the Fountain North project, on the Fountain Creek main corridor (Figure 3). This area is a large wetland complex with a side tributary and irrigation return flows, which provide opportunities for wetland rehabilitation. The focus of this project includes leaving the existing hay operation in place, while enhancing the existing wetlands and opportunistically re-establishing historic wetlands. Wetland rehabilitation can be achieved with some surficial grading and vegetation management and re-establishment will consist of minor excavation and replanting. Williams Creek mitigation can be achieved through excavation of a floodplain bench to increase the bank-full and flood-prone width, reconnecting channel cutoffs (adding length) and vegetation planting and management. This combined project includes re-establishing 64.7 acres of wetlands, 201.7 acres of rehabilitation opportunities, and 2,460 functional feet of stream credits along Williams Creek.

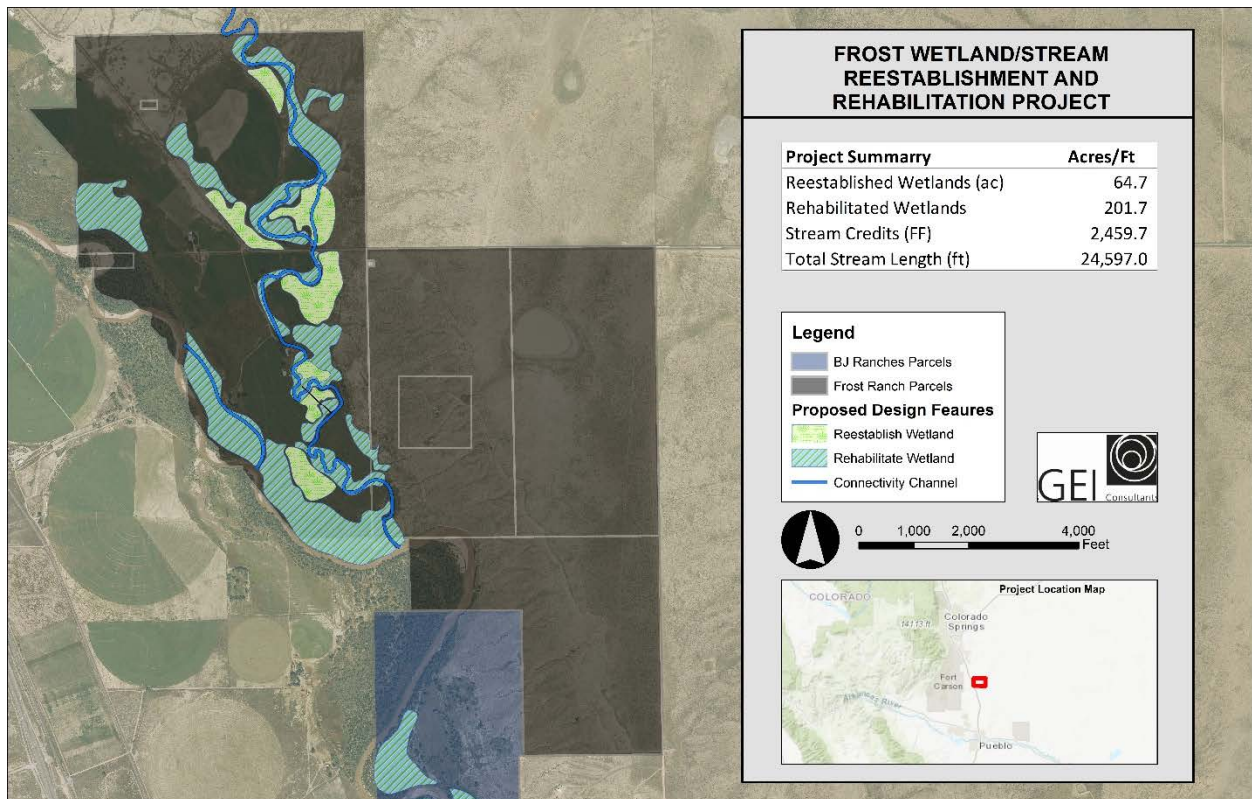
**Table 3. Frost credit to cost summary.**

Project Summary	Acres
Reestablished Wetlands	64.7
Rehabilitated Wetlands	201.7
Stream Credits (Functional Feet)	2,459.7
Total costs (rounded)	\$22 million
Cost per credit	\$135,000 (wetland)
	\$2,500 (stream)

Design elements related to the Frost project focus on restoration of the stream corridor due to the landowner’s desire to avoid changes to the existing hay fields. These improvements include the following key items:

- Perform wetland rehabilitation within existing wetland areas. This would include cattail management, minor grading/dredging, and revegetation with native plants.
- Improvement to fish habitat by reconnecting Williams Creek with Fountain Creek during high flows.
- Propose to grade Frost Wall at a 3:1 ratio and stabilize this area with native scrub-shrub vegetation and rock. Special attention should be paid to potential impacts to existing hay fields.

**Figure 3. Site location and conceptual design for Frost project.**



### 5.3.3. *BJ Ranches*

Further south along the I-25 corridor, the focus of this project is the restoration of former hay fields and rehabilitation of existing onsite wetlands, as well as stream corridor improvement (Figure4). While retaining the existing riparian corridor, Fountain Creek will be reconnected to the former hay fields through enhancement of the existing abandoned ditch network, which will create surrogate high flow channels. The existing ditch network will also be leveraged to irrigate vegetation during initial establishment until roots are developed to the point that subsurface water in the alluvium may be utilized. These activities will result in 181.9 acres of rehabilitated wetlands.

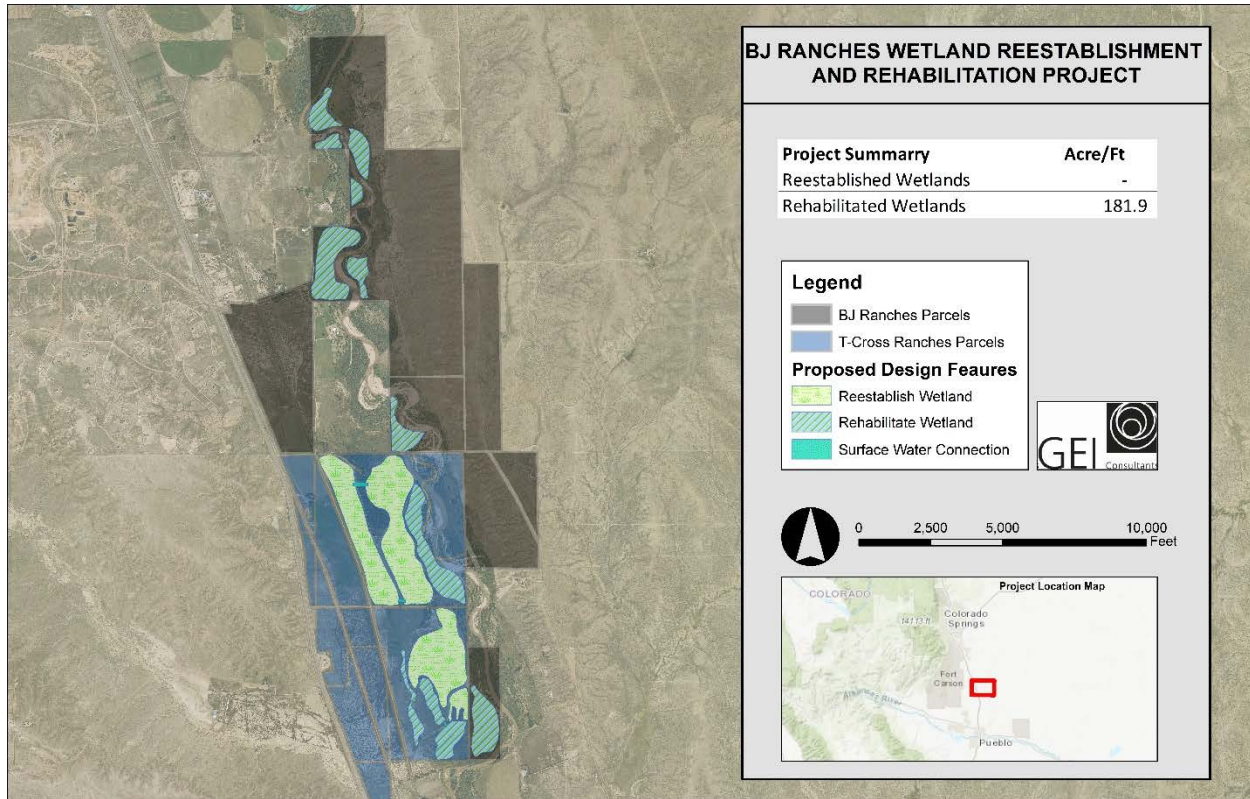
**Table 4. BJ Ranches credit to cost summary.**

<b>Project Summary</b>	<b>Acres</b>
Rehabilitated Wetlands	181.9
Total costs (rounded)	\$7.5 million
Cost per credit	\$83,000 (wetland)

Design elements for the BJ Ranches project concentrate on the restoration of former hay fields and the rehabilitation of existing onsite wetlands, as well as improvement of the stream corridor.

- Develop stream credits and improve habitat for native small fishes by retaining the existing riparian areas and reconnecting Fountain Creek to former hay fields through the enhancement of the historic ditch network, converting these areas into surrogate high flow channels.
- Incorporate existing internal ditch network for water delivery to provide irrigation during initial vegetation establishment period.
- These improvements may be broken into phases to allow activities to occur as funding through the ILF becomes available.

**Figure 4. Site location and conceptual design for BJ Ranches project.**



### 5.3.4. T-Cross

The T-Cross project is located the furthest south of the conceptual projects, near the El Paso/Pueblo county line (Figure ). The focus of this project is the re-establishment and rehabilitation of wetlands. This will be achieved through excavation, grading, and establishing connectivity channels. Wetlands will have bank-full surface water connections and will be graded to positively drain, preventing water impoundment that might affect water rights. These wetland complexes can be incrementally built in several phases that can complement each other but are not dependent on each other to reach project success. There are additional areas in the immediate vicinity that could be restored for additional credits. The combined project totals 326.8 acres of re-established wetland and 103.3 acres of rehabilitated wetlands. The cost per credit for this project is estimated at around \$399,000, which is likely more than the market can bear at once. However, by phasing various aspects of the project, costs may be managed to better meet local demand. This will be further examined in the Draft Instrument and on a project-by-project basis.

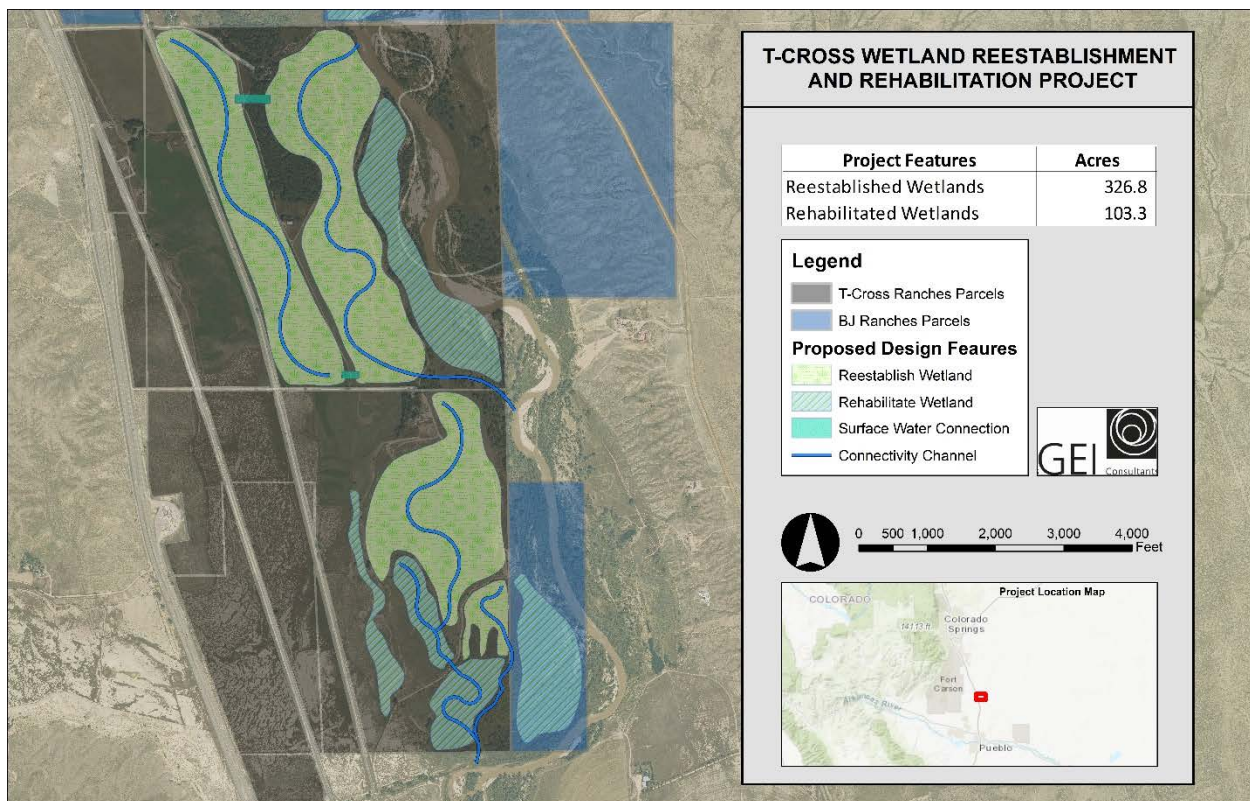
**Table 5. T-Cross credit to cost summary.**

Project Summary	Acres
Reestablished Wetlands	326.8
Rehabilitated Wetlands	103.3
Total costs (rounded)	\$151 million
Cost per credit	\$399,000 (wetland)

Design elements on the T-Cross project consist of restoring previous agricultural fields and rehabilitating current wetlands while maintaining the healthy existing riparian corridor.

- Develop new high flow channel through the existing center pivot, which may be abandoned with property sale, and tie into existing ditch system for fish and wetland habitat credits.
- Re-establish wetlands between center pivot and riparian corridor.
- Bury cattails in existing degraded wetlands on the southern portion of the property with construction spoils and revegetate with native mix.
- Potentially split these activities between multiple phases to manage costs.

**Figure 5. Site location and conceptual design for T-Cross project.**



## 5.4. Short-Term Maintenance and Adaptive Management

For each project completed for the ILF Program, short-term maintenance and long-term management plans will be established. Due to the variability in the types of projects, habitat types, and project goals, these plans will be developed on a project-by-project basis and submitted to the IRT as funding becomes available. All projects will be implemented in accordance with the CPF and ILF Instrument. Funds to support the short-term maintenance and the adaptive management of projects will be incorporated into the price of credits.

Short-term maintenance plans will focus on activities necessary within the first five years following project completion, or until all performance standards are met, whichever is later. The Fountain Creek District intends to manage each project through the short-term maintenance phase and will transfer

long-term management to an IRT-approved third party once performance standards have been achieved. Short-term maintenance plans are designed to encourage project success, and provide guidance for unforeseen changes in site condition, such as plants not establishing properly, excessive flooding, or a necessary change in the parties responsible for maintenance and management. While it is impossible to anticipate all possible adverse conditions, the purpose of the short-term maintenance plan is to provide a framework for adaptively managing those unforeseen circumstances that might affect project success, in order to make changes as necessary to maintain the project until performance standards are met.

## **5.5. Performance Standards**

Short-term management will occur until such a time as performance standards are achieved, at which point the long-term management plan will be used for long-term sustaining maintenance of the site. Performance standards will be established on a project-by-project basis due to the variability in the types of projects, habitat types, and project goals, however, all performance standards will be observable or measurable in accordance with an appropriate functional lift assessment, as discussed above. Achievement of the performance standards is an indication that the intended credits were generated by the completion of the project. To demonstrate project progress towards performance standards, a site-specific monitoring report will be provided to the USACE and IRT on an annual basis during the short-term monitoring period. This report will include a detailed progress report on the status of the project site related to each of the approved performance standards. It will also contain a description of land management activities that occurred on site during the previous year and any adaptive management measures that deviated from the approved short-term maintenance plans. Finally, the annual short-term monitoring report will include future projections and goals for the site anticipated for the following year.

## **5.6. ILF Program Reporting**

In order to track the overall ILF Program's advancement toward obtaining the stated goals and objectives, as described in Section 2, an annual ILF Program Report will be produced and submitted to USACE in compliance with 33 CFR 332.8 (c)(2)(x) (Code of Federal Regulations 2008). Each ILF Program Report will contain, at minimum, a summary of ILF Program financial activities over the previous year, such as the amount of funds collected, the amount of interest earned, and any funds expended on ILF project implementation during the previous year. Additionally, a roll-up summary of each project in-progress will be provided, which may include information such as project activities to-date, the specific number of resource credits associated with the project, credit releases, relevant project dates, and the overall watershed benefits of each project. This information will be supplemented by the annual monitoring reports produced for each site, as described in sections 5.5 and 6 of this document. Similar information related to future projects leading into the following year will also be included. Finally, the ILF Program Report will include an assessment on whether modifications to the ILF Program CPF will be required. Adjustments to the CPF may become necessary in such instances as when the prioritization strategy for selecting and implementing mitigation is no longer appropriate, project implementation is not occurring at the approved rate, or ILF Program goals are no longer valid. Should the annual assessment determine that a modification to the CPF is necessary, the Fountain Creek District will work with USACE and the IRT to modify the ILF Instrument accordingly as described in Section 33 CFR 332.8 (d)(4). Additional information regarding this reporting will be provided in the Draft ILF Instrument.

## 6. Long-Term Management

---

Long-term management plans will be established on a project-by-project basis via site-specific mitigation plans, due to the variability in the types of projects, habitat types, and project goals for each site. All plans will be distributed for the IRT to review as part of the individual project planning process upon ILF Instrument approval.

Long-term management starts once performance standards are achieved and continues in perpetuity. While the ILF Sponsor intends to maintain responsibility for the short-term management, long-term management will be conducted by an appropriate third party. This third party will be identified for each specific site based on factors such as land ownership, conservation easement status, and anticipated type of long-term management needed (e.g. urban or rural settings). Funds collected as part of ILF credit sales will be deposited into a long-term management fund, which will be invested in such a way that the interest or dividends will be sufficient to cover the costs of long-term management. As described in the following section, the ILF Sponsor has significant experience managing long-term funds for restoration through the Monetary Mitigation Fund (MMF) program, a \$50 million investment in projects that focus on flood control, water quality, and erosion prevention, which was initially established at the founding of the Fountain Creek District. The Fountain Creek District will leverage this experience to manage and invest funds using a third-party entity in a similarly responsible fashion.

Long-term management tasks may include activities such as trash removal, fence repair, invasive plant monitoring and control, and site security. Specific tasks will vary for each project site based on accessibility and site location relative to urban areas, among other factors. As mentioned in the Site Selection section above, one of the objectives of the FCWD is the protection and creation of greenways within the FCWD jurisdictional boundaries. In order to balance this objective with the long-term durability of mitigation projects, it is the intention of the FCWD to allow for non-contact recreation near select mitigation projects, while still maintaining protection of the actual mitigation project footprint and conservation values. The incorporation of recreational opportunities at specific sites will affect the long-term management tasks and costs as well, which will be adjusted on a project-by-project basis.

In concert with these expected variations in long-term management costs and approaches, there are also likely to be unforeseeable costs that will vary from site to site. Therefore, the Fountain Creek District is requesting the ability to manage the long-term management fund through a “portfolio approach” wherein all the long-term management funding is placed in a single account that is used to support long-term management costs across all of the projects, rather than individual funds for each project location. This will reduce administrative management activity and costs and allow for the flexibility to utilize funds where they are most needed at any given time, rather than being tied to a site with lower-than-expected long-term management costs. The ability to pool long-term management funds will also allow for higher annual dividends, allowing credit pricing to match market demand and encourage ILF use over PRM, meeting the preferences of the 2008 Mitigation Rule. To encourage sufficient funding across all program sites, estimated management costs will be averaged to avoid principal drawdown of the long-term management fund. Long-term management fund allocation will be reevaluated project-by-project on an annual basis to maintain ILF Program solvency.

The long-term condition of each ILF project site will be tracked and recorded via a long-term monitoring report which will be issued annually to USACE and the IRT. This report will include information such as

current site condition, credit status, management fund balance, and land management activities that occurred on site during the previous year. The long-term monitoring report will also record any adaptive management measures that were required beyond those described in the approved long-term management plan. Finally, the annual long-term monitoring report will include future projections and goals for the site anticipated for the following year.

## **7. Qualifications of the Sponsor**

---

The Fountain Creek District was established in 2009 for the purposes of planning, managing, administering, and funding capital improvements necessary within the Fountain Creek District boundary in order to mitigate flooding, erosion, and sedimentation; improve drainage; address water quality issues; and protect and develop recreational opportunities and open spaces within and along river channels and tributaries. The Fountain Creek District consists of El Paso and Pueblo counties and has land use authority in the 100-year floodplain of Fountain Creek south of Colorado Springs. Outside of that area, the Fountain Creek District can provide input to public bodies on land use approvals that might impact the watershed. The Fountain Creek District Board of Directors includes representatives of the City of Fountain, the Lower Arkansas Valley Water Conservancy District, El Paso County, Pueblo County, small El Paso County municipalities (Palmer Lake, Monument, Green Mountain Falls, and Manitou Springs), the City of Pueblo, the City of Colorado Springs, and a Pueblo County landowner. The Fountain Creek District also has a Citizens Advisory Group and Technical Advisory Committee that provide input from staff experts and individual community stakeholders into the project and mission of the Fountain Creek District. As such, the Fountain Creek District serves as a direct conduit between community engagement and on-the-ground improvements for each of the waterways within its area.

To accomplish its objectives, the Fountain Creek District has managed the MMF, which is an account established to implement on-the-ground mitigation projects, in the amount of \$50 million for the purposes of flood control, water quality improvement, and the prevention of erosion and sedimentation along the Fountain Creek corridor. This contribution to the Fountain Creek District stemmed from the 1041 Permit for the Southern Delivery System pipeline project which brings water from Pueblo Reservoir to Colorado Springs – resulting in increased return flows through Fountain Creek. As of 2024, \$35 million dollars has been invested on 13 projects, including a long-term study of the effectiveness of those projects over time (FCWD 2023). The Fountain Creek District has relevant experience responsibly managing large amounts of money and partners with a financial management firm that will assist with investing and fund management.

The Fountain Creek District is also experienced in project management specifically tied to aquatic resources and associated habitats and intends to hire qualified contractors for the design and construction phases of each mitigation project. Project financials and timelines will be managed internally via a dedicated team of Fountain Creek District employees with relevant expertise. To leverage mitigation-specific knowledge, the Fountain Creek District is currently working with GEI Consultants, Inc. (GEI) to obtain initial approvals and training on mitigation policies. Current GEI staff assisting the Fountain Creek District have a combined work history of over 40 years of hands-on experience, planning, designing, and successfully implementing mitigation and restoration projects throughout the Western U.S., including leading the development, approval, construction, and performance success of several mitigation banks in Colorado as well as the Sacramento District ILF program established for NFWF.

## 8. Water Rights

---

The Fountain Creek District will work diligently with the IRT, state, local authorities, and water right owners, including municipalities and businesses, to ensure compliance with Colorado water law. Water rights in Colorado require careful consideration, and as they are complicated, it is not feasible to secure a blanket water right for the ILF Program. To facilitate overall ILF Program approval, members of the FCWD Board have proactively contacted Department of Water Resources Division 2 staff regarding the goals of the ILF Program and water rights.

For individual projects, water rights will be evaluated on a project-by-project basis and will be assessed through every stage of project implementation in order to remain compliant with state statutes and avoid material injury to water rights. In general, this means that all projects incorporated within the ILF Program are anticipated to meet the standards set for in Senate Bill 270 - Projects to Restore Natural Stream Systems (SB-270; Colorado General Assembly 2023), and will be designed to: avoid new diversions, not expose ground water, avoid storage of surface water for greater than 72 hours, and will not impede or reduce the flow of water. Further, no new groundwater wells will be incorporated into these projects beyond the initial vegetation establishment period. Any supplemental irrigation used during this time, or additional in-channel flows that may be required for long-term bank success, will be legally obtained through approved augmentation plans, exchanges, leases, or other methods that comply with State water law. The member governments and water utility partners of the Fountain Creek District currently control certain water rights and have the authority to enter into agreements that would utilize those water rights for the benefit of the ILF Program, should these rights be required. More specific approaches to water rights compliance will be further described within the Draft ILF Instrument. The Fountain Creek District understands that credit sales will be suspended should the ILF Program become subject to legal action for injuring water rights.

## **9. Program Accounting**

---

### **9.1. Financial Accounting**

The ILF Sponsor will establish and maintain a system for tracking the production of credits, credit transactions, and financial transactions between the ILF Sponsor and permittees. These credits will be tracked programmatically as well as separately for each individual project, in order to ensure that proper mitigation is occurring to offset each impact.

The ILF Program Account will be established after approval of the Instrument and prior to the acceptance of ILF Program fees. Fees from permittees will be placed into an account at a member institution of the Federal Deposit Insurance Corporation (FDIC). Other funds collected that are not fees from permittees will be kept in a separate account. All interest and earnings will remain in the same account for use by the ILF Program for the purposes of providing compensatory mitigation. Funds paid into the ILF Program will be used to select, design, and implement projects, as well as for the necessary entitlements and permitting, management of projects, and initial monitoring until such time as the performance standards are attained. A small, approved amount of the funds will also be used to cover administrative costs, such as establishment and operation of the ILF Program, preparation of annual reports, interfacing with the IRT and permittees, and the hiring of private contractors or consultants for project implementation or management. Of primary importance, these funds will also be used for careful accounting of credits and debits within the ILF Program to ensure no net loss requirements are achieved. In addition, the credit pricing will take into account the cost of design, construction, land protection, short-term and long-term management, as well as the local economy (i.e., costs of contractors, CDOT construction costs, local market demand, etc.). The cost of ILF credits will be readjusted on an annual basis to account for local inflation, using indices such as the Denver-Aurora-Lakewood Consumer Price Index (CPI) and the CDOT Construction Cost Index (updated quarterly), as well as tools such as surveys of local contractors to reflect market demands.

#### ***9.1.1. Crediting and Implementation Timeline***

Compensatory mitigation requirements associated with advance credits require that land acquisition and initial physical and biological improvements be completed by the third growing season following credit sale to a permittee. Communication with other ILF Program Sponsors during the course of researching this prospectus, including the NFWF, The Nature Conservancy, and Ducks Unlimited, suggests that three years is often an insufficient amount of time to gather enough funds for planning and implementing high quality mitigation projects that are compliant with the 2008 Mitigation Rule, particularly in areas that require significant budgets to perform restoration such as the Fountain Creek corridor, which is highly degraded and contains numerous erodible areas. This is augmented by the presence of urban areas within the Service Area, complicated water rights in an over-appropriated system, and the increasing costs associated with the establishment of a permanent conservation easement. To minimize costs and maximize efficiencies, the ILF Sponsor intends to primarily identify projects from the existing watershed plans that will be suitable for inclusion in the ILF Program, in order to decrease administrative time and cost in identifying projects. However, project costs continue to remain high and, as such, the ILF Sponsor

is requesting a time period of five (5) years from the District Engineer between fund collection and the implementation of the mitigation project, in order to maximize the ability of the ILF Sponsor to implement high quality mitigation projects while remaining in compliance with the ILF Instrument.

The USACE typically uses a mitigation ration of 1:1.45 impacts to mitigation for ILF Programs, due to the temporal delays between impacts and the associated mitigation. However, the FCWD is requesting a crediting ratio of 1:1.25 impacts to mitigation as all of the impacts and mitigation will remain within the greater Fountain Creek watershed.

For impacts to species, FCWD is proposing a 1:3 ratio for impacts to mitigation. There is no standard for compensation credits at the federal level, however, the 1:3 ratio is the standard in California, which is also part of the South Pacific Division of USACE. The 2003 Guidance for the Establishment, Use, and Operation of Conservation Banks recommends a biologically defensible ratio that considers the ecological value of both the site where impacts occur and the mitigation site (USFWS 2003). Using a reasonable 1:3 ratio for the ILF Program will standardize mitigation for those entities needing credit; however, other ratios can be considered on a project-by-project basis as desired by the IRT.

## **9.2. RIBITS**

The ILF Sponsor will use the USACE's Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) to disclose the ILF Program's compensatory mitigation activities. The ILF Sponsor will also upload the annual program account report and project-specific monitoring reports to RIBITS and will alert the IRT when those reports are available. This will allow the IRT to track the progress of the ILF Program and monitor the credits and debits incurred to satisfy permitting requirements. This will also allow the IRT to view compliance reports and allow for communication of any necessary changes in Program administration on a timely basis.

The annual program account report will include all income received, disbursements, and interest earned, as well as a list of all permits for which ILF Program funds were accepted and a description of how the funds disbursed from the account were used. The report will also include credit balances at the end of the report period.

## 10. References

---

- Baxter, Roberta. (2017). "Water for Colorado Springs." *WaterWorld*. Available from:  
<https://www.waterworld.com/home/article/14070308/water-for-colorado-springs>.
- Cardno, Inc. (2020). Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands. Prepared for the Monarch CCAA/CCA Development Advisory Team. Available from:  
[https://www.fws.gov/sites/default/files/documents/Final\\_CCAA\\_040720\\_Fully%20Executed.pdf](https://www.fws.gov/sites/default/files/documents/Final_CCAA_040720_Fully%20Executed.pdf).
- Chapman, S.S., Griffith, G.E., Omernik, J.M., Price, A.B., Freeouf, J., and Schrupp, D.L. (2006). Ecoregions of Colorado (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,200,000).
- Code of Federal Regulations. (2008). Mitigation Banks and In-Lieu Fee Programs. 33 C.F.R. § 332.8. Available from: <https://www.ecfr.gov/current/title-33/chapter-II/part-332/section-332.8>.
- Colorado General Assembly. 2023. Projects to Restore Natural Stream Systems- Concerning Activities that restore the environmental health of natural stream systems without administration. 6 pp.
- Colorado Geological Survey. (2003). "Open-file Report OF-03-07 Evaluation of Mineral and Mineral Fuel Potential of El Paso County State Mineral Lands Administered by the Colorado State Land Board." *Colorado Geological Survey*.
- Colorado Parks and Wildlife (CPW). (2015). "Preble's Meadow Jumping Mouse Overall Range." Available from:  
[https://cpw.state.co.us/learn/Maps/Preble's\\_Meadow\\_Jumping\\_Mouse\\_Overall\\_Range.pdf](https://cpw.state.co.us/learn/Maps/Preble's_Meadow_Jumping_Mouse_Overall_Range.pdf).
- CPW. (2020). "Arkansas Darter Factsheet and Habitat Scorecard." Available from:  
[https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard\\_ArkansasDarter.pdf](https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard_ArkansasDarter.pdf).
- CPW. (2020b). "Orangespotted Sunfish Factsheet and Habitat Scorecard." Available from:  
[https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard\\_OrangespottedSunfish.pdf](https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard_OrangespottedSunfish.pdf).
- CPW. (2020c). "Preble's Meadow Jumping Mouse Factsheet and Habitat Scorecard." Available from:  
[https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard\\_PreblesMeadowJumpingMouse.pdf](https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard_PreblesMeadowJumpingMouse.pdf).
- CPW. (2020d). "Redbelly Dace Factsheet and Habitat Scorecard." Available from:  
[https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard\\_RedbellyDace.pdf](https://cpw.state.co.us/Documents/LandWater/WetlandsProgram/PrioritySpecies/Factsheet-and-Habitat-Scorecard_RedbellyDace.pdf).

- Fountain Creek Vision Task Force. (2009). "Strategic Plan for the Fountain Creek Watershed." Available from: [https://www.fountain-crk.org/files/6a8af9bae/mar09strategic\\_plan.pdf](https://www.fountain-crk.org/files/6a8af9bae/mar09strategic_plan.pdf).
- National Fish and Wildlife Foundation. 2022. Sacramento District California In-Lieu Fee Program, Amended. Available from: <https://www.nfwf.org/sites/default/files/2022-02/Amended-Enabling-Instrument-Revised-FINAL-02.18.22.pdf>. 40pp.
- Palmer Land Conservancy. (2022). "History of Agriculture in Southern Colorado." *Palmer Land Conservancy*. Available from: <https://www.palmerland.org/blog/history-of-agriculture-in-southern-colorado>.
- Stogner, Sr., Robert W. (2000). "Trends in Precipitation and Streamflow and Changes in Stream Morphology in the Fountain Creek Watershed, Colorado, 1939–99." US Geological Survey, Water Resources Investigation Report 00-4130. Available from: [https://www.fountain-crk.org/files/69c8ded6c/trends\\_particip\\_streamflow2000.pdf](https://www.fountain-crk.org/files/69c8ded6c/trends_particip_streamflow2000.pdf).
- Stroud, Hubert S. (2023). "Arkansas River." Central Arkansas Library System; CALS Encyclopedia of Arkansas. Available from: <https://encyclopediaofarkansas.net/entries/arkansas-river-2225/>.
- United States Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS). (2022). "Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin." *U.S. Department of Agriculture, Agriculture Handbook*.
- U.S. Environmental Protection Agency (USEPA). (2023). "Summary Table: Characteristics of Ecoregions of Colorado." Available from: [https://gaftp.epa.gov/EPADDataCommons/ORD/Ecoregions/co/co\\_back.pdf](https://gaftp.epa.gov/EPADDataCommons/ORD/Ecoregions/co/co_back.pdf).
- United States Fish and Wildlife Service (USFWS). (n.d.) "Species Profile: Eastern Black Rail." Available from: <https://ecos.fws.gov/ServCat/DownloadFile/235442>.
- USFWS. (n.d. b). "Species Profile: Preble's Meadow Jumping Mouse." Available from: <https://www.fws.gov/species/prebles-meadow-jumping-mouse-zapus-hudsonius-preblei>.
- USFWS. (n.d. c). "Species Profile: Tricolored Bat." Available from: <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>.
- USFWS. (2003). "Guidance for the Establishment, Use, and Operation of Conservation Banks." Available from: <https://www.fws.gov/sites/default/files/documents/conservation-banking-guidance-2003-05-02.pdf>.
- USFWS. (2023). "Species Status Assessment Report for Ute Ladies'-Tresses (*Spiranthes diluvialis*).". U.S. Fish and Wildlife Service, Utah Ecological Services Field Office, available from: <https://ecos.fws.gov/ServCat/DownloadFile/235442>.

Fountain Creek Watershed District  
In-Lieu Fee Program  
Prospectus  
El Paso and Pueblo Counties, Colorado  
December 17, 2024

Zuellig, R.E., Covert, S.A., and Hennessy, E.K. (2022). "Invertebrate, fish, and habitat data collected within the greater Fountain Creek Basin, Colorado, 2002-2022 (version 3.0, March 2023)." U.S. Geological Survey data release, available from: <https://doi.org/10.5066/P9PUY4FC>.

**Websites Referenced:**

Colorado State Demography Office (2024), available from: <https://demography.dola.colorado.gov/>

## **Appendix A Initial Example Projects Costing**

---

**Markup Report**



**Project:** Fountain Creek Watershed, Fountain Creek North  
**Phase:** Program Level  
**Date:** 10/7/2024

Description	Qty	UM	Unit \$	Total
Mobiliation (LS)	1.0	LS	\$ 50,000.00	\$ 50,000
DeMobiliation (LS)	1.0	LS	\$ 30,000.00	\$ 30,000
Excavation (CY)	245,470	CY	\$ 17.00	\$ 4,172,996
Haul (CY) - Spoils Onsite	245,470	CY	\$ 15.00	\$ 3,682,056
Clear and Grub (ac)	53.5	AC	\$ 500.00	\$ 26,725
Planting Implementaion - Re-Established Wetland	53.45	AC	\$ 5,000.00	\$ 267,250
Planting Implementaion - Rehabilitate Wetlands	15.19	AC	\$ 2,500.00	\$ 37,975
Monitoring	5.00	YR	\$ 10,000.00	\$ 50,000
<b>Total Direct Construction Cost</b>				<b>\$ 8,317,002</b>

Markup Description	Percentage	Subtotal
Design Contingency	0.0%	\$ -
General Conditions	5.0%	\$ 415,850
Overhead	5.0%	\$ 436,643
Profit	10.0%	\$ 916,949
Bond, Insurance	1.0%	\$ 100,864
Escalation*	0.0%	\$ -
Sales Tax	2.5%	\$ 254,683
<b>Total Marked Up Construction Cost</b>		<b>\$ 10,441,991</b>

Soft Costs	Subtotal
Design Fees	\$ 208,840
GC Pre-Construction Services	\$ -
CM Services	\$ 365,470
Floodplain Permitting	\$ 75,000
Permitting	\$ 75,000
<b>Total Soft Costs</b>	<b>\$ 724,310</b>

Owner Costs	Qty	UM	Unit \$	Subtotal
Project Contingency	8.0%		\$	893,304
Water Rights	1	LS	\$ 10,000.00	\$ 10,000
Land Management	1	YR	\$ 340,000.00	\$ 340,000
Conservation Easement	1	LS	\$ 50,000.00	\$ 50,000
Land Aquisition	68.64	AC	\$ 7,000.00	\$ 480,480
Attorney Fees	1	LS	\$ 15,000.00	\$ 15,000
Pre-endowment Maintenance	1	LS	\$ 150,000.00	\$ 150,000
Entitlement	1	LS	\$ 80,000.00	\$ 80,000

<b>Total Owner Costs</b>		<b>\$ 2,018,784</b>
<b>Project Cost</b>		<b>\$ 13,185,085</b>
<b>District Administrative Overhead</b>	<b>20.0%</b>	<b>\$ 2,637,017</b>
<b>Total project Costs</b>		<b>\$ 15,822,102</b>
	<b>Cost/Credit</b>	<b>\$ 258,954.20</b>

\*Escalation is calculated to mid-point of construction

\*Yellow highlight indicates constant costs (% or \$ amount)

# Markup Report



Project: **Fountain Creek Watershed, Frost**  
 Phase: **Program Level**  
 Date: **10/7/2024**

Description	Qty	UM	Unit \$	Total
Mobiliation (LS)	1.0	LS	\$ 50,000.00	\$ 50,000
DeMobiliation (LS)	1.0	LS	\$ 30,000.00	\$ 30,000
Excavation (CY)	321,536	CY	\$ 17.00	\$ 5,466,106
Haul (CY)	321,536	CY	\$ 15.00	\$ 4,823,034
Clear and Grub (ac)	55.8	AC	\$ 500.00	\$ 27,884
Planting Implementaion - Re-Established Wetland	55.8	AC	\$ 5,000.00	\$ 278,838
Planting Implementaion - Enhanced Wetland	201.66	AC	\$ 2,500.00	\$ 504,150
Monitoring	5.00	YR	\$ 10,000.00	\$ 50,000
<b>Total Direct Construction Cost</b>				<b>\$ 11,230,011</b>

Markup Description	Percentage	Subtotal
Design Contingency	0.0%	\$ -
General Conditions	5.0%	\$ 561,501
Overhead	5.0%	\$ 589,576
Profit	10.0%	\$ 1,238,109
Bond, Insurance	1.0%	\$ 136,192
Escalation*	0.0%	\$ -
Sales Tax	2.5%	\$ 343,885
<b>Total Marked Up Construction Cost</b>		<b>\$ 14,099,273</b>

Soft Costs	Subtotal
Design Fees	\$ 281,985
GC Pre-Construction Services	\$ -
CM Services	\$ 493,475
Floodplain Permitting	\$ 50,000
Permitting	\$ 50,000
<b>Total Soft Costs</b>	<b>\$ 875,460</b>

Owner Costs	Qty	UM	Unit \$	Subtotal
Project Contingency	8.0%		\$	1,197,979
Water Rights	1	LS	\$ 10,000.00	\$ 10,000
Land Management	1	YR	\$ 340,000.00	\$ 340,000
Conservation Easement	1	LS	\$ 50,000.00	\$ 50,000
Land Aquisition	257.43	AC	\$ 7,000.00	\$ 1,801,993
Attorney Fees	1	LS	\$ 15,000.00	\$ 15,000
Pre-endorment Maintenance	1	LS	\$ 150,000.00	\$ 150,000
Entitlement	1	LS	\$ 80,000.00	\$ 80,000

**Total Owner Costs** \$ **3,644,971**

**Project Cost** **\$ 18,619,704**

**District Administrative Overhead** 20% \$ **3,723,941**

**Total Project Costs** \$ **22,343,644**

<b>Cost per credit</b>	<b>\$134,982</b>
Stream	\$2,500.00

\*Escalation is calculated to mid-point of construction

\*Yellow highlight indicates constant costs (% or \$ amount)

**Markup Report**



**Project:** Fountain Creek Watershed, BJ Ranches  
**Phase:** Program Level  
**Date:** 10/7/2024

Description	Qty	UM	Unit \$	Total
Mobiliation (LS)	1.0	LS	\$ 50,000.00	\$ 50,000
DeMobiliation (LS)	1.0	LS	\$ 30,000.00	\$ 30,000
Excavation (CY)	73,875	CY	\$ 17.00	\$ 1,255,882
Haul (CY)	73,875	CY	\$ 15.00	\$ 1,108,131
Clear and Grub (ac)	0.73	AC	\$ 500.00	\$ 363
Planting Implementaion - Re-Established Wetland	0.73	AC	\$ 5,000.00	\$ 3,625
Planting Implementaion - Enhanced Wetland	181.87	AC	\$ 2,500.00	\$ 454,675
Monitoring	5.00	YR	\$ 10,000.00	\$ 50,000
<b>Total Direct Construction Cost</b>				<b>\$ 2,952,675</b>

Markup Description	Percentage	Subtotal
Design Contingency	0.0%	\$ -
General Conditions	5.0%	\$ 147,634
Overhead	5.0%	\$ 155,015
Profit	10.0%	\$ 325,532
Bond, Insurance	1.0%	\$ 35,809
Escalation*	0.0%	\$ -
Sales Tax	2.5%	\$ 90,417
<b>Total Marked Up Construction Cost</b>		<b>\$ 3,707,082</b>

Soft Costs	Subtotal
Design Fees	\$ 74,142
GC Pre-Construction Services	\$ -
CM Services	\$ 129,748
Floodplain Permitting	\$ 50,000
Permitting	\$ 50,000
<b>Total Soft Costs</b>	<b>\$ 303,890</b>

Owner Costs	Qty	UM	Unit \$	Subtotal
Project Contingency	8.0%		\$	320,878
Water Rights	1	LS	\$ 10,000.00	\$ 10,000
Land Management	1	YR	\$ 340,000.00	\$ 340,000
Conservation Easement	1	LS	\$ 50,000.00	\$ 50,000
Land Aquisition	182.60	AC	\$ 7,000.00	\$ 1,278,165
Attorney Fees	1	LS	\$ 15,000.00	\$ 15,000
Pre-endowment Maintenance	1	LS	\$ 150,000.00	\$ 150,000
Entitlement	1	LS	\$ 80,000.00	\$ 80,000
<b>Total Owner Costs</b>				<b>\$ 2,244,043</b>

<b>Project Cost</b>	<b>\$ 6,255,014</b>
<b>District Administrative Overhead</b>	<b>20%</b>
	<b>\$ 1,251,003</b>
<b>Total Project Costs</b>	<b>\$ 7,506,017</b>

**Cost/credit \$ 82,538.13**  
 Stream:

\*Escalation is calculated to mid-point of construction

\*Yellow highlight indicates constant costs (% or \$ amount)

## Markup Report



Project: **Fountain Creek Watershed, T-Cross**  
 Phase: **Program Level**  
 Date: **10/7/2024**

Description	Qty	UM	Unit \$	Total
Mobiliation (LS)	1.0	LS	\$ 50,000.00	\$ 50,000
DeMobiliation (LS)	1.0	LS	\$ 30,000.00	\$ 30,000
Excavation (CY)	2,596,124	CY	\$ 17.00	\$ 44,134,109
Haul (CY)	2,596,124	CY	\$ 15.00	\$ 38,941,861
Clear and Grub (ac)	326.75	AC	\$ 500.00	\$ 163,375
Planting Implementaion - Re-Established Wetland	326.75	AC	\$ 5,000.00	\$ 1,633,750
Planting Implementaion - Enhanced Wetland	103.34	AC	\$ 2,500.00	\$ 258,350
Monitoring	5.00	YR	\$ 10,000.00	\$ 50,000
<b>Total Direct Construction Cost</b>				<b>\$ 85,261,444</b>

Markup Description	Percentage	Subtotal
Design Contingency	0.0%	\$ -
General Conditions	5.0%	\$ 4,263,072
Overhead	5.0%	\$ 4,476,226
Profit	10.0%	\$ 9,400,074
Bond, Insurance	1.0%	\$ 1,034,008
Escalation*	0.0%	\$ -
Sales Tax	2.5%	\$ 2,610,871
<b>Total Marked Up Construction Cost</b>		<b>\$ 107,045,695</b>

Soft Costs	Subtotal
Design Fees	\$ 2,140,914
GC Pre-Construction Services	\$ -
CM Services	\$ 3,746,599
Floodplain Permitting	\$ 100,000
Permitting	\$ 100,000
<b>Total Soft Costs</b>	<b>\$ 6,087,513</b>

Owner Costs	Qty	UM	Unit \$	Subtotal
Project Contingency	8.0%			\$ 9,050,657
Water Rights	1	LS	\$ 10,000.00	\$ 10,000
Land Management	1	YR	\$ 340,000.00	\$ 340,000
Conservation Easement	1	LS	\$ 50,000.00	\$ 50,000
Land Aquisition	430.09	AC	\$ 7,000.00	\$ 3,010,630
Attorney Fees	1	LS	\$ 15,000.00	\$ 15,000
Pre-endowment Maintenance	1	LS	\$ 150,000.00	\$ 150,000
Entitlement	1	LS	\$ 80,000.00	\$ 80,000

**Total Owner Costs** \$ **12,706,287**

**Project Costs** \$ **125,839,495**

**District Administrative Overhead** 20% \$ **25,167,899**

**Total Project Costs** \$ **151,007,394**

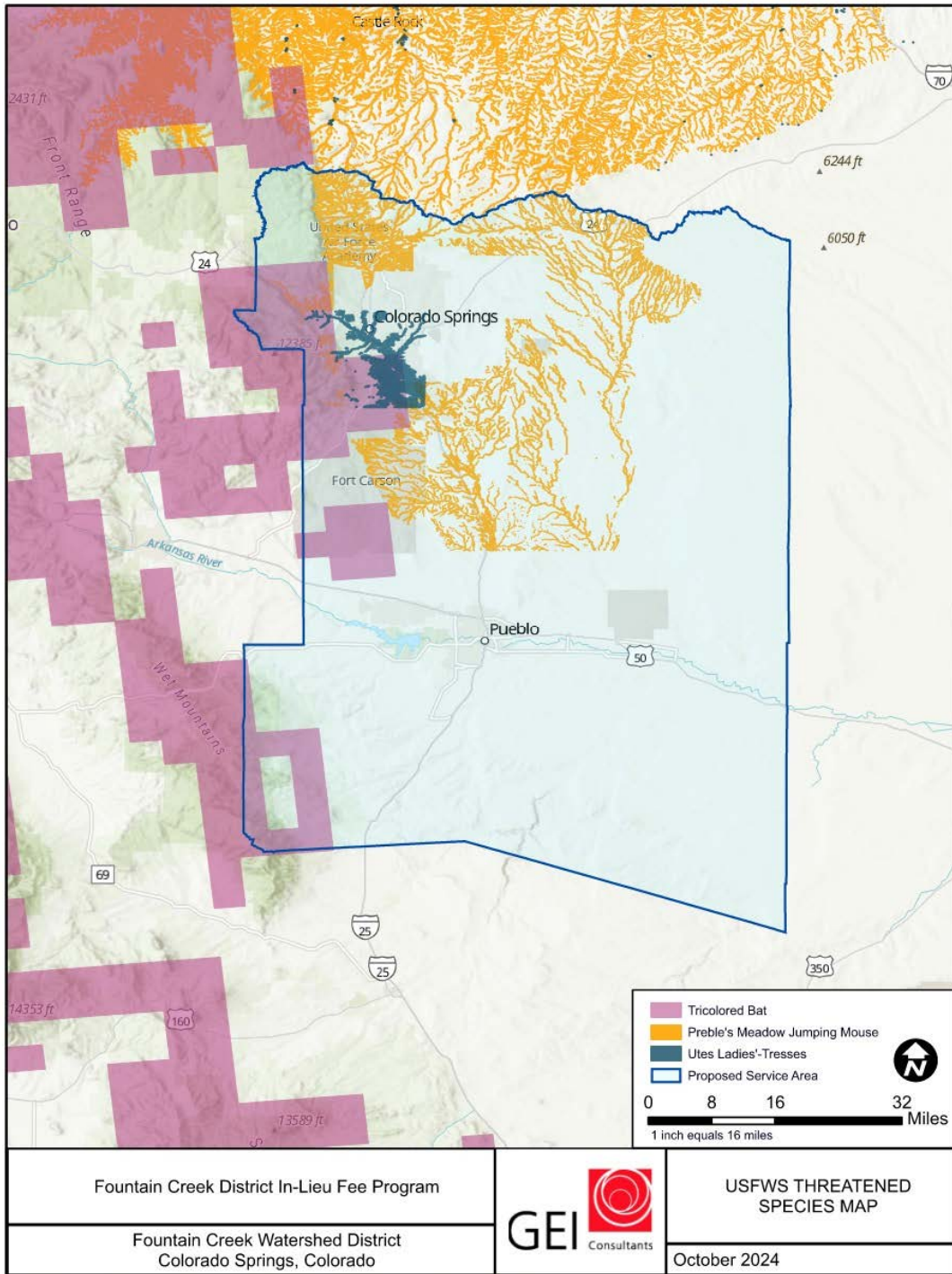
**Cost/Credit** \$ **399,015.44**

\*Escalation is calculated to mid-point of construction

\*Yellow highlight indicates constant costs (% or \$ amount)

## **Appendix B USFWS Species Map**

---



**Map 1: USFWS species ranges for selected threatened/endangered species present within proposed Service Area. Not shown: Monarch Butterfly and Eastern Black Rail species ranges, which overlay the entire Service Area.**