

UTAH DWSRF ENVIRONMENTAL REVIEW CHECKLIST

The following checklist must be completed for DDW to determine the necessary environmental review requirements for the proposed project, or to determine if the project qualifies for a categorical exclusion. Please contact a DWSRF Project Manager with any questions.

Section 1. General Information

Recipient Name: Price City, UT

Date: 4/06/2026

Project Title: Price Spring Transmission Line
Replacement Project

Project Number: P13166-2023-003

Project Contact: Rexford Carpenter

Phone Number: 406-750-5781

Email: rex.carpenter@ae2s.com

Project Description: *Include the following elements- A brief, complete description of the proposed project; Geographical extent of planning area boundaries; Description of all proposed construction activities; Length, width, depth of ground disturbance.* See attached supplemental information document

Location: *Legal address and Township(s), Range(s), and Section(s).* See attached supplemental information document

Map: *Attach a map(s) of the proposed project showing the planning area boundaries, location of all ground disturbing areas, and any known environmentally sensitive areas.* See attached supplemental information document

Section 2. Categorical Exclusion Eligibility

A project for which the answer to any part of statement 1 is “yes” may be eligible for a Categorical Exclusion. However, if any of the statements from 2 through 6 is answered “yes,” then the project is not eligible. [40 CFR §6.204(a)(1)(ii)]

	Yes	No	Basis for Determination and Documentation*
1. The project relates to existing infrastructure systems and involves minor upgrading, minor expansion of system capacity, rehabilitation (including functional replacement) of the existing system and system components, or construction of new minor ancillary facilities adjacent to or on the same property as existing facilities.	☒	☐	Project includes upgrades that will replace the 90 year old steel water transmission line through remote price canyon springs in Utah County into Carbon county along US highway 6. See attached supplemental information.
2. The project involves new or relocated discharges to surface or groundwater.	☐	☒	Project does not involve discharges to surface or groundwater. See attached supplemental information.
3. The project will likely result in the substantial increase in the volume or the loading of pollutants to the receiving water.	☐	☒	Project will not increase pollutants or volume. See attached supplemental information.
4. The project will provide capacity to serve a population 30% greater than the existing population.	☐	☒	Project does not provide additional system capacity. See attached supplemental information.
5. A state or other regional growth plan or strategy does not support this project. <i>Answering "yes" indicates that the project is not supported.</i>	☐	☒	Project is not objected to by any state or regional growth plan. See attachment B of the supplemental information.
6. The project directly or indirectly involves or relates to upgrading or extending infrastructure systems primarily for the purposes of future development.	☐	☒	Project is not designed primarily for future development - the project is strictly to replace aged and failing pipe. See attached supplemental information.

Section 3. Extraordinary Circumstances

If any of the following extraordinary circumstances apply to the project, it is not eligible for a Categorical Exclusion. [40 CFR §6.204(2)(1)-(10)]

	Yes	No	Basis for Determination and Documentation*
1. The proposed action is known or expected to have potentially significant environmental impacts on the quality of the human environment either individually or cumulatively over time.	☐	☒	Project will lower risk of failure in a vital source for the city of Price.
2. The proposed action is known or expected to have disproportionately high and adverse human health or environmental effects on any community, including minority communities, low-income communities, or federally recognized Indian tribal communities.	☐	☒	Project will not have High and adverse impacts. It will protect communities down stream in providing reliable drinking water through a critical pipeline.
3. The proposed action is known or expected to significantly affect federally listed threatened or endangered species or their critical habitat.	☐	☒	See attached Supplemental Information, number 3 and attachment C
4. The proposed action is known or expected to significantly affect national natural landmarks or any property with nationally significant historic, architectural, prehistoric, archeological, or cultural value, including but not limited to, property listed on or eligible for the National Register of Historic Places.	☐	☒	See attached supplemental information.
5. The proposed action is known or expected to significantly affect environmentally important natural resource areas such as:			For 5 see section in supplemental information and attachment C.
5a. wetlands	☐	☒	
5b. floodplains	☐	☒	
5c. significant agricultural lands	☐	☒	
5d. aquifer recharge zones	☐	☒	
5e. wild and scenic rivers	☐	☒	
5f. significant fish or wildlife habitat	☐	☒	
6. The proposed action is known or expected to cause significant adverse air quality effects.	☐	☒	Project is not expected to cause significant adverse air quality effects.
7. The proposed action is known or expected to have a significant effect on the pattern and type of land use (industrial, commercial, agricultural, recreational, residential) or growth and distribution of population including altering the character of existing residential areas, or may not be consistent with state or local government, or federally-recognized Indian tribe approved land use plans or federal land management plans.	☐	☒	Project does not alter land use type or intention. Project does not have an effect on the distribution of population. Project is consistent with all applicable state, local, federally-recognized Indian tribe approved land use plans, and federal land management plans. See attached supplemental information.
8. The proposed action is known or expected to cause significant public controversy about a potential environmental impact of the proposed action.	☐	☒	The project is not expected to generate public controversy, as it involves replacing critical water infrastructure for Price City.
9. The proposed action is known or expected to be associated with providing financial assistance to a federal agency through an interagency agreement for a project that is known or expected to have potentially significant environmental impacts.	☐	☒	Funding is ONLY for this project and Price City is NOT providing financial assistance for another agency for a project with known or expected significant impacts. See Attached supplemental information.
10. The proposed action is known or expected to conflict with federal, state or local government, or federally recognized Indian tribe environmental, resource-protection, or land-use laws or regulations.	☐	☒	Project does not conflict with any local or federal government, Indian Tribe, or land use laws or regulations. Project is an improvement of existing infrastructure. See attached supplemental information.

****Basis for Determination and Documentation***

The basis for determination and documentation information must be traceable and establish factual data to support the response to each item. Types of information may include field observations, maps, websites, published plans or studies. Cite the source.

Section 4. Special Conditions

	Yes	No	Comments/Documentation
1. The project is for planning purposes only and does not include construction.	☐	☒	Project includes the design of project Improvements. Bidding and construction will happen after adoption of the NEPA.
2. An EA/FONSI or EIS/ROD under NEPA has been conducted for this project or earlier phases of this project. <i>*If yes, provide a copy of the review document and decision</i>	☐	☒	No EA or EIS under NEPA has been conducted for this project or earlier phases.

CERTIFICATION AND AUTHORIZATION

☒ *I certify that the information contained in this Environmental Review Checklist is, to the best of my knowledge, true, accurate, and correct.*

I hereby affirm that I, Rexford Carpenter am the Project Manager and I am authorized by Price City to submit this Environmental Review Checklist on behalf of the organization for which I am acting.

Utah DWSRF
Environmental Review Checklist
Supplemental Information

Section 1: General Information

Project Description

The City is the municipal supplier of water to users and owns and maintains the associated transmission main and distribution system for the system. A portion of the existing pipeline, approximately 6.5 miles long, is in a state of deterioration. The steel pipeline is in poor condition, experiencing leakage, and could be prone to failure if not replaced. The purpose and need of the Project is to replace this segment by installing new HDPE adjacent to the existing steel pipe. The new segment of pipeline would then tie into the existing overall system and maintain service to the City into the future with few maintenance issues.

The proposed alternative is situated in central Utah along the Union Pacific Railroad and Price River in Price Canyon near Colton, UT and Kyune Pass (Emma Park rd). Most of the proposed pipeline lies in Utah County while a small section at the end of the pipeline lies in Carbon County.

The proposed alternative consists of roughly 6.45 miles of 8, 16, and 24-inch pipe to replace about half of the 12-mile-long existing transmission pipeline that conveys water from the sources of Colton Springs and UP&L Well #1 to the city's water treatment plant. This pipeline is critical to the City as the springs are the only year-round source of water operated by the city. The segments of the existing pipeline that would be decommissioned and the segments of the proposed pipeline are outlined in Table 1.

Table 1: Segments of existing pipeline and its size, along with proposed pipeline.

Existing Pipeline		Proposed Pipeline	
8-inch Steel	1,990 ft	8-inch HDPE	2,636 ft
18-inch Steel	24,363 ft	24-inch HDPE	20,965 ft
18-inch HDPE	475 ft	16-inch HDPE	10,211 ft

12-inch Steel	7,413 ft		
Total:	34,241 ft	Total:	33,812 ft

Location

Table 2 provides the location for each segment of the proposed pipeline.

Table 2: Location of the Proposed Alternative by Township, Range and Section, also includes Federal Status Lands.

Township	Range	Section	Land Status	Existing Pipe Size and Material	Existing Pipe Length (ft)	Proposed Pipe Size and Material	Proposed Pipe Length (ft)
T12S	RE9	05	BLM	12" Steel	3,302	16" HDPE	3,102
T11S	RE8	23	Private	18" HDPE	475	24" HDPE	1,901
				18" Steel	1,459		
T11S	RE8	25	Private	18" Steel	6,016	24" HDPE	6,013
T11S	RE8	26	Private	18" Steel	5,158	24" HDPE	5301
				8" Steel	1,605	8" HDPE	1,725
T11S	RE8	27	Private	18" Steel	938	24" HDPE	315
				8" Steel	277	8" HDPE	813
T11S	RE9	30	Private	18" Steel	6,119	24" HDPE	6,088
			BLM	18" Steel	385	24" HDPE	400
T11S	RE9	31	Private	18" Steel	417	24" HDPE	441
T11S	RE9	32	Private	12" Steel	4,111	16" HDPE	7,109
				18" Steel	3,870	24" HDPE	515
T11S	RE8	35	Private	8" Steel	107	8" HDPE	98

Total:	BLM	3,687	3,502
	Private	30,552	30,319

Map

Below is an overall map of the project alignment. The pipeline ROW extends from the Colton Springs and UP&L Well #1 intake structure approximately 1.6 miles southeast of Colton, UT, to its termination point roughly 0.5 miles southwest of the Kyune pass railroad tunnel, nestled in the shoulder of US 6.

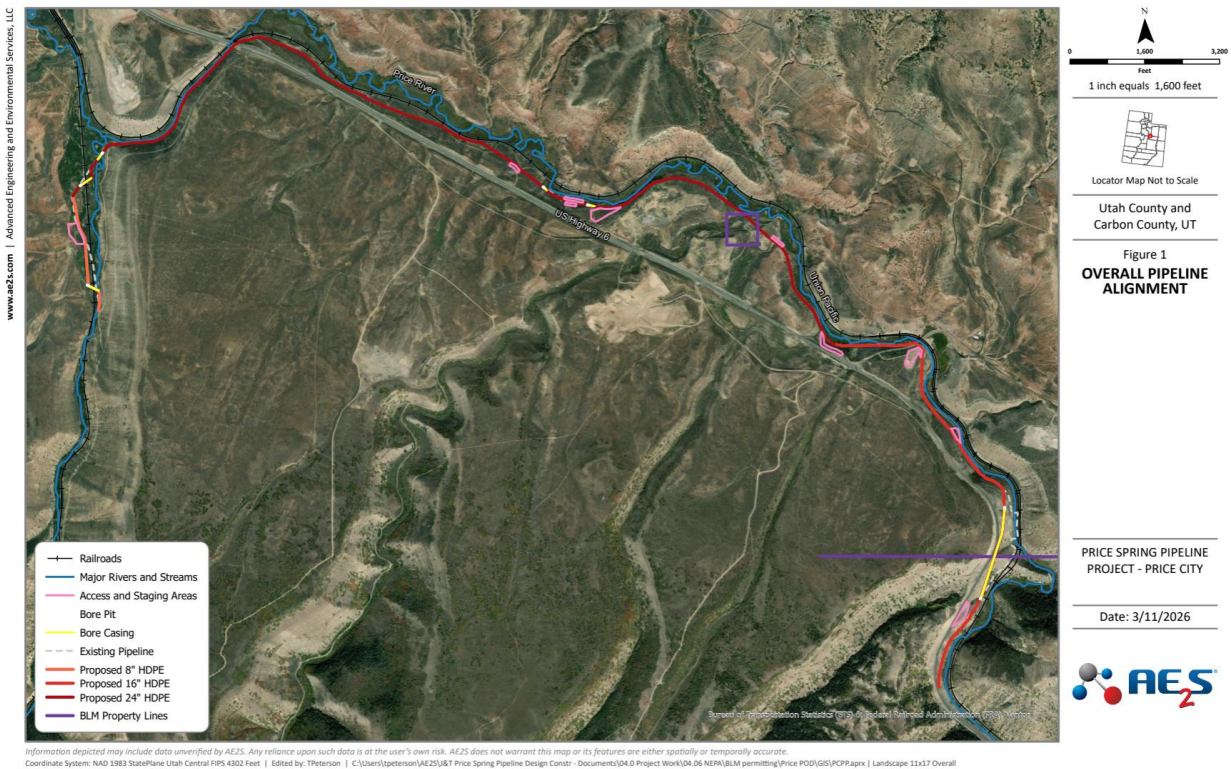


Figure 1: Overall Pipeline Alignment

Please refer to Attachment A for additional project maps including closer views of the project ROW, impact area, and site specificity.

Section 2: Categorical Exclusion Eligibility

The following supplements the basis for determination and documentation criteria for the Categorical Exclusion eligibility.

1. Existing Infrastructure Systems

The proposed alternative includes upgrading an existing water pipeline that is approximately 90 years old and in deteriorating condition. The alignment is planned to offset the existing line in order to keep the line in service until the replacement is complete. This is primarily due to the existing pipeline being the main water source for the Price service area. The new pipeline would functionally replace the existing pipeline once completed and serve the current service area in the future with roughly the same service capacity.

2. Discharges to surface or groundwater

The proposed alternative includes no new discharge locations to surface or groundwater sources. During construction, the project will have a stormwater construction permit and appropriately manage the site with BMPs and stormwater controls to prevent erosion or sedimentation discharges to adjacent waters on the site. All construction associated activities are temporary in nature.

3. Increase in volume or loading of pollutants to receiving water

No proposed increases in volume or loading of pollutants to receive water is proposed with this project. Construction of the pipeline would include restoring the impacted ROW to pre-construction grade and reseeded. There are a few locations on private parcels that include access road extensions for long-term access to the pipeline. These areas would not be restored. Post-construction there is no increased impervious surface area proposed to increase volume of stormwater in the area. As stated previously, during construction the project will have a stormwater construction permit and appropriately manage the site with BMPs and stormwater controls to prevent erosion or sedimentation discharges to adjacent waters on the site. There is no proposal to increase pollutant loads to receiving water.

4. Increase Population served by 30%

The proposed project is considered an emergency replacement of the existing pipeline. The deterioration of this pipeline is the purpose of the project, and the new pipeline would serve the current population. Increasing the supply of water is not the purpose of this project, nor is it to support any specific housing developments.

5. State or Regional Growth Plan

As stated previously, the purpose of the project is to serve as an emergency pipeline replacement for Price City and the existing service area. This project would be consistent with any state or regional growth plan. The project is included in the current Price City Water Master Plan. Please refer to attachment B for Price City Water Master Plan.

6. Upgrading Infrastructure for Future Development

The proposed project is anticipated to benefit public health. Adding updated infrastructure free of leaks and potential issues would add resilience to the overall municipal water system and help meet conservation goals. Future maintenance issues would be reduced, and the City can meet service area demands.

Section 3: Extraordinary Circumstances

1. Quality of the Human Environment

No impacts are anticipated on the quality of the human environment. The proposed project area would be along with existing underground infrastructure as well as existing transportation. Post construction, the area can be restored and reclaimed with above ground appurtenances kept to a minimum and no visual impacts anticipated. If constructed, the project may have a beneficial impact on quality of the human environment as it would supply water without leaks or potential pipeline failure, which could leave users without water supply until repairs could be made.

2. Human Health or Environmental Impacts on any Community, including Minority or Low-income Communities

The proposed project is a public infrastructure project. No adverse impacts are anticipated. Replacing the pipeline would add resiliency to the existing system but

would not propose adding users to the system. Price provides water to all users in the area regardless of minority or low-income status; therefore all would be served by the improvement and not be disproportionately affected. Further, due to the location of the pipeline along the highway no low-income or minority housing areas are in the potential construction areas. No disproportionate impacts are anticipated.

3. Federally Listed Threatened or Endangered Species or their Critical Habitat

A Biological Assessment (Attachment C) was completed for the proposed project by Western-Enviro Resources Inc. The report details potential impacts. Below summarizes the findings for Federally listed Threatened or Endangered Species and their critical habitat. The report may be referenced for additional information, support and additional mitigation measures.

S. diluvialis

May Affect, Not Likely to Adversely Affect: Potential impacts to *S. diluvialis* would be indirect and primarily related to construction related disturbance would be minor, local and temporary. None of the potential habitat would be lost as a result of the Proposed Action.

Mexican spotted owls

May Effect, Not Likely to Adversely Affect: Although suitable habitat is located within the project area, Mexican spotted owls have not been reported in the area and the potential for presence is low. Impacts related to the Proposed Action would be minor, and abundant habitat is present in the surrounding area to support any displaced individuals. Should construction occur between March 1 and August 31, pre-construction surveys be conducted to ensure that no nesting individuals are present within one-half mile of the project ROW. With the implementation of mitigation measures, including pre-construction surveys, the Proposed Action may affect, but is not likely to adversely affect Mexican spotted owl.

Raptors

No Effect: Two (2) nests were identified within one-half mile of the project ROW. Impacts to foraging and nesting habitat would be negligible. In addition, there is abundant habitat in the surrounding area to support any displaced individuals. Migratory bird surveys are recommended if work is planned between January 1 and August 31. Through the implementation of

mitigation measures, including pre-construction surveys, the Proposed Action would have no effect on Raptors.

Monarch butterfly

No Effect: Impacts to monarch butterfly habitat related to the Proposed Action are minor, and habitat suitable to the species is present near the project area to support any displaced individuals. Mitigation measures would be implemented to minimize impacts to monarch butterfly. Specifically, the reclamation seed mix would include pollinator-promoting flowering species. The Proposed Action would have no measurable effect on this species.

Suckley's cuckoo bumble bee

No Effect: Potential for this species to occur within the project area is low and impacts to Suckley's cuckoo bumble bee foraging habitat related to the Proposed Action would be minor. There is abundant habitat in the surrounding area to support any displaced individuals. Impacts to this species would be negligible.

Greater sage-grouse

May Affect, Not Likely to Adversely Affect: The project area is located within a Habitat Management Area and greater sage-grouse is known to occur. The Proposed Action may affect but is not likely to adversely affect this species. Impacts would be localized, temporary, and associated with disturbance related to construction activities. Mitigation measures, including preconstruction clearance surveys, would minimize potential impacts to greater sage-grouse in the area.

4. Cultural, Historical, and Archaeological Resources

No Historic Properties Adversely Affected recommendation was provided for the project from the cultural consultant. The BLM is initiating the consultation with the State Historic Preservation Office (SHPO).

5. Environmentally Important Natural Resource Areas

a. Wetlands

There are some wetlands that will be crossed in the requested ROW. In these areas, the wetland topsoil will be recovered. Impacts to wetland would be temporary during construction activities. Post-construction, the impacted ROW would be restored to pre-project grade and reseeded and allowed to go back to pre-project functionality. No fill material is proposed in WOTUS.

b. Floodplains

While most of the alignment is above the flood plain the preferred alternative is a buried pipeline. Once constructed the pipeline would be buried and flooding is not applicable to any above ground appurtenances.

c. Agricultural Lands

The proposed ROW is along Highway 6. No prime farmland is along the proposed ROW. In addition, once construction is complete the area will be restored to pre-project conditions and reseeded. No impervious impacts or changes to land use are proposed with this project.

d. Aquifer Recharge Zones

The proposed project area is outside of an aquifer recharge zone; therefore, no impacts are anticipated.

e. Wild and Scenic Rivers

No Wild and Scenic Rivers are in the area of the proposed project.

f. Significant Fish or Wildlife Habitat

The biological survey report attached to this document can provide additional details on significant habitats and species. The project area was surveyed for federally listed TEPC species, migratory birds, including raptors. Potential nesting habitats within the wildlife buffers were examined for nests using a spotting scope and binoculars. If a raptor nest was encountered, its location was documented, along with information on species (if evident).

Mexican Spotted Owl:

Impact Summary: Suitable habitat for Mexican spotted owl occurs throughout the project area and would be impacted by the proposed project. Impacts to habitat would be temporary, minor, and local. Ground disturbance related to the proposed project may facilitate the introduction and spread of invasive and non-native plant species which would degrade habitat quality. Primary impacts associated with the project would be associated with disturbance from increased human activity, and light and noise related to construction and ongoing operations.

May Effect, Not Likely to Adversely Affect: Although suitable habitat is located within the project area, Mexican spotted owls have not been reported in the area and the potential for presence is low. Impacts related to the Proposed Action would be minor, and abundant habitat is present in the surrounding area to support any displaced individuals. Should construction occur between March 1 and August 31, pre-construction surveys will be conducted to ensure that no nesting individuals are present within one-half mile of the project ROW. With the implementation of mitigation measures (see Section 8.0), including pre-construction surveys, the Proposed Action may affect, but is not likely to adversely affect Mexican spotted owl.

Raptors

Impact Summary: Two (2) nests were identified within the survey area. Suitable foraging and nesting habitats are present throughout the project area, especially in the riparian corridor along the Price River and on nearby rocky steep slopes above the river. Impacts to raptors would be temporary and associated with disturbance during construction activities. Impacts would dissipate as distance increases from the proposed disturbance footprint; potential impacts would correlate with proximity to project features.

No Effect: Two (2) nests were identified within one-half mile of the project ROW. Impacts to foraging and nesting habitat would be negligible. In addition, there is abundant habitat in the surrounding area to support any displaced individuals. Migratory bird surveys are recommended if work is planned between January 1 and August 31. Through the implementation of mitigation measures, including pre-construction surveys, the Proposed Action would have no effect on raptors.

Figures 1 and 2 were pulled from the report to display survey areas. Please refer to Attachment C for the full report and details.

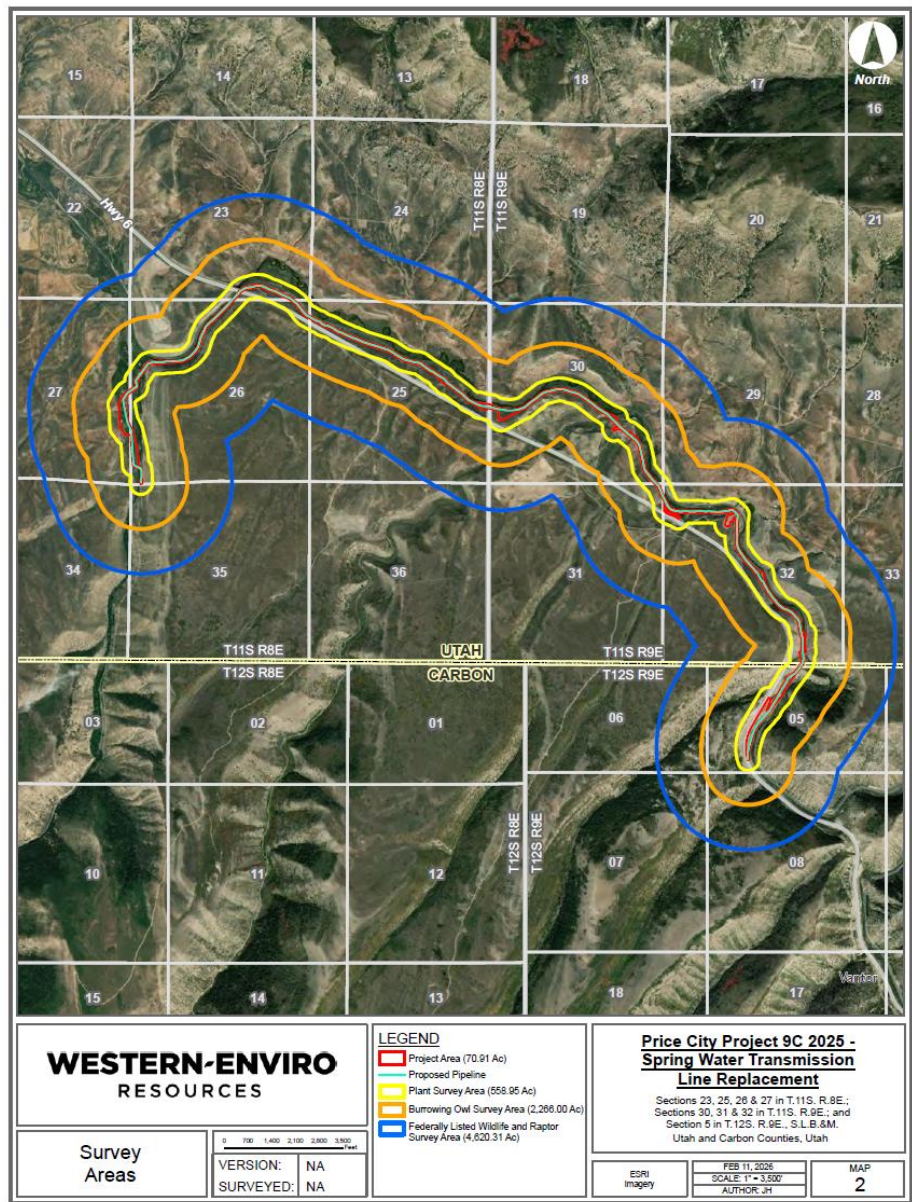


Figure 1: Western-Enviro Resources Survey areas.

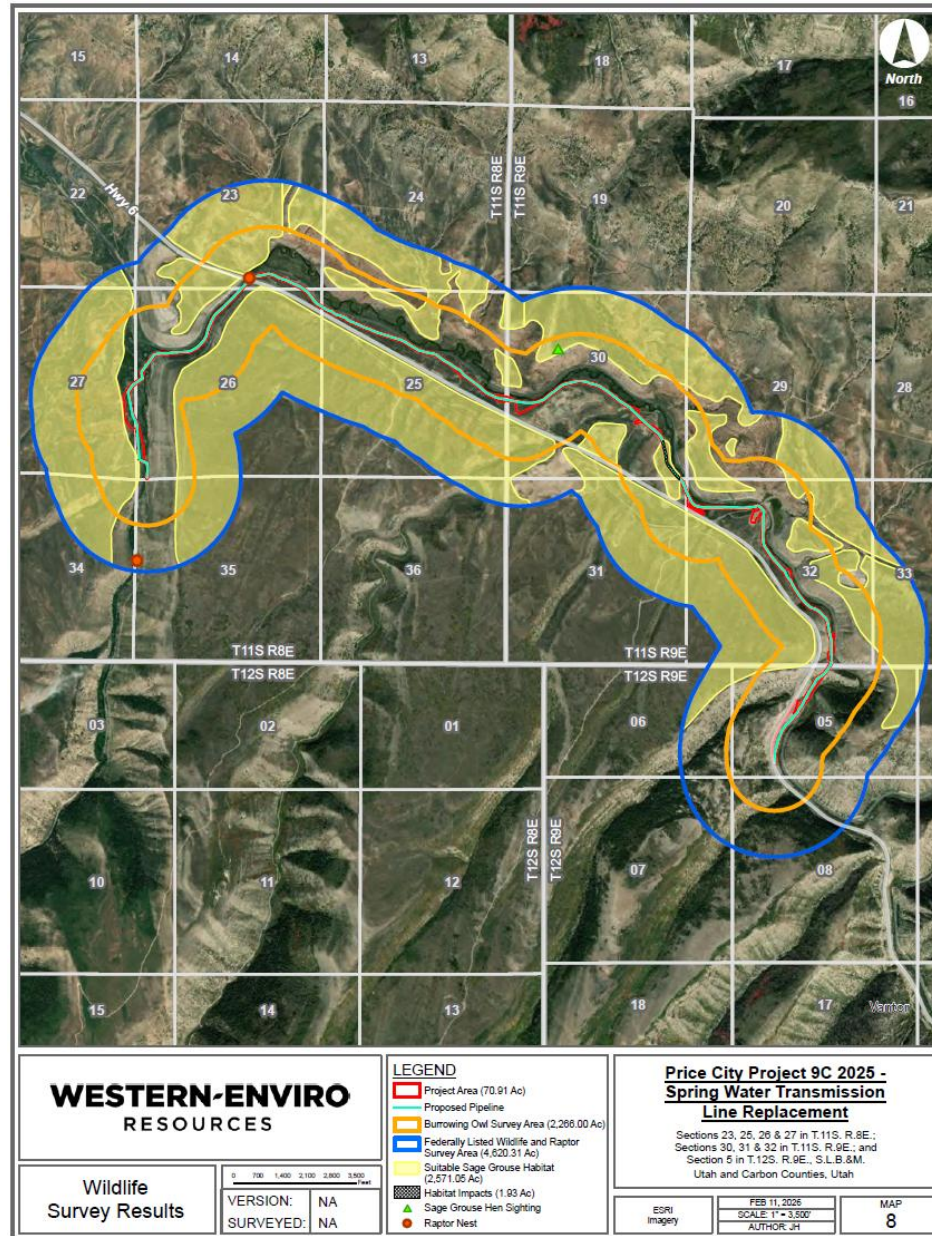


Figure 2: Western-Environ Resources Wildlife Survey results.

6. Air Quality

No significant impacts are anticipated with air quality. Some temporary air quality impacts may occur during construction activities. These impacts would be minor and temporary. Impacts would be managed with BMPs such as appropriately working equipment, noise management, watering dry soils as needed to prevent sedimentation.

7. Land Use

The proposed project is an underground pipeline. This project does not propose any land use change. Impacts would be temporary during construction and would be returned to pre-project grade and conditions or improved for maintenance access once completed. The project consists of all applicable state, local, tribal, and federal land management plans. Attachment D: Form 299b is attached for reference.

8. Public Controversy

This is a public infrastructure project with an emergency replacement designation. Due to the pipeline being the only year-round source of water for the Price service area, it is not likely that the project would have public controversy. In addition, the project location is along US 6, with a narrow ROW. It is not likely that the location would cause public controversy.

9. Financial Assistance to a Federal Agency through an Interagency Agreement

The project would not provide any financial assistance to any other federal agency in any capacity, including interagency agreements. The only financial components of the project are for design and construction of the facility.

10. The proposed alternative is known or expected to conflict with federal, state or local government, or federally recognized Indian tribe environmental, resource protection, or land use laws or regulations

The proposed alternative is not anticipated to impact federal, state, or local government, or federally recognized Indian tribe environmental, resources protection or land use laws and regulations. The BLM will review Form 299. The Army Corp of engineers will act as the lead Federal agency for Section 106 consultation.

Section 4: Special Conditions

1. Project is for Planning Purposes and includes no Construction

Due to the condition of the existing pipeline the city is considering it an emergency to push this project forward. The project includes phases for the planning and design of the preferred alternative. Construction will occur only after record of decision of the project planning phase.

2. NEPA work has been conducted for an earlier phase of this project

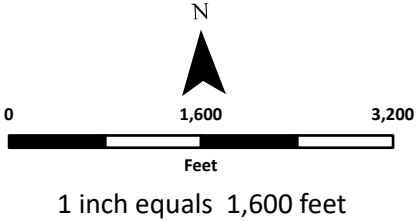
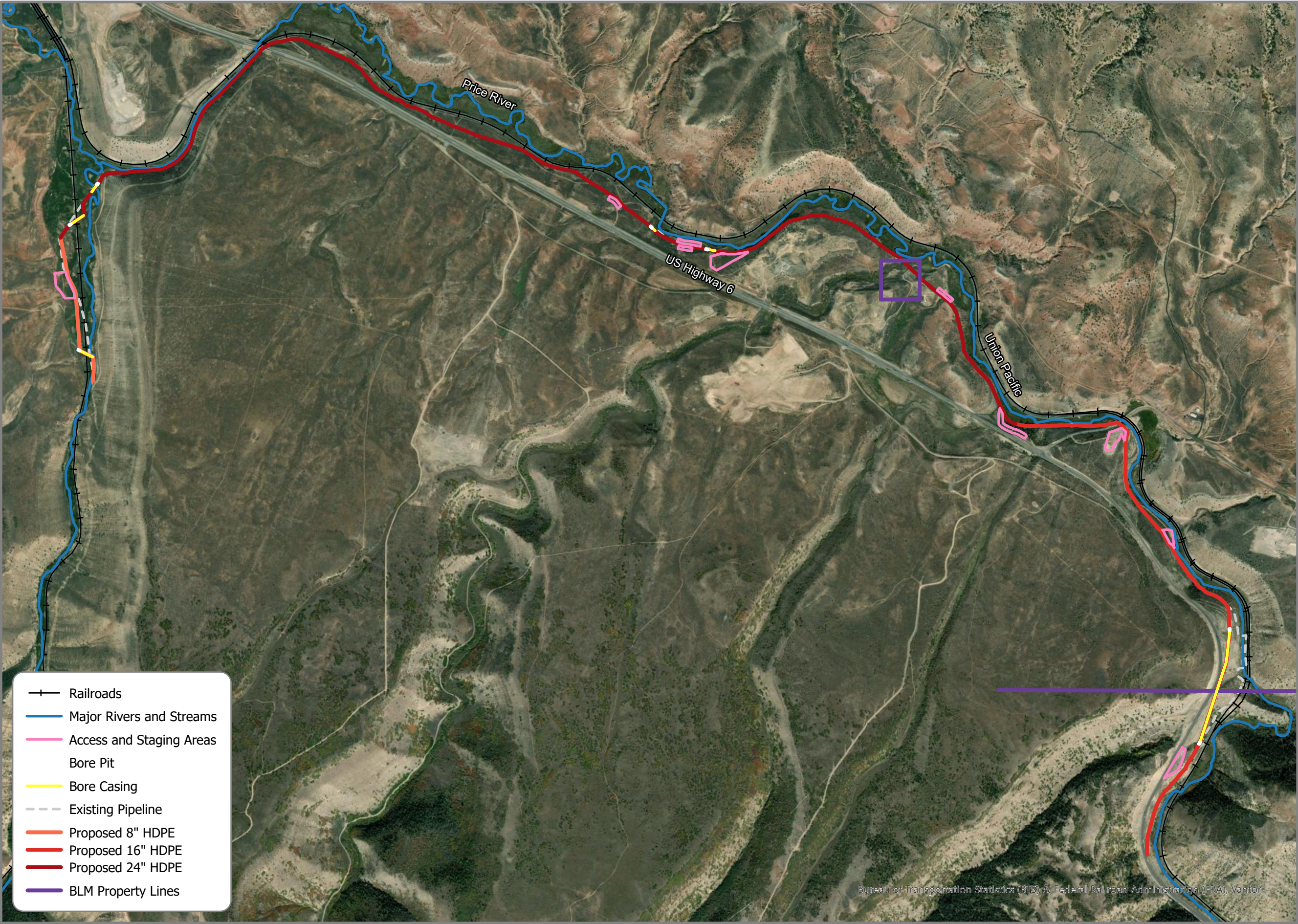
No NEPA work in the form of an EA/FONSI or EIS/ROD has been conducted for an earlier phase of this project.

Attachment A: Mapping of the Proposed Project Area

Attachment B: Price City Water Master Plan

Attachment C: Biological Assessment

Attachment D: SF299 (BLM ROW application)



Utah County and
Carbon County, UT

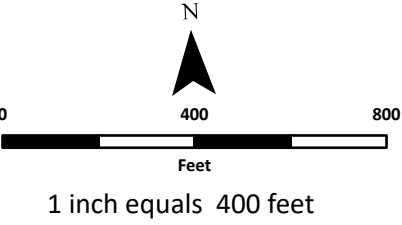
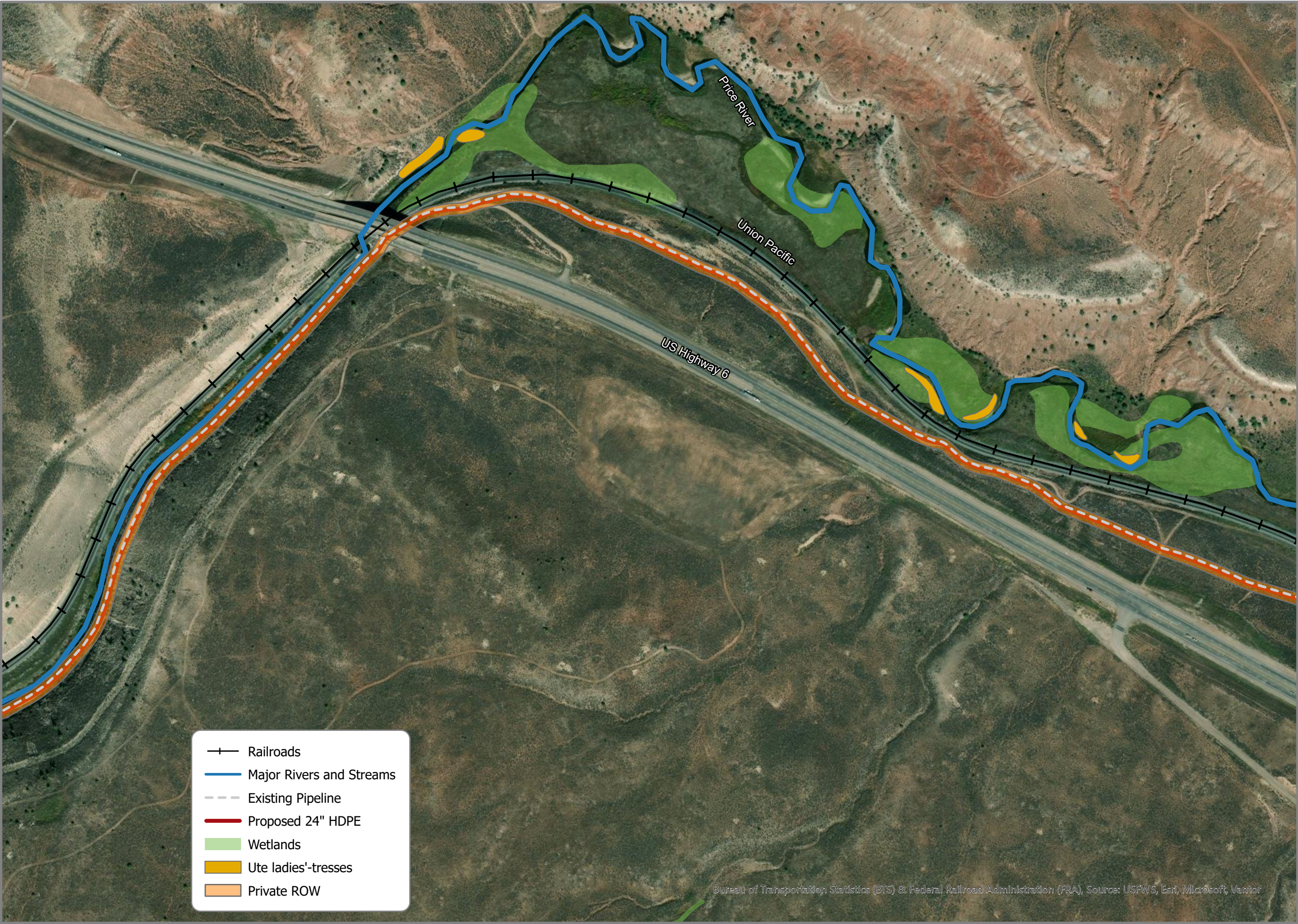
Figure 1
OVERALL PIPELINE ALIGNMENT

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

Date: 3/11/2026







Utah County, UT

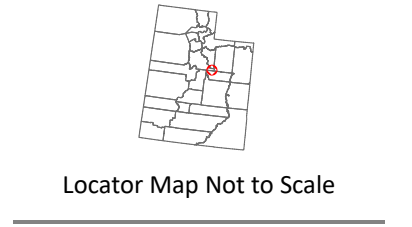
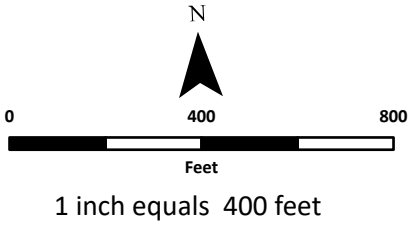
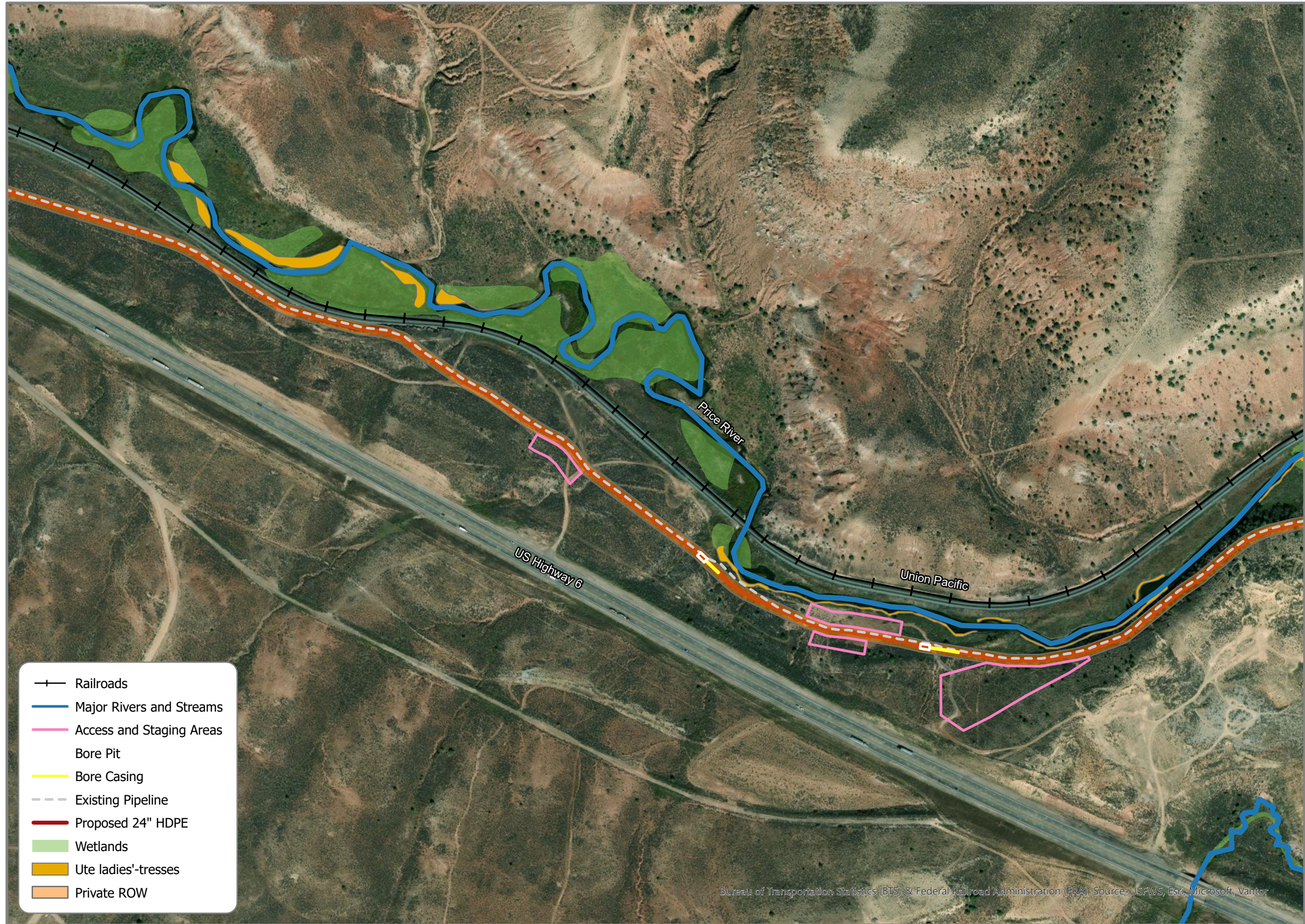
Figure 3
**PROPOSED PIPELINE
SEGMENT 2**

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

Date: 3/11/2026



Bureau of Transportation Statistics (BTS) & Federal Railroad Administration (FRA), Source: USFWS, Esri, Microsoft, Vantor



Utah County, UT

Figure 4
**PROPOSED PIPELINE
SEGMENT 3**

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

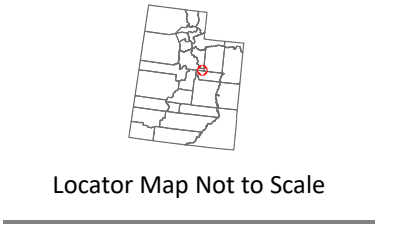
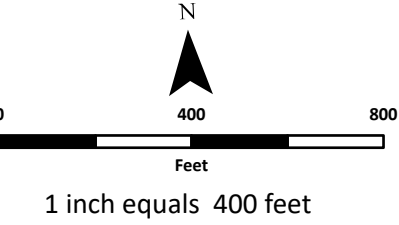
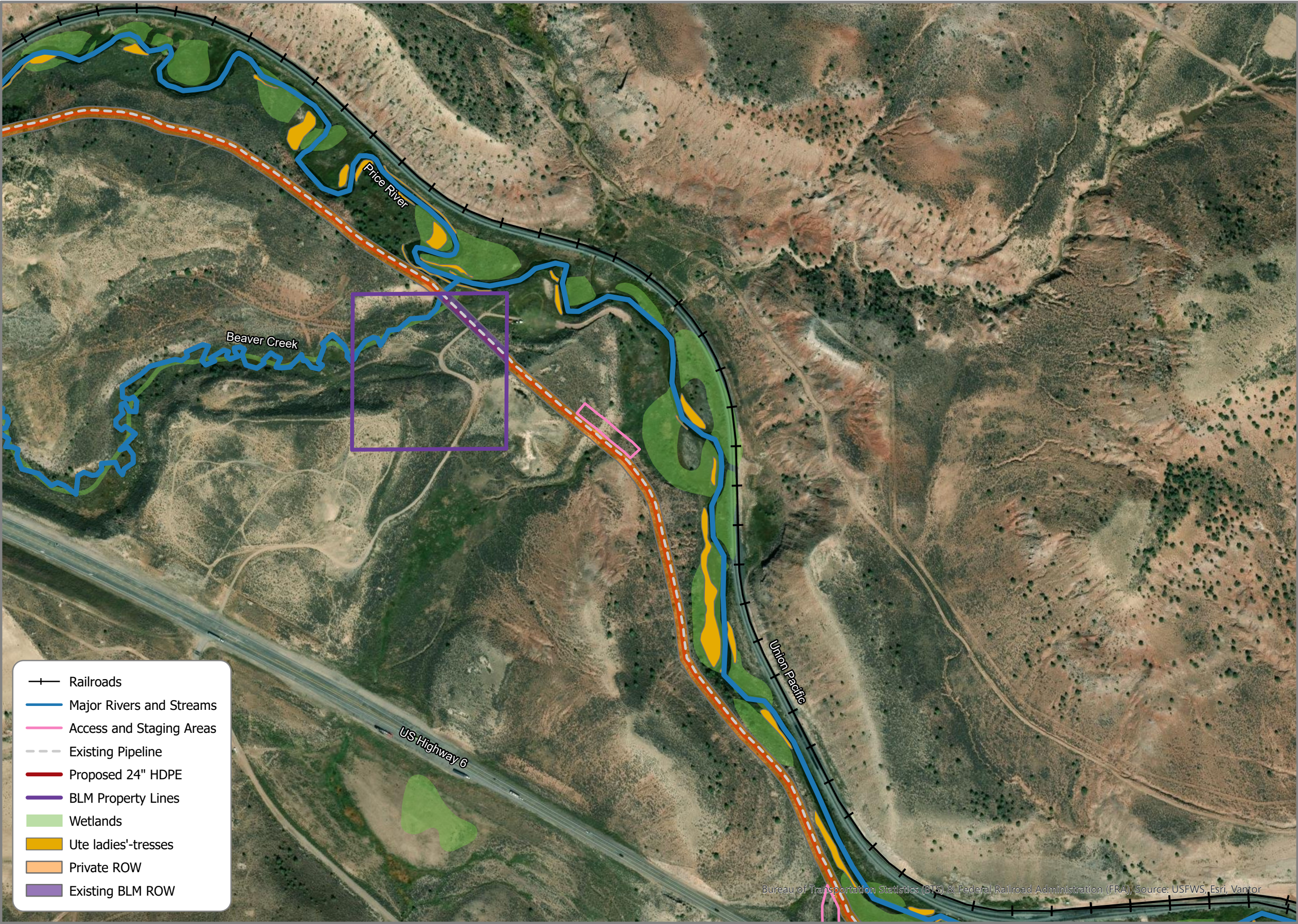
Date: 3/11/2026



Bureau of Transportation Statistics (BTS) & Federal Railroad Administration (FRA). Source: USFWS, Esri, Microsoft, Vantor

Information depicted may include data unverified by AE2S. Any reliance upon such data is at the user's own risk. AE2S does not warrant this map or its features are either spatially or temporally accurate.

Coordinate System: NAD 1983 StatePlane Utah Central FIPS 4302 Feet | Edited by: TPeterson | C:\Users\tpeterson\AE2S\J&T Price Spring Pipeline Design Constr - Documents\04.0 Project Work\04.06 NEPA\BLM permitting\Price POD\GIS\PCPP.aprx | Landscape 11x17 Segment 3



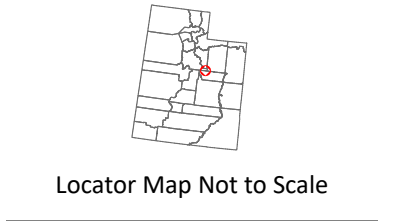
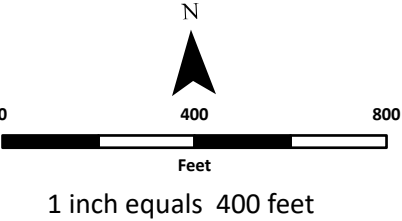
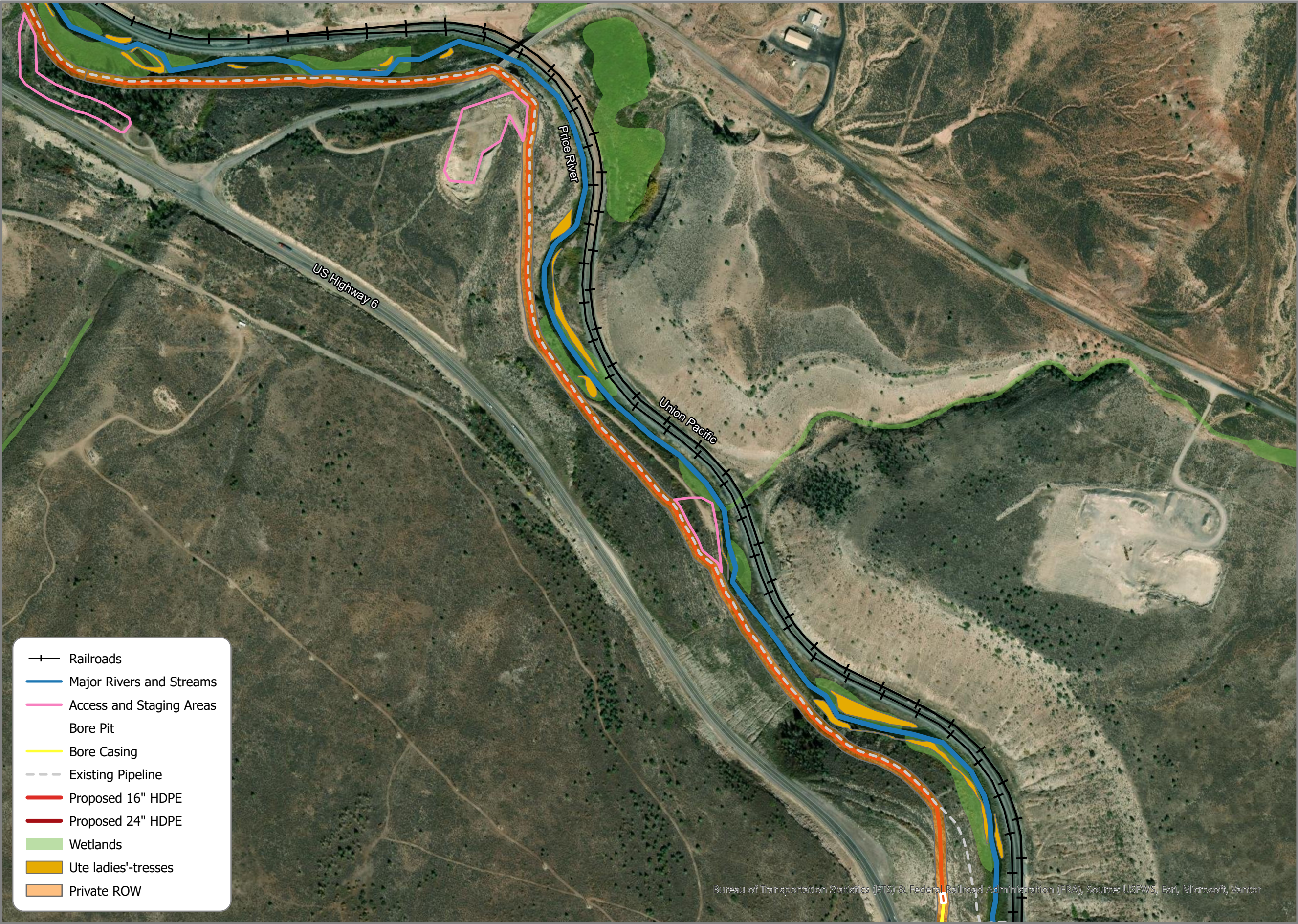
Utah County, UT

Figure 5
**PROPOSED PIPELINE
SEGMENT 4**

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

Date: 3/11/2026





Utah County, UT

Figure 6

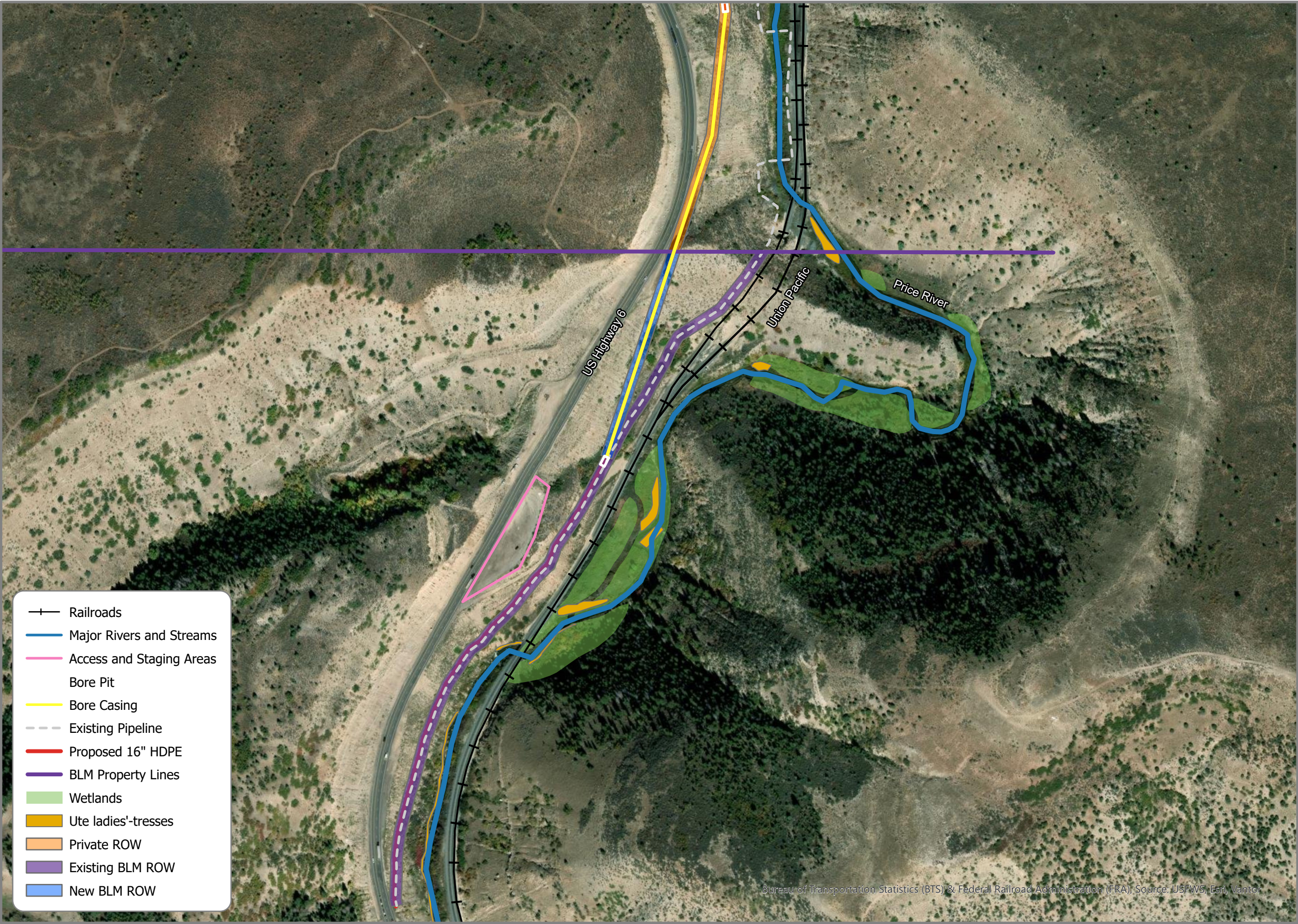
**PROPOSED PIPELINE
SEGMENT 5**

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

Date: 3/11/2026



Bureau of Transportation Statistics (BTS) & Federal Railroad Administration (FRA), Source: USFWS, Esri, Microsoft, Vantor



Price City Water System Master Plan



JOHANSEN & TUTTLE | Castle Dale, Utah



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List of Acronyms and Abbreviations

AARC	Average Annual Rate of Change
AE2S	Advanced Engineering & Environmental Services
AC	Asbestos Cement
Ac-ft.	Acre Feet
CAD	Computer Aided Design
City	Price City
CFS	Cubic Feet Per Second
CIB	Community Impact Board
Class	Type of PVC pipe
DIP	Ductile Iron Pipe
EPS	Extended Period Simulation
ERC	Equivalent Residential Connection
FCV	Flow Control Valve
FF	Fire Flow
Ft.	Feet
FPS	Feet Per Second
GIS	Global Information Systems
GOPB	Governor's Office of Planning and Budget
GPD	Gallons Per Day
GPM	Gallons Per Minute
GPS	Global Positioning System
HGL	Hydraulic Grade Lines
HP	Horse Power-----
In.	Inches
LF	Linear Feet
MF	Minimum Day Factor
MG	Million Gallons
MGD	Million Gallons Per Day
NRCS	Natural Resources Conservation Service
PF	Peak Day Factor
PRWID	Price River Water Improvement District
PRWUA	Price River Water User's Association
PRV	Pressure Reducing Valve
PSI	Pounds Per Square Inch
PVC	polyvinyl chloride
State	Utah Governor's Office of Planning and Budget
UAC	Utah Administrative Code
UFW	Unaccounted For Water
UP&L	Utah Power & Light
UPRR	Union Pacific Railroad
(PC)WTP	(Price City) Water Treatment Plant

1.1. Objective

Price City retained Johansen & Tuttle Engineering (J&T) to conduct a study of the Price City Culinary Water System (Water System). The scope of the study included mapping the water system from source to consumer, evaluating current and future demands, researching available water rights, modeling and analyzing the system, conducting a user fee analysis, and evaluating the water treatment plant facility. The objective of the 2024 Culinary Water Master Plan (Master Plan) is to analyze the existing Price City Culinary Water System to determine if the existing system is adequate to supply store, and distribute water according to State and local requirements. This study also evaluates the system under future demand conditions. These analyses will aid the Price City Staff in developing a Capital Improvement Plan detailing planning level recommendations for infrastructure improvements necessary to meet existing and future demands on the system. A project level design process is needed before implementation of any project component begins as the scope of this study is not intended to provide detailed analysis. The *Price City Water System Master Plan* provides the results of the analysis of the Price River Water System with a focus on the water system within the City Limits. It presents the background, existing system, model development, and analysis of the water systems. This section of the *Report* includes the project objective, background information, and the scope of work.

1.2. Background

Price City is located approximately 120 miles southeast of Salt Lake City in the western portion of Carbon County, Utah along US HWY 6. The primary sources for Price City are Colton Springs, Price River, and Scofield Reservoir Storage via the Price River. The water from Colton Springs and the diverted water from Price River are treated at the WTP. The WTP is located 3 miles north of Helper. The modeled system begins at the Water Treatment Plant (WTP). Price City meters a few areas in South Helper and Spring Glen along with Carbonville, but the primary focus of this study will be within the current Price City limits. **Figure 1-1** shows the entire water system along with the Price City Boundary.

1.3. Authorization and Scope of Work

The *Report* was completed as part of the Facility Plan agreement between Price City and Johansen & Tuttle Engineering, Inc. (J&T). In summary, the following tasks were completed:

Task 1 – Collect & Review Background Information

Assemble and study all available information relating to the existing culinary water system facilities. This information was obtained through City Officials as GIS maps, drawings, and personal communications. A list of information obtained is as follows:

- Service Area Boundary
- Zone Boundary
- Base maps of existing pipe, valves, PRVs, and fire hydrants
- GIS Parcel Maps
- Meter Data

Task 2 – Develop System Model

The GIS base map was used as the basis of the model. The model was then updated based on any changes provided by the City.

Task 3 – System Analysis

The updated computer model analyzed the existing system under peak day flow plus fire flow and instantaneous demands as recommended by the Utah Administrative Code (UAC). These scenarios show any piping deficiencies that result in low delivery pressures or high pipe velocities. The model includes pipes, tanks, and pressure reducing valves (PRV).

Task 4 – Prepare Final Report

This report summarizes the background information, planning assumptions, design criteria, model development, and model analysis.

2.1 Existing System

This section presents a summary of the existing distribution system, its sources, and its demands. Raw water is supplied to the Price City Water Treatment Plant (WTP) from Scofield Reservoir and the Price River. The Price River water is diverted upstream of the WTP location in Price Canyon. The WTP also receives water from its Colton Springs and Colton Wells as needed through an 18” and 12” transmission main.

A 20-inch transmission main transports water from the WTP to a portion of South Helper, Spring Glen, and Carbonville. The water pressure is reduced to the branch mains and laterals supplying these areas through pressure reducing valves (PRVs). The transmission main then feeds into Price City’s 10 MG tank. A 12-inch transmission main supplies water from the 10 MG tank to the 3 MG tank. The water is then distributed from the tanks to the Price City water distribution system through PRVs.

2.2 Pipe Network

Price City’s existing culinary water system is supplied water through a 20-inch transmission main that runs from the WTP to the 10 MG tank. The Price City’s existing culinary water system consists of pipelines ranging in diameter from 2-inch to 12-inch. A summary of approximate pipe lengths for each pipe diameter and material in the Price Water System from the WTP to the distribution pipes is provided in **Table 2-1**. **Figure 2-1** shows the existing pipe diameters.

Figure 2-2 shows the existing pipe material. **Figure 2-3** show the existing pipe diameters inside the Price City Limits Boundary. **Figure 2-4** shows the existing pipe material inside the Price City Boundary.

**Table 2-1
Existing Pipe Summary**

Pipe Size (inches)	Pipe Length (ft)		Percent of System (%)
CIP		66,000	15.03%
4	19,800		4.51%
6	17,300		3.94%
8	10,000		2.28%
10	9,300		2.12%
12	6,900		1.57%
16	2,700		0.61%
Copper		1,300	0.30%
0.75	900		0.20%
1	200		0.05%
2	200		0.05%
DIP		28,500	6.49%
4	800		0.18%
6	11,100		2.53%
8	1,500		0.34%
10	300		0.07%
12	500		0.11%
16	8,100		1.84%
20	6,200		1.41%
HDPE		24,100	5.49%
1.5	300		0.07%
2	200		0.05%
8	100		0.02%
20	13,600		3.10%
24	9,400		2.14%
26	500		0.11%
POLY		1,100	0.25%
1.5	100		0.02%
2	1,000		0.23%

Pipe Size (inches)	Pipe Length (ft)		Percent of System (%)
PVC		217,100	49.44%
1	1,000		0.23%
2	400		0.09%
3.5	300		0.07%
4	6,700		1.53%
6	65,000		14.80%
8	87,200		19.86%
10	43,800		9.97%
12	11,900		2.71%
16	100		0.02%
20	700		0.16%
Blank		101,000	23.00%
0.75	200		0.05%
1	100		0.02%
1.5	700		0.16%
2	3,100		0.71%
3	100		0.02%
4	5,000		1.14%
6	11,100		2.53%
8	23,800		5.42%
10	300		0.07%
12	16,400		3.73%
16	9,600		2.19%
20	30,600		6.97%
Total		439,100	

Table 2-1 and the **Figures 2-3** and **2-4** show the majority of the system is PVC pipe, especially inside the City Limits.

2.3 Pressure Zones

The Price Water System has 8 Pressure Zones. These pressure zones and the PRV's feeding water into each pressure zone are listed in **Table 2-2**.

Table 2-2
Existing Pressure Zone & PRVs

Pressure Zone	Box Name	Location	Elev. (ft)	PRV Setting (psi)	Hydraulic Grade Line (ft)
Helper/ Spring Glen	South Helper Box	Hwy 6 & Poplar St	5,815	77	5993
	BlueCut Box	Hwy 6 & Spring Glen Rd	5,690	84	5884
Carbonville/ West Price	North Carbonville	Hwy 6 & Carbonville Rd	5,663	89	5869
	South Carbonville	900 N Carbonville Rd	5,574	125	5863
	Carbonville 12" Steel Box	25 W. 500 N.	5,689	58	5823
	Carbonville 10" PVC Box	20. W. 500 N.	5,683	75	5856
Wood Hill Dr	Questar Property Box	1100 N. Wood Hill Rd	5,642	46	5748
Coves	Coves West Box	Hillcrest Dr & Woodhill Dr	5,800	46	5906
	Coves East Box	900 N. & 300 E. Dr	5,696	90	5904
North Price	North Price West Box	900 N. 200 E.	5,700	62	5843
	North Price East Box	900 N. 500 E.	5,688	65	5838
South Price	South Price East Box	50 E. 500 N.	5,669	18	5711
	South Price West Box	665 W. 300 N.	5,560	64	5708
East Price High	East Price High Box	Cedarhill Dr & Sagewood Rd	5,620	71	5784
East Price Low	East Price Low Box	Main St & Airport Rd	5,574	64	5721

The existing pressure zones along with the location of the PRV's and isolation valves (closed pipes) for the system are illustrated in **Figure 2-5**. The existing pressure zones with the location of the PRV's and isolation valves (closed pipes) within Price City Boundaries are shown in **Figure 2-6**. A schematic of the system is shown in **Figure 2-7**.

2.4 Pump Station

There are no pump stations within the Price City Water System.

2.5 Water Supply

Based on records held by the Utah Division of Water Rights, Price City collects water from four different primary sources:

- Colton Springs
- Price River
- Colton Wells
- Scofield Reservoir Storage via the Price River

2.5.1 Colton Springs

Water rights held at the Colton Springs and Price River are found in **Table 2-3**.

Table 2-3
Colton Springs Water Rights

Claim No.	Priority Date	Source Name	Source Type	Max. Flow (cfs)	Annual Max (AF/Year)	Annual Max Yield (Af/Yr)	Period
a-405/91-341	1874	Price River	Surface	2.25	1,630.01	675	All Year
a-1146/91-373	1874	Colton Springs	Underground	1.46	1,057.69	438	All Year
a-781/91-349	1874	Colton Springs	Underground	2	971.90	600	03/01-11/01
8312/91-75	1919	Colton Springs	Underground	0.65	470.89	474.5	All Year
		SPRINGS TOTAL		6.36	4,130.49	2,187.5	

There are eight springs located in the Colton area. Seven are found in a fenced-in area and Spring #2 is located outside to the southwest along Lower Fish Creek. **Figure 2-8** shows a snapshot of the main spring complex with the Spring #2 feed line entering from the south.



Figure 2-8
Colton Springs

It is our understanding that Spring #2 contributes the most to the total water production and Spring #1 produces the second most amount. The exact volume of water production by spring is unknown because the spring collection lines are not metered. The spring water is collected and transported through a gravity fed spiral steel line ranging from 12 to 18 inches. It was built in the 1930s and extends 12 miles upstream of the Price City water treatment plant. The spring water is then chlorinated and transported to Price City in a 20-inch transmission line built in 2002.

The 1874 priority rights are a first class right for 2.25 cfs from the Price River with a diversion point at the Price City Water Treatment Plant and for 3.45 cfs from the Colton Springs. In addition, Price City has water right 91-75 for 0.65 cfs, with a priority date of 1919, from Colton Springs. These rights provide for a total of 6.36 cfs year around giving a total right of 4,130.49 Ac-ft. However, the springs cannot yield the full water right for the entire season. As shown in **Table 2-3** the springs can annually yield about 2,200 ac-ft. This would provide a peak flow of about 2 MGD.

2.5.2 Price River

During normal peak day operation, the balance of the City's water needs are supplied from Price River through the water treatment plant. The source of this diversion is water right 91-341 for 2.25 cfs. The water right would normally yield 1,642 ac-ft./year. The City owns 1,116.94 shares (1,116.94 ac-ft) of Scofield Reservoir water. These two sources will yield, on a normal year, about 2,760 ac-ft/year.

2.5.3 Colton Wells

In 2017, PacifiCorp, formerly Utah Power & Light Company (UP&L), transferred the UP&L wells to Price City. This transfer included water right 91-198 (well #1) in the amount of 1.75 cfs, priority date 10/14/1952, and water right 91-199 (well #2) in the amount of 4.57 cfs, priority date 5/21/1953. Together these two water rights consist of 7.32 cfs to be used year around (Jan 1 - Dec 31), not to exceed 1,016.4 acre-feet. These Wells are now referred to as Colten Well #1 and Colten Well #2.

Proof of the transfer and change application a42119 is due 6/30/2027. It is recommended that Proof Certification with the Division of Water Rights be processed immediately.

These two wells are located north of the Colton Springs collection site about 11 miles up Price Canyon from the Price City Water Treatment Plant.

2.5.4 Scofield Reservoir Storage

Price City owns 1,116.94 shares of Scofield Reservoir water. These shares will yield, on a normal year, one acre-foot/share or 1,116.94 Ac-ft. These shares can be diverted at the water treatment plant or placed in any canal on the Price River system. Presently these shares are distributed as shown in **Table 2-4**.

Table 2-4
Scofield Reservoir Shares

Canal	Scofield Share	Assessment
Wellington	216	\$9.50
Pioneer I	75	\$8.00
Pioneer II	3	\$5.50
Price Water Co.	95.74	\$2.25
Allred	0	-
Carbon Canal	699.11	\$6.00
Spring Glen	28.09	\$6.00
Total	1,116.94	

2.5.5 Total Supply

Table 2-5 summarizes Price City's water rights that can be utilized for the Price City water system and the normal expected yield for each water rights.

Table 2-5
Water Right Expected Yield

Water Right #	Source	Water Right Amount	Annual Yield	Annual Yield	Annual Yield
		(cfs)	(ac-ft)	(gal/yr)	(mgd)
91-373	Colton Springs	1.46			
91-349	Colton Springs	2			
91-75	Colton Springs	0.65			
Colton Springs Total		4.11	2,200	716,872,200	1.96
91-341	Price River	2.25	1,642	535,047,342	1.47
91-198	Colten Well #1	1.75			
91-199	Colten Well #2	4.57			
Colten Wells Total		6.32	1016.4	331,194,956	0.91
Scofield Shares		1,116.94 Ac-ft.	1,116.94	363,956,016	1.00
Total Water Rights			5,975.34	1,947,070,514	5.33

Table 2-5 shows that Price City has an total water rights of 5,975 ac-ft of Scofield shares. If these rights are allocated evenly over 365 days there is 5.33 mgd available.

Actual annual Price City use in acre-ft from years 2009 through 2019 is shown in **Table 2-6**. The existing supply information taken provided in the Annual Utah Public Water Supply Forms is shown in **Table 2-7**.

Table 2-6
Historical Price City Water Use

Year	Annual Diversion
2009	3,442
2010	2,729
2011	3,518
2012	3,487
2013	2,954
2014	2,760
2015	2,286
2016	2,389
2017	3,123
2018	2,750
2019	3,222
Average	2,969

Table 2-7
Historical Water Supply from Utah Public Water Supply Use Form

Water Supply (AF)											
Year	Inflows					Outflows		Net to Price City	Annual	Avg.	Peak
	Springs	Colton Springs	WTP	PRWID	UP&L (RMP)	River Meter	PRWID		(MG)	(MG/Day)	(MG/Day)
2013	2,501.38		452.46	128.14	158.51		446.01	2,477.46	807.28	2.21	4.42
2014	2,366.30		394.13	125.29	185		247.58	2,453.14	799.36	2.19	4.38
2015	1,926.26		299.46	251.84	87.85		238.98	2,150.73	700.82	1.92	3.84
2016	1,943.90	0	447.31	235.41				2,626.62	855.89	2.34	4.69
2017	2,724.10	0	310.18	106.12				3,140.40	1,023.30	2.80	5.61
2018	2,291.76	0		505.72		55.4	433.89	2,308.19	752.13	2.06	4.12
2019	3,242.29	0	164.52			223.69	452.69	2,730.43	889.71	2.44	4.88
2023	2,714.93	134.37	119.89	65.66		111.22	444.06	2,479.57	807.97	2.21	4.43
Average	2,463.87	26.87	312.56	202.60	143.79	130.10	377.20	2,354.81	767.32	2.10	4.20

Table 2-7 shows that the annual supply for 2023 was 807.97 MG. This would supply 2.21 MG per day for 365 days. The peak day was calculated to be double the average day. The actual peak day demand was recorded on July 15 as 5.452 MG. The average of the recorded peak day for the years 2020 to 2024 are shown in **Table 2-8**.

Table 2-8
Recorded Peak Day from Utah Public Water Supply Use Form

Year	GPD
2020	5,179,000
2021	4,140,000
2022	4,007,000
2023	5,452,000
Avg.	4,694,500

2.5.6 Irrigation Company Shares

In addition to water rights and Scofield reservoir water, Price City owns shares in multiple irrigation companies. These shares are tied to the point of diversion, the place of use, and the nature of use associated with each company's water right. Consequently, these shares are usually leased to individuals within the various irrigation companies. If the City were to use these shares within their culinary water system, a change application would have to be filed with the Division of Water Rights adding the City's point of diversion and a municipal place of use of each of the irrigation company's water right. A list of the irrigation companies and the number of shares owned by the City are shown in **Table 2-9**.

Table 2-9
Irrigation Company Shares

Irrigation Company	Source	Number of Shares	Normal yield/Share	Normal yield	2023 Assessment
Price Water Company	Price River	5,807.57	0.12	697.61	\$0.75
Pioneer #1	Price River	147.00	4.00	588.0	\$16.50
Pioneer #2	Price River	223.00	1.00	223.0	\$5.50
Allred Ditch	Price River	4,122.12	0.12	494.6	\$0.55

2.6 Storage

There are two storage tanks in the existing system as shown on **Figure 2-1**. A 10 MG Tank located on the Wood Hill Road is filled with the 20-inch transmission line from the WTP. The 3 MG located on Price-Kenilworth Road is filled from the 10 MG tank through a 12-inch line. The 3 MG tank is used to feed the East Price High and East Price Low Pressure Zones. A 12-inch line with an altitude valve is used to fill the 3 MG Tank from the 10 MG Tank. The 3 MG tank sits 194 feet below the 10 MG tank. The Hydraulic Grade Line of the 3 MG tank is 180 feet below the 10 MG tank. **Table 2-10** summarizes the information about the two tanks.

Table 2-10
Existing Storage Tank Summary

Tank	Location	Type	Dia.	Tank Level			Tank Elevation			
				Min	Max	Initial	Base	Min	Max	Initial
10 MG	Wood Hill Rd	Concrete	230.6	0.5	32	29	5,960	5,960.5	5,992	5,989
3 MG	Price-Kenilworth Rd	Steel	105.4	0.5	46	43	5,766	5,766.5	5,812	5,809

2.7 Existing Population

The population reported on the Utah Public Water Supply Use Form (Use Form) shown in **Table 2-11** was used to collaborate the existing population reported by The United States Census. The Use Forms show the existing population in 2021 was around 8,200. The Census reported 8,216 in 2020.

Table 2-11
Existing Population From
Utah Public Water Supply Use Form

Year	Population
2016	8,270
2017	8,640
2018	9,050
2019	8,730
2020	8,104
2021	8,199
2022	8,267
2023	8,291

A critical part of model development is the establishment of water use. It provides the basis for water supply and storage needs and drives the distribution system analysis. The existing population in conjunction with existing meter data and water reporting were used to establish existing demand as described in **Section 3-4** of this report.

3.1 Computer Model Development

A computer model of the distribution system was created as a tool for evaluating the existing system with existing and future demands. This section outlines the methods and model conventions that were used in developing the hydraulic model of the Price City Water System. The discussion includes physical facilities, water demands, fire flows, and scenarios.

3.2 Model Description

The model was created using InfoWater, a water distribution modeling software. The computer files associated with the Price City model include an ArcGIS prof file, a folder containing database files of model attribute data, and an output folder containing results from model scenario runs. Together these files are referred to as a Project. The ArcGIS, database folder, and output folder share the same name but have different extensions, .APRX, .IWDB, and .OUT, respectively. The Project filename for the City's model is "Pricecitymasterplan2024".

3.3 Physical Facilities

The majority of the system was brought into the model from the GIS information provided by the City. This map is located in the NAD83 State Plane Central Zone FIPS 4302 (US Feet). The map was reviewed by J&T and any discrepancies or questions were addressed with City staff. J&T met with the City and obtained clarification on pipe connectivity, any changes to the system, and information on closed valves that were not available in the original system map.

Informational fields were added to the model to facilitate system evaluation. The fields listed in **Table 3-1** were fields added to the model to facilitate system evaluation, but are not required to run the model. These fields are used to facilitate system evaluation.

**Table 3-1
Informational Fields**

Field Name	Data
Pipes	
DESCRIPTION	Existing or Proposed
MATERIAL	Pipe Material
YEAR INSTALL	Installation Year
ZONE	Pressure Zone
PHASE	Exist (0) or Proposed (1)
USE	Transmission
NEWMAT	Material if Pipe Improvement
PROJECT	Project No.
Junctions	
DESCRIPTION	Existing or Proposed
ZONE	Pressure Zone
LANDUSE	Land Use Type
DEMANDNODE	Demand Node
PHASE	Exist (0) or Proposed (1)
USE	Transmission, PRV, Hydrant
Pumps	N/A
Tanks	
DESCRIPTION	Name
Phase	Exist (0) or Proposed (1)
MATERIAL	Material
ELEVATION	Tank Bottom Elevation
MIN LEVEL	Minimum Water Level
MAX LEVEL	Maximum Water Level
INITIAL LEVEL	Initial Water Level
DIAMETER	Diameter
VOLUME	Volume
Valves	
DESCRIPTION	Box Name
Zone	Pressure Zone
PHASE	Exist (0) or Proposed (1)

3.3.1 Pipes

For pipe creation, the model requires the population of a number of data fields in the model database. These include IDENTIFICATION NUMBER (ID), LENGTH, DIAMETER, and FRICTION COEFFICIENT (C Factor). The other fields populated were DESCRIPTION, MATERIAL, ZONE, PHASE, USE, NEWMAT, and PROJECT.

The IDENTIFICATION NUMBER field identifies the pipe. The LENGTH field is the actual length of the pipe calculated by the computer unless specified as user defined. The DIAMETER and MATERIAL field of each pipe segment was populated by J&T with the pipe shapefile information provided by the City. The FRICTION COEFFICIENT was entered based on the material of the pipe. The Hazen-Williams equation was used by the hydraulic model to determine friction-related headloss. Entry of the friction coefficient C in the equation is required for each pipe segment in the model. Recommended C factors are listed in **Table 3-2**. These coefficients are not adjusted for pipeline diameter or age and were applied to both proposed and existing pipelines as recommended by UAC R309-550.

Table 3-2
Friction Coefficients

Pipe Material	Hazen-Williams Friction Coefficient, C
PVC	140
Transite/AC	130
Cast Iron or Ductile Iron, Cement Lined	130
Ductile Iron Pipe	120
Galvanized Steel	120
Unknown	135

The pressure zone was designated in the ZONE field. The PHASE field was populated with a 0 if it was an existing facility and a 1 if it is a proposed facility. The NEWMAT field was populated if the pipe was replaced with new material. The PROJECT field identified the project number of the improvement.

3.3.2 Junctions

Junctions are entered into the model at all changes in pipe diameter (reducers), pipe connections (tees and taps), intersections (crosses), dead-ends (plugs), fire hydrants, at valves, and pump stations. Required data for junctions includes IDENTIFICATION NUMBER (ID), ELEVATION, and DEMAND. The other fields populated were DESCRIPTION, ZONE, HYDRANT, DEMANDCODE, LANDUSE, and PHASE.

The IDENTIFICATION NUMBER field identifies the junction. The ELEVATION field was populated by extracting elevation data from Lidar DEM information downloaded from the

<https://raster.utah.gov/> website. The DEM Mosaic file created for elevation extraction is named CARBONDEMFEET2.TIF.

Demands were allocated based on actual meter reads as discussed later in this section. The DEMANDNODE field indicates whether demand was to be assigned to the junction. The USE field designates if the node is part of a transmission line (TRANSMISSION), at a PRV (PRV), or at a Fire Hydrant (HYDRANT). The nodes designated as transmission, PRV, or hydrant were not designated as demand nodes during the allocation process.

The LANDUSE fields were populated by J&T utilizing the Landuse shape file provided by the City. The Landuse designations are indicated in **Table 3-3** and are shown on **Figure 3-1**.

Table 3-3
Landuse Designations

C-1	Commercial
M-1	Manufacturing
M-2	Manufacturing
PF	Public Facility
RR	Rural Residential
R1-12	Single Family Residential
R1-6	Single Family Residential
R2-11	Multiple Residential
R2-7	Multiple Residential

These designations were used to assign the proper fire flow to the hydrant servicing these areas and to allocate future demand to the system. The pressure zone was designated in the ZONE field. The PHASE field was populated with a 0 if it was an existing junction and a 1 if it is a proposed junction.

3.3.3 Valves

There are 15 Pressure Reducing Valves (PRV) valves modeled in the system. The required fields for PRV valves are TYPE, DIAMETER, and SETTING. The other fields populated are the DESCRIPTION and PHASE field. **Table 3-4** shows the information entered into the model for each PRV.

**Table 3-4
PRV Data**

ID	Description	Zone	Elev.	PRV Setting	Dia.
			(ft)	(psi)	(in)
PRVSPRINGGLENNORTH	South Helper Box	SPRING GLEN	5,815	77	6
PRVSPRINGGLENSOUTH	BlueCut Box	SPRING GLEN	5,690	84	6
PRVNORTHCARBONVILLE	North Carbonville	CARBONVILLE	5,663	89	6
PRVSOUTHCARBONVILLE	South Carbonville	CARBONVILLE	5,574	125	6
PRVCARBONVILLE12	Carbonville 12" Steel Box	CARBONVILLE	5,689	58	12
PRVCARBONVILLE10	Carbonville 10" PVC Box	CARBONVILLE	5,683	75	10
PRVWOODHILL	Questar Property Box	WOOD HILL	5,642	46	6
PRVCOVESWEST	Coves West Box	COVES	5,800	46	6
PRVCOVESEAST	Coves East Box	COVES EAST	5,696	90	6
PRVNORTHPRICEWEST	North Price West Box	NORTH	5,700	62	6
PRVNORTHPRICEEAST	North Price East Box	NORTH	5,688	65	6
PRVSOUTHPRICEEAST	South Price East Box	SOUTH	5,669	18	6
PRVSOUTHPRICEWEST	South Price West Box	SOUTH	5,560	64	6
PRVEASTPRICEHIGH	East Price High Box	EAST HIGH	5,620	71	6
PRVEASTPRICELOWER	East Price Low Box	EAST LOWER	5,574		6

The DESCRIPTION field indicates the Box name of each PRV. The TYPE field indicates that the valve is a PRV. The DIAMETER field was the assumed diameter of the PRV. The settings were provided by the City.

3.3.4 Pumps

There are no pump stations within Price City's Water System.

3.3.5 Tanks

Two cylindrical tanks and the WTP are in the model. The two tanks were modeled as cylindrical tanks and the WTP was modeled as a fixed head reservoir. The fields required for cylindrical tanks are the TYPE of tank, the ELEVATION of the bottom of the tank and the INITIAL LEVEL of the water in the tank. Other fields that were populated were MINIMUM LEVEL, MAXIMUM LEVEL, DIAMETER, MATERIAL, HEIGHT, and VOLUME. The minimum level, maximum level, and diameter would be necessary under an extended period simulation (EPS), but not for a steady state model. The fields required for a fixed head reservoir is the HEAD elevation. **Table 3-5** shows the information entered into the model.

**Table 3-5
Tank Data**

ID	Description	Type	Elev/ Head	Min. Level	Max. Level	Initial Level	Dia.	Phase	Material	Height	Vol.
			(ft)	(ft)	(ft)	(ft)	(ft)			(ft)	(MG)
10MG	Wood Hill Rd	Cylindrical	5,960	0.5	32	29	230.6	0	Concrete	32	10
3MG	Price-Kenilworth Rd	Cylindrical	5,766	0.5	46	43	105.4	0	Steel	43	3
WTP	Water Treatment Plant	Fixed Head	6,274								

The two tanks have a total storage capacity of 13 MG. The 10 MG tank is filled with the 20-inch transmission line from the water treatment plant. Then, a 12-inch line connects the 10 MG and 3 MG in series.

3.4 Water Demand

A critical part of model development is the establishment of water use. It provides the basis for water supply needs and drives the analysis of the distribution system. The majority of the City's services are residential services as shown in **Table 3-6**. The existing population, estimated ERC's reported, and the reported peak day demand are shown in **Table 3-7**. The existing water demand and source information was primarily taken from the Utah Public Water Supply Use Forms provided by the City from the years 2013 to 2023. It should be noted that 2023 report was complete. However, most of the other years were missing information. It looked like information must have been scanned from a two-sided report, but only one side was scanned because the information provided was every other page. The number of connections were provided in the reports from 2013-2019 and then 2023. This information was missing years 2020-2022 so it is impossible to look at any trends as far as number of connections versus ERC's.

**Table 3-6
Connection Types**

Connection Type	2023 No. of Connections	2023 Metered Usage (gal)	Metered usage per day per connection	ERC's per connection	ERC
		(gal)	(gal)		
Residential	3,564	336,200,100	258.4	1	3,564
Commercial	319	89,850,600	771.7	3.0	952
Industrial	20	5,630,900	771.4	3.0	60
Institutional	149	159,940,900	2,940.9	11.4	1,696
Total	4,052	591,622,500	4,742		6,272

**Table 3-7
Existing Peak Day Demand**

			No	Estimated	Peak Day Demand	Peak Day Demand
	Peak Day	Population	of Connections	ERC	(gpd)	(gpd/ERC)
2020	2-Jun	8,104		5,970	5,179,000	867.50
2021	8-Jul	8,199		5,949	4,140,000	695.92
2022	21-May	8,267		5,993	4,007,000	668.61
2023	15-Jul	8,291	4,052	6,272	5,452,000	869.26

Table 3-6 and **Table 3-7** show that the number of ERC's went up dramatically between 2020 and 2023. The demand per ERC fluctuated quite a bit during this time. This probably is due to having wet seasons during those years.

3.4.1 Existing Demand

J&T requested the monthly meter data from the City. This data included the address, the entity for some large users, the rate number, and the usage per 100 gallons per month. Existing demands were distributed using the meter data. Price City provided meter data for 3,401 meters. This is about 650 connections short of how many connections were reported on the 2023 Public Water Supply Use Form.

The reported water use was compared to the production records to determine unaccounted for water (UFW). This information was used to calculate the Unaccounted For Water (UFW). UFW represents unreported metered use, non-metered water use, and leakage throughout the distribution system. **Table 3-8** shows that the UFW fluctuates dramatically. After discussing this with the City, it was determined that most of this UFW was due to unmetered water that occurs during nonpeak demand and did not need to be accounted for in the system. **Table 3-9** shows the usage by month for year 2023 and compares it to the reported usage and reported production records.

Table 3-8
UFW (Production vs Use)

	Water Purchased:	From Diversions:	Total from all Sources of Water:	Sum of Retail Culinary Use:	Wholesale Deliveries:	Sum of All Returns:	Estimated Water Loss:	Water Loss %
	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	
2020	47,023,620	1,100,729,384	1,147,753,004	712,122,051	197,746,198		237,884,755	20.73%
2021	50,852,374	826,792,605	877,644,979	599,267,255	166,695,815		111,681,909	12.73%
2022	40,215,000	805,746,400	845,961,400	590,362,901	141,415,000		114,183,499	13.50%
2023	21,395,405	967,514,803	988,910,208	591,622,500	144,697,585	36,241,196	216,348,927	21.88%

Table 3-9
Metered Use vs Reported Use and Production

	Retail Culinary Metered	Retail Culinary Reported	Whole Sale/All Returns	Total Usage	Production	UFW	UFW
	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(%)
Jan (Min)	5,971,700				51,269,464		
Feb	6,581,200				47,026,878		
March	6,621,800				51,054,402		
April	107,526,500				59,317,994		
May	37,892,000				88,051,573		
June	70,559,900				101,326,760		
July	85,036,400				136,163,536		
Aug (Max)	88,387,400				125,618,984		
Sept	75,099,300				102,389,036		
Oct	61,062,300				79,980,233		
Nov	8,684,500				73,811,866		
Dec	15,892,300				72,899,482		
Total:	569,315,300	591,622,500	180,938,781		988,910,208	216,348,927	21.9%
Average:	47,442,942	49,301,875	15,078,232	64,380,107	82,409,184	18,029,077	21.9%
PF Avg. to	1.86	PF Oct. to	1.45		1.65		

Table 3-8 shows the UFW fluctuates quite a bit between 2020 and 2023. The UFW was calculated to be almost 22%. Typical UFW ranges between 10% and 20% of the total demand. It is recommended that UFW be kept under 15%. In 2021 and 2022 the UFW falls within this range, but in 2020 and 2023 the UFW was higher than the recommended range. **Table 3-9** shows that the maximum metered data occurred in August. April meter records are very high because a many of the meters are not read in January, February, and March and then are totaled in April. The maximum production record was the month of July. The month of August was used to allocate demand for the peak day and peak instantaneous. October was used to allocate the

average day and minimum day demand. The peak factor when comparing peak month to average month for usage and production is 1.86 and 1.65 respectively. This information was then compared to the Utah Administrative Code (UAC) recommended standards. The UAC standards are very conservative. **Table 3-10** shows the UAC requirements (UAC R309-510) for average day, peak day, and peak instantaneous demand. **Table 3-11** shows the various ways the existing demand were calculated.

Table 3-10
UAC Regulation Demand Requirements

Demand Condition	Indoor	Outdoor
	per connection	per irrigable acre
Avg. Day	400 gpd	2,848 gpd
Peak Day	800 gpd	3.96 gpm
Peak Instantaneous	$Q=10.8(N)^{0.64}$	7.92 gpm

Table 3-11
UAC Regulation Source Demand Requirements

				UAC Regulations			
	No.	No.	Acre- age	Avg. Day	Peak Day	Peak Day	Peak Instantaneo us
	Con.	ERCS	(acres)	(gpd)	(gpd)		$Q=10.8(N)^{0.64}$
Indoor				400	800	(gpm)	(gpm)
	4,052	6,272		2,508,800	5,017,600	1,939	2,909
Outdoor					gpd (6 hrs)	gpm	gpm
						3.96	7.92
Residential	3,564	3,564	376		536,542	1,490	2,981
Commercial	319	952	7		10,440	29	58
Industrial	20	60	0.2		262	1	1
Institutional	149	1,696	125		178,200	495	990
Total Outdoor			509		725,444	2,015	4,030
Total Calculated (Used)					5,764,296	3,955	6,939
Peak Day Reported					gpd	gpm (24 hrs)	gpm (12 hrs)
					5,452,000	3,786	7,572
				(gal/month)	gpd (31 days)	gpm (12 hrs)	gpm (8 hrs)
Meter Records	August			88,387,400	2,851,206	3,960	5,940
	October			61,062,300	1,969,752	2,736	4,104

Table 3-11 shows that the demand for 6,272 ERC's based on the UAC regulations are 5.76 million gallons for peak day. The reported peak day was 5.45 million gallons for peak day. The meter records show that the average peak day (peak month divided by 31 days) would be 2.85 million gallons a day. The peak day reported on the Utah Water Use Data form would be more

accurate. The meter records were in 100 gallons per month so assumptions had to be made to determine the gpm. The August meter records were used for peak day and peak instantaneous demand. The peak day demand was slightly over the calculated peak demand, but the peak instantaneous was lower than the peak instantaneous calculated by the UAC standards. Demand 3 was added to increase the demand from 6,068 gpm to 6,940 gpm for peak instantaneous. The average day demand and were allocated based on the August meter records. The minimum demand was the average day divided by 2. To be conservative, the analysis utilized the UAC calculated demand based on 6,272 ECRS as shown in **Table 3-12**. Demand 1 is the regular users. Demand 2 was the large users. Large users were any user that used over 1 million gallons in a year. There were 84 large users identified. These large users account for 37% of all the demand. Demand 3 was UAC increase.

Table 3-12
Existing Demand Allocated to the Model

Model	Demand 1	Demand 2	Demand 3	Total
	Metered	Large Users Metered	UAC	
	gpm	gpm	gpm	gpm
Peak Instantaneous	3,820.18	2,247.79	871.41	6,939.38
Peak Day	2,546.81	1,498.54	0	4,045.35
Avg Day	1,229.97	802.9	0	2,032.87
Min Day	614.99	401.45	0	1,016.44

3.4.2 Spatial Allocation

Spatial allocation is the process where a spatial graphic representing each customer account is created based on account address data in tabular form and a spatial reference theme (County's address point shape file for Carbon County). This process is referred to as geocoding. 3,092 of the 3,401 matched the addresses. There were 84 meters allocated as large users. These users are listed in **Table 3-13**. The remaining were manually allocated by locating them on Google Earth or asking Price City.

**Table 3-13
Large Users**

Address	Type of Building
200 WEST Main Street	Carbon County Jail/Sheriff
WIB BUILDING	West instruction building- USU-E
250 EAST 600 NORTH	Parkdale Health and Rehab
550 NORTH 200 EAST	Burtenshaw Dorms
85 EAST 400 NORTH	LDS Church
60 WEST 400 NORTH #1	Mt. Harmon Middle School
251 WEST 400 NORTH #1	Carbon School District
590 East 100 North - OUTSIDE LIGHTING	Rocky Mtn Home Care & Hospice/ ProRehab/ Health
97 EAST 100 NORTH	Car Wash/Envy elevated/labor finders/Sodalicious
205 SOUTH CARBON AVENUE	Mobile Home Park
1130 SOUTH CARBON AVENUE	GCR Tires & Service
1101 SOUTH CARBON AVENUE	Mobile Home
REEVES SPRINKLER	Reeves Sprinkler
ONE STOP SPRINKLERS	One Stop
JLSC BUILDING	JLSC Building
PHYSICAL PLANT BUILDING	
AARON JONES DORM	Dorm
AARON JONES EAST SIDE SPRINKLER	Dorm
MCDONALD CAREER CENRTER BUILDING	USU-E building
555 NORTH 300 EAST	USU-E building
208 EAST 100 NORTH	Laundromat Sudsy Duds
373 SOUTH 500 EAST	Apartments
655 EAST 300 SOUTH #6	Apartments
635 EAST 300 SOUTH	Apartments
655 EAST Main street #1	Hotel- Greenwell Inn
828 EAST MAIN	Laundromat
353 SOUTH HWY 55	
323 SOUTH HWY 55	
255 SOUTH HWY 55	
1481 EAST 150 SOUTH	Carbon County Ambulance
357 SOUTH 100 WEST	House
140 North CEDAR HILLS	Condos
1340 EAST 300 NORTH	Pinnacle Nursing & Rehab Center
332 NORTH 1200 EAST	Home
751 EAST 100 NORTH	Court House
650 EAST 200 NORTH	House
755 EAST 400 NORTH	Seminary LDS
NEW HIGH SCHOOL BALLFIELD	Ballfield
145 NORTH CARBON AVENUE	Apartments

SOCCER FIELD-CASTLEVIEW HOSPITAL	Soccer Field-Castle View Hospital
530 WEST 200 SOUTH	Apartments
125 SOUTH 600 WEST - WATER	BLM price
475 PRICE RIVER DRIVE #2	Cemetery
641 WEST PRICE RIVER DRIVE	Hotel National 9
CREEKVIEW MALL SPLR	Creekview Plaza
CREEKVIEW MALL #2	Creekview Plaza
700 WEST 200 SOUTH	Retail-Creekview Plaza
120 NORTH CARBONVILLE ROAD	Taco Bell
121 NORTH CARBONVILLE Road	Chevron Gas
124 NORTH CARBONVILLE ROAD	Burger King
150 NORTH HOSPITAL DRIVE	Crosscut Convenience Store
181 NORTH HOSPITAL DRIVE	Wingers
838 WEST WESTWOOD BLVD	Best Western Hotel
925 WEST WESTWOOD BLVD	Holiday Inn Hotel
590 WEST 500 SOUTH	Creekview Elementary School
215 WEST 200 SOUTH	Homes
1220 EAST 800 NORTH	Apartments
CASTLE VALLEY CENTER -SPRINKLERS	Castle Valley Center
CASTLE HEIGHTS SCHOOL	Castle Heights School
1800 EAST 800 NORTH - WATER	Homes
190 South 1150 East -HM BLG C	Apartments
300 SOUTH 1600 EAST	Apartments
1600 EAST 275 SOUTH	Apartments
277 SOUTH 1588 EAST	Apartments
3550 NORTH HWY 6 & CONSUMERS RD	
WEST UNDERPASS	
WEST Main street - HERITAGE PARK	
EAST UNDERPASS	
SOUTH PARK TENNIS	South Park Tennis
BALL FIELD #1	Ball field
BALL FIELD #2	Ball field
USU EASTERN BALL FIELD #3	Ball field
WEST BALL PARK PAVILLION	Park Pavilion
TERRACE HILLS PARK	Park
595 EAST 400 NORTH	Cemetery
CEMETARY #2	Cemetery
CEMETARY #4	Cemetery
1120 NORTH 300 EAST-#2	
PIONEER PARK #1	Park
240 EAST 500 NORTH	Wavepool
102 EAST 500 NORTH	Park
WASHINGTON PARK NOTRH	Park

3.4.3 Future Demand

The United States Census and the State Governor's Office of Planning and Budget (GOPB) projections were used to project growth out to the year 2060 as shown in **Table 3-14** and **Figure 3-2**. The future population may be higher or lower than the predicted values due to economic, natural, or other factors.

Table 3-14
Population Projections

Year	Census Data	GOPB Projection
1900	539	
1910	1,021	
1920	2,777	
1930	4,084	
1940	5,214	
1950	6,010	
1960	6,802	
1970	6,218	
1980	9,086	
1990	8,712	
2000	8,402	
2010	8,715	
2020	8,216	8,216
2030		9,069
2040		9,811
2050		10,544
2060		11,186

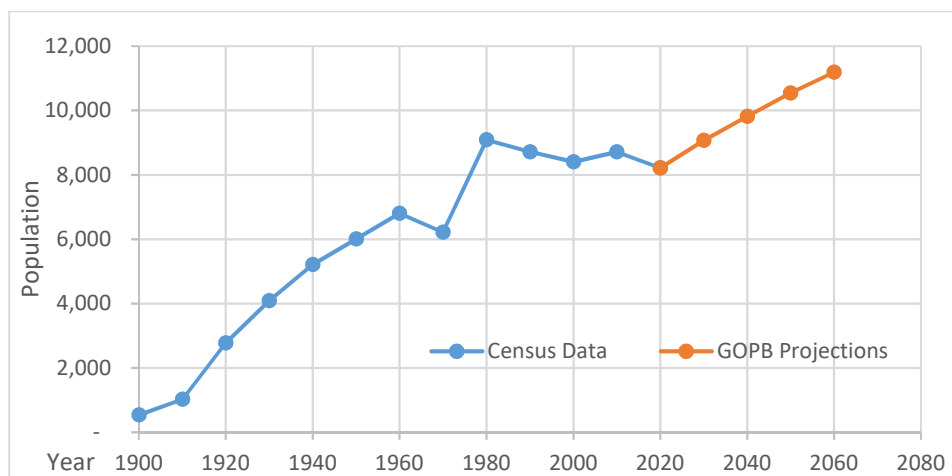


Figure 3-2
Population Projections

These population projections were used to estimate system growth and future demand in the areas shown in **Figure 3-2**. Future demands were estimated based on GOPB population projections in conjunction with the likely development map. **Figure 3-3** shows the likely development areas. The estimated ERC's per acre are shown in **Table 3-15**.

Table 3-15
Likely Development Assumptions

		Irrigated Area/ERC	Indoor			Outdoor		
	ERC/Acre		Avg	Peak	Instant	Avg	Peak	Instant
		(ft ²)	gpd/ERC	gpd/ERC	gpm	gpd/ irrigated acre	gpd/ irrigated acre	gpm/ irrigated acre
			400	800	$Q=10.8(N)^{0.64}$	2,848	3.96	7.92
Single Family	3	4,600						
Multi Family	6	1,000						
Commercial	3	1,000						
Public Facility	4	4,600						
Manufacturing	3	400						

Table 3-16 shows the demand that was manually allocated to the model for each area. Each area was assigned a unique ID to be able to easily identify the area in the table. The likely development table shows the Zoning Code, Area, Estimated ERC's, estimated Average Day Demand, Peak Day Demand, and Peak Instantaneous Demand. This information is summarized by land use in **Table 3-17**.

**Table 3-16
Likely Development**

2040 Development						
ID	Zoning Code	Area	Estimated	Average Day	Peak Day	Peak Instantaneous
		(acres)	ERC	(gpm)	(gpm)	(gpm)
1	R2-7	24.26	158	65.7	131.4	225.7
2	C-1	2.32	7	2.9	5.8	28.1
3	R2-7	37.40	225	93.5	187.1	287.9
4	R1-8	31.11	94	54.4	108.9	219.9
5	R1-12	13.44	41	23.7	47.5	117.4
6	R2-7	7.38	45	18.7	37.4	96.4
7	R1-6	6.19	19	11.0	22.0	66.7
8	R1-8	15.36	47	27.2	54.5	130.0
9	PF	5.39	22	12.7	25.5	74.2
10	PF	4.31	18	10.4	20.9	64.1
11	R2-7	5.70	35	14.6	29.1	81.4
12	R2-7	1.54	10	4.2	8.3	35.5
13	R2-7	10.42	63	26.2	52.4	120.8
14	R2-7	3.82	23	9.6	19.1	61.6
15	C-1	3.86	12	5.0	10.0	40.0
16	C-1	2.51	8	3.3	6.7	30.6
2050 Development						
21	R1-8	9.84	30	17.4	34.8	93.1
22	R1-8	19.85	60	34.8	69.5	156.2
23	R2-7	14.64	88	36.6	73.2	151.4
24	R2-7	18.05	109	45.3	90.6	175.1
25	M-1	28.01	85	33.0	66.1	138.7
26	R1-8	34.38	104	60.2	120.5	237.7
27	C-1	2.32	7	2.9	5.8	28.1
2060 Development						
31	R1-6	68.75	207	119.9	239.9	407.3
32	C-1	0.93	3	1.2	2.5	16.1
33	C-1	1.95	6	2.5	5.0	25.4
34	C-1	3.69	12	5.0	10.0	40.0
35	M-1	23.87	72	28.0	56.0	124.4
36	R1-8	42.63	128	74.1	148.3	279.2

Table 3-17
Future Demand Summary by Use

	2040 Additional Demand					2050 Additional Demand					2060 Additional Demand				
	Total		Avg Day Total	Peak Day Total	Instant Total	Total		Avg Day Total	Peak Day Total	Instant Total	Total		Avg Day Total	Peak Day Total	Instant Total
	Acres	ERC	gpm	gpm	gpm	Acres	ERC	gpm	gpm	gpm	Acres	ERC	gpm	gpm	gpm
Residential	157	760	349	698	1,443	97	391	194	389	814	111	335	194	388	686
Commercial	9	27	11	22	99	2	7	3	6	6	7	21	9	17	82
Manufacture						28	85	33	66	66	24	72	28	56	124
Public Facility	10	40	23	46	138										
	175	827	383	767	1,680	127	483	230	461	885	142	428	231	462	892

Table 3-18 shows the existing demand compared to the 2060 Demand with the future demand shown in **Table 3-17** added to the existing demand. **Table 3-19** shows how this demand was allocated to the model.

Table 3-18
Existing & Buildout Demand

	Existing 2023 Demand					Buildout Demand				
Use	Irrigated		Avg Day Total	Peak Day Total	Instant Total	Irrigated		Avg Day Total	Peak Day Total	Instant Total
	Acres	ERC	gpm	gpm	gpm	Acres	ERC	gpm	gpm	gpm
Residential	376.4	3,564	1,296	2,592	4,634	470.8	5,050.0	2,033.4	4,067.2	7,577.2
Commercial	7.3	952	162	324	500	8.6	1,007.5	184.6	369.3	685.9
Manufacturing	0.2	60	9.6	19	29.1	1.6	216.7	70.6	141.2	219.6
Public Facility	125.0	1,696	510	1,019	1,776	129.2	1,735.5	532.8	1,065.6	1,914.7
Total	509	6,272	1,977	3,954	6,939	610.2	8,009.7	2,821.4	5,643.3	1,0397.3

Table 3-19
Future Demand Allocated to the Model

Model	Demand 1	Demand 2	Demand 3	Total
	Metered	Large Users Metered	UAC	
	gpm	gpm	gpm	gpm
Peak Instantaneous	3,820.18	2,247.79	871.41	6,939.38
Peak Day	2,546.81	1,498.54	0	4,045.35
Avg Day	1,229.97	802.9	0	2,032.87
Min Day	614.985	401.45	0	1,016.435

3.4.4 Demand Assignment

The average demand (October), the peak day demand (July/August), the peak instantaneous demand, and the minimum demand were added to the GIS geocoded database. Then the demands

were allocated to the demand nodes using the Infowater Demand Allocator module. The process locates the junction closest to the meter by using an advanced search algorithms and then allocates the nodal demand to that junction. It assigned geocoded water consumption for each account to the closest junction according to geographic proximity. The demands were allocated to the demand nodes by the distance-weighted method. This process was performed for the average day scenario, the peak day scenario, the minimum day scenario, and the instantaneous scenario. The junctions designated as transmission lines and PRV's were not designated as demand junctions during the allocation process.

The Allocator module directly assigns demands to the hydraulic model, which can store up to 10 individual demand values and patterns at each junction. The following demand fields were designated for specific demand types:

- Demand 1- Metered Demand
- Demand 2- Large Users
- Demand 3- UAC demand
- Demand 4- Future Demand

3.5 Fire Flow

Fire flows were assigned to junctions at or near a fire hydrant. These were identifiable by a “Query” within the model. Fire flows were based on land use type as shown in **Figure 3-1** and associated fire flow are rates as shown in **Table 3-20**.

Table 3-20
Fire Flow Requirements

Classification	Description	Fire Flow (gpm)	Duration (hr)
C-1	Commercial	1,500	2
M-1	Manufacturing	1,500	2
M-2	Manufacturing	1,500	2
PF	Public Facility	1,500	2
RR	Rural Residential	1,000	2
R1-12	Single Family Residential	1,000	2
R1-6	Single Family Residential	1,000	2
R2-11	Multiple Residential	1,500	2
R2-7	Multiple Residential	1,500	2

Each hydrant should be capable of providing the desired fire flow at 20 psi. In locations where sprinklers may be installed inside buildings, the residual pressure was evaluated at 40 psi as discussed in Section 4.

3.6 Scenarios

Six scenarios were developed during the analysis of the system.

- Existing Average Demand (EXAVGDAY)
- Minimum Demand (EXMINDAY)
- Peak Day Demand & Peak Day Plus Fire Flow (EXPEAKDAY)
- Peak Instantaneous Demand (EXINSTANTANEOUS)
- Peak Day Demand & Peak Day Plus Fire Flow with Improvements (FUTUREPEAKDAY)
- Peak Instantaneous Demand with improvements (FUTUREINSTANTEOUS)

3.7 Diurnal Curves

The model was only analyzed at steady state. Therefore, a diurnal pattern was not entered into the model. If the City decides they do need to create a 24-hour EPS model, more information would have to be obtained for the WTP and tanks to determine a diurnal curve.

3.8 Calibration

Twenty-one pressure tests were taken in October to calibrate the model. It was assumed that the testing occurred on average day demand. The location of the pressure tests are shown on **Figure 3-4** and the testing data is shown in **Table 3-21**.

**Table 3-21
Calibration Results**

Location	Zone	Test Static Press	Test Residual Press	Test Flow	Model Static Press	Model Residual Press	Static Diff.	Residual Diff.
		(psi)	(psi)	(gpm)	(psi)	(psi)	(psi)	(psi)
977 N Smith Dr	COVES	58	55	1,250	63.06	56.84	-5.06	-1.84
959 N 100 E	COVES	68	65	1,250	71.57	65.87	-3.57	-0.87
950 N Wadleigh	COVES	65	60	1,325	70.28	57.46	-5.28	2.54
200 E 600 N	NORTH	80	78	1,500	83.28	77.41	-3.28	0.59
700 E 800 N	NORTH	74	65	1,350	68.84	65.35	5.16	-0.35
700 N Cedar Hills Dr	NORTH	72	70	1,405	76.58	63.36	-4.58	6.64
800 N Molyneux	NORTH	60	55	1,250	63.45	56.87	-3.45	-1.87
520 N Cottonwood Rd	NORTH	94	85	1,550	85.29	71.12	8.71	13.88
705 N Homestead Blvd	NORTH	60	58	1,240	64.75	62.9	-4.75	-4.9
310 N Madison Ave	NORTH	80	72	1,500	84.71	58	-4.71	14
210 N 300 E	SOUTH	44	40	1,060	49.89	43.44	-5.89	-3.44
90 S Carbon Ave	SOUTH	66	62	1,310	68	64.11	-2	-2.11
580 S 300 W	SOUTH	82	80	1,500	87.78	75.52	-5.78	4.48
540 S Nick Ln	SOUTH	90	0	1,596	83.86	11.34	6.14	-11.34
920 S Carbon Ave	SOUTH	76	70	1,405	82.57	69.37	-6.57	0.63
1520 E Airport Rd	HIGH EAST	80	65	1,500	83	61.88	-3	3.12
1695 E 300 S	HIGH EAST	78	74	1,450	82.3	48.47	-4.3	25.53
1500 E Fausett Ln	LOW EAST	70	0	1,405	72.68	-11.27	-2.68	11.27
2000 N Carbonville Rd	CARBONVILLE	115	80	1,805	111.33	73.21	3.67	6.79
130 N Carbonville Rd	CARBONVILLE	130	115	1,805	138.7	81.44	-8.7	33.56
189 N Hospital Dr	CARBONVILLE	126	115	1,805	129.58	64.5	-3.58	50.5

During Calibration, valves were opened and closed to ensure there wasn't any flow crossing pressure zone boundaries. These were discussed and verified with the City. Even after these adjustments were made there were still some issues with the calibration.

Static pressure calibrated within 6 psi except Carbonville and the east part of the North Zone. The static pressure was low at Cottonwood Rd and high on the dead-end pipe on Carbonville Road. When reviewing the Jones & Demille report it was apparent they also struggled to figure out how this area was operating. Their report stated, "The static pressure oscillated with a change in 15 psi or more, but while running the fire flow test, no drastic changes in pressure were recorded. It was likely that the PRV located on Cedar Hills Dr. near Sagewood was cycling between the open and closed position. A PRV operates based on the upstream and downstream pressures. When the downstream pressure gauge is triggered, the PRV opens to compensate, and closes when equalized based on the PRV settings. It is believed that demands are low enough on the Cedar Hills Dr. line that the 8-inch PRV constantly opens and closes to meet the settings. A smaller PRV for low flows would eliminate the problem."

There was difficulty calibrating the fire flow test as described below.

1. Opened Valve on Sagewood to increase residual pressure, still static pressure low, however residual drop is similar with the valve open.
2. On 8-inch line, but 4-inch pipe surrounds this area so getting much bigger pressure drop during fire flow conditions. Check pipe sizes in this area.
3. Opened discussed closed pipe on Cedar Hills Drive or pressure dropped to 48 psi upstream of the PRV during fire flow conditions.
4. 8-inch dead end causes significant pressure drop during fire flow conditions.
5. 6-inch dead end causes significant pressure drop during fire flow conditions.
6. 6-inch dead end causes significant pressure drop during fire flow conditions.

These discrepancies in the residual fire flow would not affect the recommended improvements. J&T has developed an accurate model of Price City's water distribution system. The model is hydraulically well calibrated, and can be used for analysis of the system. The results of the analysis can be compared to the standards

4.1 Purpose

This Section defines the criteria used in evaluating the capacity and performance of the City's existing water distribution system facilities. The criteria will also be used to develop proposed water system improvements. The evaluation process will identify components that do not meet the performance criteria and are therefore classified as "deficient". The Price City hydraulic model was used as the primary tool in performing the evaluation for the facilities. The culinary water system was evaluated under the criteria listed in this Section.

4.2 Evaluation Criteria

This Section discusses the criteria that cover capacity, operation, and reliability requirements for piping, pumping, supply, and storage facilities. In the State of Utah, the design and construction of public drinking water systems is regulated by the Utah Administrative Code (UAC) R309. A summary of the criteria are shown in **Table 4-1**. The criteria are based on the UAC or industry standards. Where not otherwise established, criteria are based on engineering experience.

Table 4-1
Evaluation Criteria

Description	Evaluation Performed
Minimum pressure for peak day demand	40 psi
Minimum pressure for peak hour demand	30 psi
Minimum pressure for maximum day demand plus fire flow	20 psi
Maximum Operating Pressure	100 psi
Maximum Existing Pipeline Velocity	8 fps
Peak Day Designed Pipeline Velocity	5 fps
Peak Hour Designed Pipeline Velocity	8 fps
Peak Hour Flow Maximum Friction Loss	10 ft/1,000 ft
Minimum Storage Requirements (by pressure zone)	
Indoor Component	400 gals per ERC
Irrigation Component	2,848 gals/irrigated acre
Fire Component	Max. Fire Flow x Associated Duration
Emergency Component	Half indoor component
Minimum Supply Requirements	Peak Day Demand and Average Yearly Demand

4.3 Demand Conditions

Pipes must have sufficient capacity to convey flows under each of the three demand conditions. These demand conditions are defined as:

- Peak Day-the day of the year when the daily water demand is the greatest.
- Instantaneous-the hour of peak demand usage, on the maximum day.
- Fire Suppression-the combined maximum day and various fire flow requirements for fire suppression

4.4 Pipe Criteria

Pipe criteria to be addressed include diameter, pressure, velocity, headloss, and reliability. Criteria for water system appurtenances, such as air release and vacuum valve sizing and placement, fire hydrant spacing, and isolation valve spacing are not within the scope of this analysis.

4.4.1 Diameter

The criteria for pipe diameter should be based on peak hour flow, fire flow, and pressure requirements. The UAC R309-550 states, “For water mains not connected to fire hydrants, the minimum line size shall be 4-inch diameter. Minimum water main size serving a fire hydrant lateral shall be 8-inch diameter unless hydraulic analysis indicates that required flow and pressures can be maintained by smaller lines.” It is recommended that 8-inch line be used whenever pipe replacement is required throughout the system.

Figure 2-3 shows that there is 4-inch pipe throughout the system and a few 2-inch pipes. There are fire hydrants on a few of 4-inch lines. It is recommended that eventually all 4-inch that have fire hydrants located on them be replaced unless the hydraulic model shows that there is enough looping in the system to deliver the required fire flow at the required residual pressure. The fire flow deficiencies will be discussed below.

4.4.2 Velocity and Headloss

Criteria for evaluating pipe velocity for evaluation and design are generally provided by way of recommendation rather than requirement. It is recommended during maximum day demand the velocities be kept under 5 fps, during peak hour under 8 fps.

As with velocity, headloss criteria are suggested as indicators of sufficient capacity and energy efficiency. It is recommended that a maximum design headloss rate of 10 ft/1,000 ft under peak hour flow conditions be used for pipes less than 16-inches in diameter. For pipes 16-inch and greater diameter, a headloss rate of 3 ft/1,000 ft is recommended.

The velocities through each pipe for instantaneous demand are shown on **Figure 4-1**. The pipe velocities that are over 8 fps are from the 10 MG to the 200 East and the pipe over 5 fps to 500 East. During peak day scenario the pipes from the 10 MG tank to 200 East have a velocity of 6.9 fps and the pipes to 500 East have a velocity of 4.9 fps. During the average day scenario the pipes from the 10 MG tank to 200 East have a velocity of 4.2 fps and the pipes to 500 East have

velocity of 3.9 fps. In order to address these velocity issues without replacing the pipe, it is recommended that a 14-inch pipe and PRV be constructed from Woodhill Drive to Park Drive and the 10-inch pipe from Park Drive to 100 East be replaced with a 14-inch pipe.

4.4.3 Maximum Day and Instantaneous Pressure

Maximum distribution system pressure is dictated by pressure class of pipe and other appurtenances in the distribution system. High pressures are not advisable because of the increased leakage rate, an increased risk of pipe failure, and the required installation of pressure reducing valves on service connections. It is recommended that the maximum pressure be limited to 100 psi. Pressures exceeding this may be allowable as determined by the City.

A minimum distribution system pressure is required by the UAC to avoid customer complaints and prevent contamination from backflow. The minimum pressure during peak day demand is 40 psi. The minimum pressure for instantaneous demand is 30 psi. The minimum pressure for maximum day demand plus fire flow is 20 psi.

Figure 4-1 shows the pressure at each node for peak hour demand. The lowest pressure in the system is 30 psi. This is at the end of the 12-inch coming out of the 3 MG Tank. There isn't any demand at this location. The other two areas that have lower pressure are described below:

- Top of South Pressure Zone along 400 N from 100 West to 100 East. These pressures range from 36 to 40 psi during the instantaneous scenario. During the peak day demand and average day demand scenarios this is increased to range from 37 to 41 psi. This area meets instantaneous criteria, but pressure does fall below the 40 psi criteria for peak day demand.
- The other area that does have lower pressures is the corner of 1880 East and 880 North. The pressure at this corner is 39 psi during peak instantaneous demand and 41 psi during peak day and average day demand. This area meets all the UAC pressure criteria, but should be noted as a low pressure area.

Price City does have the risk of high operational pressures, which could potentially lead to possible pipe failure. The areas with high pressure are the following:

- South Carbonville Zone: 100-135 psi instantaneous, 105-141 psi peak day, & 113-149 psi average day
- South North Zone: 90-102 psi instantaneous, 91-103 psi peak day & average day
- High East Zone: 91-97 psi instantaneous, 93-100 psi peak day, 94-101 psi average day

4.4.4 Fire Flow

The system is required to maintain 20 psi at each fire hydrant with peak day demand plus various fire flow requirements. **Table 4-2** shows the fire flow placed on the system for each land use type. The majority of the system is residential and is required to maintain a fire flow of 1,000 gpm. **Table 4-3** shows the fire flow required and available at 40 psi for those customers that have sprinkler systems.

Table 4-2
Fire Flow Requirement By Landuse

Zoning Districts	Landuse Type	Fire Flow (gpm)	Duration (hr)
C-1	Commercial	1,500	2
M-1	Manufacturing	1,500	2
M-2	Manufacturing	1,500	2
PF	Public Facility	1,500	2
RR	Rural Residential	1,000	2
R1-12	Single Family Residential	1,000	2
R1-6	Single Family Residential	1,000	2
R2-11	Multiple Residential	1,500	2
R2-7	Multiple Residential	1,500	2

A fire node was placed at all hydrants shown in the City's shape file. Of the 515 fire hydrants, 18 hydrants did not meet criteria. **Table 4-4** lists the hydrants that are deficient with available fire flow at 20 psi. The deficient fire hydrants are shown on **Figure 4-2** and the fire flow available are shown on **Figure 4-3**. There is 1 hydrant that has an available fire flow less than 500 gpm, 3 hydrants that have available fire flow less than 750 gpm, and 8 hydrants that have fire flow less than 1,000 gpm. The additional 10 deficiencies are due to the area being required to provide 1,500 gpm fire flow. **Table 4-4** lists the 17 hydrant locations that do not meet fire flow requirements along with the available fire flow at each location.

State standards require a minimum of 1,000 gpm for residential connection. In discussion with Price City staff and Fire Chief, they would prefer the fire flow be 1,500 gpm in residential areas and 2,000 gpm in commercial, multiple residential and manufacturing areas. There are currently 70 hydrants that cannot provide a fire flow of 1500 gpm. In other areas, a 2,000 gpm minimum is desired however the system will not produce 2,000 ppm in many areas. There are 129 hydrants that will not be able to produce the 2,000 gpm in commercial, multi-residential, and manufacturing. You can see the available fire flow at 20 psi on **Figure 4-3**. Storage was designed to accommodate a fire flow of 2000 gpm for 2 hours for a total of 240,000 gallons, the highest fire flow likely on the system. Further discussion on storage capacity is found in the storage section.

Table 4-3
Fire Flow Results for Customers with Sprinklers

ID	Location	Hydrant Available Flow @ 40 psi (gpm)
J1766	CEU	2,599.44
J1750	CEU	3,447.13
J1390	ROCKYMTN HOME CARE	1,864.77
J1520	PINNACLE NURSING	2,370.50
J1530	COURTHOUSE	2,626.56
J1550	CARBON HIGH SCHOOL	2,975.02
J1680	BURTENSHAW DORM	3,173.69
J1826	CASTLEHEIGHTS SCHOOL	1,154.05
J2094	APARTMENTS	1,000.05
J2202	WALMART	1,800.59
J2322	APARTMENTS	1,647.86
J2650	APARTMENTS	1,199.22
J2794	CREVIEW ELEMENTARY	1,759.54
J2156	MAIN STREET EAST	2,887.71
J3006	MAIN STREET WEST	4,452.85
J80	MAIN STREET MIDDLE	2,608.06
J3032	JAIL	1,872.32
J3744	CREEKVIEW MALL	1,703.94
J3226	APARTMENTS	2,968.49
J3234	BLM	3,546.03
J3358	CARBON SCHOOL DISTRI	6,292.92
J3480	GREENWELL HOTEL	1,975.17
J3552	MUSEUM	3,942.31
J3626	CREVIEW ELEMENTARY	1,688.32
J3762	HOTEL NATIONAL 9	2,146.87
J3770	MT. HARMON MIDDLE	5,367.10
J3798	APARTMENTS	1,400.96
J3952	COURTHOUSE	2,407.02
J3972	APARTMENTS	1,416.93
J492	HOLIDAY INN	2,920.65
J500	BEST WESTERN	2,626.21
J520	CROSSCUT STORE	2,573.74
J528	WINGERS	1,955.56
J530	HOSPITAL	1,676.68
J664	APARTMENTS	3,119.78
J836	CASTLE VALLEY CENTER	1,935.11

Table 4-3 shows that all customers that have sprinklers have more than 1,000 gpm at 40 psi.

**Table 4-4
Nodes Not Meeting Fire Flow Requirements**

ID	Zone	Land	Available FF @ 20 psi	Required FF @ 20 psi		CIP Project To Correct
		Use	(gpm)	(gpm)	Address	
J354	NORTH	R2-7	654	1,000	200 N 600 E	7
J356	NORTH	R2-7	602	1,000	620 E 200 N	7
J1344	NORTH	R2-7	892	1,500	5th Ave 250 N	7
J3830	NORTH	R1-6	957	1,000	880 N 1880 E	6
J2360	SOUTH	R2-7	1,424	1,500	540 S Nick Ln	4 & Onsite-24
J2364	SOUTH	M-1	1,406	1,500	Nick Ln Rays Rd	5 & Onsite-24
J2374	SOUTH	M-1	1,394	1,500	625 S Nick Ln	6 & Onsite-24
J2544	SOUTH	C-1	466	1,500	600 E Main	10
J2550	SOUTH	C-1	1,453	1,500	5 N 500 E	10
J2600	SOUTH	C-1	1,463	1,500	100 S 600 E	10
J2694	SOUTH	R1-6	974	1,000	447 S 400 E	1
J3176	SOUTH	M-1	1,018	1,500	200 S 200 W	13
J3368	CARBONVILLE	C-1	1,477	1,500	205 N Fairgrounds Rd	8
J3376	CARBONVILLE	C-1	1,470	1,500	125 N Fairgrounds Rd	8
J3438	HIGH EAST	C-1	1,060	1,500	775 E 100 S	11
J3454	HIGH EAST	C-1	996	1,500	850 E 100 S	11
J2512	LOW EAST	R1-6	964	1,000	1800 E Fausett Ln	11

4.4.5 Reliability

To increase reliability of service in the distribution system, dead end pipes should be minimized by looping whenever practical. It is also recommended that hydraulically isolated areas should be provided with two feed sources.

The majority of the system is looped except at pressure zone boundaries and cul-de-sacs. There are a few areas where check valves could be installed to improve the reliability of the system.

The first one is before the PRV between the North Zone and the High East Zone on Cedar Hill Drive (approximately 500 North). The High East Zone cannot provide adequate fire protection unless it can pull from the 3 MG tank and the 10 MG tank. During calibration, it looked like flow was being transmitted through both pipes to provide adequate fire flow, but this should be verified.

A PRV is also recommended from the North Zone to the South Zone at Main Street and 600 East to help with fire flow deficiencies and to better loop the system together.

The other location a check valve is recommended is 1600 East & 500 South between the High East Zone and the Low East Zone. This would only operate if the pressure in the area fell below 35 psi to allow flow during fire flow conditions only.

4.5 Pumping Evaluation

4.5.1 Capacity

There are no pump stations within the Price City Water System.

4.5.2 Reliability

There are no pump stations within the Price City Water System.

4.6 Supply Evaluation WTP and Transmission Lines

Water supply should be adequate to provide for peak day demand and average yearly demand for their respective service area. The water shares were evaluated to determine if the City has enough water shares to accommodate average yearly demand. The Price City Water Treatment Plant (PCWTP) Capacity was evaluated to determine if the supply can adequately provide for peak day demand. PCWTP runs from April to October as dictated by the higher demand in the summer months that springs alone cannot cover.

4.6.1 Water Supply

Price City currently has water rights amounting to 5975.34 acre-ft that are available to the Culinary System.

Raw water is supplied to the Price City Water Treatment Plan from the Price River. The WTP has the capacity of 1.7 to 2.0 MGD. As described in the Price Canyon Water Treatment Plant Basis for Design Report dated March 1st, 2024, conducted by Hazen, there are future plans to increase capacity from 2.0 to 8.0 MGD.

4.6.2 Raw Water Storage for Culinary Water

Raw water is supplied to the Price City Water Treatment Plant (PCWTP) from the Price River. The facility uses a gravity-fed surface water intake structure to divert water from the Price River. The structure is made of concrete and utilizes slide gates and screens.

4.6.3 Culinary Water Treatment

The PCWTP is capable of producing a total flow of 1.7 to 2.0 MGD, averaged over 24 hours. The existing plant has a river intake, pre-sedimentation basin, a sand trap for grit removal, rapid mixer (currently not in use), a single stage of vertical paddle wheel flocculators, conventional settling basins with two circular clarifiers in series, and a single gravity media filter. As described in the Price Canyon Water Treatment Plant Basis of Design Report dated March 1st, 2024, conducted by Hazen, a new treatment process consisting of a robust pre-sedimentation, flocculation, dissolved air floatation, ozone, and filtration has been recommended as an approach to treat the range of water quality that the plant sees now and is expected to see in the future.

4.6.4 Transmission Lines

The Price City is fed by two spring sources. Colton Springs resides northwest of the treatment, plant, close to US-6 mile markers 228 and 229, and Colton Well #1 and #2 are located near Colton Springs. The water of these springs is transferred to the Price City Water Treatment Plant via a 12 mile stretch of transmission pipeline. The pipes are composed mostly of carbon steel and

cast iron, with some PVC and HDPE. The pipe diameters vary between 12 inches and 18 inches in diameter. The pipes never run at full capacity and leads to the operating pressures usually remaining low. The pipes are aging and are due for replacement or repairs, as they are close to 100 years old. Moreover, some locations are shallowly buried or even completely exposed. This subjects the pipe to heightened risks of deterioration. A condition assessment was conducted by Advanced Engineering & Environmental Services (AE2S) and Infinity Corrosion Group for the existing transmission pipeline from Colton Springs to the PCWTP. This study, dated February 29th, 2024 was called the Transmission Line Condition Assessment for Price City. This assessment determined that the pipe segments inspected were found to be in very poor condition. Steel pipe segments showed evidence of extreme corrosion, metal loss, and structural damage. Protective coatings were completely worn down and no longer effective. Cast iron pipe segments, while less of a structural concern, also showed signs of corrosion with rust and heavy pitting present. The location of this pipeline is also critical as it runs parallel to U.S. Highway 6 and to UPRR tracks. Pipe breaks and failures will become increasingly expensive in these areas if not addressed immediately. The study recommended that the highest priority would be to replace the steel pipe segments followed by the cast iron pipe segments.

4.6.5 Source Analysis

The four sources available for Price City are Colton Springs, Price River, Colton Wells, and Scofield Reservoir Storage via the Price River. These sources are discussed in detail in Section 2 of this report. **Table 2-5** shows that Price City has an annual yield of 5,975 ac-ft. **Table 4-5** shows the supply analysis.

For planning purposes, it is important to identify the amount of reliable water available in drought conditions. The Division of Drinking Water (DDW) regulations require that the quantity of water available from surface water sources must “be assumed to be no greater than the low flow of a 25-year recurrence interval or the low flow of record for these sources when 25-years of records are not available” (R309-515-5(4)(a)).

In 2016, a year of water shortage, the diversion from the springs totaled 1,944 Ac-ft. The Price River water right yielded 578 Ac-ft. for a total diversion of 2,522 Ac-ft. Scofield shares were allocated at 33% for a total of 367 Ac-ft. This year’s total yield for the City’s water source was 2,899 Ac-ft (2.59 mgd). Using extreme conservation efforts, the City only used 2,389 Ac-ft (2.13 mgd). However, the supply was still insufficient to satisfy the demand because of low flow in the river during late fall. This low flow prevented the City from diverting sufficient water to meet the water demands. Even though the City owns sufficient water rights, it lacks storage to assure that water is available when required, especially in drought conditions.

**Table 4-5
Supply Analysis**

			Peak Day	Avg Day	Annual	Total		Drought Condition	
Year	ERCs	Irrigable Acres	Recorded/ Estimated			Available		Available	
		(acres)	(mgd)	(mgd)	(ac-ft)	(acre-ft)	(mgd)	(ac-ft)	(mgd)
2024	6,272	509	4.69	2.61	2,920.59	5975	5.33	2,899	2.59
2040	7,099	548	5.26	2.92	3,275.55				
2050	7,582	574	5.59	3.11	3,481.05				
2060	8,010	611	5.91	3.28	3,680.32				

Table 4-5 shows that although the water supply is more than adequate to meet existing and future needs annually. It is difficult to meet peak day demand, especially during drought conditions. During years of extreme drought, the City has experienced water delivery shortages during the late season period. In order to utilize the water rights fully, additional storage would be required downstream of Scofield Reservoir.

4.6.6 Future Storage

It is recommended that a reservoir lower on the Price River be built to help the City meet the existing and future water demand needs, especially during drought conditions. This Reservoir would allow the City to take advantage of all of its existing water right holdings. To this end, the City has taken the initiative to study reservoir site alternatives and identify possible funding sources. Planning studies are presently in progress being funded by the Natural Resource Conservation Service (NRCS) under PL-566. This study has identified a feasible reservoir site and will be completed by 2025. Funding for construction will be possible at the completion and approval of the proposed plan. This proposal is discussed in a separate report.

The City has a water right 91-152, priority date of 1946, for 5,000 ac-ft. of storage. This storage right was originally planned for development on the White River, a tributary of the Price River. The right was later changed to a diversion from undeveloped wells on the Emma Park area. This proposed source did not produce the expected water. A change application would have to be filed to move the right back to a new storage location. Presently, a 40-year plan was submitted to the Division of Water Rights, asking for an extension of time to submit proof of use. This extension was approved on October, 2022. The date to submit proof was extended to November 30, 2031. Prior to the new approved data, a revised 40-year plan will be required if proof has not been made.

4.7 Storage Evaluation

Storage capacity requirements include provisions for operational, fire suppression, and emergency components.

4.7.1 Operational Storage

Operational storage requirements are determined by calculating the average day demands. The UAC recommends that 400 gallons per Equivalent Residential Connection (ERC) be used. Where the drinking water system provides water for outdoor use, the operational storage recommended by the UAC is 2,848 gallons per irrigated acre.

4.7.2 Fire Storage

Fire storage capacity must, at a minimum, be equal to the water volume required to serve the largest fire flow for the required duration for the facility's service area. The maximum fire suppression storage will be 240,000 gallons (2,000 gpm for 2 hours). The fire flow for each type of land use is shown in **Table 4-2**. The maximum fire flow in the system is 1,500 gpm for 2 hours. **Table 4-6** shows the required storage for Price City Water System. The operational storage is the number of ERC's times the UAC recommended 400 gallons.

4.7.3 Emergency

Emergency Storage was assumed to be equal to the average indoor demand. Emergency storage provides water during situations such as natural disasters, main pipe or equipment failures, electrical outages, etc.

Table 4-6
Storage Summary Table

			Indoor	Outdoor	Emergency	Max	Storage	Storage
Year	ERCs	Irrigable Acres	Avg. Day			FF	Req'd	Available
		(acres)	(gpd/ERC)	(gal/acre/day)		(2000 gpm, 2 hrs)		
			(gpd)	(gpd)	(gpd)	(gal)	(gal)	(gal)
			400	2848				
2024	6,272	509	2,508,800	1,449,632	2,508,800	240,000	6,707,232	13,000,000
2040	7,099	548	2,839,600	1,560,704	2,839,600	240,000	7,479,904	13,000,000
2050	7,582	574	3,032,800	1,634,752	3,032,800	240,000	7,940,352	13,000,000
2060	8,010	611	3,204,000	1,740,128	3,204,000	240,000	8,388,128	13,000,000

Table 4-6 shows that the 13 MG storage available in the two tanks is enough to provide operational, emergency, and fire flow for 2,000 gpm to 2 hours. The UAC code states that the storage for fire flow must not be less than 1,000 gpm for 60 minutes. It also references Appendix B of the International Fire Code. Depending on the type of building 2,000 gpm for 2 hours is recommended for larger facilities. However, local fire code officials are authorized to determine fire flow requirements in their jurisdictions. For analysis purposes, 2,000 gpm for 2 hours was used. This extra storage is used when supply does not meet peak day demands or if a fire situations happen to need more than 2,000 gpm for 2 hours.

5.1 Recommended Improvements

This section discusses the recommended improvements for the Price City Water System. These improvements were determined by evaluating the hydraulic model developed for the existing system and interviewing City Employees to determine the status of the culinary system. **Figure 5-1** illustrates the Master Plan projects. The projects are prioritized according to the greatest hydraulic impact on the system. The recommended improvements and the purpose of the improvement are listed below.

1. The first project is required to loop the system with an 8-inch to supply water to the new Devco Development in the South Zone around 600 South and 500 East and to eliminate fire flow deficiencies in this area. Two new hydrants will be installed along this line to meet fire hydrant spacing requirements.
2. Besides low fire flow, the only other significant deficiency in the system is the velocity in the 12-inch pipe coming from the 10 MG tank to 600 East is above 8 fps. A 14-inch pipe and PRV is recommended from Woodhill Road to Park Drive.
3. The third project continues this 14-inch from Park Drive along 600 North to 100 East. An additional fire hydrant will be installed to meet fire hydrant spacing requirements.
4. Is a small project connecting the west and east side of the South Zone across the railroad tracks at 400 South and about 400 East. This will help eliminate some fire flow issues on both sides of the track and will allow the South Zone to be looped better.
5. To continue reducing the velocity in the 12-inch line from 10 MG to 600 East the 4-inch CI Pipe should be replaced with 12-inch PVC on 800 N from 200 E to 300 E. The 4-inch on 700 N from 400 E to 500 E also needs to be replaced with an 8-inch PVC pipe.
6. As future developments come online in the North Zone, the 6-inch PVC pipe on 800 North from Cedar Hills Dr. to Homestead Blvd should be replaced due to high velocities in the existing 6-inch pipe. This will also increase the fire flow available in the north east corner of the North Zone (1880 E & 800 N).
7. Replace 4-inch CI Pipe with 8-inch PVC Pipe on 5th Avenue from 300 N to dead end and on 600 E from 300 N to 200 N to eliminate fire flow deficiencies in the area.
8. Replace 6-inch CI Pipe with 10-inch PVC Pipe along Westwood Blvd from existing 10-inch at Hospital Drive to Existing 8-inch to supply 1500 gpm fire flow to this dead end.
9. Install an 8-inch pipe to Loop Airport Rd to 150 S. This will ensure adequate fire flow to this dead end.
10. Connect North Zone to South Zone through a PRV at 600 East and Main Street. This will require replacing 4-inch CI Pipe with 12-inch PVC Pipe along 500 E from 100 North to Main St, then replace the 8-inch pipe with a 12-inch pipe on Main St. from 500 E to 600 E, then replace 4-inch main with 10-inch main on 600 E from Main Street to 100 S. The fire flow at this dead end is less than 500 gpm (1500 gpm required).
11. Install Check Valves controlled to open during low pressure conditions (to improve availability of fire flow). Located at: Cedar Hill Drive at Sagewood before the PRV

(North Zone to High East Zone); 1600 E before 500 S (High East Zone to Low East Zone), & 700 E and 100 S (South Zone to High East Zone).

12. Replace 4-inch CI Pipe with 8-inch PVC pipe 200 S from 600 E to 700 E, 600 E from 200 S to 300S, 500 E from 100 S to 400 S, and install 2 Hydrants to meet fire hydrants spacing requirement. This will improve flow to handle new development and increase fire flow to the area.
13. Replace 4-inch CI Pipe with 8-inch PVC Pipe: along 200 W from 400 S to 200 S, 200 S from 200 W to 600 W, along 500 W & from 200 S to 300 S, along 400 W from 200 S to 300 S, 300 W from 200 S to Rail Rd Ave, & install 3 Hydrants to meet fire hydrant spacing requirements. This will increase fire flow to the area.
14. Install 12-inch Pipe from existing 12-inch on Price Kenilworth Rd to 800 N. Maybe connect at 800 N to North Zone to loop the system (New Development).
15. Replace 6-inch PVC with 10-inch PVC along 800 N from Homestead to 1880 E to loop 3 MG tank during Fire Flow. (This is only if want to connect 3 MG with check valve to the North Zone).
16. Install 12-inch Pipe along 1900 E from 800 N to PRV to handle new development.
17. Install 12-inch Pipe along 1900 E from PRV to Airport Rd to handle new development.
18. Replace 4-inch CI Pipe with 8-inch PVC Pipe when installing 12 fire hydrants to meet UAC requirements for hydrant spacing. **Figure 5-2** shows recommended hydrants along with existing 4-inch mains throughout the system. The 4-inch pipe quantities only include replacing 4-inch lines where future fire hydrants are recommended
19. Install an additional 36 hydrants to meet UAC requirements for fire hydrant spacing.

Items 1-11 are recommended to be completed by the year 2040. The other improvements are recommended to be completed by the years 2050 and 2060.

5.2 Unit Cost

The costs developed for this Study are for planning purposes only and are based on unit costs developed from recent planning projects and construction bid information. The opinions include a 20 percent markup for engineering and administration and 15 percent contingency for unknowns such as bidding environment and site specific conditions which are unknown at this planning stage. Guidelines published by the American Association of Cost Engineers suggest that the budget level cost opinions developed during the plan phase have a “reconnaissance grade” level of accuracy, which may vary between -30 and +50 percent of actual project costs. The unit costs are included in **Table 5-1**.

Table 5-1
Unit Cost Table

Description	Unit	Unit Cost
Pipelines by Diameter (inch)		
8-inch PVC Pipe	LF	\$90
8-inch PVC Pipe Replacement	LF	\$90
10-inch PVC Pipe	LF	\$120
10-inch PVC Pipe Replacement	LF	\$120
12-inch PVC Pipe	LF	\$140
12-inch PVC Pipe Replacement	LF	\$140
14-inch PVC Pipe	LF	\$160
14-inch PVC Pipe Replacement	LF	\$160
Miscellaneous		
6-inch PRV	EA	\$40,000
8-inch PRV	EA	\$45,000
8-inch Check Valve	EA	\$6,000
8-inch Bore Crossing	LF	\$500
Fire Hydrant	EA	\$6,000
Contingency		15%
Engineering/Legal/Admin.		20%

The unit cost per linear feet of pipe includes cost of pipe, fittings, valves, excavation, pipe installation, pipe testing, backfilling, compaction and surface restoration. These costs do not include cost for land acquisition.

Other costs accounted for in the cost estimates include contingency, engineering, legal, and administration fees. A 15 percent allowance for contingencies is included in the cost estimates. The allowance for contingencies covers items such as variations in the project configuration, unforeseen site conditions encountered during construction, and reasonable project changes during construction. The contingency does not include design criteria changes, additional costs resulting from permit mitigation, nor does it account for inflation. The engineering, legal, and administration cost are included at 20 percent of the total construction cost plus contingency.

5.3 Quantities

The quantities used to develop the probable costs were taken from GIS maps of the area and checked with the lengths provided in the hydraulic model.

5.4 Cost Opinions

A summary of the budge level cost opinions for the recommended projects are presented in **Table 5-2**. The cost opinions shown in **Table 5-2** include the 20 percent markup for engineering and administration and the 15 percent contingency for unknowns such as bidding environment and site specific conditions which are unknown at this planning stage. The detailed cost opinions for each project are located in **Appendix A**. The location of each project is shown on **Figure 5-1** and the location of the proposed fire hydrants is shown on **Figure 5-2**.

Table 5-2
Capital Improvements Cost Opinion Summary

Proj.	Location	Description	Unit	Quantity	Total Cost
Priority A (2040)					
1	Replace 4" with 8" 400 S & 100 E to Private Drive	8" Replacement	LF	1,100	
	Install 8" to Loop System from 400 S Private Drive to 400 E	8" PVC	LF	1,100	
	Install Fire Hydrants	New Hydrant	EA	2	\$289,800
2	Install 14" PVC Woodhill Road to Park Drive	14" PVC	LF	1,100	
	Install 8" PRV	8" PRV	EA	1	\$304,980
3	Replace 10" w/ 14" PVC Park Drive, along 600 N to 100 E	14" Replacement	LF	800	
	Install Fire Hydrant	New Hydrant	EA	1	\$184,920
4	Install 8" 400 S @ 400 E (w/Railroad Crossing)	8" PVC	LF	200	
		8" Bore Crossing	LF	200	\$162,840
5	Replace 4" with 12" Pipe 800 N 200 E to 300 E	12" Replacement	LF	400	
	Replace 4" with 8" Pipe 700 N. 400 E to 500 E	8" Replacement	LF	400	\$126,960
6	Replace 6" with 10" 800 N. Cedar Hills Dr to Homestead Blvd	10" Replacement	LF	2,000	\$331,200
7	Replace 4" with 8", 5th Avenue 300 N to dead end; 600 E 300 N to 200 N	8" Replacement	LF	1,100	\$136,620
8	Replace 6" w/ 10" along Westwood Blvd from Ex. 10" @ Hospital Dr to Ex. 8"	10" Replacement	LF	700	\$115,920
9	Install 8" to Loop Airport Rd to 150 S	8" Replacement	LF	300	\$37,260
10	Replace 4" w/ 12" along 500 E 100 N to Main St, 8" w/ 12" along main street from 500 E to 600 E,	12" Replacement	LF	600	
	Replace 4" with 10" 600 E, Main St to 100 S, Add PRV to South Zone	10" Replacement	LF	1,200	
	Install 6" PRV	6" PRV	EA	1	\$287,040
11	Install Check Valves: North to High East Zone (Cedar Hill Drive; Sagewood before the PRV); High East to Low East Zone(1600 E, 500 S),South to High East Zone (700 E & 100 S)	8-inch Check Valve	EA	3	
	Install 8" Pipe to connect Parallel 6" and 10" Pipe at 700 E & 100 S	8" PVC	LF	100	\$24,840
Total Priority A Cost					\$2,002,380

Table 5-2 (Continued)
Capital Improvements Cost Opinion Summary

Priority B (2050/2060)					
12	Replace 4" with 8" 200 S 600 E to 700 E; 600 E 200 S to 300 S, New Hydrants	8" Replacement	LF	2,800	
	Install Fire Hydrant	New Hydrant	EA	2	\$364,320
13	Replace Pipe with 8" PVC Pipe: 200 S 400 W to 600 W, 500 W 200 S to 300 S, 400 W 200 S to 300 S	8" Replacement	LF	5,400	
	Install Fire Hydrant	New Hydrant	EA	3	\$695,520
14	Install 12" Pipe on Price Kenilworth Rd to 800 N.	12" Replacement	LF	1,000	\$193,200
15	Replace 6" PVC with 10" PVC 800 N Homestead to 1880 E to loop 3 MG tank	10" Replacement	LF	1,400	\$231,840
16	Install 12" Pipe 1900 E 800 N to PRV	12" PVC	LF	2,500	\$483,000
17	Install 12" Pipe 1900 E PRV to Airport Rd	12" PVC	LF	2,600	\$502,320
18	Replace 4-inch where recommending future hydrants	8" Replacement	LF	5,800	
	Install Fire Hydrants		EA	14	\$836,280
19	Install Fire Hydrants	New Hydrant	EA	36	\$298,080
Total Priority B Cost					\$3,604,560
Total Project Cost					\$5,606,940

5.5 Connection Fee Analysis

In Price City resolution 2011-14 section 4 established fee schedules for water connections. The current fee schedule is broken down by meter size as shown in **Table 5-4**.

Table 5-4: Utility Connection Fees

Water Connection Line Size	Fee
¾"	\$1,250
1"	\$2,500
1 1/2"	\$3,500
2"	\$4,750

The fee for meters 3-inches and larger does not include the cost of the meter.

When a connection is requested, the City requires the owner to provide all the materials for the connection except the water meter which the City provided. For meters 2-inches and smaller, City crews conduct the hot tap to connect the service line to the main, perform an inspection, and install the meter when the service is ready to be activated. For 3-inches and larger, the owner is required to perform the work, but the City provides an inspection.

Appendix A (Detailed Cost)

DRAFT BIOLOGICAL ASSESSMENT – BOTANICAL AND WILDLIFE RESOURCES

**FOR THE PROPOSED:
PRICE CITY PROJECT 9C-2025 –
SPRING WATER TRANSMISSION LINE REPLACEMENT**

UTAH AND CARBON COUNTIES, UTAH

**PREPARED BY:
WESTERN-ENVIRO RESOURCES, INC.
FRIDAY HARBOR, WA 98250**



FEBRUARY 2026

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1.0 EXECUTIVE SUMMARY

Proposed Project	Price City Project 9C-2025 – Spring Water Transmission Pipeline Replacement	
Consultants/Contractor	WESTERN-ENVIRO Resources, Inc. Friday Harbor, WA 98250	Johansen and Tuttle Engineering, Inc. 90 South 100 East Castle Dale, UT 84513
	AE2S Engineering, LLC 3400 North Aston Blvd, Suite 105, Lehi, UT 84043	
Land Status	Bureau of Land Management (BLM), Utah School and Institutional Trust Lands Administration (SITLA), and private property	
Date(s) of Survey	- Botanical surveys conducted October 23, 24, 28, and 29 and November 10, 11, 12, and 13, 2025. - Wildlife surveys conducted January 5, 12, 13, 14, 15, and 16, 2026.	
Survey Location	Sections 23, 25, 26, and 27 in Township 11 South, Range 8 East; Sections 30, 31, and 32 in Township 11 South, Range 9 East; and Section 5 in Township 12 South, Range 9 East, Salt Lake Base and Meridian (S.L.B.&M.), Utah and Carbon Counties, Utah.	
Survey Crew Lead(s)	Bridget M Atkin, M.S., M.L.A., Plant Ecologist Rayce Bryan, M.S., Plant Glen Gantz, M.S., Certified Wildlife Biologist	

SUMMARY OF SURVEY RESULTS

Acreage Surveyed for Plant Resources	558.95 acres	
Target Plant Species	Plant species listed by the U.S. Fish and Wildlife Service (USFWS) as Threatened, Endangered, Proposed, and Candidate (TEPC); survey focused on Ute lady's tresses (<i>Spiranthes diluvialis</i>).	
Number of Target Plant Species Observed	None (0)	
Target Plant Species Habitat Documented	11.65 acres of suitable <i>S. diluvialis</i> habitat documented, 0.32 acres of which would be located within the pipeline ROW but would be avoided through a bore. - No impacts to suitable <i>S. diluvialis</i> habitat are anticipated as suitable habitat has been avoided or would be bored.	
Target Wildlife Species	Wildlife species listed by the USFWS, raptors, and other Species of Concern (SOC).	
Acreage Surveyed for Wildlife Resources	Burrowing owl survey	TEPC species, raptor, and SOC surveys
	2,266.00 acres	4,620.31 acres
Target Wildlife Species or Resources Documented	- Habitat suitable to monarch butterfly and Suckley's cuckoo bumble bee observed within one-half mile of the project ROW. No habitat suitable to any other TEPC wildlife species present. - No previously documented raptor nests within one-half mile of the project ROW; two (2) new nests located during the 2025 field survey. - No suitable burrowing owl habitat present within one-quarter mile of the project ROW. - Project located within Utah Sage-Grouse Management Area (SGMA); 2,571.05 acres of suitable habitat and one (1) individual observed within project area.	
Wildlife Resources for Consideration:	Pre-construction avian survey recommendations: - Raptors and other migratory birds (January 1 through August 31). - Greater sage-grouse (March 1 through June 15)	

2.0 INTRODUCTION AND BACKGROUND

WESTERN-ENVIRO Resources, Inc. (WESTERN-ENVIRO), in coordination with AE2S Engineering, LLC (AE2S) and Johansen and Tuttle Engineering, Inc. (J&T), conducted field surveys and prepared a Biological Assessment (BA) related to the proposed Price City Project 9C-2025 – Spring Water Transmission Line Replacement (project) (Map 1, Appendix A).

The purpose of this BA is to review potential effects of the proposed project on biological resources, including TEPC plant and wildlife species, migratory birds, and other SOC. These resources are protected and regulated under the Endangered Species Act of 1973 (16 United States Code [U.S.C.] § 1531 et seq.) and the Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703–712).

Surveys focused on characterizing and mapping habitat respective to biological resources and identifying the presence of listed target species within corresponding habitats, if applicable. Biological resources include federally listed plant and wildlife species and migratory birds including raptors. Work specifically involved the following tasks:

- Identifying potential habitats for federally listed TEPC species, as per USFWS requirements (USFWS 2026a), and other SOC.
- Determining if federally listed TEPC species, migratory birds, including raptors, and other SOC have been identified within the project area and its immediate surroundings. This task was accomplished by referencing the USFWS Information for Planning and Consultation (IPaC) database (USFWS 2026b), the Utah Division of Wildlife Resources (UDWR) Wildlife Habitat Analysis Tool (WHAT) database (UDWR 2026a), and the UDWR raptor nest database (UDWR 2026b).
- Conducting field assessments for TEPC species, nesting raptors, and other SOC within the proposed impact area and in respective species survey buffers.

This report details findings related to TEPC species, migratory birds, including raptors, and other SOC within the proposed project right-of-way (ROW) and survey buffers. Field assessments and reporting pertain to the project ROW and associated buffers for plant surveys (300 feet) and wildlife surveys (one-quarter mile for burrowing owl and one-half mile for TEPC species, other raptors, and other SOC) (project area) (USFWS 2011) (Map 2, Appendix A).

This report is intended to provide the Client guidance during permitting and construction activities associated with the proposed project.

3.0 PROJECT DESCRIPTION

3.1 PURPOSE AND NEED

The Client's purpose of the proposed project is to replace an existing water pipeline which is the primary source of culinary water for Price City and other surrounding communities. The proposed project would facilitate the collection of water from natural springs located at the western end of the project area and install a new pipeline roughly parallel to the existing pipeline. The current pipeline is over 50 years old, is in a state of disrepair and would be abandoned in place. The replacement of the existing water pipeline is critical for continued, reliable access to clean drinking water. The proposed project would restore the function of the critical infrastructure and protect safe drinking water access for Price City and the surrounding communities.

The proposed project would:

- Obtain permanent ROWs on private and BLM properties,
- Replace the existing water pipeline infrastructure, and
- Decommission the existing failing pipeline.

The BLM's purpose for this project is to respond to the proposed project ROW application and fulfill the BLM's multiple-use mandate as outlined in the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC ch 35 § 1701 et seq.).

3.2 PROPOSED ACTION

The project area is located approximately 17.73 miles northwest of Price and 11.41 miles northwest of Helper in Carbon and Utah Counties (Map 1, inset, Appendix A). More specifically, the proposed project is in Sections 23, 25, 26, and 27 in Township 11 South, Range 8 East; Sections 30, 31, and 32 in Township 11 South, Range 9 East; and Section 5 in Township 12 South, Range 9 East (S.L.B.&M). The project area is primarily in Utah County on private and SITLA property with the southernmost 3,450 linear feet of the pipeline extending into Carbon County on BLM-administered land in Section 5 (T12S, R9E) (Map 1, Appendix A).

The proposed pipeline would be constructed roughly parallel to the existing pipeline, which follows the Price River and Union Pacific Railroad (UPRR) adjacent to U.S. Highway 6 (Hwy 6) through Price Canyon (Map 1, Appendix A). The proposed pipeline alignment would begin at natural springs at the western end of the project area and extend north, crossing the Price River and the UPRR. The pipeline would continue northeast, extending under Hwy 6, and then turn southeast. The proposed pipeline would terminate at existing infrastructure at the southern end of the project area. Elevations within the project ROW are highest in the northern portion and gently descend to the south.

The proposed project also includes staging area and bore pads adjacent to the proposed pipeline alignment. These areas would facilitate construction activities.

Generally, the proposed project includes a 70-foot permanent ROW, 40 feet on one side of center and 30 feet on the other side of center, for the proposed pipeline. The ROW width has been reduced in some portions of the alignment to avoid existing features which would not be impacted such as the Price River, aquatic resources, certain habitats, and the UPRR. These impacts are considered temporary and would be associated with construction activities. The ROW also includes the extent of the staging areas and bore pads. Although pipeline construction does not typically disturb an entire ROW, for analysis purposes, it is assumed that the full ROW would be utilized during construction. It is anticipated that disturbance would be concentrated directly adjacent to the proposed improvements (Map 2, Appendix A).

Ground disturbance resulting from the Proposed Action would total 70.91 acres (OUTLAW Engineering 2025). Table 3-1 summarizes the details of the proposed project.

Table 3-1. Summary of project features and ground disturbance.

FEATURE	LINEAR FEET OF PIPELINE			ACRES OF IMPACTS			TOTAL LINEAR FEET (lf) / ACRES (ac)
	PRIVATE	SITLA	BLM	PRIVATE	SITLA	BLM	
Proposed Pipeline	27,737	2,937	3,450	55.41	4.91	10.59	34,124 lf / 70.91 ac

4.0 RESOURCE SURVEY METHODOLOGY

4.1 BOTANICAL SURVEY

The project area was first evaluated for potential TEPC plant species, specifically targeting *S. diluvialis*. A 300-foot buffer was established around the project ROW and habitat assessments were conducted within this buffer (Map 2, Appendix A). A habitat suitability rating (e.g., suitable, or not suitable) for respective TEPC plant species in Utah and Carbon Counties (i.e., target plant species) was assigned. Vegetation associations, geology, hydrology, and substrate qualities were considered indicators of habitat suitability, in accordance with documented and personal knowledge of known habitat parameters specific to target plant species. If an area contained habitat that could potentially support any of the target species, and the site investigation occurred during the appropriate survey window, it was surveyed using methodology that would provide 100-percent coverage for detecting corresponding species.

The botanical surveys were conducted in October and November 2025 outside the USFWS-designated *S. diluvialis* survey window, which coincides with the typical blooming period of this species, typically in August. Therefore, botanical surveys focused on identifying and mapping suitable habitat. Clearance surveys for *S. diluvialis* individuals were not conducted.

Data recorded during the 2025 botanical survey were collected using ESRI® data collection software (Field Maps®) supported by hand-held Trimble® R1 GNSS receivers. In addition, field notes and photos were taken of the project area to record general site characteristics. Botanical survey and reporting were completed by Bridget Atkin, Kari Coy, and Rayce Bryan; vitae found in Appendix B.

4.2 WILDLIFE SURVEY

The project area was surveyed for federally listed TEPC species, migratory birds, including raptors, and other SOC, on foot, ensuring that the entire area was thoroughly reviewed for wildlife resources. Areas that could be directly impacted by construction and occupancy of the project area footprint were also surveyed.

Buffers for burrowing owl (one-quarter mile) and raptors and other SOC (one-half mile) were established around the project area and surveys were conducted within these buffer zones (Map 2, Appendix A). Potential nesting habitats within the wildlife buffers were examined for nests using a spotting scope and binoculars. If a raptor nest was encountered, its location was documented, along with information on species (if evident), activity, condition, substrate, and in situ habitat. Within this region, the nesting season for most of the locally nesting raptor species is between January and August. Surveys were conducted in January, i.e., at the beginning of the regional nesting and breeding season. Therefore, wildlife surveys focused on identifying active and inactive nests as well as suitable habitat.

In addition to burrowing owl and other raptor nests, habitat suitable to any of the wildlife TEPC species and other SOC known to occur in Utah and Carbon Counties was noted and discussed in the results section of this report. Wildlife surveys were conducted by Glen Gantz and Rayce Bryan; vitae found in Appendix B.

5.0 EXISTING CONDITIONS

5.1 GENERAL DESCRIPTION OF THE PROJECT AREA

The project is situated on the border of southeast Utah County and north-central Carbon County in Price Canyon along Hwy 6 (Map 1, Appendix A). The Price River flows southeasterly through the canyon bottom, which is flat to gently undulating, narrow, and surrounded by mountainous terrain on either side (Figure 5-1). The Price River adjacent to the project area exhibits a meandering active channel, which is approximately 30 to 50 feet wide (Figures 5-1 and 5-2). The canyon bottom includes transportation infrastructure, most prominently Hwy 6 and a UPRR, which both roughly parallel the Price River and the proposed pipeline alignment, as well as powerlines, the existing pipeline, and various trails and access roads (Figure 5-1). Soils within the project area are sandy loam alluvium and rocky sandy loams with loose gravels on the surface. Outcrops of parent material are visible along slope breaks and nearby road cuts.

Vegetation communities within the project area include sagebrush steppe, riparian shrubland, and wet meadow. Sagebrush steppe is the dominant vegetation community in the project area and occupies the broader surrounding slopes. Big sagebrush (*Artemisia tridentata*) is the dominant species with scattered rubber rabbitbrush (*Ericameria nauseosa*) and Utah juniper (*Juniperus osteosperma*). Steep slopes above the Price River are sparsely vegetated. Wet meadow communities are found primarily along the banks of the river and in isolated depressions in the Price River floodplain. Wet meadows are also found associated with the natural springs at the western end of the project area. Dominant plant species in these habitats include reed canarygrass (*Phalaris arundinacea*), mountain rush (*Juncus arcticus* ssp. *littoralis*), water sedge (*Carex aquatilis*), and smooth horsetail (*Equisetum laevigatum*). Riparian shrublands are scattered along the river and are most common in the northern portion of the project area. Common species here

include narrowleaf willow (*Salix exigua*) and redosier dogwood (*Cornus sericea*). Table 5-1 lists the dominant plant species observed within the plant survey area.

5.2 GEOLOGY

The project area occurs primarily on Quaternary alluvium associated with the Price River, with large expanses of the Colton Formation present on either side. Flagstaff Limestone and the North Horn Formation also border the Price River valley bottom within the project area (Maps 3 through 7, Appendix A) (Weiss et al. 2003).



Figure 5-1. View of Price Canyon with the Price River and existing infrastructure, including Highway 6, the UPRR, and overhead powerlines. Photo taken October 23, 2025; oriented southerly.



Figure 5-2. The Price River floodplain in the northern portion of the project ROW is broad with gently rising slopes. The river is lined with wet meadows and riparian shrubland habitats. Photo taken October 24; oriented northeasterly.

Table 5-1. Dominant plant species documented within the project area during the 2025 site survey.

SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME	COMMON NAME
Grass and Grass-like Species			
<i>Agropyron cristatum</i>	Crested wheatgrass	<i>Juncus compressus</i>	Roundfruit rush
<i>Agrostis stolonifera</i>	Creeping bentgrass	<i>Leymus cinereus</i>	Basin wildrye
<i>Bouteloua gracilis</i>	Blue grama	<i>Leymus salinus</i>	Saline wildrye
<i>Bromus porteri</i>	Porter brome	<i>Pascopyrum smithii</i>	Western wheatgrass
<i>Bromus tectorum</i>	Cheatgrass	<i>Phalaris arundinacea</i>	Reed canarygrass
<i>Carex angustata</i>	Widefruit sedge	<i>Poa pratensis</i>	Kentucky bluegrass
<i>Carex nebrascensis</i>	Nebraska sedge	<i>Pseudoroegneria spicata</i>	Bluebunch wheatgrass
<i>Equisetum laevigatum</i>	Smooth horsetail	<i>Thinopyrum intermedium</i>	Intermediate wheatgrass
<i>Juncus arcticus ssp. littoralis</i>	Mountain rush		
Forbs			
<i>Abronia elliptica</i>	Fragrant white sand verbena	<i>Ipomopsis aggregata</i>	Scarlet gilia
<i>Achillea millefolium</i>	Common yarrow	<i>Linum kingii</i>	King's flax
<i>Alyssum desertorum</i>	Desert madwort	<i>Machaeranthera canescens</i>	Hoary tansyaster
<i>Arcticum minus</i>	Lesser burdock	<i>Machaeranthera grindelioides</i>	Rayless tansyaster

SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME	COMMON NAME
<i>Artemisia ludoviciana</i>	White sagebrush	<i>Melilotus officinalis</i>	Sweetclover
<i>Asclepias speciosa</i>	Showy milkweed	<i>Oenothera caespitosa</i>	Tufted evening primrose
<i>Asparagus officinalis</i>	Garden asparagus	<i>Packera multilobata</i>	Lobeleaf groundsel
<i>Astragalus utahensis</i>	Utah milkvetch	<i>Penstemon caespitosus</i>	Mat penstemon
<i>Carduus nutans</i>	Musk thistle	<i>Penstemon palmeri</i>	Palmer's penstemon
<i>Centaurea stoebe</i>	Spotted knapweed	<i>Phlox austromontana</i>	Mountain phlox
<i>Chaenactis douglasii</i>	Douglas' dustymaiden	<i>Phlox hoodii</i>	Spiny phlox
<i>Cirsium arvense</i>	Canada thistle	<i>Plantago major</i>	Common plantain
<i>Convolvulus arvensis</i>	Field bindweed	<i>Polygonum aviculare</i>	Prostrate knotweed
<i>Cynoglossum officinale</i>	Gypsyflower	<i>Ranunculus cymbalaria</i>	Alkali buttercup
<i>Eriogonum alatum</i>	Winged buckwheat	<i>Rumex crispus</i>	Curly dock
<i>Eriogonum brevicale</i>	Shortstem buckwheat	<i>Sisymbrium altissimum</i>	Tall tumbledustard
<i>Eriogonum umbellatum</i>	Sulphur-flower buckwheat	<i>Solidago canadensis</i>	Canada goldenrod
<i>Eurybia glauca</i>	Gray aster	<i>Solidago velutina</i>	Threenerve goldenrod
<i>Geranium richardsonii</i>	Richardson's geranium	<i>Sonchus arvensis</i>	Field sowthistle
<i>Geum macrophyllum</i>	Largeleaf avens	<i>Sphaeralcea coccinea</i>	Scarlet globemallow
<i>Glycyrrhiza lepidota</i>	American licorice	<i>Tragopogon dubius</i>	Yellow salsify
<i>Grindelia squarrosa</i>	Curlycup gumweed	<i>Urtica dioica</i>	Stinging nettle
<i>Heuchera parviflora</i>	Littleflower alumroot	<i>Verbascum thapsus</i>	Common mullein
Shrubs and Sub-Shrubs			
<i>Alnus incana</i>	Gray alder	<i>Lonicera involucrata</i>	Twinberry honeysuckle
<i>Amelanchier alnifolia</i>	Saskatoon serviceberry	<i>Mahonia repens</i>	Creeping barberry
<i>Arctostaphylos uva-ursi</i>	Kinnikinnick	<i>Picea pungens</i>	Blue spruce
<i>Artemisia frigida</i>	Prairie sagewort	<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Artemisia tridentata</i>	Big sagebrush	<i>Purshia tridentata</i>	Antelope bitterbrush
<i>Betula occidentalis</i>	Water birch	<i>Quercus gambelii</i>	Gambel oak
<i>Chrysothamnus viscidiflorus</i>	Yellow rabbitbrush	<i>Ribes aureum</i>	Golden currant
<i>Cornus sericea</i>	Redosier dogwood	<i>Rosa woodsii</i>	Woods' rose
<i>Dasiphora fruticosa</i>	Shrubby cinquefoil	<i>Salix exigua</i>	Narrowleaf willow
<i>Elaeagnus angustifolia</i>	Russian olive	<i>Sambucus nigra</i> ssp. <i>cerulae</i>	Blue elderberry
<i>Ericameria nauseosa</i>	Rubber rabbitbrush	<i>Symphoricarpos oreophilus</i>	Mountain snowberry
<i>Juniperus osteosperma</i>	Utah juniper	<i>Tetradymia canescens</i>	Spineless horsebrush
Cacti			
<i>Opuntia fragilis</i>	Brittle pricklypear	<i>Pediocactus simpsonii</i>	Mountain ball cactus

6.0 EVALUATED SPECIES INFORMATION

6.1 THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE SPECIES (TEPC)

The project area includes 558.95 acres assessed for plant resources, 2,266.00 acres assessed for burrowing owl habitat, and 4,620.31 acres assessed for TEPC wildlife species, raptor nests, and other SOC (Map 2, Appendix A). TEPC plant and wildlife species that could potentially occur in Utah and Carbon Counties, Utah, are summarized in Table 6-1.

To narrow the list to TEPC species with potential to occur within the project area or its immediate surroundings, WESTERN-ENVIRO conducted an online search of the IPaC database (USFWS 2026b) and the WHAT database (UDWR 2026a). Based on this review, *S. diluvialis*, monarch butterfly (*Danaus plexippus*), and Suckley's cuckoo bumble bee (*Bombus suckleyi*) have potential to occur within the project area. See Table 6-1 for details.

6.2 SPECIES OF CONCERN

In addition to TEPC species listed by the USFWS, Utah's Species of Concern (SOC) were also evaluated. Greater sage-grouse (*Centrocercus urophasianus*) was identified with the potential to occur within or near the project area. This species is evaluated in this report as it is protected under the Utah Conservation Plan for the Greater Sage-Grouse (UDWR 2019). See Table 6-1 for details.

Table 6-1. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Flowering Plants		
Uinta Basin waxfruit (<i>Hesperidanthus suffrutescens</i>)	Endangered	NO POTENTIAL TO OCCUR: <i>H. suffrutescens</i> occurs in pinyon-juniper and desert shrub communities on semi-barren white-shale layers of the Green River Formation. This species grows in xeric, fine-textured soils intermixed with shale fragments at elevations ranging from 5,100 to 6,700 feet (Goodrich and Huber 2014). - No suitable <i>H. suffrutescens</i> habitat documented within the project area. - The Proposed Action would have No Effect on <i>H. suffrutescens</i> individuals or its habitats. This species will not be evaluated in further analysis.
Clay phacelia (<i>Phacelia argillacea</i>)	Endangered	NO POTENTIAL TO OCCUR: <i>P. argillacea</i> is restricted to Spanish Fork Canyon in Utah County. This species occurs on sparsely vegetated Green River Shale Formation in pinyon-juniper mountain brush vegetation communities. <i>Phacelia argillacea</i> is found at elevations from 6,150 to 6,600 feet (Welsh et al. 2015). - The project area does not contain habitat suitable to this species, nor was it observed during field surveys. The Proposed Action would have No Effect on <i>P. argillacea</i> individuals or its habitat. The species will not be evaluated in further analysis.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Flowering Plants		
Uinta Basin hookless cactus (<i>Sclerocactus wetlandicus</i>)	Threatened	NO POTENTIAL TO OCCUR: <i>S. wetlandicus</i> is endemic to Duchesne, Uintah, and Carbon Counties on bluff margins, sloping gravelly pediments, and gravel-littered draws generally where clay or silty clay soils underlie surface rock deposits. <i>S. wetlandicus</i> typically occurs in vegetation communities dominated by shadscale and mixed desert shrublands. The species occurs on rocky mesa slopes at 4,400 to 5,700 feet (Goodrich and Huber 2014). - No suitable <i>S. wetlandicus</i> habitat documented within the project area. - The Proposed Action would have No Effect on this species. This species will not be evaluated further.
<i>Spiranthes diluvialis</i> (Ute lady's tresses)	Threatened	MAY OCCUR: <i>S. diluvialis</i> grows in wet meadows and on the banks of perennial streams and rivers. Sites were evaluated in accordance with known <i>S. diluvialis</i> habitat parameters outlined in the Ute Ladies'-Tresses Field Survey Guidelines (USFWS 2007) and Rangewide Status Review of Ute Ladies'-Tresses (<i>S. diluvialis</i>) (Fertig et al. 2005), and from personal knowledge of the area and the species requirements. - The project area is within the known distribution range of the species and suitable habitat was documented. <i>S. diluvialis</i> will be evaluated in further analysis.
Aquatic Wildlife		
Bonytail chub (<i>Gila elegans</i>)	Endangered	NO POTENTIAL TO OCCUR: - Bonytail chub is adapted to mainstream rivers and has been documented in pools, eddies, and reservoirs in a variety of habitats. This species is endemic to the Colorado River basin, including Carbon County, Utah (USFWS 1987). - The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	Endangered	NO POTENTIAL TO OCCUR: - Colorado pikeminnow habitat includes large rivers of the Colorado Basin with warm, swift waters and seasonally variable flows. Adult fishes are migratory and inhabit pools and eddies just outside of the main current. Young Colorado pikeminnow have been observed in backwater areas (USFWS 1987). - The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Aquatic Wildlife		
Humpback chub (<i>Gila cypha</i>)	Threatened	NO POTENTIAL TO OCCUR: - Humpback chub is endemic to the Colorado River basin, including Carbon County, Utah. Humpback chub populations are found in river canyons where they use a variety of habitats including pools, riffles, and eddies. Further, humpback chub has been associated with boulder-strewn canyons, pools, backwaters, flooded bottoms, flooded mouths of tributary streams, slow runs, sandy riffles, and others (USFWS 1987). - The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.
June sucker (<i>Chasmistes liorus</i>)	Threatened	NO POTENTIAL TO OCCUR: - June suckers are endemic to Utah Lake and its tributaries. Although spawning primarily occurs in the Provo River, other tributaries may provide minor spawning habitat. - The project area is not within the known range of this species. The Proposed Action will have No Effect on June sucker individuals or its habitats. This species will not be evaluated in further analysis.
Razorback sucker (<i>Xyrauchen texanus</i>)	Endangered	NO POTENTIAL TO OCCUR: - Razorback sucker is endemic to the Colorado River Basin, including Carbon County, Utah. The species requires riverine habitats for spawning and moves into flooded areas in early spring. Spawning occurs over rocky runs and gravel bars (USFWS 1987, Minkley 1991). - The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.
Terrestrial Wildlife - Birds		
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened	NO POTENTIAL TO OCCUR: - Western yellow-billed cuckoo is known or believed to occur in the Western U.S., Canada, and Mexico. Habitat preference includes forested stream sides dominated by cottonwood and willow species composed of dense, low, and shrubby vegetation (Halterman et al. 2015). Individuals use and nest in areas characterized by cottonwood galleries and an understory of <i>Elaeagnus angustifolia</i> with occasional inclusions of <i>Tamarix</i> ssp. (Howe 1986). - No suitable Western yellow-billed cuckoo habitat documented within or near the project area. - The Proposed Action would have No Effect on Western yellow-billed cuckoo. This species will not be evaluated in further analysis.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Terrestrial Wildlife - Birds		
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Endangered	NO POTENTIAL TO OCCUR: - Southwestern willow flycatcher breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands habitats. In most instances, dense vegetation occurs within the first 10–13 feet above ground (USFWS 2002). - The project area does not contain suitable habitat, and the project area is outside the known geographical range of the southwest willow flycatcher. - The Proposed Action would have No Effect on Southwestern willow flycatcher. This species will not be evaluated in further analysis.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Threatened	MAY OCCUR: - Occurring in both rocky-canyon and forested habitat, Mexican spotted owl is known to nest and roost in steep, rocky-canyon habitats that include vertical cliffs, neighboring tributary canyons, and a variety of riparian and desert scrub/shrub vegetation communities (USFWS 2012). - Habitat suitable to this species was documented within one-half mile of project area; it observed during field surveys. - The project area is within the known range of this species; suitable habitat was documented. Mexican spotted owl will be evaluated in further analysis.
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Utah SOC	MAY OCCUR: - This species occupies upland sagebrush grasslands and usually nest within 4 miles of a lek. During the winter, greater sage-grouse can be found in high-elevation, mountainous sagebrush shrublands (CDOW 2008). - Occurrences have been reported within one-half mile of the project ROW (UDWR 2026a), and suitable habitat for this species is present within the project area. The project area is located within 2 miles of a known lek and within 3 miles of several known lek and is within a Greater Sage-Grouse Habitat Management Area. Greater sage-grouse will be evaluated in further analysis.
Terrestrial Wildlife - Mammals		
Canada lynx (<i>Lynx canadensis</i>)	Threatened	NO POTENTIAL TO OCCUR: - Canada lynx populations extend south from the classic boreal forest zone into the subalpine forest of the western U.S. (USFWS 2014). - No suitable Canada lynx habitat present within one-half mile of the project ROW. No historical or recent documentation of this species within the project area. - The Proposed Action would have No Effect on Canada lynx individuals or its habitats. This species will not be evaluated in further analysis.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Terrestrial Wildlife - Insects		
Monarch butterfly (<i>Danaus plexippus</i>)	Candidate	MAY OCCUR: - Due to declining population numbers, the monarch butterfly was proposed as a Candidate for listing under the Endangered Species Act in December 2020 (USFWS 2020). Monarch butterflies are globally distributed with two distinct populations occurring across North American – the western and eastern population. The western population’s 3,000-mile migration intersects Utah, including Carbon County. This species occupies open grasslands with wildflowers for foraging and milkweed, the exclusive hosts of monarch butterfly larvae (USFWS 2020). - The project area contains suitable habitat for monarch butterfly and showy milkweed (<i>Asclepias speciosa</i>) was observed. <i>D. plexippus</i> will be evaluated in further analysis.
Suckley’s cuckoo bumble bee (<i>Bombus suckleyi</i>)	Candidate	MAY OCCUR: - Due to an estimated 85 percent decline throughout its range across North America, Suckley’s cuckoo bumble bee was proposed for listing in December 2024 (USFWS 2024). Suckley’s cuckoo bumble bee is an obligate parasite of bumble bees in the genus <i>Bombus</i> (USFWS 2024). This species has been collected historically in various habitats from 2-3,200 meter in elevation including montane meadows and prairies, farms, woodlands, boreal forests, active and fallow agricultural fields, and urban areas. Suckley’s cuckoo bumble bee relies on pollen and nectar for nutrition from flowering forbs and has been recorded on plants from the <i>Asteraceae</i>, <i>Fabaceae</i>, <i>Rosaceae</i>, <i>Plantaginaceae</i>, and <i>Salicaceae</i> families (USFWS 2024). This species has not been observed in the contiguous United States, including Utah, since 2016 (USFWS 2024). - The project area includes suitable habitat for Suckley’s cuckoo bumble bee associated with flowering forbs. <i>B. suckleyi</i> will be evaluated in further analysis.

6.3 MIGRATORY BIRDS

Suitable migratory bird habitat is present and migratory birds, including raptors, likely forage and nest in the area. Migratory birds are discussed in this report as they are protected under the Migratory Bird Treaty Act (16 U.S.C. § 703-712). Pursuant to migratory birds, the USFWS, Region 6, has issued Migratory Bird Management Strategies (USFWS 2019). These strategies can be found in Appendix C and outline migratory bird conservation actions to reduce the risks of a *take* during the nesting season.

7.0 BIOLOGICAL RESOURCES IMPACTS AND ANALYSIS OF EFFECTS

7.1 INTRODUCTION

This analysis of effects reviews the potential effects of the Proposed Action on species identified in Table 6-1 as having potential to occur within the project area. This section also provides the anticipated cumulative effects that could potentially accrue to a species if project activities add cumulatively to other past, present, or reasonably foreseeable development (RFD) to impact the species of concern. Cumulative effects are only addressed if project-related activities would lead to measurable effects/impacts and add cumulatively to past, present, or RFD. Cumulative effects will not be addressed if there are no disclosed effects/impacts or if the impacts are minimal (unmeasurable) or discountable (extremely unlikely to occur).

7.2 BOTANICAL RESOURCES IMPACTS AND ANALYSIS OF EFFECTS

***S. diluvialis*:** The project area is located within the known geographic and elevational range of this federally listed species; however, no occurrences of *S. diluvialis* have been reported within two miles of the project ROW (UDWR 2026a). In association with the 300-foot survey buffer, 559.40 acres were assessed for *S. diluvialis* habitat (Map 2, Appendix A). Within this buffer, a total of 11.65 acres of suitable habitat were document (Maps 3 through 7, Appendix A). The moderately suitable habitat occurs along the Price River associated with fringe wet meadows. The highest-quality habitat was observed directly adjacent to the open water of the river.

The habitat assessments were conducted in October and November, i.e., outside the USFWS designated survey window, which overlaps with the bloom period of *S. diluvialis*, typically in August. Due to the timing of the site visits, clearance surveys for *S. diluvialis* individuals were not conducted.

Impact Summary: Approximately 11.65 acres of suitable *S. diluvialis* habitat were mapped within the plant survey area; 9.84 acres on private property, 1.02 acres of SITLA, and 0.79 acres on BLM-administered land. The pipeline alignment and design were modified to avoid direct impacts to suitable habitat. Of the 11.65 acres of mapped, 0.32 acres are located within the proposed project ROW on private property. However, the pipeline would be bored under the suitable habitat, avoiding direct impacts (Maps 3 through 7, Appendix A). Indirect impacts to suitable habitat would include degradation of habitat related to the establishment and spread of invasive species and potential sedimentation into suitable habitat. It is anticipated that disturbance would be restricted to the proposed project ROW; however, inadvertent disturbance to habitat related to construction activities outside of the project ROW may occur.

May Affect, Not Likely to Adversely Affect: Potential impacts to *S. diluvialis* would be indirect and primarily related to construction related disturbance would be minor, local and temporary. Due to the timing of the site investigation, a clearance survey for individuals was not conducted and therefore, *S. diluvialis* occurrence cannot be discounted. Although 11.65 acres of suitable habitat

was mapped, none of the identified habitat would be lost as a result of the Proposed Action. The Proposed Action may affect *S. diluvialis*. However, through the implementation of minimization and mitigation measures, including alignment adjustments and boring under the suitable habitat, *S. diluvialis* is not likely to be adversely affected by the proposed project. Weed control measures would be implemented to reduce impacts related to non-native and invasive plant species and erosion control measures would be implemented to minimize adverse impacts related to sedimentation.

Invasive species: The project area is situated in Price Canyon which has development related to transportation infrastructure, including Hwy 6, the UPRR, an overhead powerline, several trails and access roads, and the existing water pipeline. These developments have contributed to impacts from invasive and noxious species. Open range grazing has also facilitated the introduction and spread of invasive and noxious plant species. Six (6) State of Utah or Utah/Carbon County noxious species were identified within the plant survey area (*Carduus nutans*, *Centaurea stoebe*, *Cirsium arvense*, *Convolvulus officinale*, *Cynoglossum officinale*, and *Elaeagnus angustifolia*). Other non-native invasive species were also observed, including *Agropyron cristatum*, *Bromus tectorum*, *Sisymbrium altissimum*, and *Tragopogon dubius*. While these species are not on the State or County noxious weed list, they are known to be invasive within this region and proliferate through disturbance.

Impact Summary: The Proposed Action would include 70.91 acres of ground disturbance. In addition, adjacent areas would be more vulnerable to the establishment and spread of invasive species. Mitigation measures would be implemented to decrease potential impacts from invasive plant species. Key mitigation measures would include:

- Avoiding the introduction of invasive species by washing equipment and vehicles prior to entering construction areas;
- Post-construction monitoring to detect infestations of noxious species for early detection and treatment;
- Chemical and mechanical treatments of noxious plant species.

Details regarding mitigation measures can be found in Section 8.0. Through the implementation of mitigation measures, the Proposed Action would result in minor impacts to the vegetative communities.

May Affect, Not Likely to Adversely Affect: The Proposed Action would include 72.00 acres of surface soil disturbance. The Proposed Action may facilitate the establishment and spread of noxious and invasive species. However, impacts would be minimized through the implementation of mitigation measures as detailed in Section 8.0.

7.3 WILDLIFE RESOURCES IMPACTS AND ANALYSIS OF EFFECTS

Mexican Spotted Owl: The project area is within the known range of Mexican spotted owl and the USFWS IPaC report lists Mexican spotted owl as having potential to occur within or near the project area (USFWS 2026b). Suitable habitat for the Mexican spotted owl was documented the project. Nesting habitat is associated with the rocky cliffs above the Price River while breeding and foraging about is found through the project area. Although suitable habitat is present, no occurrences of this species have been reported within two miles of the project ROW (UDWR 2025a).

Impact Summary: Suitable habitat for Mexican spotted owl occurs throughout the project area and would be impacted by the proposed project. Impacts to habitat would be temporary, minor, and local. Ground disturbance related to the proposed project may facilitate the introduction and spread of invasive and non-native plant species which would degrade habitat quality. Primary impacts associated with the project would be associated with disturbance from increased human activity, and light and noise related to construction and ongoing operations.

May Effect, Not Likely to Adversely Affect: Although suitable habitat is located within the project area, Mexican spotted owls have not been reported in the area and the potential for presence is low. Impacts related to the Proposed Action would be minor, and abundant habitat is present in the surrounding area to support any displaced individuals. Should construction occur between March 1 and August 31, pre-construction surveys would be conducted to ensure that no nesting individuals are present within one-half mile of the project ROW. With the implementation of mitigation measures (see Section 8.0), including pre-construction surveys, the Proposed Action may affect, but is not likely to adversely affect Mexican spotted owl.

Raptors: In association with the one-half mile raptor survey buffer, a total of 4,620.32 acres were surveyed for raptor nests (Map 2, Appendix A). Migratory bird foraging and nesting habitat was found throughout the project area, and the WHAT and the IPaC reports list occurrences of several migratory birds, including raptors, within two miles of the project ROW (UDWR 2026a, USFWS 2026b); see Table 7-1 for details. A regionally comprehensive list of breeding bird species and associated habitats is listed in Appendix D.

Table 7-1. Migratory birds, including raptors, reported within two miles of the project ROW.

UNHP	IPaC
American kestrel (<i>Falco sparverius</i>)	Bald eagle (<i>Haliaeetus leucocephalus</i>)
Black rosy-finch (<i>Leucosticte atrata</i>)	Black rosy-finch (<i>Leucosticte atrata</i>)
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Broad-tailed hummingbird (<i>Selasphorus platycercus</i>)
Red-tailed hawk (<i>Buteo jamaicensis</i>)	Cassin's finch (<i>Haemorhous cassinii</i>)
	Clark's grebe (<i>Aechmophorus clarkii</i>)
	Clark's nutcracker (<i>Nucifraga columbiana</i>)
	Evening grosbeak (<i>Coccothraustes vespertinus</i>)
	Grace's warbler (<i>Setophaga graciae</i>)
	Golden eagle (<i>Aquila chrysaetos</i>)
	Olive-sided flycatcher (<i>Contopus cooperi</i>)
	Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)
	Virginia's warbler (<i>Leiothlypis virginiae</i>)
	Western grebe (<i>Aechmophorus occidentalis</i>)

Sources: UDWR 2026 and USFWS 2026b.

WESTERN-ENVIRO located two (2) nests during the January 2026 wildlife survey (Map 8, Appendix A). Both nests documented were in good condition; however, these were inactive at the time of survey and it is not known what species may utilize these features. It is possible that they are raven nests. One nest is in the northern portion of the project area along the proposed pipeline alignment. The other nest is located at the southernmost extent of the one-half mile buffer. In addition to the two nests, three (3) golden eagles and two (2) bald eagles were observed flying over the project area. Because the site investigations were conducted during January, at the beginning of the regional nesting season, the observed eagles may have been scouting for suitable nesting locations. A regionally comprehensive list of breeding bird species and associated habitats is listed in Appendix D.

Impact Summary: Two (2) nests were identified within the survey area. Suitable foraging and nesting habitats are present throughout the project area, especially in the riparian corridor along the Price River and on nearby rocky steep slopes above the river. Impacts to raptors would be temporary and associated with disturbance during construction activities. Impacts would dissipate as distance increases from the proposed disturbance footprint; potential impacts would correlate with proximity to project features.

No Effect: Two (2) nests were identified within one-half mile of the project ROW. Impacts to foraging and nesting habitat would be negligible. In addition, there is abundant habitat in the surrounding area to support any displaced individuals. Migratory bird surveys are recommended if work is planned between January 1 and August 31. Through the implementation of mitigation measures, including pre-construction surveys, the Proposed Action would have no effect on raptors.

Monarch Butterfly: Habitat suitable to the monarch butterfly was observed within the project ROW and the one-half mile survey buffer. The suitable habitat is located throughout the project area, particularly in communities with blooming forbs including showy milkweed (*Asclepias speciosa*).

Impact Summary: It is not likely that the Proposed Action would directly impact adult monarch butterflies. However, ground disturbance may remove *Asclepias* individuals that have the potential to host viable larvae. In Utah, monarch butterflies lay their eggs from July to October, and caterpillars emerge 3 to 12 days later (USFWS 2020). Disturbances outside this window would not directly impact monarch butterfly at any life stage. The Proposed Action would impact potentially suitable monarch butterfly habitat. Other impacts would include degradation of habitat from the spread of invasive species related to ground disturbance from the Proposed Action and disturbance from increased human activity.

No Effect: Impacts to monarch butterfly habitat related to the Proposed Action are minor, and habitat suitable to the species is present near the project area to support any displaced individuals. Mitigation measures would be implemented to minimize impacts to monarch butterfly. Specifically, the reclamation seed mix would include pollinator-promoting flowering species (Section 8.0). The Proposed Action would have no measurable effect on this species.

Suckley's Cuckoo Bumble Bee: Habitat suitable to the Suckley's cuckoo bumble bee was observed within the project area. While this bumble bee has not been documented in the contiguous United States, including Utah, since 2016 (USFWS 2024), suitable foraging habitat with flowering forbs was observed within the project area. Although suitable habitat is present, flowering forbs are limited in the landscape, and the likelihood of Suckley's cuckoo bumble bee occurring within the project area is low.

Impact Summary: The Proposed Action would include the loss of 72.00 acres of potentially suitable foraging habitat. Impacts to Suckley's cuckoo bumble bee would primarily be temporary and associated with construction activities, although some flowering forbs may be permanently removed as part of the proposed project.

No Effect: Potential for this species to occur within the project area is low and impacts to Suckley's cuckoo bumble bee foraging habitat related to the Proposed Action would be minor. There is abundant habitat in the surrounding area to support any displaced individuals. Impacts to this species would be negligible.

Greater Sage-Grouse: Greater sage-grouse is a State of Utah SOC that is protected under the Utah Conservation Plan for the Greater Sage-Grouse (UDWR 2019). In association with the one-half mile survey buffer, a total of 4,620.32 acres were surveyed for greater sage-grouse (Map 2, Appendix A). During the wildlife survey a total of 2,571.06 acres of suitable habitat was mapped. The project area is within the Carbon County Habitat Management Area and is situated between two documented leks to the northwest and to the east approximately 1.92 miles and 3.06 acres from the project ROW, respectively (UDWR 2019). UDWR has reported occurrences of greater sage-grouse within one-half mile of the project ROW (UDWR 2026) and during the wildlife surveys a greater sage-grouse hen was observed in the central

portion of the project area on private property (Map 8, Appendix A). The observed hen may have been headed to one of the documented leks near the project area.

Impact Summary: Approximately 2,571.05 acres of suitable greater sage-grouse habitat were mapped within the project area; 2,259.90 acres on private property, 113.16 acres of SITLA, and 197.98 acres on BLM-administered land. Of the mapped habitat, 1.93 acres (0.08 percent) would be impacted by the proposed project (Map 8, Appendix A). Impacts to greater sage-grouse would be temporary and associated with disturbance during construction activities. Impacts would dissipate as distance increases from the proposed disturbance footprint; potential impacts would correlate with proximity to project features.

May Affect, Not Likely to Adversely Affect: The project area is located within a Habitat Management Area and greater sage-grouse is known to occur. The Proposed Action may affect but is not likely to adversely affect this species. Impacts would be localized, temporary, and associated with disturbance related to construction activities. Mitigation measures, including pre-construction clearance surveys, would minimize potential impacts to greater sage-grouse in the area.

7.4 CUMULATIVE ANALYSIS OF EFFECTS

The following cumulative impact analysis evaluates past, present, and RFD in the cumulative analysis area (CAA), as related to environmental impacts. Based on the results of the impact and effects analysis in Sections 7.2 and 7.3, the following cumulative analysis will focus on:

- *S. diluvialis*
- Invasive plant species
- Greater sage-grouse
- Mexican spotted owl

All other resources are excluded from the following cumulative analysis as the Proposed Action would not have measurable impacts contributing to cumulative impacts.

The CAA boundaries were established in consideration of the extent of similar physical, ecological, and land-use characteristics of the project area for each resource. CAAs for the above-listed biological resources are as follows:

- The CAA for *S. diluvialis* and invasive plant species encompasses 26,203 acres and includes Price Canyon and the surrounding rising slopes from Solider Summit to the north, Scofield Reservoir to the west and Helper to the south.
- The CAA for Mexican spotted owl and greater sage-grouse encompass approximately 50,083 acres and includes the CAA of *S. diluvialis* and invasive plant species with the addition of a one-half mile buffer. The CAA includes portions of Scofield Reservoir and Helper, Utah.

7.4.1 CUMULATIVE ANALYSIS OF BOTANICAL RESOURCES

S. diluvialis: During the botanical survey, 11.65 acres of suitable habitat were documented within the plant survey area. Of the 11.65 acres of habitat documented, 0.32 acres would be located within the pipeline ROW; however, direct impacts would be avoided through boring.

Suitable habitat with the CAA is restricted to wetland habitat along the Price River, although the amount of suitable habitat within the CAA is unknown. Past projects which have potentially contributed to cumulative impacts to *S. diluvialis* include infrastructure projects within the floodplain of the Price River, agricultural activity, and to a limited extent residential and commercial development. Specific future developments are unknown; however, current land-use practices are expected to continue, which may impact suitable *S. diluvialis* habitat. Clearance surveys for *S. diluvialis* would be required under the ESA for all future projects. It is not anticipated that the Proposed Action would significantly contribute to adverse cumulative impacts

Invasive Plant Species: The Proposed Action may contribute incrementally to the introduction and spread of invasive and noxious species through ground-disturbing activities and increased traffic in the area. Past projects and activities that may have contributed to cumulative impacts to these species include infrastructure; residential and commercial development; recreational activity including camping, hiking, fishing, and Off Highway Vehicle (OHV) use; gravel and mining operations; agricultural activity including open range grazing; and scattered oil and gas development. Development in the CAA is widely spaced and primarily concentrated in Price Canyon and the adjacent connected canyons. Impacts from past projects are estimated to be 507.85 acres. Future projects in the CAA are unknown; however, it is anticipated that land-use practices will continue.

Construction activities for the Proposed Action would result in 70.91 acres of temporary ground disturbance. Past projects within the CAA total 507.85 acres. The Proposed Action would constitute an increase of about 14 percent to these impacts ($\frac{70.91}{507.85} * 100$). Through the implementation of mitigation measures to control the spread of invasive and noxious species, the Proposed Action would minimally contribute to cumulative impacts related to invasive and noxious species.

7.4.2 CUMULATIVE ANALYSIS OF WILDLIFE RESOURCES

Mexican spotted owl: Suitable Mexican spotted owl habitat is present throughout the CAA, especially along the Price River. Past development and activities have likely resulted in the loss of foraging habitat; however, impacts to nesting and breeding habitat are primarily related to indirect impacts from increase human activity, noise, light, traffic, and fugitive dust.

The proposed project may temporarily impact foraging habitat for Mexican spotted owl. Other impacts include construction-related disturbance, which would be temporary. Due to the minor and temporary nature of impacts related to the proposed project, and the presence of existing, ongoing disturbance from Hwy 6, the UPRR, and recreational activity in the CAA, it is not anticipated that the Proposed Action would significantly contribute to cumulative impacts.

Greater Sage-Grouse: The project area is within the Carbon County Habitat Management Area for greater sage-grouse and suitable habitat is abundant in the CAA. Additionally, two leks are located within the CAA. Approximately 2,571.05 acres of suitable greater sage-grouse habitat were mapped within one-half mile of the project ROW associated with sagebrush steppe communities. Development within the CAA has contributed to the loss of greater sage-grouse as well as to indirect impacts, including disturbance from human activity—most prominent OHV activity, which may result in the loss and degradation of suitable habitat—as well as noise and fugitive dust disturbance. Disturbance near the identified leks may disrupt breeding behaviors of greater sage-grouse. Past development within the CAA total 790.78 acres. Future projects in the CAA are unknown; however, it is anticipated that land-use practices will continue.

The Proposed Action would directly impact 1.93 acres of suitable foraging and nesting habitat for greater sage-grouse. Past projects within the CAA total 790.78 acres. Based on past impacts to potential habitat, the Proposed Action would contribute less than one percent to impacts ($\frac{1.93}{790.78} * 100$). Due to the abundance of suitable habitat within the CAA, and the implementation of mitigation measures, including pre-construction surveys, the Proposed Action would not significantly contribute to cumulative impacts.

8.0 CONSERVATION MEASURES

Conservation measures have been developed to reduce environmental impacts resulting from the Proposed Action. Table 8-1 summarizes the mitigation measures that would be implemented.

Table 8-1. Applicant-committed conservation measures for the Proposed Action.

MITIGATION MEASURES
Plant Resources
<i>S. diluvialis</i>: **BLM input for required mitigation measures requested.
Revegetation/Reclamation of the Project Area: • Vehicles and equipment used in the project area will be moderated to reduce compaction of soils as much as possible. • Low-compaction grading methodology will be implemented in areas where earthwork is necessary, leaving surfaces loose and uncompacted. Soils will be loosely dumped onsite, and finish grading will be completed with smaller equipment, such as a bobcat, to avoid unnecessary soil compaction. Soils will not be “tracked-in” (Sweigard et al. 2007). • Reclamation seed mixes will exclude introduced and non-native species in all habitat types that are restored. • All areas subject to temporary disturbance will be reclaimed with native plant seed mixes.
Noxious and Invasive Weed Control: • An Application for Pesticide Use Permit (PUP) will be required for chemical treatment of Utah Class A, B, and C noxious weeds. • Whenever possible, mechanical removal will be used for Utah Class A, B, and C noxious weeds within the proposed project area. • To reduce the potential spread/introduction of noxious and invasive weed species via project-related vehicles and equipment into the project area, project employees and contractors will not drive off-road (unless on approved roads).
Wildlife Resources
Migratory Birds: • No more than seven (7) days prior to any surface disturbing activity, avian surveys will be conducted within one-half mile of the project area for migratory birds, including raptors (January 1 through August 31). • If occupied/active nests are found, onsite work will not occur during the critical nesting season for that species within the species-specific spatial buffer, unless the nest is obscured from visual or noise-related impacts through vegetative or topographic screening.
Greater sage-grouse: **BLM input for required mitigation measures requested.
Other: • To reduce the potential for wildlife-human interactions in the project area, the project area will be managed to minimize garbage accumulation. • To reduce the potential for wildlife-vehicle collisions, Price City would encourage employees and contractors to carpool to and from the project area and to always observe the posted speed limits. • Firearms are prohibited. Employees and contractors will be notified of this restriction at the beginning of each day of construction. This, in turn, will minimize the potential for illegal poaching.

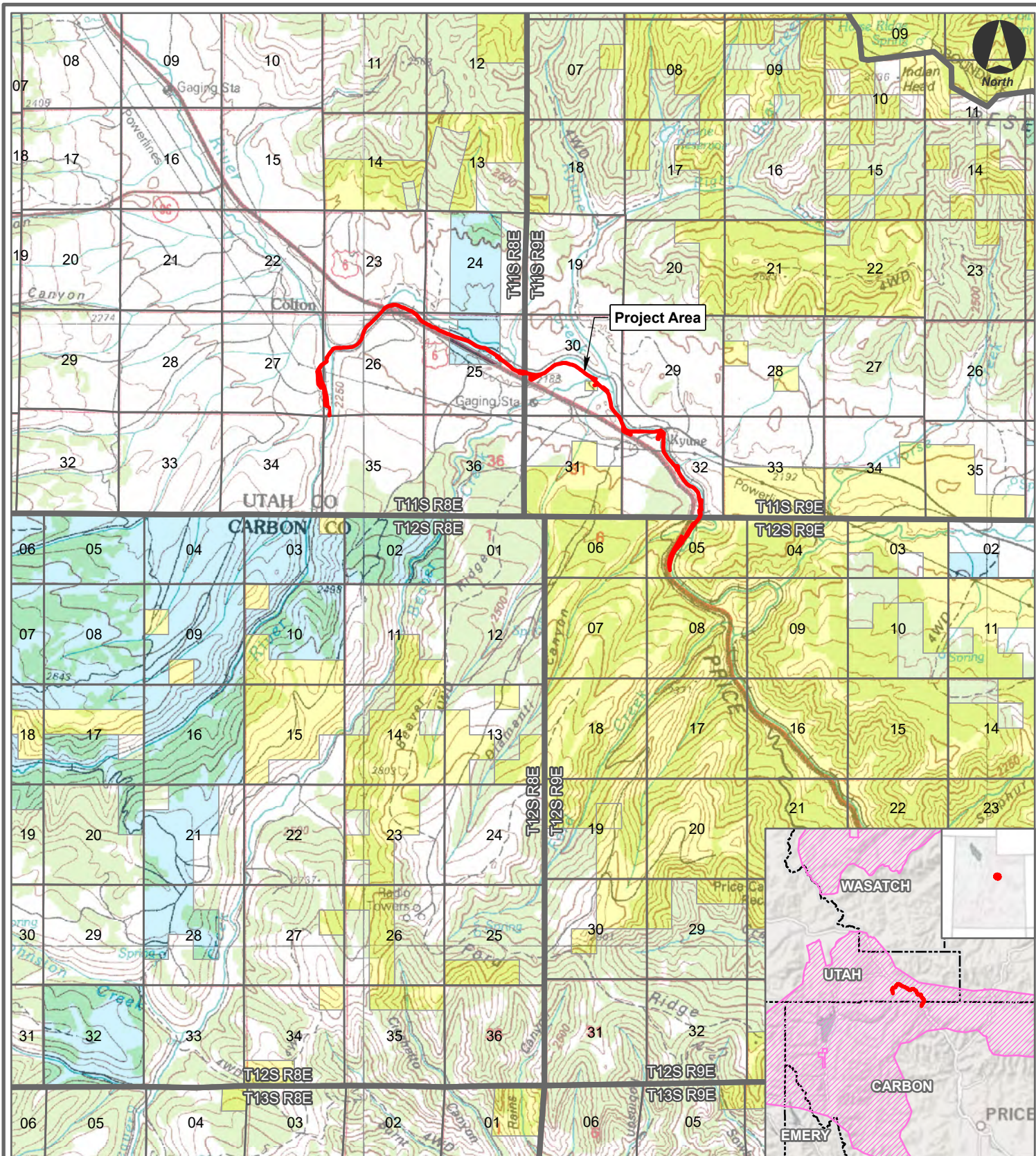
9.0 REFERENCES

- Colorado Division of Wildlife [CDOW]. 2008. Colorado Greater Sage-grouse Conservation Plan. Colorado Greater Sage-grouse Steering Committee, Denver, Colorado.
- Department of the Interior [DOI]. 1994. Endangered and Threatened Wildlife and Plants; Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback Sucker, Colorado Squawfish, Humpback Chub, and Bonytail Chub. Federal Register. CFR 50 Part 17. Vol. 59 No. 54. November 21, 1994.
- Fertig, W., R. Black, and P. Wolken. 2005. Rangewide Status Review of Ute Ladies'-Tresses (*Spiranthes diluvialis*). U.S. Fish and Wildlife Service and Central Utah Water Conservancy District. Salt Lake City, Utah. 101 pp.
- Goodrich, S. and A. Huber. 2014. Uinta Flora. USDA Forest Service-Intermountain Region. Ogden, Utah.
- Halterman, M., M.J. Johnson, J.A. Holmes and S.A. Laymon. 2015. A Natural History Summary and Survey Protocol for the Western Distinct Populations Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45p.
- Howe, W. H. 1986. Status of the Yellow-billed Cuckoo (*Coccyzus americanus*) in New Mexico. Rep. 516.6-75-09. Department of Game Fish, Santa Fe, New Mexico.
- Minckley, W. L., P. C. Marsh, J. E. Brooks, J. E. Johnson, and B. L. Jensen. 1991. Management Towards Recovery of the Razorback Sucker. pp. 303–317. in Minckley W.L., Deacon J.E., eds. Battle against
- Sweigard R., J. Burger, C. Zipper, J. Skousen, C. Barton, and P. Angel. 2007. Low Compaction Grading to Enhance Reforestation Success on Coal Surface Mines. The Appalachian Regional Reforestation Initiative. Forest Reclamation Advisory No. 3.
- U.S. Fish and Wildlife Service [USFWS]. 1987. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. U.S. Forest Service, Region 6, Denver, Colorado.
- U.S. Fish and Wildlife Service [USFWS]. 1998. Razorback Sucker (*Xyrauchen texanus*) Recovery Plan. Denver, Colorado. 81 pp.
- U.S. Fish and Wildlife Service. 2002. Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. i-ix + 210 pp., Appendices A-O.
- U.S. Fish and Wildlife Service [USFWS]. 2007. Ute Ladies-tresses Field Survey Guidelines. U.S. Fish and Wildlife Service – Utah Ecological Services Field Office March 12, 2007. Memorandum. 3 pp.
- U.S. Fish and Wildlife Service [USFWS]. 2011. Utah Field Office Guidelines for Conducting and Reporting Botanical Inventories and Monitoring of Federally Listed, Proposed and Candidate Plants. USFWS Utah Field Office. Salt Lake City, Utah.

- U.S. Fish and Wildlife Service [USFWS]. 2012. Mexican Spotted Owl Recovery Plan, First Revision (*Strix occidentalis lucida*). Prepared by the Mexican Spotted Owl Recovery Team. Region 2, Southeast Region. Albuquerque, New Mexico.
- U.S. Fish and Wildlife Service [USFWS]. 2014. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary; Final Rule. 79 Federal Register 177 (September 12, 2014), pp. 54782.
- U.S. Fish and Wildlife Service [USFWS]. 2019. Migratory Bird Program Strategic Plan. Migratory Bird Program. Washington DC. March 20, 2019.
- U.S. Fish and Wildlife Service [USFWS] 2020. Endangered and Threatened Wildlife and Plant; 12-Month Finding for the Monarch Butterfly. 50 CFR Part 17. Federal Register Vol. 85, No. 243, PG 81813 December 17, 2020.
- U.S. Fish and Wildlife Service [USFWS]. 2024. Species Status Assessment Report for the Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*), Version 1.0. August 2024. Alaska Region. 131 pp.
- U.S. Fish and Wildlife Service [USFWS]. 2026a. United States Fish and Wildlife Service. ECOS Environmental Conservation Online System. Available online: <https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=UT&stateName=Utah&statusCategory=Listed>. Accessed January 2026.
- U.S. Fish and Wildlife Service [USFWS]. 2026b. United States Fish and Wildlife Service. IPaC Information for Planning and Consultation. Available online: <https://ipac.ecosphere.fws.gov/>. Accessed January 2026.
- Utah Division of Wildlife Resources (UDWR). 2019. Utah Conservation Plan for Greater Sage-Grouse. State of Utah, Salt Lake City, Utah. Effective January 2019.
- Utah Division of Wildlife Resources [UDWR]. 2026a. Wildlife Habitat Analysis Tool (WHAT), Utah Division of Wildlife Resources, Utah Department of Natural Resources. <https://wildlife.utah.gov/wildlife-habitat-analysis-tool.html>. Accessed January 2026.
- Weiss, M.P., Witkind, I.J., and Cashion, W.B. 2003. Geologic Map of the Price 30' x 60' Quadrangle, Carbon, Duchesne, Uintah, Utah and Wasatch Counties, Utah. Utah Geological Survey, Map 198DM (digital compilation of USGS Map I-1981).
- Welsh, S.L., Atwood, N.D., Goodrich, S., and L.C. Higgins, editors. 2015. A Utah Flora. Fifth edition, revised. Brigham Young University, Provo, Utah.

10.0 APPENDICES

APPENDIX A
MAPS



WESTERN-ENVIRO
RESOURCES

Project
Location

0 1,400 2,800 4,200 5,600 7,000 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area
- Utah Sage Grouse Management Area

Federal State Private

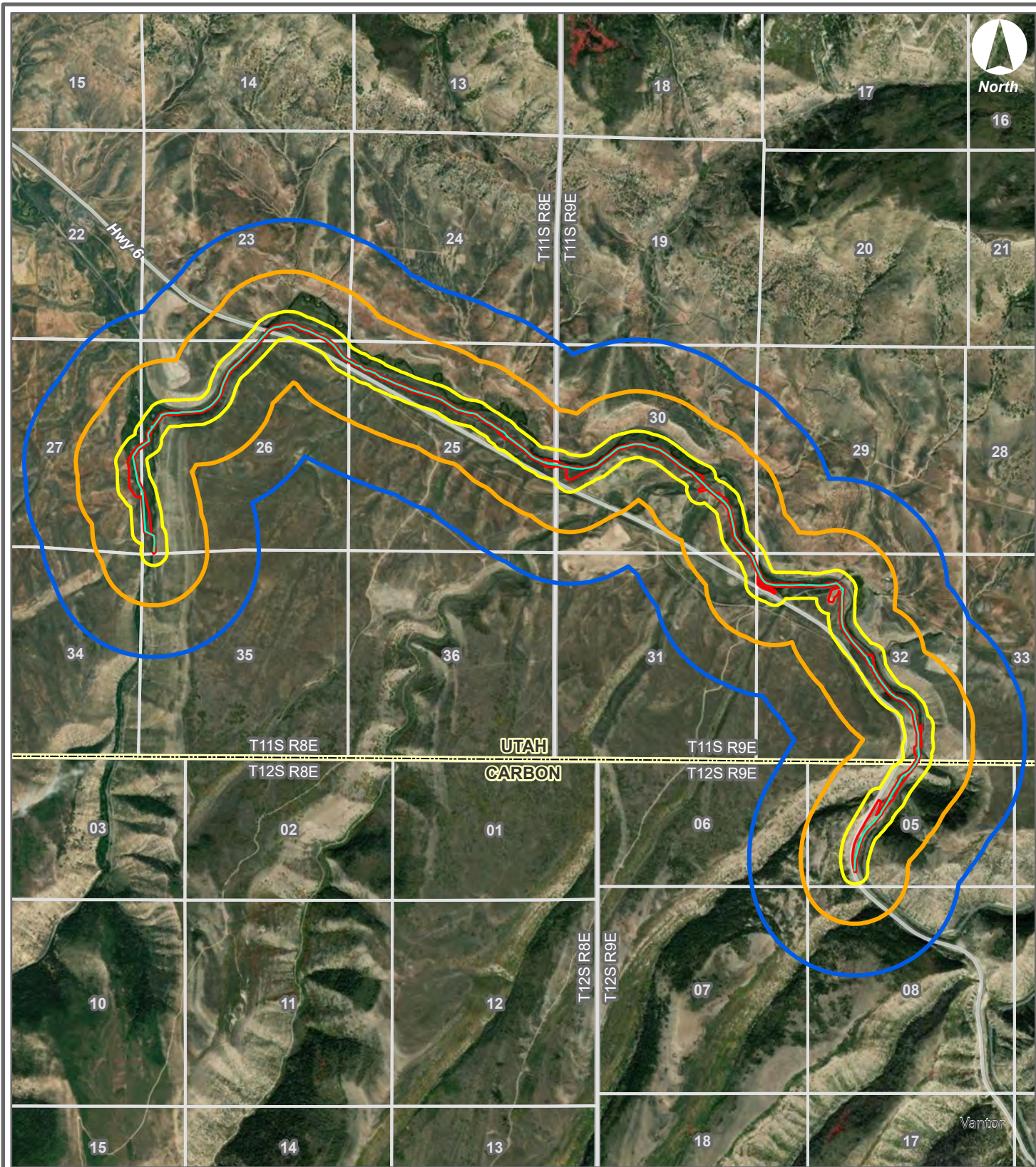
**Price City Project 9C 2025 -
Spring Water Transmission
Line Replacement**

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

100k
USGS
Topo

FEB 11, 2026
SCALE: 1" = 7,000'
AUTHOR: JH

MAP
1



WESTERN-ENVIRO
RESOURCES

Survey
Areas

0 700 1,400 2,100 2,800 3,500
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Plant Survey Area (558.95 Ac)
- Burrowing Owl Survey Area (2,266.00 Ac)
- Federally Listed Wildlife and Raptor Survey Area (4,620.31 Ac)

**Price City Project 9C 2025 -
Spring Water Transmission
Line Replacement**

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

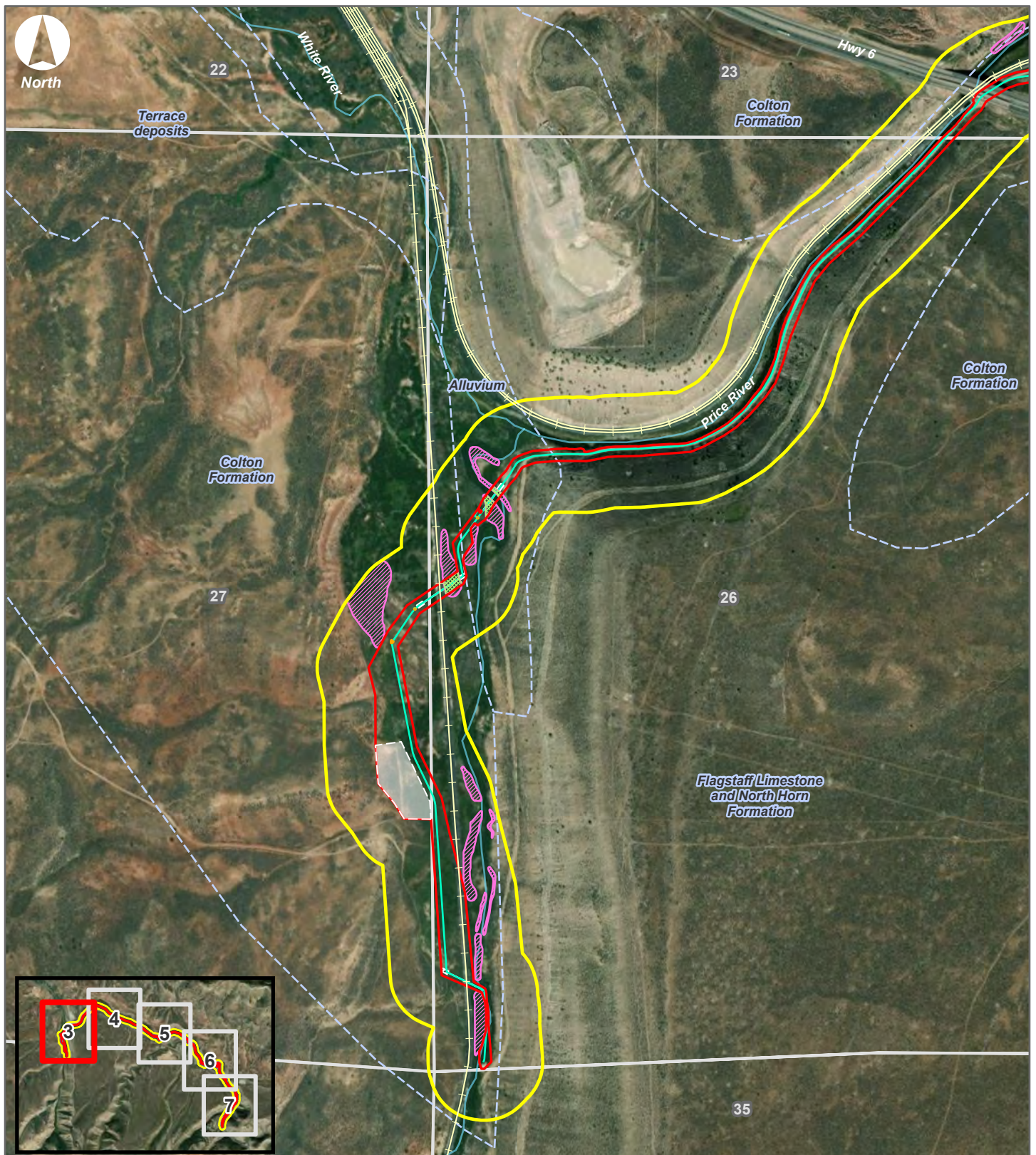
ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 3,500'
AUTHOR: JH

MAP
2



North



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

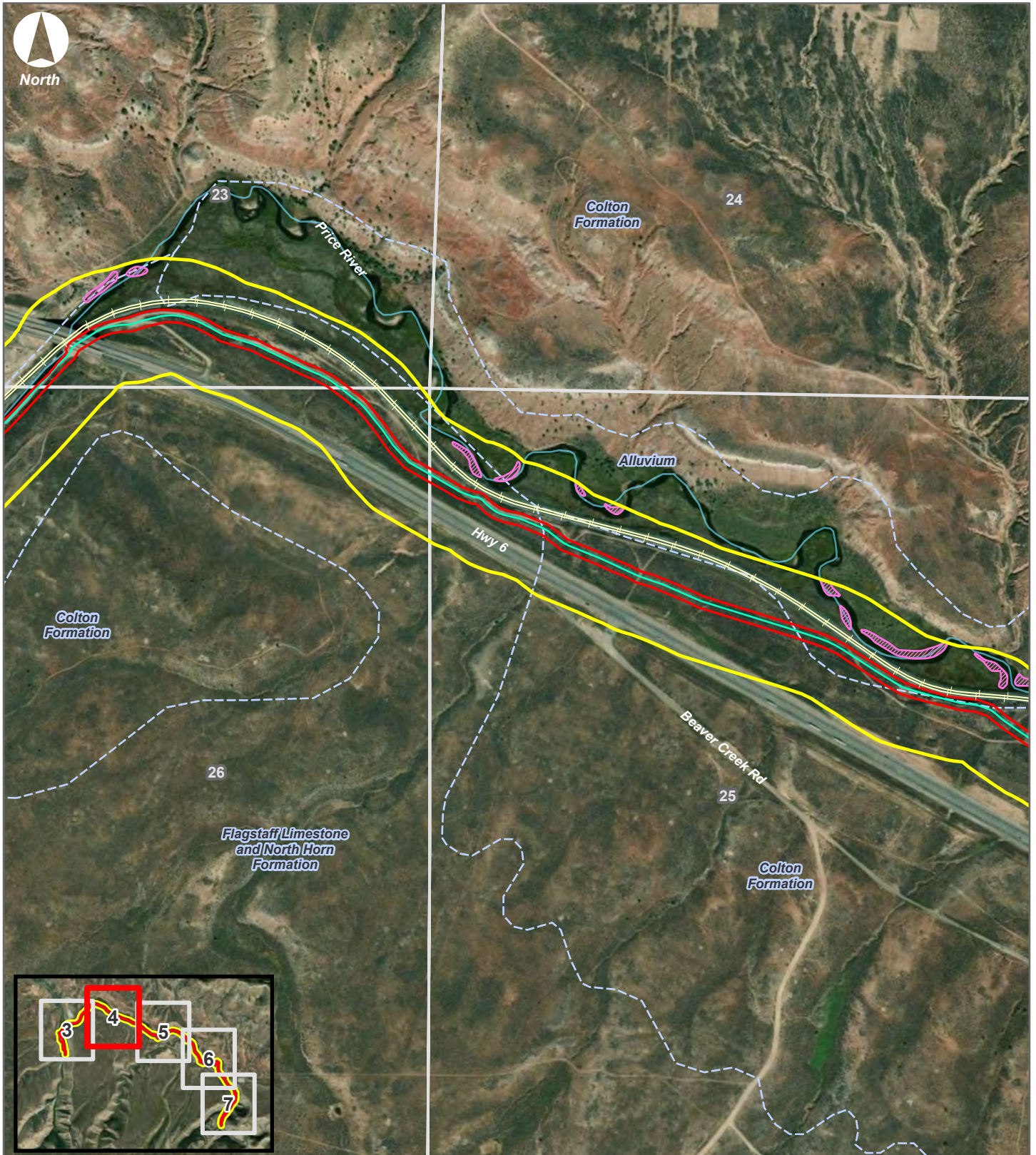
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

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Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
3



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

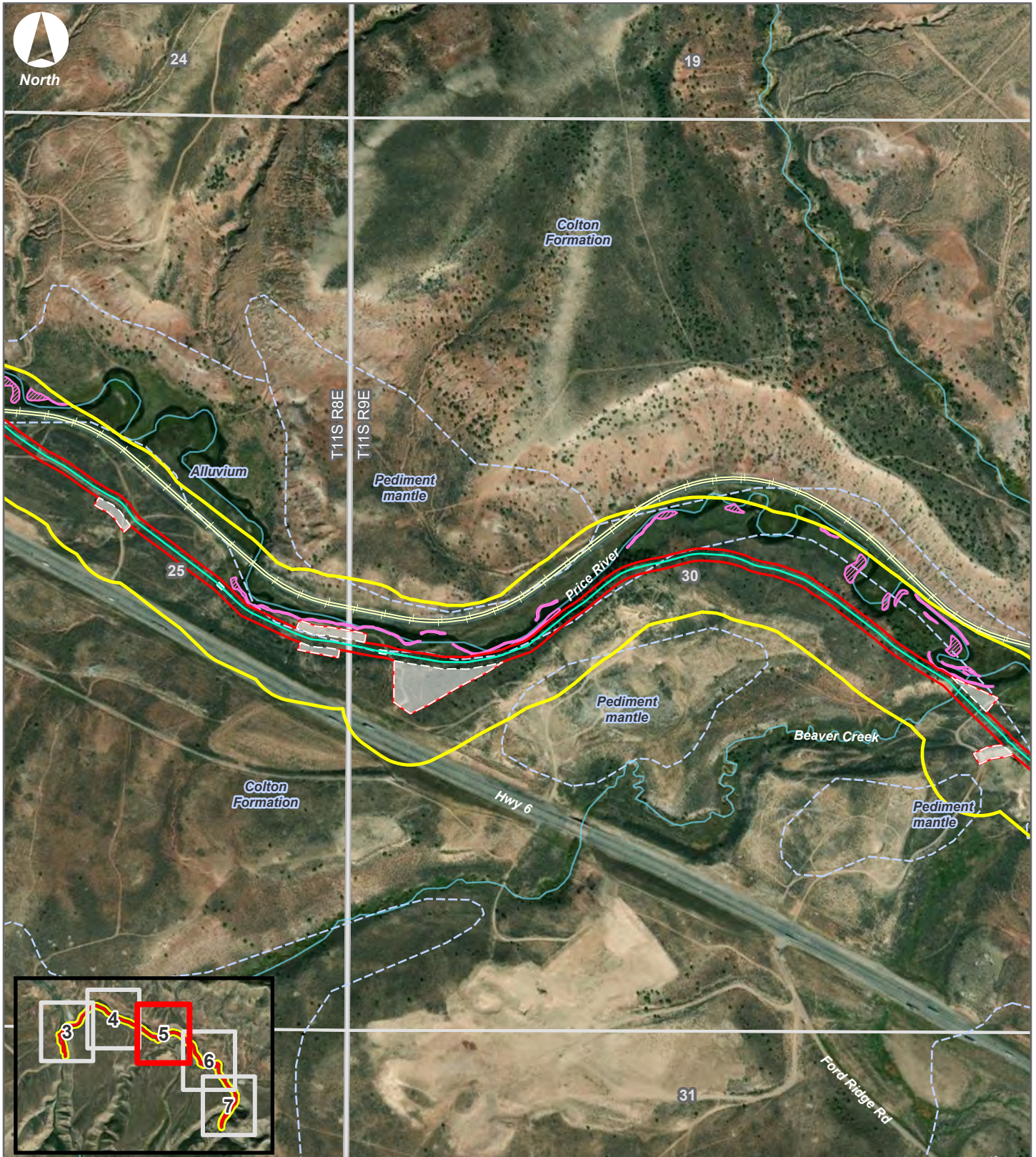
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Sections 30, 31 & 32 in T.11S. R.9E.; and
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Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
4



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

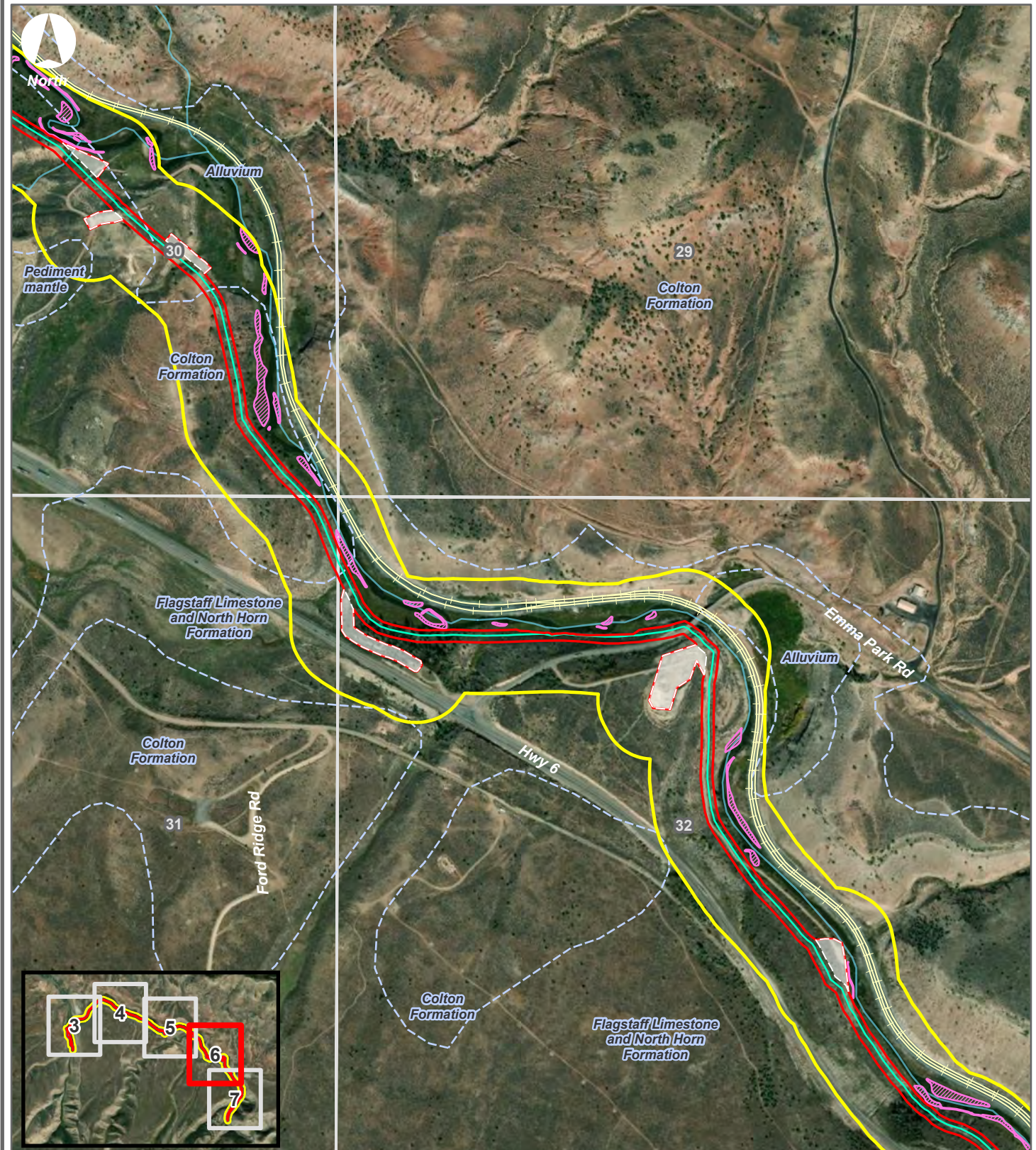
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Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
5



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

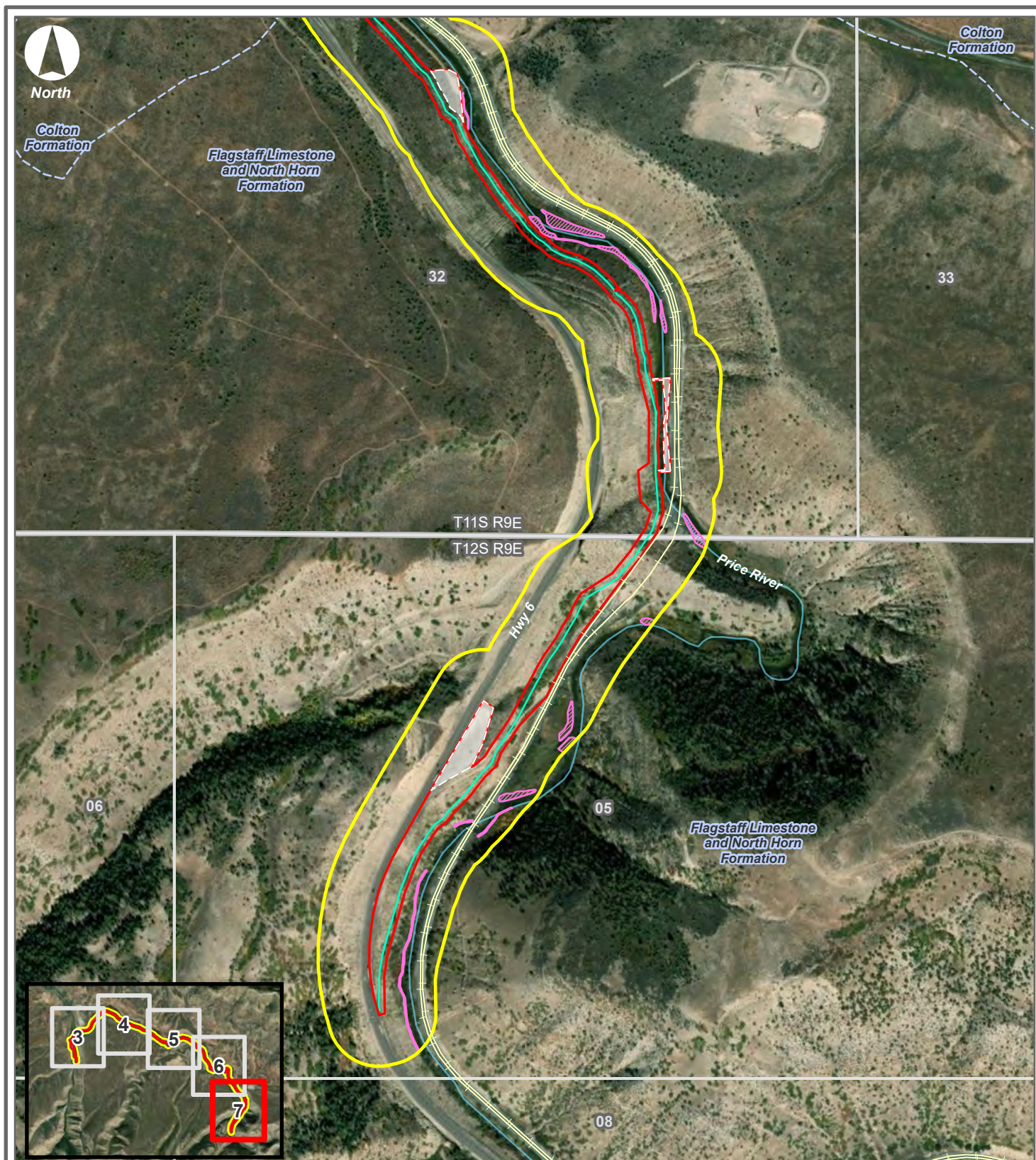
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

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Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
6



WESTERN-ENVIRO
RESOURCES

Botanical
Survey Results

0 700 1,400 2,100 2,800 3,500
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

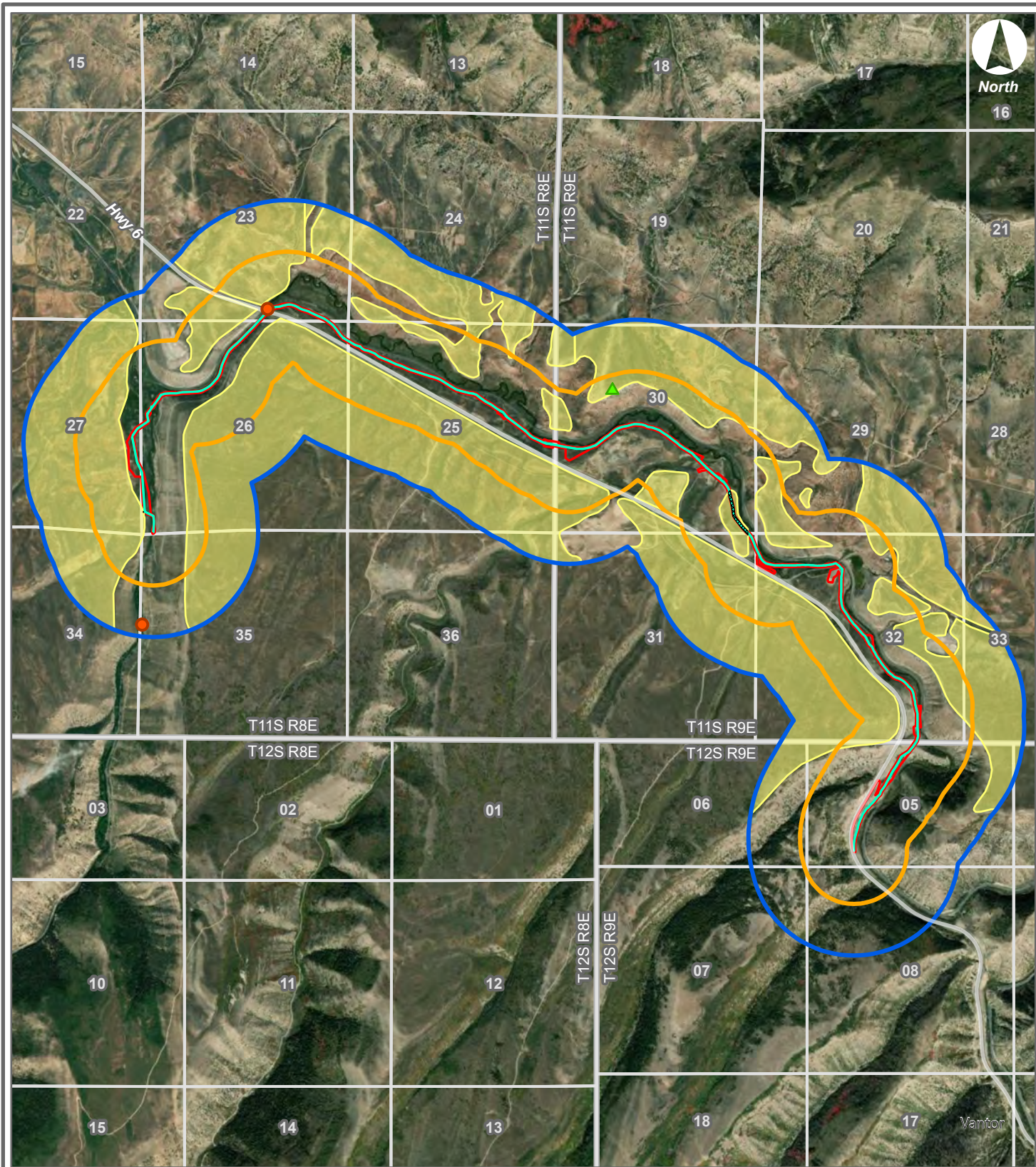
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Spring Water Transmission
Line Replacement**

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Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
7



WESTERN-ENVIRO RESOURCES

Wildlife
Survey Results

0 700 1,400 2,100 2,800 3,500
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Burrowing Owl Survey Area (2,266.00 Ac)
- Federally Listed Wildlife and Raptor Survey Area (4,620.31 Ac)
- Suitable Sage Grouse Habitat (2,571.05 Ac)
- Habitat Impacts (1.93 Ac)
- ▲ Sage Grouse Hen Sighting
- Raptor Nest

Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 3,500'
AUTHOR: JH

MAP
8

APPENDIX B

QUALIFICATIONS

BRIDGET ATKIN – PLANT ECOLOGIST and ENVIRONMENTAL PLANNER – Ms. Atkin has 22 years of plant and environmental planning experience in the Intermountain West. She is experienced in the preparation and application of NEPA documents from scoping to project construction and compliance. She has managed projects involving the Clean Water Act and Section 404 Wetlands and was the primary coordinator with federal and state agencies. She is experienced with surveying and monitoring TEPC species, water-related planning, and permitting processes. She has managed hundreds of projects focusing on monitoring and mapping plant resources throughout the Intermountain West and has conducted natural resources surveys, inventories, and plant identification. Ms. Atkin holds a B.S. degree in Horticulture, an M.S. degree in Plant Science, and has an M.L.A. from the Landscape Architecture and Environmental Planning department, all from Utah State University (USU), Logan, Utah.

RAYCE BRYAN – PLANT ECOLOGIST – Mr. Bryan has 10 years of plant and natural resources management experience in the Great Basin. He is experienced in post-fire rangeland restoration and is well versed in a wide range of rangeland and vegetation monitoring techniques. He has experience in surveying and monitoring TEPC species and mapping their suitable habitats in the Uinta Basin. He has also organized field projects and led crews in remote locations, including leading crews to complete various federal contracts to monitor greater sage-grouse ecosystem health. Mr. Bryan holds a B.S. degree in Rangeland Ecology and Management and an M.S. degree in Rangeland Ecology and Management with emphasis in post-fire revegetation ecology, both from USU.

KARI COY – PLANT TAXONOMIST and ENVIRONMENTAL PLANNER – Ms. Coy has 18 years of environmental planning and natural resources experience and is an expert in plant biology, TEPC species, wetland resources, and NEPA analysis. She has knowledge and experience in environmental permitting, including Section 404 Individual and Nationwide permits, Section 401 Water Quality Certificates, and PGP 10 Stream Alteration Permits. Ms. Coy has conducted extensive rare plant clearance surveys for transportation, oil and gas, restoration, biological inventory, and various development projects. She has coordinated with federal, state, local, and tribal organizations on environmental projects and has experience in the NEPA process as both a subject matter expert and project manager for CatEx EA and EIS documents. Ms. Coy holds a B.S. in Botany from Weber State University, Ogden, Utah, and a NEPA Certificate and an M.S. in Natural Resources, both from USU.

GLEN GANTZ – CERTIFIED WILDLIFE BIOLOGIST and COMMERCIAL PILOT – Mr. Gantz has 38 years of experience conducting ground-based and low-level aerial surveys. He is certified by The Wildlife Society as a Wildlife Biologist. In addition, he is a commercial pilot. Aerial surveys include aerial telemetry in mountainous areas. Training and certifications include Mexican spotted owl surveys, Utah prairie dog surveys, Southwest willow flycatcher surveys, raptor surveys and monitoring, and migratory bird surveys. Mr. Gantz holds a B.S. in Wildlife Science from Pennsylvania State University, University Park, Pennsylvania, and an M.S. in Wildlife Ecology from USU. In recent years, Mr. Gantz has conducted wildlife analysis on nearly 400 well sites and associated infrastructure proposed for oil and gas development, including 1,600 miles of proposed pipelines, roads, and powerlines and two large seismic projects in Utah, Wyoming, and Nevada. Specifically, during the past five years, Mr. Gantz has surveyed over 200,000 acres. A high concentration of work has been within the Uinta Basin of Utah. During this time, he has mapped more than 800 raptor nests and 32,000 acres of white-tailed prairie dog towns and associated burrowing owl habitat.

APPENDIX C

USFWS MIGRATORY BIRD CONSERVATION ACTIONS

Migratory Bird Conservation Actions for Projects to Reduce the Risk of Take during the Nesting Season*

U.S. Fish and Wildlife Service (USFWS) Region 6, Migratory Bird Management

June 2014

Goal: Avoid take of migratory birds and/or minimize the loss, destruction, or degradation of migratory bird habitat while completing the proposed project or action. Under the Migratory Bird Treaty Act (MBTA) take is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture or collect” a migratory bird (50 CFR § 10.12). **

1. Determine if the proposed project or action will involve below- and/or above-ground construction or habitat-altering activities, because recommended practices and timing of surveys could differ accordingly.
2. If the proposed project or action includes a reasonable likelihood that take of migratory birds will occur, then complete the project or those actions expected to take migratory birds outside of their nesting season to the greatest extent possible. Examples of actions that may take migratory birds include, clearing or cutting of vegetation, burning vegetation, driving or parking equipment on vegetation that may harbor nesting birds, etc. The primary nesting season for migratory birds varies greatly among species and geographic locations, but generally extends from early April to mid-July. However, the maximum time period for the migratory bird nesting season can extend from early January through late August. Due to this variability, project proponents should consult with the USFWS for specific nesting seasons of birds in your project or action area. As early as possible please consult the USFWS in the planning stages of your project for other input on conservation measures to avoid and minimize the take of migratory birds.
3. Complete all project activities that could result in migratory bird take outside the maximum migratory bird nesting season (early January through late August) to the greatest extent possible. If this is not possible, then avoid any habitat alteration, removal, or destruction during the primary nesting season for migratory birds (early April to mid-July).
4. If a proposed project or action includes the potential for take of migratory birds and/or the loss or degradation of migratory bird habitat, and work cannot occur outside the migratory bird nesting season (either the maximum or primary nesting season), project proponents should provide USFWS with an explanation for why work has to occur during the migratory bird nesting season. Further, in these cases, project proponents also should demonstrate that all efforts to complete work outside the migratory bird nesting season were attempted, and that the reasons work needs to be completed during the nesting season were beyond the proponent’s control.

5. Where project work must occur during the migratory bird nesting season, project proponents should utilize a qualified biologist to survey those portions of the project area during the nesting season (but prior to the project or action occurring) to determine if migratory birds are present and nesting in those areas. These bird surveys should occur no more than 7-10 days prior to when work actually begins on the project site. In addition to conducting surveys during the nesting season, entities may also benefit from conducting surveys during the previous nesting season. Such surveys will serve to inform the likely presence of nesting migratory birds in the proposed project or work area. While individual migratory birds will not necessarily return to nest at the exact site as in previous years, a survey in the nesting season the year before the project or action allows the company to become familiar with bird species and numbers present in the project area well before the nesting season in the year of proposed action. Migratory bird surveys also should be completed during the best timeframe for detecting the presence of nesting migratory birds, using accepted bird survey protocols. USFWS Offices can be contacted for recommendations on appropriate survey guidance. Project proponents should also be aware that results of migratory bird surveys are subject to spatial and temporal variability.
6. If no migratory birds are found nesting in proposed project or action areas immediately prior to the time when construction and associated activities are to occur, then proceed with your project activity as planned.
7. If migratory birds are present and nesting in the proposed project or action area, contact your nearest USFWS Ecological Services Field Office and/or USFWS Regional Migratory Bird Management Office for guidance on appropriate next steps to avoid and minimize impacts to (and take of) migratory birds associated with the proposed project or action. Although bald and golden eagles are protected under MBTA they are also covered under BGEPA. Please consult USFWS if there are eagles or eagle nests in or near your proposed project area ***.

* Note: these recommended conservation measures assume that there are no Endangered or Threatened migratory bird species present in the project/action area, or any other Endangered or Threatened animal or plant species, or any designated critical habitat for Endangered or Threatened species present in this area. If Endangered or Threatened species or designated critical habitat are present, or they could potentially be present, and the project/action may affect these species or designated critical habitat for them, then consult with your nearest USFWS Ecological Services Office before proceeding with any project/action.

** The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, and transportation, (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the MBTA has no provision for allowing unauthorized take, the USFWS realizes that some birds may be killed during construction or through other project activities, even if all known reasonable and effective measures to protect birds are used. The USFWS Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships

with individuals, companies, and industries that have taken effective steps to avoid take of migratory birds and by encouraging others to implement measures to avoid take of migratory birds. It is not possible to absolve individuals, companies, or agencies from liability even if they implement bird mortality avoidance, or other similar protective measures. However, the Office of Law Enforcement focuses its resources on investigating and undertaking enforcement actions against individuals and companies that take migratory birds without identifying and implementing all reasonable, prudent, and effective measures to avoid that take. Companies are encouraged to work closely with USFWS biologists to identify available protective measures when developing project plans and/or avian protection plans, and to implement those measures prior to/during construction or similar activities.

*** Also note that Bald and Golden Eagles receive additional protection under the Bald and Golden Eagle Protection Act (BGEPA). BGEPA prohibits the take, possession, sale, purchase, barter, offer to sell, purchase, or barter, transport, export or import, of any Bald or Golden Eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. BGEPA also defines take to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb,” 16 U.S.C. 668c, and includes criminal and civil penalties for violating the statute. Further, activities that would disturb Bald or Golden Eagles are prohibited under BGEPA. “Disturb” means to agitate or bother a Bald or Golden Eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an Eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. If a proposed project or action would occur in areas where nesting, feeding, or roosting eagles occur, then project proponents may need to take additional conservation measures to achieve compliance with BGEPA. New regulations (50 CFR § 22.26 and § 22.27) allow the take of bald and golden eagles and their nests, respectively, to protect interests in a particular locality provided that the USFWS finds that such take is compatible with the goal of maintaining stable or increasing eagle breeding populations. However, consultation with the USFWS Migratory Bird, Ecological Services, and Law Enforcement programs will be required before a permit may be issued.

APPENDIX D

BREEDING BIRD SPECIES BY HABITAT TYPE

Breeding Bird Species on the Colorado Plateau in Utah, that occur in Grassland Habitat Type, Utah PIF Conservation Scores, and Migration Status . Utah PIF Priority Species are listed in bold type. Adapted from Utah Partners in Flight (Parrish et al. 2002).

Common Name ¹	UPIF Score ²	1 ⁰ Breeding ⁴	2 ⁰ Breeding ⁵	Winter Habitat ⁶	Migratory Status ⁷	Utah Status ^{8, 9, 10}	Federal Status ¹²	BLM Status ¹³	FS Status ¹⁴
Grasshopper Sparrow ⁸	32	Grassland	Grassland	Migrant	A	Special Concern ⁸		Sensitive	
Horned Lark	14	Grassland	High Desert Scrub	Grassland	B				
Lark Bunting	27	Grassland	High Desert Scrub	Migrant	A				
Long-billed Curlew⁸	34	Grassland	Agriculture	Migrant	A	Special Concern ⁸		Sensitive	
Savannah Sparrow	22	Grassland	Wet Meadow	Grassland	B				
Ring-necked Pheasant	27	Agriculture	Grassland	Wetland	P				
Burrowing Owl ⁸	28	High Desert Scrub	Grassland	Migrant	A	Special Concern ⁸		Sensitive	
Western Meadowlark	24	High Desert Scrub	Grassland	Agriculture	B				
Short-eared Owl ⁸	29	Wetland	Grassland	Agriculture	B	Special Concern ⁸		Sensitive	
Ferruginous Hawk⁹	33	Pinyon-Juniper	Shrubsteppe	Grassland	B	Threatened ⁹		Sensitive	

¹ Priority Species are listed in bold type; See Appendix B for Scientific Names

² See text for explanation of Utah PIF conservation scores (possible range 10-50)

⁴ 1⁰ Breeding Habitat: Primary habitat used during the breeding season in Utah (nesting habitat)

⁵ 2⁰ Breeding Habitat: Secondary habitat used during the breeding season in Utah (nesting or foraging habitat; habitat specialists may have identical 1E and 2E habitats)

⁶ Winter Habitat: Primary Winter Habitat in Utah.

⁷ Neotropical Migratory Status: A = species breeds North of US/Mexican border, winters south of border; B = species breeds North of US/Mexican border, some winter south of border; C = some breed South of US/Mexican border, winters south of border; M = Non-Neotropical migratory species (e.g., waterfowl); P = Permanent Resident species; for remaining status codes see Finch and Martin 1991, Gauthreaux 1992, and Hunter and Pashley 1999)

⁸ State Species of Special Concern; 1998 Utah Sensitive Species List (UDWR 1998)

⁹ State Threatened Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹⁰ State Endangered Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹¹ Sage-grouse includes Greater and Gunnison species

Breeding Bird Species on the Colorado Plateau in Utah, that occur in Pinyon-Juniper Habitat Type, Utah PIF Conservation Scores, and Migration Status . Utah PIF Priority Species are listed in bold type. Adapted from Utah Partners in Flight (Parrish et al. 2002).

Common Name ¹	UPIF Score ²	Colorado Plateau	1 ⁰ Breeding ⁴	2 ⁰ Breeding ⁵	Winter Habitat ⁶	Migratory Status ⁷	Utah Status ^{8, 9, 10}	Federal Status ¹²	BLM Status ¹³	FS Status ¹⁴
Ash-throated Flycatcher	23	X	Pinyon-Juniper	Low Desert Scrub	Migrant	A				
Black-chinned Hummingbird	28	X	Pinyon-Juniper	Mountain Shrub	Migrant	A				
Black-throated Gray Warbler	32	X	Pinyon-Juniper	Mountain Shrub	Migrant	A				
Blue-gray Gnatcatcher	25	X	Pinyon-Juniper	Lowland Riparian	Migrant	A				
Bushtit	26	X	Pinyon-Juniper	Mountain Riparian	Mountain Riparian	P				
Common Nighthawk	23	X	Pinyon-Juniper	Lowland Riparian	Migrant	A				
Common Poorwill	28	X	Pinyon-Juniper	Lowland Riparian	Migrant	B				
Ferruginous Hawk⁹	33	X	Pinyon-Juniper	Shrubsteppe	Grassland	B	Threatened ⁹		Sensitive	
Gray Flycatcher	32	X	Pinyon-Juniper	High Desert Scrub	Migrant	A				
Gray Vireo	36	X	Pinyon-Juniper	Northern Oak	Migrant	A				
Juniper Titmouse	30	X	Pinyon-Juniper	Pinyon-Juniper	Pinyon-Juniper	P				
Pinyon Jay	31	X	Pinyon-Juniper	Ponderosa Pine	Pinyon-Juniper	P				
Common Raven	17	X	Cliff	Pinyon-Juniper	Agriculture	P				
Loggerhead Shrike	28	X	High Desert Scrub	Pinyon-Juniper	High Desert Scrub	B				
Scott's Oriole	29	X	Low Desert Scrub	Pinyon-Juniper	Migrant	A				
Bewick's Wren	26	X	Lowland Riparian	Pinyon-Juniper	High Desert Scrub	P				
Black-billed Magpie	24	X	Lowland Riparian	Pinyon-Juniper	Agriculture	P				
Cassin's Kingbird	29	X	Lowland Riparian	Pinyon-Juniper	Migrant	A				
Mountain Chickadee	29	X	Mixed Conifer	Pinyon-Juniper	Mountain Riparian	P				
Western Scrub-Jay	26	X	Mountain Shrub	Pinyon-Juniper	Mountain Shrub	P				
Virginia's Warbler	36	X	Northern Oak	Pinyon-Juniper	Migrant	A				
Western Bluebird	27	X	Ponderosa Pine	Pinyon-Juniper	Pinyon-Juniper	B				

¹ Priority Species are listed in bold type; See Appendix B for Scientific Names

² See text for explanation of Utah PIF conservation scores (possible range 10-50)

⁴ 1⁰ Breeding Habitat: Primary habitat used during the breeding season in Utah (nesting habitat)

⁵ 2⁰ Breeding Habitat: Secondary habitat used during the breeding season in Utah (nesting or foraging habitat; habitat specialists may have identical 1E and 2E habitats)

⁶ Winter Habitat: Primary Winter Habitat in Utah.

⁷ Neotropical Migratory Status: A = species breeds North of US/Mexican border, winters south of border; B = species breeds North of US/Mexican border, some winter south of border; C = some breed South of US/Mexican border, winters south of border; M = Non-Neotropical migratory species (e.g., waterfowl); P = Permanent Resident species; for remaining status codes see Finch and Martin 1991, Gauthreaux 1992, and Hunter and Pashley 1999)

⁸ State Species of Special Concern; 1998 Utah Sensitive Species List (UDWR 1998)

⁹ State Threatened Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹⁰ State Endangered Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹¹ Sage-grouse includes Greater and Gunnison species

Breeding Bird Species on the Colorado Plateau in Utah, that occur in Shrubsteppe Habitat Type, Utah PIF Conservation Scores, and Migration Status . Utah PIF Priority Species are listed in bold type. Adapted from Utah Partners in Flight (Parrish et al. 2002).

[illegible]

STANDARD FORM 299
APPLICATION FOR TRANSPORTATION, UTILITY SYSTEMS, TELECOMMUNICATIONS AND FACILITIES
ON FEDERAL LANDS AND PROPERTY

FORM APPROVED
OMB Control Number: 0596-0249
Expiration Date: 02/28/2023

FOR AGENCY USE ONLY

NOTE: Before completing and filing the application for an authorization (easement, right-of-way, lease, license or permit), the applicant should completely review this package, including instructions, and schedule a pre-application meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the pre-application meeting.

Application Number

Date Filed

1. Name and address of applicant

Price City
185 East Main Street
Price, Utah 84501

2. Name and address of authorized agent if different from item 1

3. Applicant telephone number and email:

Authorized agent telephone number and email:

4. As applicant are you? (*check one*)

- a. ☐ Individual
b. ☐ Corporation*
c. ☐ Partnership/Association*
d. ☐ State Government/State Agency
e. ☐ Local Government
f. ☐ Federal Agency

* If checked, complete supplemental page

5. Specify what application is for: (*check one*)

- a. ☐ New authorization
b. ☐ Renewing existing authorization number
c. ☐ Amend existing authorization number
d. ☐ Assign existing authorization number
e. ☐ Existing use for which no authorization has been received *
f. ☐ Other*

* If checked, provide details under item 7

6. If an individual, or partnership, are you a citizen(s) of the United States? ☐ Yes ☐ No

7. Project description (describe in detail): (a) Type of use or occupancy, (e.g., canal, pipeline, road, telecommunications); (b) related structures and facilities; (c) physical specifications (*Length, width, grading, etc.*); (d) term of days/years needed; (e) time of year of use or operation; (f) Volume or amount of product to be transported; (g) duration and timing of construction; and (h) temporary work areas needed for activity/construction (*Attach additional sheets, if additional space is needed.*)

The proposed project is to replace an existing deteriorating steel pipe installed along highway 6. The existing pipe diameter ranges from 12-18 inches. This is considered an emergency replacement due to the current condition of the line. The proposed pipeline would be located adjacent the existing transmission main. The existing pipeline was installed in the late 1920's and is in deteriorating condition. The proposed area of potential effect includes Federal property managed by the BLM. One segment located in Sec. 30, T.11S., R.9E., is in Utah County. The other BLM parcel located in Sec. 05, T.12S., R.9E., is in Carbon County. Price City received SRF funding from the Utah DDW in July 2026 as part of the funding proposed for this project.

8. Attach a map covering area and show location of project proposal.

9. State or Local government approval: ☒ Attached ☐ Applied for ☐ Not Required

10. Nonrefundable application fee: ☐ Attached ☐ Not required ☐ To be determined by agency

11. Does project cross international boundary or affect international waterways? ☐ Yes ☐ No (*if "yes," indicate on map*)

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

Price City is the technical and financial party responsible for the proposed project. The City currently maintains the existing line and has sought SRF funding to aid in the funding of the proposed emergency replacement project.

13a. Describe other alternative locations considered.

The no action alternative was considered for this project. Under this scenario there would be no upgrading of deteriorating pipeline. The no action alternative would propose no construction impacts, however it would not achieve the purpose and need for the project, which is to replace the deteriorating line to ensure reliability and performance. Additional alternative routes were not considered because locating near the existing line is more efficient and limits the amount of pipeline replacement to just that of deteriorated condition. Any alternative alignments would be likely to have a similar impact in temporary construction activities, or greater due to not being adjacent to the existing line.

b. Why were these alternatives not selected?

The no action alternative was not selected as it does not achieve the purpose and need of the project. Alternative alignments were not selected as the proposed project is adjacent to the existing pipeline and allows for just the portions of pipeline that are failing to be replaced.

c. Give explanation as to why it is necessary to use or occupy Federal assets (lands or buildings).

The existing pipeline currently occupies Federal lands in the ROW along Highway 6. The existing line is beginning to fail and the compromised condition could limit the ability for Price City to adequately serve residents with a safe and reliable source of water. By replacing the deteriorating pipeline in the adjacent corridor, the line can continue to provide water until the new line is constructed.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. (Specify number, date, code, or name)

The existing pipeline was initially installed in the 1920's and did encroach on BLM lands.

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits.

The need for the project is to replace the existing transmission main due to its deteriorated condition. Due to the current condition this is considered an emergency replacement.

16. Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

The effects on populations in the area are anticipated to be beneficial. The proposed project would ensure the continued delivery of a safe and reliable source of water to those served by Price City. While the proposed project is being constructed there may be minor impacts such as noise, equipment staging, and dust. These impacts would be managed by limiting working hours to normal daylight hours and properly working equipment, as well as appropriate site management. Since the project area is along a highway it is unlikely many residential or rural home owners would experience any particular effects that would disrupt their daily lives. Any traffic impacts would be managed with appropriate traffic plans, clearly marked for road users. End users are those served by Price City and include all social and economic users.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability; and, (g) historic or archaeological resources or properties.

Environmental impacts are anticipated to be minor and temporary. Noise, air, and construction impacts would be managed in accordance to permits and properly working equipment and staging areas. Temporary soil disturbance would occur along the corridor but would be managed with BMPs and stormwater management techniques. The area would also be restored and reseeded once the pipeline is installed. No significant impacts would be anticipated with the project. No long term noise generation or above ground appurtenances are proposed that would hinder views.

18. Describe the probable effects that the proposed project will have on (a) populations of fish, plant life, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

The proposed project is not likely to have an adverse effect on protected species. No effect is anticipated for raptors, monarch butterfly, Suckley's cuckoo bumble bee, and greater sage grouse. May Affect, Not Likely to Adversely Affect: Potential impacts to *S. diluvialis* would be indirect and primarily related to construction related disturbance would be minor, local and temporary. May Effect, Not Likely to Adversely Affect: Although suitable habitat is located within the project area, Mexican spotted owls have not been reported in the area and the potential for presence is low.

19. State whether any hazardous material, as defined in this paragraph, would be used, produced, transported or stored on or in a federal building or federal lands or would be used in connection with the proposed use or occupancy. "Hazardous material" shall mean (a) any hazardous substance under section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any petroleum product or its derivative, including fuel oil, and waste oils; and (d) any hazardous substance, extremely hazardous substance, toxic substance, hazardous waste, ignitable, reactive or corrosive materials, pollutant, contaminant, element, compound, mixture, solution or substance that may pose a present or potential hazard to human health or the environment under any applicable environmental laws. The holder shall not store any hazardous materials at the site without prior written approval from the authorized officer. This approval shall not be unreasonably withheld. If the authorized officer provides approval, this permit shall include (or in the case of approval provided after this permit is issued, shall be amended to include) specific terms addressing the storage of hazardous materials, including the specific type of materials to be stored, the volume, the type of storage, and a spill plan. Such terms shall be proposed by the holder and are subject to approval by the authorized officer.

During construction activities it is possible the contractor may have hazardous materials on site in the form of petroleum products or other derivatives to complete construction activities. Should the contractor have such products on site it is their responsibility to effectively manage such materials, including providing secondary containment or containment to prevent any contact with water and prevention of potential spills. Such requirements are common and explicit in project specifications and also are required by the NPDES Construction Stormwater permit. Quantities would be limited to that necessary for daily construction and managed by the contractor on site.

20. Name all the Federal Department(s)/Agency(ies) where this application is being filed.

Bureau of Land Management

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant

Date

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

GENERAL INFORMATION
ALASKA NATIONAL INTEREST LANDS

This application will be used when applying for a right-of-way, permit, license, lease, or certificate for the use of Federal lands which lie within conservation system units and National Recreation or Conservation Areas as defined in the Alaska National Interest Lands Conservation Act. Conservation system units include the National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers System, National Trails System, National Wilderness Preservation System, and National Forest Monuments.

Transportation utility systems telecommunication installations facility uses for which the application may be used are:

1. Canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other systems for the transportation of water.
2. Pipelines and other systems for the transportation of liquids other than water, including oil, natural gas, synthetic liquid and gaseous fuels, and any refined product produced therefrom.
3. Pipelines, slurry and emulsion systems, and conveyor belts for transportation of solid materials.
4. Systems for the transmission and distribution of electric energy.
5. Wired and wireless systems for transmission or reception of radio, television, telephone, telegraph, and other electronic signals, and other means of communications.
6. Improved right-of-way for snow machines, air cushion vehicles, and all-terrain vehicles.
7. Roads, highways, railroads, tunnels, tramways, airports, landing strips, docks, and other systems of general transportation.

This application must be filed simultaneously with each Federal department or agency requiring authorization to establish and operate your proposal.

In Alaska, the following agencies will help the applicant file an application and identify the other agencies the applicant should contact and possibly file with:

Department of Agriculture
Regional Forester, Forest Service (USFS)
P.O. Box 21628
Juneau, Alaska 99802-1628
Telephone: (907) 586-7847 (or a local Forest Service Office)

Department of the Interior
Bureau of Indian Affairs (BIA)
Alaska Regional Office
709 West 9th Street
Juneau, Alaska 99802
Telephone: (907) 586-7177

Department of the Interior
Alaska State Office
Bureau of Land Management
222 West 7th Avenue #13
Anchorage, Alaska 99513
Public Room: 907-271-5960
FAX: 907-271-3684
(or a local BLM Office)

U.S. Fish & Wildlife Service (FWS)
Office of the Regional Director 1011
East Tudor Road Anchorage, Alaska
99503 Telephone: (907) 786-3440

National Park Service (NPS)
Alaska Regional Office
240 West 5th Avenue
Anchorage, Alaska 99501
Telephone: (907) 644-3510

Note - Filings with any Interior agency may be filed with any office noted above or with the Office of the Secretary of the Interior, Regional Environmental Officer, P.O. Box 120, 1675 C Street, Anchorage, Alaska 99513.

Department of Transportation
Federal Aviation Administration
Alaska Region AAL-4, 222 West 7th Ave., Box 14
Anchorage, Alaska 99513-7587
Telephone: (907) 271-5285

NOTE - The Department of Transportation has established the above central filing point for agencies within that Department. Affected agencies are: Federal Aviation Administration (FAA), Coast Guard (USCG), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA).

OTHER THAN ALASKA NATIONAL INTEREST LANDS

Use of this form is not limited to National Interest Conservation Lands of Alaska.

Individual department/agencies may authorize the use of this form by applicants for transportation, utility systems, telecommunication installations and facilities on other Federal lands outside those areas described above.

For proposals located outside of Alaska, applications will be filed at the local agency office or at a location specified by the responsible Federal agency.

SPECIFIC INSTRUCTIONS
(Items not listed are self-explanatory)

- 7 Attach preliminary site and facility construction plans. The responsible agency will provide instructions whenever specific plans are required.
- 8 Generally, the map must show the section(s), township(s), and range(s) within which the project is to be located. Show the proposed location of the project on the map as accurately as possible. Some agencies require detailed survey maps. The responsible agency will provide additional instructions.
- 9, 10, and 12 The responsible agency will provide additional instructions.
- 13 Providing information on alternate locations in as much detail as possible, discussing why certain locations were rejected and why it is necessary to use Federal assets will assist the agency(ies) in processing your application and reaching a final decision. Include only reasonable alternate locations as related to current technology and economics.
- 14 The responsible agency will provide instructions.
- 15 Generally, a simple statement of the purpose of the proposal will be sufficient. However, major proposals located in critical or sensitive areas may require a full analysis with additional specific information. The responsible agency will provide additional instructions.
- 16 through 19 Providing this information with as much detail as possible will assist the Federal agency(ies) in processing the application and reaching a decision. When completing these items, you should use a sound judgment in furnishing relevant information. For example, if the project is not near a stream or other body of water, do not address this subject. The responsible agency will provide additional instructions.

Application must be signed by the applicant or applicant's authorized representative.

EFFECT OF NOT PROVIDING INFORMATION

Disclosure of the information is voluntary. If all the information is not provided, the proposal or application may be rejected.

DATA COLLECTION STATEMENT

The Federal agencies collect this information from proponents and applicants requesting a right-of-way, permit, license, lease, or certification for use of Federal assets. The Federal agencies use this information to evaluate a proponent's or applicant's proposal to use Federal assets.

BURDEN STATEMENT

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0249. The time required to complete this information collection is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The authority to collect this information is derived from 47 U.S.C. 1455(c)(3) and 16 U.S.C. 3210.

USDA NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

SUPPLEMENTAL

NOTE: The responsible agency(ies) will provide instructions	CHECK APPROPRIATE BLOCK	
I - PRIVATE CORPORATIONS	ATTACHED	FILED*
a. Articles of Incorporation	☐	☐
b. Corporation Bylaws	☐	☐
c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State	☐	☐
d. Copy of resolution authorizing filing	☐	☐
e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate.	☐	☐
f. If application is for an oil or gas pipeline, describe any related right-of-way or temporary use permit applications, and identify previous applications.	☐	☐
g. If application is for an oil and gas pipeline, identify all Federal lands by agency impacted by proposal.	☐	☐
II - PUBLIC CORPORATIONS		
a. Copy of law forming corporation	☐	☐
b. Proof of organization	☐	☐
c. Copy of Bylaws	☐	☐
d. Copy of resolution authorizing filing	☐	☐
e. If application is for an oil or gas pipeline, provide information required by item "I - f" and "I - g" above.	☐	☐
III - PARTNERSHIP OR OTHER UNINCORPORATED ENTITY		
a. Articles of association, if any	☐	☐
b. If one partner is authorized to sign, resolution authorizing action is	☐	☐
c. Name and address of each participant, partner, association, or other	☐	☐
d. If application is for an oil or gas pipeline, provide information required by item "I - f" and "I - g" above.	☐	☐

*If the required information is already filed with the agency processing this application and is current, check block entitled "Filed." Provide the file identification information (e.g., number, date, code, name). If not on file or current, attach the requested information.

Price Spring Pipeline Project Plan of Development

March 2026

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Appendix A: Biological Assessment

Chapter 1 Purpose and Need

Price City (City) is the owner and operator of a municipal pipeline approximately 64,480 feet (12.2 miles) in length, running from springs in the Colton area to the City's water treatment plant. The springs are the City's only year-round source of water. The City operates the steel pipeline, installed in the 1930's, to bring raw water to treat and distribute to Municipal water users.

Approximately 6.5 miles of the pipeline in the Colton and Kyune pass areas are deteriorating. The current condition is poor, prone to leaks, and could be prone to failure if not replaced. As part of the Price Spring Pipeline Project (Project), the City proposes an emergency replacement of this segment in an adjacent corridor with high density polyethylene (HDPE) pipe.

The new gravity fed, subsurface pipeline would then tie into the existing overall system and maintain service to the City into the future with enhanced reliability. The City is slated to receive loan funding from the State Revolving Fund (SRF) issued by the Utah Division of Drinking Water (DDW) in July 2026 to perform this work.

The Project involves construction and operational activities on Federal land in both Utah and Carbon Counties, and will involve review by the Bureau of Land Management (BLM). Under the laws applied by the BLM, the agency must determine whether the Project satisfies the requirements of those laws, whether to authorize the Project, and if so, under what terms and conditions. The need for BLM action arises from its responsibility under the Federal Land Policy and Management Act (FLPMA) of 1976 and other laws to respond to the City's right-of-way (ROW) request. The BLM's multiple-use mission includes managing activities on federal land such as ROW authorizations, while conserving natural, historical, cultural, and other resources in accordance with federal laws and BLM policies, guidance and management plans. The City has submitted a ROW application to the BLM to construct, operate and maintain the Project on land administered by the BLM. The City is also in the process of applying for other permits to the Utah DDW and Utah Department of Transportation (UDOT).

The purpose of this Plan of Development (POD) document is to describe the specific proposed Project features, identify the BLM ROW grant requested for the pipeline, describe the Project construction, operation and maintenance, and termination, and present the City's area of potential effects maps and proposed environmental resource protection measures. This information will be presented as it pertains specifically to the BLM parcels that the proposed pipeline crosses. The BLM parcel located in Sec. 30, T.11S., R.9E., SLM, will hereby be referred to as the "Utah County Parcel. The BLM parcel located in Sec. 05, T.12S., R.9E., SLM, will be hereby referred to as the "Carbon County Parcel."

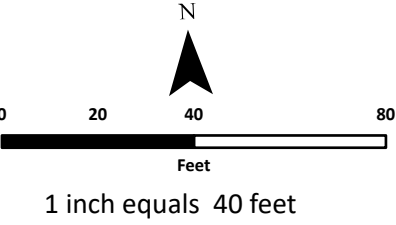
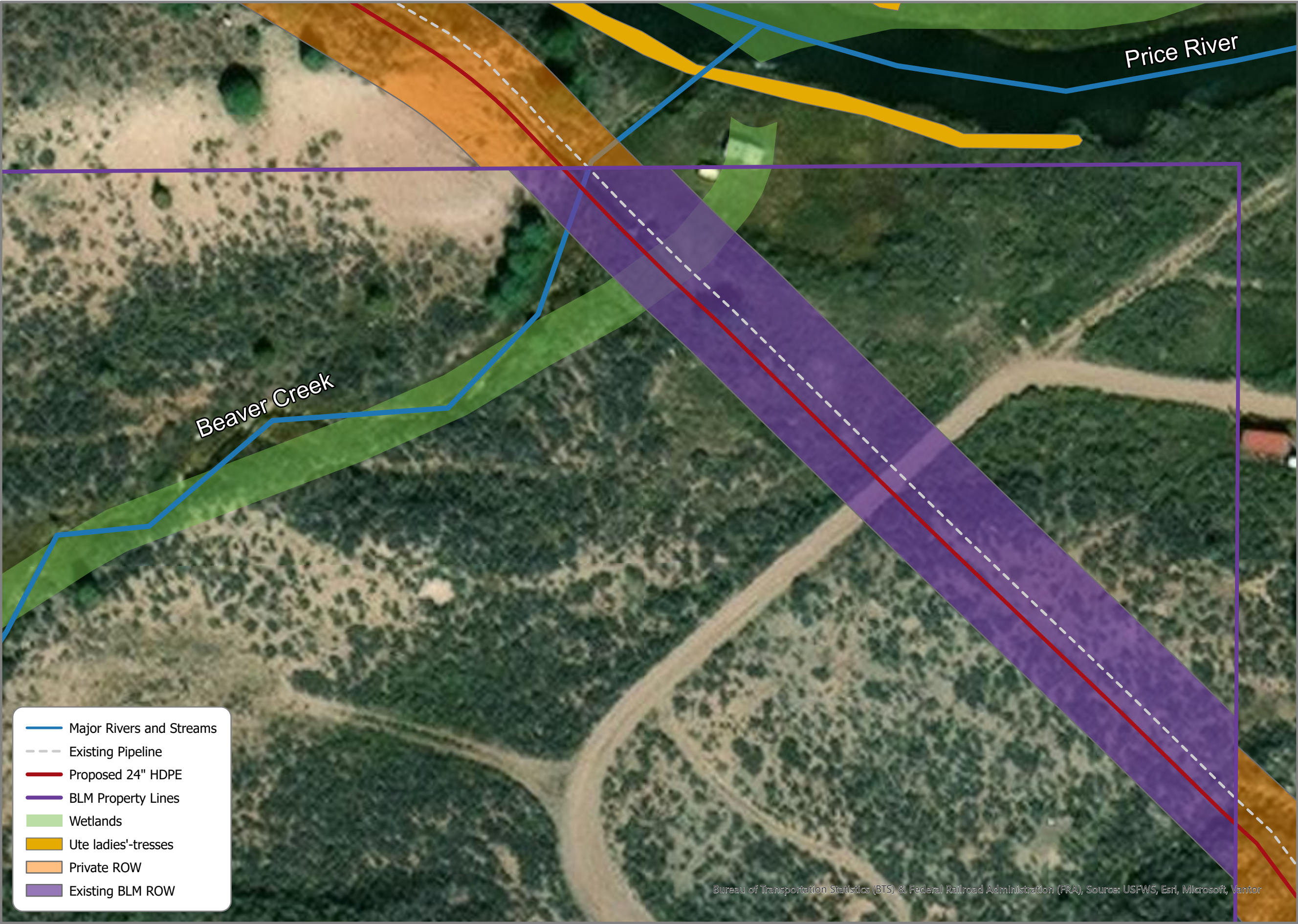
1.1 Project Alternatives

Alternatives considered for the Project include:

- No Action Alternative – Because the Project is an emergency replacement project, the No Action Alternative would not achieve the purpose and need. In addition, it would result in rapid deterioration of the existing pipeline and subsequent failure. This alternative would have no short-term impacts from construction, but would not meet the purpose and need and would likely lead to water supply issues due to potential future failure.
- Removal of Existing Pipeline with New Pipeline Installation – The Removal of Existing Pipeline with New Pipeline Installation Alternative would interrupt water conveyance to the City. The existing pipeline provides the only year-round source of water to the City, and as a result, this alternative was eliminated due to not having a residual line to serve the City during construction.
- Routing of Pipeline off BLM Land – The Routing of Pipeline off BLM Land Alternative was eliminated due to hydraulic issues associated with the alignment. The pipeline system would not be able to maintain sufficient pressure head with the additional pipeline required to route off all Federal land.
- New Pipeline Installation off Existing Pipeline ROW (Project) – The New Pipeline Installation off Existing Pipeline ROW Alternative is the only alternative that meets the purpose and need of the proposed Project and is, therefore, the Preferred Alternative. This is the alternative carried throughout analysis and will be referred to as 'Project.'

1.2 Overview of the Project

The Project is situated in central Utah along the Union Pacific Railroad and the Price River in Price Canyon. Most of the proposed pipeline is located in Utah County, with the terminal segment extending into Carbon County. On the Utah County Parcel, roughly 385 feet of 18" steel pipe will be decommissioned and 400 feet of 24" HDPE pipe will be installed. On the Carbon County Parcel, roughly 3,290 feet of existing 12" steel pipe will be decommissioned and 3,102 feet of 16" HDPE pipe will be installed. The proposed pipe segment will be roughly 190 feet shorter than the existing pipe segment due to the shorter proposed pipe path via horizontal directional drilling. Figure 1-1 and Figure 1-2 show the proposed pipeline alignment on the Utah County Parcel and Carbon County Parcel, respectively.



Utah County, UT

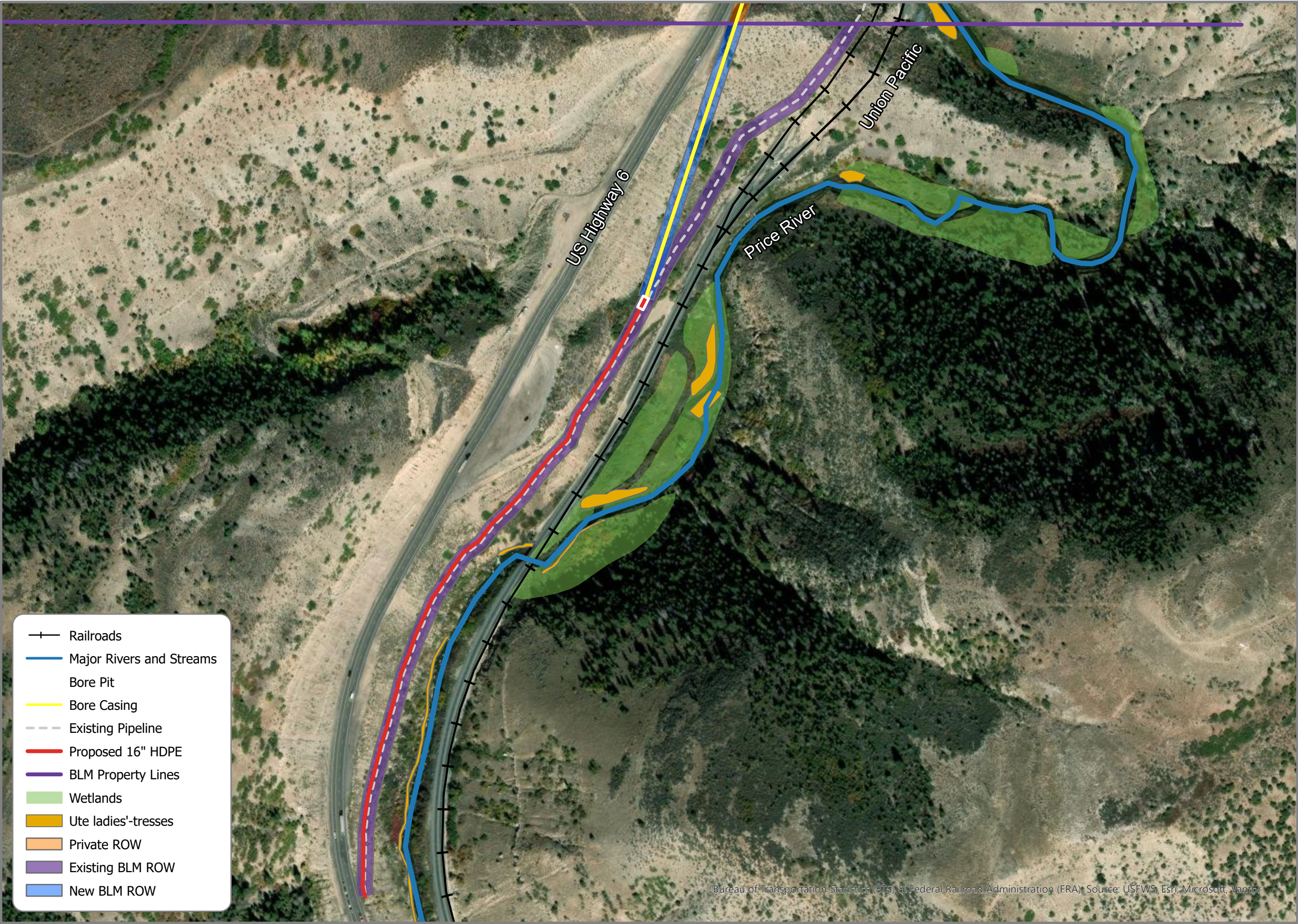
Figure 1-1
**UTAH COUNTY
PARCEL PIPELINE
ALIGNMENT**

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

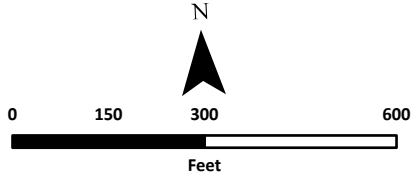
Date: 3/30/2026



Bureau of Transportation Statistics (BTS) & Federal Railroad Administration (FRA), Source: USFWS, Esri, Microsoft, Vantor



- +— Railroads
- Major Rivers and Streams
- Bore Pit
- Bore Casing
- Existing Pipeline
- Proposed 16" HDPE
- BLM Property Lines
- Wetlands
- Ute ladies'-tresses
- Private ROW
- Existing BLM ROW
- New BLM ROW



1 inch equals 300 feet



Locator Map Not to Scale

Carbon County, UT

Figure 1-2
**CARBON COUNTY
PARCEL PIPELINE
ALIGNMENT**

PRICE SPRING PIPELINE
PROJECT - PRICE CITY

Date: 3/30/2026



Bureau of Transportation Statistics (BTS) & Federal Railroad Administration (FRA); Source: USFWS, Esri, Microsoft, Vantor

Chapter 2 Right-Of-Way Location

The Project will require ROW across federal land administered by the BLM on both the Utah County Parcel and the Carbon County Parcel. When the existing pipeline was constructed in the 1930's, the BLM ROW was granted under different laws than exist today. The City requests that the existing BLM ROW be reauthorized under FLPMA in lieu of an entirely new ROW, with the exception of an alteration to the existing ROW on the Carbon County Parcel where boring will take place by the railroad tunnel (Figure 1-2).

The permanent ROW will cover approximately 0.44 acres (385' long by 50' wide) on the Utah County Parcel and 3.56 acres (3,102' long by 50' wide) on the Carbon County Parcel. Acreages are calculated based on a 50-foot ROW along the existing pipeline to match the existing ROW, except for boring location. Here, the reauthorized ROW would follow the bore path as opposed to the existing pipeline (Figure 1-2). On the Carbon County Parcel, the temporary staging area (Figure 1-2) will cover approximately 1.32 acres.

The dimensions of ROWs identified within this POD are consistent with those established for other similar facilities constructed on BLM-managed land and are intended to minimize ground disturbance while allowing for safe and efficient construction and operation of project facilities. In areas of level terrain and stable soil conditions, the amount of disturbance of the ROWs may be reduced; however, any potential reductions will not be known until after detailed alignment surveys and project design have been completed. Impacts on the ROW associated with pipeline construction will be temporary and disturbed ROW will be restored. The term of the ROW grant is anticipated to be 100 years with an option for renewal. Terms for Utah DDW and UDOT grants are anticipated to be 100 years.

Chapter 3 Facility Design Factors

This chapter describes the components that comprise the Project, mainly the spring water transmission line. No future components are anticipated to be associated with the Project. Preliminary design has been performed to balance cuts and fills as much as was feasible and estimates no significant surplus or deficit of material. Spoil materials will be kept out of all potential ditches, wetlands, and Waters of the US (WOTUS) as well as any areas of potential critical habitat for endangered species.

3.1 Utah County Parcel Pipeline Segment

The Utah County Parcel pipeline segment begins near the intersection of the parcel and Beaver Creek and spans roughly 400 feet in the southeast direction (Figure 1-1). This subsurface segment of pipe will be 24" DR 17 HDPE pipe. The pressure rating for DR 17 is 130 psi and the minimum wall thickness is 1.518 inches for 24" pipe.

3.2 Carbon County Parcel Pipeline Segment

The Carbon County Parcel pipeline segment begins near US Highway 6 where the pipeline crosses counties and spans roughly 3,102 feet in the southwest direction (Figure 1-2). This subsurface segment of pipe will be 16" HDPE pipe. Up to DR 7 will be used when boring and DR 17 will be used otherwise. The pressure rating for DR 7 is 335 psi and the minimum wall thickness is 2.486 inches for 16" pipe. The pressure rating for DR 17 is 130 psi and the minimum wall thickness is 1.024 inches for 16" pipe.

Preliminary design identified at least one blowoff valve and one combination air valve (CAV) will be located on this pipe segment. The final number and location of valves will be determined during final design. Valves will be installed in buried concrete vaults with locking at-grade access lids to provide access.

Blowoff valves would be installed at low points in the pipeline and used for draining during hydrostatic testing, maintenance, and repair periods. CAV's would be installed at high points in the pipeline and used to release trapped air and prevent vacuum conditions.

Markers and other pipeline identifiers will be installed as needed at intervals consistent with BLM requirements and at key locations. Marker type and color on BLM-administered lands will be coordinated with BLM during final design to minimize visual contrast.

Chapter 4 Government Agencies Involved

Table 4-1 lists the Federal and state permits, licenses, approvals and reviews potentially required to construct, operate, and maintain the Project facilities described in this POD.

Table 4-1: Government Agency Needs

Agency	Permit/License/Approval/Review
Bureau of Land Management	- National Environmental Policy Act compliance – Cooperating Agency - National Historic Preservation Act Section 106 compliance (lead) - Right-of-Way Grant (FLPMA)
Utah Department of Environmental Quality, Division of Drinking Water	- Approval to Construct New Facilities - National Environmental Policy Act Compliance – Lead Agency - National Historic Preservation Act Section 106 Compliance
United States Army Corps of Engineers	- Endangered Species Act Compliance – Lead Agency
Utah Department of Transportation	- Encroachment Permit - ROW occupancy permits

Chapter 5 Construction of the Facilities

General construction methods and procedures are described in this chapter. The construction contract breakdown will be identified during final design. There are no site-specific problems relating to surface use or special mitigation on BLM land. Existing roads will be used to the extent feasible to access construction areas, provided they are suitable and BLM approval is received, and there will be no permanent access restrictions along the pipeline ROW. Fire control will not be needed for the Project.

5.1 Standard Construction Methods

Standard construction methods common to Project components are briefly described in the following sections. The City will notify the BLM at least 14 days before initiation of project construction.

5.1.1 Surveying and Staking

Before ground disturbance activities are initiated, the City will survey and stake the ROW boundary and construction area. In addition, environmental features requiring avoidance such as Ute Ladies'-tresses will be staked or flagged in accordance with approved environmental measures and federal and state environmental conditions and stipulations. The existing pipeline, General Land Office and BLM survey monuments, and other existing features will be staked to prevent accidental damage during construction.

5.1.2 Clearing and Grading

Clearing will occur within the staked boundary of the ROW. Clearing may include removal of materials that could interfere with construction activities, create hazards or unsafe conditions, or impair subsequent site work. This could include cutting vegetation and removing boulders from the ROW as approved by the BLM. Areas not needed for construction and areas without conditions that impede construction activities will not be cleared.

After prescribed plant and topsoil salvage, the cleared ROW area will be grubbed by removing a deep surface layer that includes stumps and roots. The ROW area will be graded as necessary to provide a level working surface for construction equipment. Grading of the ROW area will most likely be performed by a bulldozer or track hoe.

Following site clearing and grading, berms and drainage ditches may be constructed to contain runoff and divert floodwaters from the construction area.

5.1.3 Materials Storage

Portions of the ROW will be used for construction equipment storage, building materials, and will provide for safe personnel workspace. Equipment is expected to include, but not be limited to, graders, trenchers, haul trucks, and pickup trucks. Building materials may include, but not be limited to, sections of HDPE pipe, concrete boxes with steel reinforcement, ductile iron or stainless-steel valves, steel casings, and gravel and sand fill. Potentially hazardous materials, such as fuel for construction equipment or any pesticides, will be stored in the ROW during construction according to state, federal, and local rules and regulations. No staging areas will be used on either BLM parcel.

5.1.4 Sanitation

Sanitary facilities and potable water storage will be provided for construction personnel. Sanitary facilities for construction personnel will be portable units. Water required during construction will be provided by local sources.

The ROW will be kept free from any accumulation of construction waste, trash, and debris. Food waste will be disposed of promptly in predator-proof containers with re-sealable lids. Trash, debris, recyclables, and waste will not be buried or burned. Disposal or recycling of trash and debris will be off-site, at a State of Utah approved sanitary landfill or recycling site. Construction materials shall be stored in a gathered, piled, or other organized manner that will readily accommodate use and eventual removal and will not create additional waste problems. Sanitation facilities will be staked down to prevent potentially tipping over and coming in contact with stormwater. Facility locations will be identified on stormwater erosion control plans and the Construction SWPPP.

5.2 Pipeline Construction

Pipeline construction will be by standard open-cut technique. The only exceptions will be a short segment of open-cut trenching with temporary flow diversion to cross Beaver Creek on the Utah County Parcel and a longer segment of HDD through the railroad tunnel on the Carbon County Parcel.

5.2.1 General Pipeline Construction Techniques

In addition to the standard construction methods previously described, the following general construction techniques will apply to the proposed pipeline.

5.2.1.1 Trenching

The ROW for the pipeline will accommodate the pipe trench. Excavators, backhoes, track hoes, and/or other similar equipment will be used to excavate the trench in compliance with

Occupational Safety and Health Administration (OSHA) standards. The pipe trench top width will vary between 10 and 15 feet, with side slopes from 0.5:1 to 2:1. The depth of the excavated ditch will range from 5 to 7 feet. This allows 1 to 2 feet of space for pipe bedding and placement, 1 to 2 feet of depth to accommodate the pipe itself, plus a minimum of 3 feet of material to cover the pipe. Material excavated from the trench will be stockpiled adjacent to the trench. The anticipated workforce for open-cut trenching would likely be around 8-10 crew members and will likely be adjusted when boring. Crews are anticipated to work normal workday hours.

Signs and barricades will be used, as needed, at public road crossings and trails to protect the public from open trenches and construction areas. Escape ramps will be placed at each end and every ¼-mile of any open trench or other excavation deeper than 4 feet to allow escape of wildlife or livestock that may become entrapped. Escape ramps will not be required at the end of a trench where active pipelaying and backfilling is occurring.

5.2.1.2 Bedding

Bedding materials placed in the bottom of the pipeline trench will either be screened or otherwise processed excavated materials or imported gravel. Bedding materials may be laid up through the lower pipe zone to the mid-point around the pipe.

5.2.1.3 Pipe Installation

Pipe sections will be transported to the construction site via truck, strung along the trench alignment and butt-fused into longer continuous segments. Fused pipe strings will then be lowered into the trench using appropriate lifting equipment. HDPE pipe joints will be butt-fused to create a continuous, leak-resistant system with no mechanical joints along the pipeline alignment except at appurtenances. All butt-fuses will be visually inspected and tested using non-destructive and approved testing methods. Butt-fuses that do not meet established specifications will be repaired or removed. Appurtenant structures will then be affixed to the pipe.

5.2.1.4 Backfilling

After the bedding materials and pipe have been placed in the trench, backfilling materials would be placed up to approximately finished grade and compacted in place. Backfilling materials will be screened or otherwise processed excavated materials and will be placed using a backhoe, track hoe, or similar equipment.

5.2.1.5 Construction Water

Water will be required for construction activities, including dust control, pipe bedding, trench backfill compaction, and hydrostatic testing. Construction water will be obtained from legally permitted municipal or groundwater sources.

5.2.1.6 Hydrostatic Testing

Hydrostatic testing will be conducted to pressure test the pipeline at each construction phase. Following hydrostatic testing, test water will be discharged in a controlled manner to stable upland areas or existing drainages, as appropriate, and in compliance with applicable permits and best management practices (BMP's) to prevent erosion or sediment transport.

5.2.2 Special Pipeline Construction Techniques

Some pipeline segments will require the pipeline construction techniques described in the following sections. Topsoil will be preserved when crossing wetlands on the Utah County Parcel.

5.2.2.1 Stream Crossing

The pipeline will cross Beaver Creek on the Utah County Parcel. The construction technique will be open cut with temporary diversion of flow, in accordance with US Army Corps of Engineers and State of Utah permit requirements, as applicable.

5.2.2.2 Railroad Tunnel

At the railroad tunnel, where the proposed pipeline enters the Carbon County Parcel, it is anticipated that an approximate 2,000 feet HDD will be required, of which 920 feet will be on the Carbon County Parcel. It will consist of bore pits, approximately 40 feet long by 20 feet wide, placed within the requested ROW. The maximum depth of boring could be approximately 200 feet.

5.2.2.3 Existing Lines

The Helper pipeline runs semi-parallel to the Project and has limited, potentially inaccurate details as to the exact locations of pipe. However, the Project has been aligned to avoid this pipeline as much as possible.

Chapter 6 Resource Values and Environmental Concerns

The City has identified environmental protection measures that will be implemented as part of the construction and operation of the Project. These applicant-committed measures include design features, BMP's, monitoring, standard operating procedures, and other practices.

6.1 Air Resources

No significant impacts are anticipated with air quality. Minor temporary impacts to air quality may occur with construction activities. These impacts would mainly be due to transportation of materials and employees to the site, equipment use during construction, and reclamation activities. However, the project does not extend to large scale air quality impacts nor does it include high emission sources that would operate into the future.

6.2 Noise Impacts

No significant impacts are anticipated with noise. Minor temporary impacts to noise may occur with construction activities. These impacts would mainly be due to equipment and construction activities. No homeowners or housing is near the proposed ROW. The proposed ROW is off of Highway 6, which has an existing level of traffic and background noise associated with it. The contractor will be responsible for ensuring properly working equipment with mufflers, and will complete construction activities during normal working hours to manage the impacts of noise during the project construction.

6.3 Geologic Conditions

The project area occurs primarily on Quaternary alluvium associated with the Price River, with large expanses of the Colton Formation present on either side. Flagstaff Limestone and the North Horn Formation also border the Price River valley bottom within the project area (Noted in the Biological Assessment completed for the project and attached in Appendix A).

6.4 Mineral and Energy Resources

No impacts are anticipated on mineral and energy resources with the proposed project.

6.5 Paleontological Resources and Cultural Resources

A cultural resource report was prepared by Jody Montgomery. Based on this evaluation, there are no adverse impacts anticipated to cultural resources in the proposed project area.

6.6 Soils

Collapsible soils are susceptible to significant volume loss when wetted or loaded. These soils are typically associated with young alluvial and colluvial deposits found in arid and semi-arid environments. Portions of the alignment, particularly the valley floors in Segment A and Segment B, are mantled with alluvial and colluvial soils.

While no specific testing was performed for this project, these surficial deposits generally possess a porous structure that may be susceptible to hydro-collapse upon saturation. Expansive soils contain clay minerals that swell when wetted and shrink when dried, potentially exerting uplift pressures on buried infrastructure. The Colton Formation contains significant layers of dark reddish-brown to green mudstone and shaly siltstone. Similarly, the Flagstaff Formation contains interbedded calcareous shale. These fine-grained sedimentary units can weather into expansive clays. Although excavation in these segments often encounters granular overburden, excavations extending into the weathered mudstone or shale bedrock may expose expansive materials. As no at-grade structures are currently planned, these hazards are not anticipated to impact the proposed pipeline.

6.7 Water

Wetlands will be crossed in the requested ROW. In these areas, the wetland topsoil will be recovered. Impacts to wetland would be temporary during construction activities. Post-construction, the impacted ROW would be restored to pre-project grade, reseeded and allowed to go back to pre-project functionality. No fill material is proposed in WOTUS.

6.8 Vegetation

Vegetation communities within the project area include sagebrush steppe, riparian shrubland, and wet meadow. Sagebrush steppe is the dominant vegetation community in the project area and occupies the broader surrounding slopes. Big sagebrush (*Artemisia tridentata*) is the dominant species with scattered rubber rabbitbrush (*Ericameria nauseosa*) and Utah juniper (*Juniperus osteosperma*). Steep slopes above the Price River are sparsely vegetated. Wet meadow communities are found primarily along the banks of the river and in isolated depressions in the Price River floodplain. Wet meadows are also found associated with the natural springs at the western end of the project area. Dominant plant species in these habitats include reed canarygrass (*Phalaris arundinacea*), mountain rush (*Juncus arcticus* ssp. *littoralis*), water sedge (*Carex aquatilis*), and smooth horsetail (*Equisetum laevigatum*). Riparian shrublands are scattered along the river and are most common in the northern portion of the project area. Common species here include narrowleaf willow (*Salix exigua*) and redosier dogwood (*Cornus sericea*). Table 5-1 in the Biological Assessment (Appendix A) lists the dominant plant species observed within the plant survey area.

The Proposed Action would include 72.00 acres of surface soil disturbance. The Proposed Action may facilitate the establishment and spread of noxious and invasive species. However, impacts would be minimized through the implementation of mitigation measures:

1. Avoiding the introduction of invasive species by washing equipment and vehicles prior to entering construction areas;
2. Post-construction monitoring to detect infestations of noxious species for early detection and treatment;
3. Chemical and mechanical treatments of noxious plant species.

The biological assessment concluded the project: May Affect, Not Likely to Adversely Affect invasive species.

Impacts on vegetation would ultimately be temporary. Post-construction the impacted ROW would be reclaimed and reseeded. Significant impacts would not be proposed with the project as there is no paving or impervious surfaces proposed with the project.

6.9 Visual Resources

Visual resources may temporarily be impacted during construction. This impact would be minor and mainly due to staging of materials and construction equipment to install the pipeline. Post-construction the impacted ROW would likely be visible until the vegetation has a chance to reestablish. Long-term there would be no significant impact on the visual resources of the area as the pipeline would be underground and only small above ground appurtenances in the form of air release valves would be visible and this would not obstruct any views or visual resources.

6.10 BLM Projects

There is no anticipated impact on BLM projects associated with the proposed project. No known BLM projects in the proposed ROW are known to the project sponsor. Post-construction the pipeline will be underground and will not impact surface resources. The City will provide as-built drawings once the pipeline is installed to the BLM for their record.

6.11 Recreational Activities

No impact on recreational activities are proposed with this project. No recreational areas would be proposed to be shut down. No public trails are proposed to be effected.

6.12 Wilderness

No impacts on wilderness areas are proposed with this project.

6.13 Land Use

The proposed project is anticipated to be concurrent with the current land use of the area. The proposed project is to locate the replacement pipeline adjacent to the existing line. No proposed land use changes or zoning requests would be necessary.

6.14 Federally Listed Threatened or Endangered Species or their Critical Habitat

A Biological Assessment (attached in Appendix A) was completed for the proposed project by Western-Enviro Resources Inc. The report details potential impacts. Summaries of the findings for Federally listed Threatened or Endangered Species and their critical habitat can be found below. The report may be referenced for additional information, support and additional mitigation measures.

6.14.1 Ute ladies'-tresses (*Spiranthes diluvialis*)

May Affect, Not Likely to Adversely Affect: Potential impacts to Ute ladies'-tresses (*Spiranthes diluvialis*) would be indirect and primarily related to construction. Disturbance would be minor, local and temporary.

6.14.2 Mexican spotted owls

May Effect, Not Likely to Adversely Affect: Although suitable habitat is located within the project area, Mexican spotted owls have not been reported in the area and the potential for presence is low. Impacts related to the Proposed Action would be minor, and abundant habitat is present in the surrounding area to support any displaced individuals. Should construction occur between March 1 and August 31, pre-construction surveys would be conducted to ensure that no nesting individuals are present within one-half mile of the project ROW. With the implementation of mitigation measures, including pre-construction surveys, the Proposed Action may affect, but is not likely to adversely affect Mexican spotted owl.

6.14.3 Raptors

No Effect: Two (2) nests were identified within one-half mile of the project ROW. Impacts to foraging and nesting habitat would be negligible. In addition, there is abundant habitat in the surrounding area to support any displaced individuals. Migratory bird surveys are recommended if work is planned between January 1 and August 31. Through the implementation of mitigation measures, including pre-construction surveys, the Proposed Action would have no effect on Raptors.

6.14.4 Monarch butterfly

No Effect: Impacts to monarch butterfly habitat related to the Proposed Action are minor, and habitat suitable to the species is present near the project area to support any displaced individuals. Mitigation measures would be implemented to minimize impacts to monarch butterfly. Specifically, the reclamation seed mix would include pollinator-promoting flowering species. The Proposed Action would have no measurable effect on this species.

6.14.5 Suckley's cuckoo bumble bee

No Effect: Potential for this species to occur within the project area is low and impacts to Suckley's cuckoo bumble bee foraging habitat related to the Proposed Action would be minor. There is abundant habitat in the surrounding area to support any displaced individuals. Impacts to this species would be negligible.

6.14.6 Greater sage-grouse

May Affect, Not Likely to Adversely Affect: The project area is located within a Habitat Management Area and greater sage-grouse is known to occur. The Proposed Action may affect but is not likely to adversely affect this species. Impacts would be localized, temporary, and associated with disturbance related to construction activities. Mitigation measures, including preconstruction clearance surveys, would minimize potential impacts to greater sage-grouse in the area.

6.15 Natural Resource Impacts

Natural Resource impacts are not anticipated as all improvements would take place in the existing footprint.

6.16 Natural Landmarks or Significant Historic, Architectural, Prehistoric, Archaeological or Cultural Resources

No impacts on natural landmarks or historic, architectural, prehistoric, archaeological, or cultural resources are anticipated with this project.

6.17 Quality of the Human Environment

No impacts are anticipated on the quality of the human environment. The proposed project area resides near existing underground and transportation infrastructure. Post construction, the area can be restored and reclaimed with above ground appurtenances kept to a minimum and no visual impacts anticipated.

6.18 Public Health

The proposed project is anticipated to benefit public health. Adding updated infrastructure free of leaks and potential issues would add resilience to the overall municipal water system and help meet conservation goals. Future maintenance issues would be reduced and the City can meet service area demands.

Chapter 7 Stabilization and Rehabilitation

Land within the ROW will be stabilized and restored after construction activities.

7.1 Soil Replacement and Stabilization

Surface soils removed during clearing, grubbing, and trenching activities within the ROW will be temporarily side cast adjacent to the trench and segregated where practical. Excavated material will be returned to the trench during backfilling operations, and disturbed areas will be graded to approximate pre-construction contours. Finished grading will drain disturbed areas to natural drainage features such as dry washes, swales, and depressions.

7.2 Vegetation Removal and Handling During Construction

Trees and other woody vegetation, if removed, will be cut near the ground surface and stockpiled for chipping and distribution during ROW surface restoration. Other non-woody vegetation, if removed, will be placed adjacent to disturbed areas and redistributed during final ROW restoration. The cleared and removed vegetation will provide seed stock and organic matter to aid in the natural revegetation of disturbed areas.

7.3 Seeding Specifications

A seed mixture reviewed with the BLM will be prepared for spreading over the restored ROW area. The seed mixture will be certified weed-free and include seeds of revegetation plant species recommended by the BLM. The seed mixture will be applied to the surface soils at a rate and during seasons reviewed by the BLM.

7.4 Fertilizer

A fertilizer mixture reviewed with the BLM will be prepared for applying over the restored ROW area. Major soil types can be analyzed to determine chemical or mineral make-up and the potential composition of the fertilizers. Fertilizer will be applied to the surface soils at a rate and during seasons reviewed with the BLM.

7.5 Temporary Watering

Seeded and fertilized areas in the ROW area may be temporarily watered, depending on the season and weather conditions following restoration activities. Temporary watering may involve spraying and sprinkling seeded and fertilized areas in the ROW using water appropriate for vegetation and soil conditions. Spraying and sprinkling quantities and timing will be reviewed by the BLM.

Chapter 8 Operation and Maintenance

The Project will be operated and maintained in accordance with environmental requirements of the BLM ROW grant and within the ROW area. In addition to routine operation of the pipeline, there may be remote and on-site monitoring of system functions, pipeline inspections, regular equipment maintenance, repairs, and responses to emergency situations. Pipeline inspections will identify any areas of exposed pipeline and appurtenances, excessive erosion, unauthorized ROW encroachment, or any other conditions that could present a safety hazard or require preventive maintenance or reporting. ROW maintenance may include application of herbicides to control noxious and non-native invasive weeds, in accordance with a BLM-issued pesticide use proposal. A routine operations and maintenance schedule will be developed for the project during pipeline construction and provided to the BLM. No additional pipe will be needed post-construction and there are no safety concerns anticipated with the new pipeline once it is in service. The City will be responsible for any future contingency planning as the Owner and Operator of the Project.

Chapter 9 Termination and Restoration

The ROW reauthorization for the Project will be in accordance with the FLPMA and other land management laws and regulations. Any BMP's will also be removed if they are used. The existing pipeline will be abandoned and the new pipeline will be brought into service. Existing roads will be maintained. As stated in Chapter 7, disturbed areas will be stabilized and reclaimed and vegetation will be reestablished.

Appendix A: Biological Assessment

DRAFT BIOLOGICAL ASSESSMENT – BOTANICAL AND WILDLIFE RESOURCES

**FOR THE PROPOSED:
PRICE CITY PROJECT 9C-2025 –
SPRING WATER TRANSMISSION LINE REPLACEMENT**

UTAH AND CARBON COUNTIES, UTAH

**PREPARED BY:
WESTERN-ENVIRO RESOURCES, INC.
FRIDAY HARBOR, WA 98250**



FEBRUARY 2026

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1.0 EXECUTIVE SUMMARY

Proposed Project	Price City Project 9C-2025 – Spring Water Transmission Pipeline Replacement	
Consultants/Contractor	WESTERN-ENVIRO Resources, Inc. Friday Harbor, WA 98250	Johansen and Tuttle Engineering, Inc. 90 South 100 East Castle Dale, UT 84513
	AE2S Engineering, LLC 3400 North Aston Blvd, Suite 105, Lehi, UT 84043	
Land Status	Bureau of Land Management (BLM), Utah School and Institutional Trust Lands Administration (SITLA), and private property	
Date(s) of Survey	- Botanical surveys conducted October 23, 24, 28, and 29 and November 10, 11, 12, and 13, 2025. - Wildlife surveys conducted January 5, 12, 13, 14, 15, and 16, 2026.	
Survey Location	Sections 23, 25, 26, and 27 in Township 11 South, Range 8 East; Sections 30, 31, and 32 in Township 11 South, Range 9 East; and Section 5 in Township 12 South, Range 9 East, Salt Lake Base and Meridian (S.L.B.&M.), Utah and Carbon Counties, Utah.	
Survey Crew Lead(s)	Bridget M Atkin, M.S., M.L.A., Plant Ecologist Rayce Bryan, M.S., Plant Glen Gantz, M.S., Certified Wildlife Biologist	

SUMMARY OF SURVEY RESULTS

Acreage Surveyed for Plant Resources	558.95 acres	
Target Plant Species	Plant species listed by the U.S. Fish and Wildlife Service (USFWS) as Threatened, Endangered, Proposed, and Candidate (TEPC); survey focused on Ute lady's tresses (<i>Spiranthes diluvialis</i>).	
Number of Target Plant Species Observed	None (0)	
Target Plant Species Habitat Documented	11.65 acres of suitable <i>S. diluvialis</i> habitat documented, 0.32 acres of which would be located within the pipeline ROW but would be avoided through a bore. - No impacts to suitable <i>S. diluvialis</i> habitat are anticipated as suitable habitat has been avoided or would be bored.	
Target Wildlife Species	Wildlife species listed by the USFWS, raptors, and other Species of Concern (SOC).	
Acreage Surveyed for Wildlife Resources	Burrowing owl survey	TEPC species, raptor, and SOC surveys
	2,266.00 acres	4,620.31 acres
Target Wildlife Species or Resources Documented	- Habitat suitable to monarch butterfly and Suckley's cuckoo bumble bee observed within one-half mile of the project ROW. No habitat suitable to any other TEPC wildlife species present. - No previously documented raptor nests within one-half mile of the project ROW; two (2) new nests located during the 2025 field survey. - No suitable burrowing owl habitat present within one-quarter mile of the project ROW. - Project located within Utah Sage-Grouse Management Area (SGMA); 2,571.05 acres of suitable habitat and one (1) individual observed within project area.	
Wildlife Resources for Consideration:	Pre-construction avian survey recommendations: - Raptors and other migratory birds (January 1 through August 31). - Greater sage-grouse (March 1 through June 15)	

2.0 INTRODUCTION AND BACKGROUND

WESTERN-ENVIRO Resources, Inc. (WESTERN-ENVIRO), in coordination with AE2S Engineering, LLC (AE2S) and Johansen and Tuttle Engineering, Inc. (J&T), conducted field surveys and prepared a Biological Assessment (BA) related to the proposed Price City Project 9C-2025 – Spring Water Transmission Line Replacement (project) (Map 1, Appendix A).

The purpose of this BA is to review potential effects of the proposed project on biological resources, including TEPC plant and wildlife species, migratory birds, and other SOC. These resources are protected and regulated under the Endangered Species Act of 1973 (16 United States Code [U.S.C.] § 1531 et seq.) and the Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703–712).

Surveys focused on characterizing and mapping habitat respective to biological resources and identifying the presence of listed target species within corresponding habitats, if applicable. Biological resources include federally listed plant and wildlife species and migratory birds including raptors. Work specifically involved the following tasks:

- Identifying potential habitats for federally listed TEPC species, as per USFWS requirements (USFWS 2026a), and other SOC.
- Determining if federally listed TEPC species, migratory birds, including raptors, and other SOC have been identified within the project area and its immediate surroundings. This task was accomplished by referencing the USFWS Information for Planning and Consultation (IPaC) database (USFWS 2026b), the Utah Division of Wildlife Resources (UDWR) Wildlife Habitat Analysis Tool (WHAT) database (UDWR 2026a), and the UDWR raptor nest database (UDWR 2026b).
- Conducting field assessments for TEPC species, nesting raptors, and other SOC within the proposed impact area and in respective species survey buffers.

This report details findings related to TEPC species, migratory birds, including raptors, and other SOC within the proposed project right-of-way (ROW) and survey buffers. Field assessments and reporting pertain to the project ROW and associated buffers for plant surveys (300 feet) and wildlife surveys (one-quarter mile for burrowing owl and one-half mile for TEPC species, other raptors, and other SOC) (project area) (USFWS 2011) (Map 2, Appendix A).

This report is intended to provide the Client guidance during permitting and construction activities associated with the proposed project.

3.0 PROJECT DESCRIPTION

3.1 PURPOSE AND NEED

The Client's purpose of the proposed project is to replace an existing water pipeline which is the primary source of culinary water for Price City and other surrounding communities. The proposed project would facilitate the collection of water from natural springs located at the western end of the project area and install a new pipeline roughly parallel to the existing pipeline. The current pipeline is over 50 years old, is in a state of disrepair and would be abandoned in place. The replacement of the existing water pipeline is critical for continued, reliable access to clean drinking water. The proposed project would restore the function of the critical infrastructure and protect safe drinking water access for Price City and the surrounding communities.

The proposed project would:

- Obtain permanent ROWs on private and BLM properties,
- Replace the existing water pipeline infrastructure, and
- Decommission the existing failing pipeline.

The BLM's purpose for this project is to respond to the proposed project ROW application and fulfill the BLM's multiple-use mandate as outlined in the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC ch 35 § 1701 et seq.).

3.2 PROPOSED ACTION

The project area is located approximately 17.73 miles northwest of Price and 11.41 miles northwest of Helper in Carbon and Utah Counties (Map 1, inset, Appendix A). More specifically, the proposed project is in Sections 23, 25, 26, and 27 in Township 11 South, Range 8 East; Sections 30, 31, and 32 in Township 11 South, Range 9 East; and Section 5 in Township 12 South, Range 9 East (S.L.B.&M). The project area is primarily in Utah County on private and SITLA property with the southernmost 3,450 linear feet of the pipeline extending into Carbon County on BLM-administered land in Section 5 (T12S, R9E) (Map 1, Appendix A).

The proposed pipeline would be constructed roughly parallel to the existing pipeline, which follows the Price River and Union Pacific Railroad (UPRR) adjacent to U.S. Highway 6 (Hwy 6) through Price Canyon (Map 1, Appendix A). The proposed pipeline alignment would begin at natural springs at the western end of the project area and extend north, crossing the Price River and the UPRR. The pipeline would continue northeast, extending under Hwy 6, and then turn southeast. The proposed pipeline would terminate at existing infrastructure at the southern end of the project area. Elevations within the project ROW are highest in the northern portion and gently descend to the south.

The proposed project also includes staging area and bore pads adjacent to the proposed pipeline alignment. These areas would facilitate construction activities.

Generally, the proposed project includes a 70-foot permanent ROW, 40 feet on one side of center and 30 feet on the other side of center, for the proposed pipeline. The ROW width has been reduced in some portions of the alignment to avoid existing features which would not be impacted such as the Price River, aquatic resources, certain habitats, and the UPRR. These impacts are considered temporary and would be associated with construction activities. The ROW also includes the extent of the staging areas and bore pads. Although pipeline construction does not typically disturb an entire ROW, for analysis purposes, it is assumed that the full ROW would be utilized during construction. It is anticipated that disturbance would be concentrated directly adjacent to the proposed improvements (Map 2, Appendix A).

Ground disturbance resulting from the Proposed Action would total 70.91 acres (OUTLAW Engineering 2025). Table 3-1 summarizes the details of the proposed project.

Table 3-1. Summary of project features and ground disturbance.

FEATURE	LINEAR FEET OF PIPELINE			ACRES OF IMPACTS			TOTAL LINEAR FEET (lf) / ACRES (ac)
	PRIVATE	SITLA	BLM	PRIVATE	SITLA	BLM	
Proposed Pipeline	27,737	2,937	3,450	55.41	4.91	10.59	34,124 lf / 70.91 ac

4.0 RESOURCE SURVEY METHODOLOGY

4.1 BOTANICAL SURVEY

The project area was first evaluated for potential TEPC plant species, specifically targeting *S. diluvialis*. A 300-foot buffer was established around the project ROW and habitat assessments were conducted within this buffer (Map 2, Appendix A). A habitat suitability rating (e.g., suitable, or not suitable) for respective TEPC plant species in Utah and Carbon Counties (i.e., target plant species) was assigned. Vegetation associations, geology, hydrology, and substrate qualities were considered indicators of habitat suitability, in accordance with documented and personal knowledge of known habitat parameters specific to target plant species. If an area contained habitat that could potentially support any of the target species, and the site investigation occurred during the appropriate survey window, it was surveyed using methodology that would provide 100-percent coverage for detecting corresponding species.

The botanical surveys were conducted in October and November 2025 outside the USFWS-designated *S. diluvialis* survey window, which coincides with the typical blooming period of this species, typically in August. Therefore, botanical surveys focused on identifying and mapping suitable habitat. Clearance surveys for *S. diluvialis* individuals were not conducted.

Data recorded during the 2025 botanical survey were collected using ESRI® data collection software (Field Maps®) supported by hand-held Trimble® R1 GNSS receivers. In addition, field notes and photos were taken of the project area to record general site characteristics. Botanical survey and reporting were completed by Bridget Atkin, Kari Coy, and Rayce Bryan; vitae found in Appendix B.

4.2 WILDLIFE SURVEY

The project area was surveyed for federally listed TEPC species, migratory birds, including raptors, and other SOC, on foot, ensuring that the entire area was thoroughly reviewed for wildlife resources. Areas that could be directly impacted by construction and occupancy of the project area footprint were also surveyed.

Buffers for burrowing owl (one-quarter mile) and raptors and other SOC (one-half mile) were established around the project area and surveys were conducted within these buffer zones (Map 2, Appendix A). Potential nesting habitats within the wildlife buffers were examined for nests using a spotting scope and binoculars. If a raptor nest was encountered, its location was documented, along with information on species (if evident), activity, condition, substrate, and in situ habitat. Within this region, the nesting season for most of the locally nesting raptor species is between January and August. Surveys were conducted in January, i.e., at the beginning of the regional nesting and breeding season. Therefore, wildlife surveys focused on identifying active and inactive nests as well as suitable habitat.

In addition to burrowing owl and other raptor nests, habitat suitable to any of the wildlife TEPC species and other SOC known to occur in Utah and Carbon Counties was noted and discussed in the results section of this report. Wildlife surveys were conducted by Glen Gantz and Rayce Bryan; vitae found in Appendix B.

5.0 EXISTING CONDITIONS

5.1 GENERAL DESCRIPTION OF THE PROJECT AREA

The project is situated on the border of southeast Utah County and north-central Carbon County in Price Canyon along Hwy 6 (Map 1, Appendix A). The Price River flows southeasterly through the canyon bottom, which is flat to gently undulating, narrow, and surrounded by mountainous terrain on either side (Figure 5-1). The Price River adjacent to the project area exhibits a meandering active channel, which is approximately 30 to 50 feet wide (Figures 5-1 and 5-2). The canyon bottom includes transportation infrastructure, most prominently Hwy 6 and a UPRR, which both roughly parallel the Price River and the proposed pipeline alignment, as well as powerlines, the existing pipeline, and various trails and access roads (Figure 5-1). Soils within the project area are sandy loam alluvium and rocky sandy loams with loose gravels on the surface. Outcrops of parent material are visible along slope breaks and nearby road cuts.

Vegetation communities within the project area include sagebrush steppe, riparian shrubland, and wet meadow. Sagebrush steppe is the dominant vegetation community in the project area and occupies the broader surrounding slopes. Big sagebrush (*Artemisia tridentata*) is the dominant species with scattered rubber rabbitbrush (*Ericameria nauseosa*) and Utah juniper (*Juniperus osteosperma*). Steep slopes above the Price River are sparsely vegetated. Wet meadow communities are found primarily along the banks of the river and in isolated depressions in the Price River floodplain. Wet meadows are also found associated with the natural springs at the western end of the project area. Dominant plant species in these habitats include reed canarygrass (*Phalaris arundinacea*), mountain rush (*Juncus arcticus* ssp. *littoralis*), water sedge (*Carex aquatilis*), and smooth horsetail (*Equisetum laevigatum*). Riparian shrublands are scattered along the river and are most common in the northern portion of the project area. Common species here

include narrowleaf willow (*Salix exigua*) and redosier dogwood (*Cornus sericea*). Table 5-1 lists the dominant plant species observed within the plant survey area.

5.2 GEOLOGY

The project area occurs primarily on Quaternary alluvium associated with the Price River, with large expanses of the Colton Formation present on either side. Flagstaff Limestone and the North Horn Formation also border the Price River valley bottom within the project area (Maps 3 through 7, Appendix A) (Weiss et al. 2003).



Figure 5-1. View of Price Canyon with the Price River and existing infrastructure, including Highway 6, the UPRR, and overhead powerlines. Photo taken October 23, 2025; oriented southerly.



Figure 5-2. The Price River floodplain in the northern portion of the project ROW is broad with gently rising slopes. The river is lined with wet meadows and riparian shrubland habitats. Photo taken October 24; oriented northeasterly.

Table 5-1. Dominant plant species documented within the project area during the 2025 site survey.

SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME	COMMON NAME
Grass and Grass-like Species			
<i>Agropyron cristatum</i>	Crested wheatgrass	<i>Juncus compressus</i>	Roundfruit rush
<i>Agrostis stolonifera</i>	Creeping bentgrass	<i>Leymus cinereus</i>	Basin wildrye
<i>Bouteloua gracilis</i>	Blue grama	<i>Leymus salinus</i>	Saline wildrye
<i>Bromus porteri</i>	Porter brome	<i>Pascopyrum smithii</i>	Western wheatgrass
<i>Bromus tectorum</i>	Cheatgrass	<i>Phalaris arundinacea</i>	Reed canarygrass
<i>Carex angustata</i>	Widefruit sedge	<i>Poa pratensis</i>	Kentucky bluegrass
<i>Carex nebrascensis</i>	Nebraska sedge	<i>Pseudoroegneria spicata</i>	Bluebunch wheatgrass
<i>Equisetum laevigatum</i>	Smooth horsetail	<i>Thinopyrum intermedium</i>	Intermediate wheatgrass
<i>Juncus arcticus ssp. littoralis</i>	Mountain rush		
Forbs			
<i>Abronia elliptica</i>	Fragrant white sand verbena	<i>Ipomopsis aggregata</i>	Scarlet gilia
<i>Achillea millefolium</i>	Common yarrow	<i>Linum kingii</i>	King's flax
<i>Alyssum desertorum</i>	Desert madwort	<i>Machaeranthera canescens</i>	Hoary tansyaster
<i>Arcticum minus</i>	Lesser burdock	<i>Machaeranthera grindelioides</i>	Rayless tansyaster

SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME	COMMON NAME
<i>Artemisia ludoviciana</i>	White sagebrush	<i>Melilotus officinalis</i>	Sweetclover
<i>Asclepias speciosa</i>	Showy milkweed	<i>Oenothera caespitosa</i>	Tufted evening primrose
<i>Asparagus officinalis</i>	Garden asparagus	<i>Packera multilobata</i>	Lobeleaf groundsel
<i>Astragalus utahensis</i>	Utah milkvetch	<i>Penstemon caespitosus</i>	Mat penstemon
<i>Carduus nutans</i>	Musk thistle	<i>Penstemon palmeri</i>	Palmer's penstemon
<i>Centaurea stoebe</i>	Spotted knapweed	<i>Phlox austromontana</i>	Mountain phlox
<i>Chaenactis douglasii</i>	Douglas' dustymaiden	<i>Phlox hoodii</i>	Spiny phlox
<i>Cirsium arvense</i>	Canada thistle	<i>Plantago major</i>	Common plantain
<i>Convolvulus arvensis</i>	Field bindweed	<i>Polygonum aviculare</i>	Prostrate knotweed
<i>Cynoglossum officinale</i>	Gypsyflower	<i>Ranunculus cymbalaria</i>	Alkali buttercup
<i>Eriogonum alatum</i>	Winged buckwheat	<i>Rumex crispus</i>	Curly dock
<i>Eriogonum brevicale</i>	Shortstem buckwheat	<i>Sisymbrium altissimum</i>	Tall tumbledustard
<i>Eriogonum umbellatum</i>	Sulphur-flower buckwheat	<i>Solidago canadensis</i>	Canada goldenrod
<i>Eurybia glauca</i>	Gray aster	<i>Solidago velutina</i>	Threenerve goldenrod
<i>Geranium richardsonii</i>	Richardson's geranium	<i>Sonchus arvensis</i>	Field sowthistle
<i>Geum macrophyllum</i>	Largeleaf avens	<i>Sphaeralcea coccinea</i>	Scarlet globemallow
<i>Glycyrrhiza lepidota</i>	American licorice	<i>Tragopogon dubius</i>	Yellow salsify
<i>Grindelia squarrosa</i>	Curlycup gumweed	<i>Urtica dioica</i>	Stinging nettle
<i>Heuchera parviflora</i>	Littleflower alumroot	<i>Verbascum thapsus</i>	Common mullein
Shrubs and Sub-Shrubs			
<i>Alnus incana</i>	Gray alder	<i>Lonicera involucrata</i>	Twinberry honeysuckle
<i>Amelanchier alnifolia</i>	Saskatoon serviceberry	<i>Mahonia repens</i>	Creeping barberry
<i>Arctostaphylos uva-ursi</i>	Kinnikinnick	<i>Picea pungens</i>	Blue spruce
<i>Artemisia frigida</i>	Prairie sagewort	<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Artemisia tridentata</i>	Big sagebrush	<i>Purshia tridentata</i>	Antelope bitterbrush
<i>Betula occidentalis</i>	Water birch	<i>Quercus gambelii</i>	Gambel oak
<i>Chrysothamnus viscidiflorus</i>	Yellow rabbitbrush	<i>Ribes aureum</i>	Golden currant
<i>Cornus sericea</i>	Redosier dogwood	<i>Rosa woodsii</i>	Woods' rose
<i>Dasiphora fruticosa</i>	Shrubby cinquefoil	<i>Salix exigua</i>	Narrowleaf willow
<i>Elaeagnus angustifolia</i>	Russian olive	<i>Sambucus nigra</i> ssp. <i>cerulae</i>	Blue elderberry
<i>Ericameria nauseosa</i>	Rubber rabbitbrush	<i>Symphoricarpos oreophilus</i>	Mountain snowberry
<i>Juniperus osteosperma</i>	Utah juniper	<i>Tetradymia canescens</i>	Spineless horsebrush
Cacti			
<i>Opuntia fragilis</i>	Brittle pricklypear	<i>Pediocactus simpsonii</i>	Mountain ball cactus

6.0 EVALUATED SPECIES INFORMATION

6.1 THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE SPECIES (TEPC)

The project area includes 558.95 acres assessed for plant resources, 2,266.00 acres assessed for burrowing owl habitat, and 4,620.31 acres assessed for TEPC wildlife species, raptor nests, and other SOC (Map 2, Appendix A). TEPC plant and wildlife species that could potentially occur in Utah and Carbon Counties, Utah, are summarized in Table 6-1.

To narrow the list to TEPC species with potential to occur within the project area or its immediate surroundings, WESTERN-ENVIRO conducted an online search of the IPaC database (USFWS 2026b) and the WHAT database (UDWR 2026a). Based on this review, *S. diluvialis*, monarch butterfly (*Danaus plexippus*), and Suckley's cuckoo bumble bee (*Bombus suckleyi*) have potential to occur within the project area. See Table 6-1 for details.

6.2 SPECIES OF CONCERN

In addition to TEPC species listed by the USFWS, Utah's Species of Concern (SOC) were also evaluated. Greater sage-grouse (*Centrocercus urophasianus*) was identified with the potential to occur within or near the project area. This species is evaluated in this report as it is protected under the Utah Conservation Plan for the Greater Sage-Grouse (UDWR 2019). See Table 6-1 for details.

Table 6-1. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Flowering Plants		
Uinta Basin waxfruit (<i>Hesperidanthus suffrutescens</i>)	Endangered	NO POTENTIAL TO OCCUR: <i>H. suffrutescens</i> occurs in pinyon-juniper and desert shrub communities on semi-barren white-shale layers of the Green River Formation. This species grows in xeric, fine-textured soils intermixed with shale fragments at elevations ranging from 5,100 to 6,700 feet (Goodrich and Huber 2014). - No suitable <i>H. suffrutescens</i> habitat documented within the project area. - The Proposed Action would have No Effect on <i>H. suffrutescens</i> individuals or its habitats. This species will not be evaluated in further analysis.
Clay phacelia (<i>Phacelia argillacea</i>)	Endangered	NO POTENTIAL TO OCCUR: <i>P. argillacea</i> is restricted to Spanish Fork Canyon in Utah County. This species occurs on sparsely vegetated Green River Shale Formation in pinyon-juniper mountain brush vegetation communities. <i>Phacelia argillacea</i> is found at elevations from 6,150 to 6,600 feet (Welsh et al. 2015). - The project area does not contain habitat suitable to this species, nor was it observed during field surveys. The Proposed Action would have No Effect on <i>P. argillacea</i> individuals or its habitat. The species will not be evaluated in further analysis.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Flowering Plants		
Uinta Basin hookless cactus (<i>Sclerocactus wetlandicus</i>)	Threatened	NO POTENTIAL TO OCCUR: • <i>S. wetlandicus</i> is endemic to Duchesne, Uintah, and Carbon Counties on bluff margins, sloping gravelly pediments, and gravel-littered draws generally where clay or silty clay soils underlie surface rock deposits. <i>S. wetlandicus</i> typically occurs in vegetation communities dominated by shadscale and mixed desert shrublands. The species occurs on rocky mesa slopes at 4,400 to 5,700 feet (Goodrich and Huber 2014). • No suitable <i>S. wetlandicus</i> habitat documented within the project area. • The Proposed Action would have No Effect on this species. This species will not be evaluated further.
<i>Spiranthes diluvialis</i> (Ute lady's tresses)	Threatened	MAY OCCUR: • <i>S. diluvialis</i> grows in wet meadows and on the banks of perennial streams and rivers. Sites were evaluated in accordance with known <i>S. diluvialis</i> habitat parameters outlined in the Ute Ladies'-Tresses Field Survey Guidelines (USFWS 2007) and Rangewide Status Review of Ute Ladies'-Tresses (<i>S. diluvialis</i>) (Fertig et al. 2005), and from personal knowledge of the area and the species requirements. • The project area is within the known distribution range of the species and suitable habitat was documented. <i>S. diluvialis</i> will be evaluated in further analysis.
Aquatic Wildlife		
Bonytail chub (<i>Gila elegans</i>)	Endangered	NO POTENTIAL TO OCCUR: • Bonytail chub is adapted to mainstream rivers and has been documented in pools, eddies, and reservoirs in a variety of habitats. This species is endemic to the Colorado River basin, including Carbon County, Utah (USFWS 1987). • The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	Endangered	NO POTENTIAL TO OCCUR: • Colorado pikeminnow habitat includes large rivers of the Colorado Basin with warm, swift waters and seasonally variable flows. Adult fishes are migratory and inhabit pools and eddies just outside of the main current. Young Colorado pikeminnow have been observed in backwater areas (USFWS 1987). • The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Aquatic Wildlife		
Humpback chub (<i>Gila cypha</i>)	Threatened	NO POTENTIAL TO OCCUR: - Humpback chub is endemic to the Colorado River basin, including Carbon County, Utah. Humpback chub populations are found in river canyons where they use a variety of habitats including pools, riffles, and eddies. Further, humpback chub has been associated with boulder-strewn canyons, pools, backwaters, flooded bottoms, flooded mouths of tributary streams, slow runs, sandy riffles, and others (USFWS 1987). - The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.
June sucker (<i>Chasmistes liorus</i>)	Threatened	NO POTENTIAL TO OCCUR: - June suckers are endemic to Utah Lake and its tributaries. Although spawning primarily occurs in the Provo River, other tributaries may provide minor spawning habitat. - The project area is not within the known range of this species. The Proposed Action will have No Effect on June sucker individuals or its habitats. This species will not be evaluated in further analysis.
Razorback sucker (<i>Xyrauchen texanus</i>)	Endangered	NO POTENTIAL TO OCCUR: - Razorback sucker is endemic to the Colorado River Basin, including Carbon County, Utah. The species requires riverine habitats for spawning and moves into flooded areas in early spring. Spawning occurs over rocky runs and gravel bars (USFWS 1987, Minkley 1991). - The project area is not within the known range of this species. The Proposed Action would have No Effect on this species. This species will not be evaluated further.
Terrestrial Wildlife - Birds		
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened	NO POTENTIAL TO OCCUR: - Western yellow-billed cuckoo is known or believed to occur in the Western U.S., Canada, and Mexico. Habitat preference includes forested stream sides dominated by cottonwood and willow species composed of dense, low, and shrubby vegetation (Halterman et al. 2015). Individuals use and nest in areas characterized by cottonwood galleries and an understory of <i>Elaeagnus angustifolia</i> with occasional inclusions of <i>Tamarix</i> ssp. (Howe 1986). - No suitable Western yellow-billed cuckoo habitat documented within or near the project area. - The Proposed Action would have No Effect on Western yellow-billed cuckoo. This species will not be evaluated in further analysis.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Terrestrial Wildlife - Birds		
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Endangered	NO POTENTIAL TO OCCUR: - Southwestern willow flycatcher breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands habitats. In most instances, dense vegetation occurs within the first 10–13 feet above ground (USFWS 2002). - The project area does not contain suitable habitat, and the project area is outside the known geographical range of the southwest willow flycatcher. - The Proposed Action would have No Effect on Southwestern willow flycatcher. This species will not be evaluated in further analysis.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Threatened	MAY OCCUR: - Occurring in both rocky-canyon and forested habitat, Mexican spotted owl is known to nest and roost in steep, rocky-canyon habitats that include vertical cliffs, neighboring tributary canyons, and a variety of riparian and desert scrub/shrub vegetation communities (USFWS 2012). - Habitat suitable to this species was documented within one-half mile of project area; it observed during field surveys. - The project area is within the known range of this species; suitable habitat was documented. Mexican spotted owl will be evaluated in further analysis.
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Utah SOC	MAY OCCUR: - This species occupies upland sagebrush grasslands and usually nest within 4 miles of a lek. During the winter, greater sage-grouse can be found in high-elevation, mountainous sagebrush shrublands (CDOW 2008). - Occurrences have been reported within one-half mile of the project ROW (UDWR 2026a), and suitable habitat for this species is present within the project area. The project area is located within 2 miles of a known lek and within 3 miles of several known lek and is within a Greater Sage-Grouse Habitat Management Area. Greater sage-grouse will be evaluated in further analysis.
Terrestrial Wildlife - Mammals		
Canada lynx (<i>Lynx canadensis</i>)	Threatened	NO POTENTIAL TO OCCUR: - Canada lynx populations extend south from the classic boreal forest zone into the subalpine forest of the western U.S. (USFWS 2014). - No suitable Canada lynx habitat present within one-half mile of the project ROW. No historical or recent documentation of this species within the project area. - The Proposed Action would have No Effect on Canada lynx individuals or its habitats. This species will not be evaluated in further analysis.

Table 6-1, continued. Status and potential of TEPC and SOC species to occur within the project area.

SPECIES	STATUS	POTENTIAL TO OCCUR IN PROJECT AREA
Terrestrial Wildlife - Insects		
Monarch butterfly (<i>Danaus plexippus</i>)	Candidate	MAY OCCUR: - Due to declining population numbers, the monarch butterfly was proposed as a Candidate for listing under the Endangered Species Act in December 2020 (USFWS 2020). Monarch butterflies are globally distributed with two distinct populations occurring across North American – the western and eastern population. The western population’s 3,000-mile migration intersects Utah, including Carbon County. This species occupies open grasslands with wildflowers for foraging and milkweed, the exclusive hosts of monarch butterfly larvae (USFWS 2020). - The project area contains suitable habitat for monarch butterfly and showy milkweed (<i>Asclepias speciosa</i>) was observed. <i>D. plexippus</i> will be evaluated in further analysis.
Suckley’s cuckoo bumble bee (<i>Bombus suckleyi</i>)	Candidate	MAY OCCUR: - Due to an estimated 85 percent decline throughout its range across North America, Suckley’s cuckoo bumble bee was proposed for listing in December 2024 (USFWS 2024). Suckley’s cuckoo bumble bee is an obligate parasite of bumble bees in the genus <i>Bombus</i> (USFWS 2024). This species has been collected historically in various habitats from 2-3,200 meter in elevation including montane meadows and prairies, farms, woodlands, boreal forests, active and fallow agricultural fields, and urban areas. Suckley’s cuckoo bumble bee relies on pollen and nectar for nutrition from flowering forbs and has been recorded on plants from the <i>Asteraceae</i>, <i>Fabaceae</i>, <i>Rosaceae</i>, <i>Plantaginaceae</i>, and <i>Salicaceae</i> families (USFWS 2024). This species has not been observed in the contiguous United States, including Utah, since 2016 (USFWS 2024). - The project area includes suitable habitat for Suckley’s cuckoo bumble bee associated with flowering forbs. <i>B. suckleyi</i> will be evaluated in further analysis.

6.3 MIGRATORY BIRDS

Suitable migratory bird habitat is present and migratory birds, including raptors, likely forage and nest in the area. Migratory birds are discussed in this report as they are protected under the Migratory Bird Treaty Act (16 U.S.C. § 703-712). Pursuant to migratory birds, the USFWS, Region 6, has issued Migratory Bird Management Strategies (USFWS 2019). These strategies can be found in Appendix C and outline migratory bird conservation actions to reduce the risks of a *take* during the nesting season.

7.0 BIOLOGICAL RESOURCES IMPACTS AND ANALYSIS OF EFFECTS

7.1 INTRODUCTION

This analysis of effects reviews the potential effects of the Proposed Action on species identified in Table 6-1 as having potential to occur within the project area. This section also provides the anticipated cumulative effects that could potentially accrue to a species if project activities add cumulatively to other past, present, or reasonably foreseeable development (RFD) to impact the species of concern. Cumulative effects are only addressed if project-related activities would lead to measurable effects/impacts and add cumulatively to past, present, or RFD. Cumulative effects will not be addressed if there are no disclosed effects/impacts or if the impacts are minimal (unmeasurable) or discountable (extremely unlikely to occur).

7.2 BOTANICAL RESOURCES IMPACTS AND ANALYSIS OF EFFECTS

***S. diluvialis*:** The project area is located within the known geographic and elevational range of this federally listed species; however, no occurrences of *S. diluvialis* have been reported within two miles of the project ROW (UDWR 2026a). In association with the 300-foot survey buffer, 559.40 acres were assessed for *S. diluvialis* habitat (Map 2, Appendix A). Within this buffer, a total of 11.65 acres of suitable habitat were document (Maps 3 through 7, Appendix A). The moderately suitable habitat occurs along the Price River associated with fringe wet meadows. The highest-quality habitat was observed directly adjacent to the open water of the river.

The habitat assessments were conducted in October and November, i.e., outside the USFWS designated survey window, which overlaps with the bloom period of *S. diluvialis*, typically in August. Due to the timing of the site visits, clearance surveys for *S. diluvialis* individuals were not conducted.

Impact Summary: Approximately 11.65 acres of suitable *S. diluvialis* habitat were mapped within the plant survey area; 9.84 acres on private property, 1.02 acres of SITLA, and 0.79 acres on BLM-administered land. The pipeline alignment and design were modified to avoid direct impacts to suitable habitat. Of the 11.65 acres of mapped, 0.32 acres are located within the proposed project ROW on private property. However, the pipeline would be bored under the suitable habitat, avoiding direct impacts (Maps 3 through 7, Appendix A). Indirect impacts to suitable habitat would include degradation of habitat related to the establishment and spread of invasive species and potential sedimentation into suitable habitat. It is anticipated that disturbance would be restricted to the proposed project ROW; however, inadvertent disturbance to habitat related to construction activities outside of the project ROW may occur.

May Affect, Not Likely to Adversely Affect: Potential impacts to *S. diluvialis* would be indirect and primarily related to construction related disturbance would be minor, local and temporary. Due to the timing of the site investigation, a clearance survey for individuals was not conducted and therefore, *S. diluvialis* occurrence cannot be discounted. Although 11.65 acres of suitable habitat

was mapped, none of the identified habitat would be lost as a result of the Proposed Action. The Proposed Action may affect *S. diluvialis*. However, through the implementation of minimization and mitigation measures, including alignment adjustments and boring under the suitable habitat, *S. diluvialis* is not likely to be adversely affected by the proposed project. Weed control measures would be implemented to reduce impacts related to non-native and invasive plant species and erosion control measures would be implemented to minimize adverse impacts related to sedimentation.

Invasive species: The project area is situated in Price Canyon which has development related to transportation infrastructure, including Hwy 6, the UPRR, an overhead powerline, several trails and access roads, and the existing water pipeline. These developments have contributed to impacts from invasive and noxious species. Open range grazing has also facilitated the introduction and spread of invasive and noxious plant species. Six (6) State of Utah or Utah/Carbon County noxious species were identified within the plant survey area (*Carduus nutans*, *Centaurea stoebe*, *Cirsium arvense*, *Convolvulus officinale*, *Cynoglossum officinale*, and *Elaeagnus angustifolia*). Other non-native invasive species were also observed, including *Agropyron cristatum*, *Bromus tectorum*, *Sisymbrium altissimum*, and *Tragopogon dubius*. While these species are not on the State or County noxious weed list, they are known to be invasive within this region and proliferate through disturbance.

Impact Summary: The Proposed Action would include 70.91 acres of ground disturbance. In addition, adjacent areas would be more vulnerable to the establishment and spread of invasive species. Mitigation measures would be implemented to decrease potential impacts from invasive plant species. Key mitigation measures would include:

- Avoiding the introduction of invasive species by washing equipment and vehicles prior to entering construction areas;
- Post-construction monitoring to detect infestations of noxious species for early detection and treatment;
- Chemical and mechanical treatments of noxious plant species.

Details regarding mitigation measures can be found in Section 8.0. Through the implementation of mitigation measures, the Proposed Action would result in minor impacts to the vegetative communities.

May Affect, Not Likely to Adversely Affect: The Proposed Action would include 72.00 acres of surface soil disturbance. The Proposed Action may facilitate the establishment and spread of noxious and invasive species. However, impacts would be minimized through the implementation of mitigation measures as detailed in Section 8.0.

7.3 WILDLIFE RESOURCES IMPACTS AND ANALYSIS OF EFFECTS

Mexican Spotted Owl: The project area is within the known range of Mexican spotted owl and the USFWS IPaC report lists Mexican spotted owl as having potential to occur within or near the project area (USFWS 2026b). Suitable habitat for the Mexican spotted owl was documented the project. Nesting habitat is associated with the rocky cliffs above the Price River while breeding and foraging about is found through the project area. Although suitable habitat is present, no occurrences of this species have been reported within two miles of the project ROW (UDWR 2025a).

Impact Summary: Suitable habitat for Mexican spotted owl occurs throughout the project area and would be impacted by the proposed project. Impacts to habitat would be temporary, minor, and local. Ground disturbance related to the proposed project may facilitate the introduction and spread of invasive and non-native plant species which would degrade habitat quality. Primary impacts associated with the project would be associated with disturbance from increased human activity, and light and noise related to construction and ongoing operations.

May Effect, Not Likely to Adversely Affect: Although suitable habitat is located within the project area, Mexican spotted owls have not been reported in the area and the potential for presence is low. Impacts related to the Proposed Action would be minor, and abundant habitat is present in the surrounding area to support any displaced individuals. Should construction occur between March 1 and August 31, pre-construction surveys would be conducted to ensure that no nesting individuals are present within one-half mile of the project ROW. With the implementation of mitigation measures (see Section 8.0), including pre-construction surveys, the Proposed Action may affect, but is not likely to adversely affect Mexican spotted owl.

Raptors: In association with the one-half mile raptor survey buffer, a total of 4,620.32 acres were surveyed for raptor nests (Map 2, Appendix A). Migratory bird foraging and nesting habitat was found throughout the project area, and the WHAT and the IPaC reports list occurrences of several migratory birds, including raptors, within two miles of the project ROW (UDWR 2026a, USFWS 2026b); see Table 7-1 for details. A regionally comprehensive list of breeding bird species and associated habitats is listed in Appendix D.

Table 7-1. Migratory birds, including raptors, reported within two miles of the project ROW.

UNHP	IPaC
American kestrel (<i>Falco sparverius</i>)	Bald eagle (<i>Haliaeetus leucocephalus</i>)
Black rosy-finch (<i>Leucosticte atrata</i>)	Black rosy-finch (<i>Leucosticte atrata</i>)
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Broad-tailed hummingbird (<i>Selasphorus platycercus</i>)
Red-tailed hawk (<i>Buteo jamaicensis</i>)	Cassin's finch (<i>Haemorhous cassinii</i>)
	Clark's grebe (<i>Aechmophorus clarkii</i>)
	Clark's nutcracker (<i>Nucifraga columbiana</i>)
	Evening grosbeak (<i>Coccothraustes vespertinus</i>)
	Grace's warbler (<i>Setophaga graciae</i>)
	Golden eagle (<i>Aquila chrysaetos</i>)
	Olive-sided flycatcher (<i>Contopus cooperi</i>)
	Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)
	Virginia's warbler (<i>Leiothlypis virginiae</i>)
	Western grebe (<i>Aechmophorus occidentalis</i>)

Sources: UDWR 2026 and USFWS 2026b.

WESTERN-ENVIRO located two (2) nests during the January 2026 wildlife survey (Map 8, Appendix A). Both nests documented were in good condition; however, these were inactive at the time of survey and it is not known what species may utilize these features. It is possible that they are raven nests. One nest is in the northern portion of the project area along the proposed pipeline alignment. The other nest is located at the southernmost extent of the one-half mile buffer. In addition to the two nests, three (3) golden eagles and two (2) bald eagles were observed flying over the project area. Because the site investigations were conducted during January, at the beginning of the regional nesting season, the observed eagles may have been scouting for suitable nesting locations. A regionally comprehensive list of breeding bird species and associated habitats is listed in Appendix D.

Impact Summary: Two (2) nests were identified within the survey area. Suitable foraging and nesting habitats are present throughout the project area, especially in the riparian corridor along the Price River and on nearby rocky steep slopes above the river. Impacts to raptors would be temporary and associated with disturbance during construction activities. Impacts would dissipate as distance increases from the proposed disturbance footprint; potential impacts would correlate with proximity to project features.

No Effect: Two (2) nests were identified within one-half mile of the project ROW. Impacts to foraging and nesting habitat would be negligible. In addition, there is abundant habitat in the surrounding area to support any displaced individuals. Migratory bird surveys are recommended if work is planned between January 1 and August 31. Through the implementation of mitigation measures, including pre-construction surveys, the Proposed Action would have no effect on raptors.

Monarch Butterfly: Habitat suitable to the monarch butterfly was observed within the project ROW and the one-half mile survey buffer. The suitable habitat is located throughout the project area, particularly in communities with blooming forbs including showy milkweed (*Asclepias speciosa*).

Impact Summary: It is not likely that the Proposed Action would directly impact adult monarch butterflies. However, ground disturbance may remove *Asclepias* individuals that have the potential to host viable larvae. In Utah, monarch butterflies lay their eggs from July to October, and caterpillars emerge 3 to 12 days later (USFWS 2020). Disturbances outside this window would not directly impact monarch butterfly at any life stage. The Proposed Action would impact potentially suitable monarch butterfly habitat. Other impacts would include degradation of habitat from the spread of invasive species related to ground disturbance from the Proposed Action and disturbance from increased human activity.

No Effect: Impacts to monarch butterfly habitat related to the Proposed Action are minor, and habitat suitable to the species is present near the project area to support any displaced individuals. Mitigation measures would be implemented to minimize impacts to monarch butterfly. Specifically, the reclamation seed mix would include pollinator-promoting flowering species (Section 8.0). The Proposed Action would have no measurable effect on this species.

Suckley's Cuckoo Bumble Bee: Habitat suitable to the Suckley's cuckoo bumble bee was observed within the project area. While this bumble bee has not been documented in the contiguous United States, including Utah, since 2016 (USFWS 2024), suitable foraging habitat with flowering forbs was observed within the project area. Although suitable habitat is present, flowering forbs are limited in the landscape, and the likelihood of Suckley's cuckoo bumble bee occurring within the project area is low.

Impact Summary: The Proposed Action would include the loss of 72.00 acres of potentially suitable foraging habitat. Impacts to Suckley's cuckoo bumble bee would primarily be temporary and associated with construction activities, although some flowering forbs may be permanently removed as part of the proposed project.

No Effect: Potential for this species to occur within the project area is low and impacts to Suckley's cuckoo bumble bee foraging habitat related to the Proposed Action would be minor. There is abundant habitat in the surrounding area to support any displaced individuals. Impacts to this species would be negligible.

Greater Sage-Grouse: Greater sage-grouse is a State of Utah SOC that is protected under the Utah Conservation Plan for the Greater Sage-Grouse (UDWR 2019). In association with the one-half mile survey buffer, a total of 4,620.32 acres were surveyed for greater sage-grouse (Map 2, Appendix A). During the wildlife survey a total of 2,571.06 acres of suitable habitat was mapped. The project area is within the Carbon County Habitat Management Area and is situated between two documented leks to the northwest and to the east approximately 1.92 miles and 3.06 acres from the project ROW, respectively (UDWR 2019). UDWR has reported occurrences of greater sage-grouse within one-half mile of the project ROW (UDWR 2026) and during the wildlife surveys a greater sage-grouse hen was observed in the central

portion of the project area on private property (Map 8, Appendix A). The observed hen may have been headed to one of the documented leks near the project area.

Impact Summary: Approximately 2,571.05 acres of suitable greater sage-grouse habitat were mapped within the project area; 2,259.90 acres on private property, 113.16 acres of SITLA, and 197.98 acres on BLM-administered land. Of the mapped habitat, 1.93 acres (0.08 percent) would be impacted by the proposed project (Map 8, Appendix A). Impacts to greater sage-grouse would be temporary and associated with disturbance during construction activities. Impacts would dissipate as distance increases from the proposed disturbance footprint; potential impacts would correlate with proximity to project features.

May Affect, Not Likely to Adversely Affect: The project area is located within a Habitat Management Area and greater sage-grouse is known to occur. The Proposed Action may affect but is not likely to adversely affect this species. Impacts would be localized, temporary, and associated with disturbance related to construction activities. Mitigation measures, including pre-construction clearance surveys, would minimize potential impacts to greater sage-grouse in the area.

7.4 CUMULATIVE ANALYSIS OF EFFECTS

The following cumulative impact analysis evaluates past, present, and RFD in the cumulative analysis area (CAA), as related to environmental impacts. Based on the results of the impact and effects analysis in Sections 7.2 and 7.3, the following cumulative analysis will focus on:

- *S. diluvialis*
- Invasive plant species
- Greater sage-grouse
- Mexican spotted owl

All other resources are excluded from the following cumulative analysis as the Proposed Action would not have measurable impacts contributing to cumulative impacts.

The CAA boundaries were established in consideration of the extent of similar physical, ecological, and land-use characteristics of the project area for each resource. CAAs for the above-listed biological resources are as follows:

- The CAA for *S. diluvialis* and invasive plant species encompasses 26,203 acres and includes Price Canyon and the surrounding rising slopes from Solider Summit to the north, Scofield Reservoir to the west and Helper to the south.
- The CAA for Mexican spotted owl and greater sage-grouse encompass approximately 50,083 acres and includes the CAA of *S. diluvialis* and invasive plant species with the addition of a one-half mile buffer. The CAA includes portions of Scofield Reservoir and Helper, Utah.

7.4.1 CUMULATIVE ANALYSIS OF BOTANICAL RESOURCES

S. diluvialis: During the botanical survey, 11.65 acres of suitable habitat were documented within the plant survey area. Of the 11.65 acres of habitat documented, 0.32 acres would be located within the pipeline ROW; however, direct impacts would be avoided through boring.

Suitable habitat with the CAA is restricted to wetland habitat along the Price River, although the amount of suitable habitat within the CAA is unknown. Past projects which have potentially contributed to cumulative impacts to *S. diluvialis* include infrastructure projects within the floodplain of the Price River, agricultural activity, and to a limited extent residential and commercial development. Specific future developments are unknown; however, current land-use practices are expected to continue, which may impact suitable *S. diluvialis* habitat. Clearance surveys for *S. diluvialis* would be required under the ESA for all future projects. It is not anticipated that the Proposed Action would significantly contribute to adverse cumulative impacts

Invasive Plant Species: The Proposed Action may contribute incrementally to the introduction and spread of invasive and noxious species through ground-disturbing activities and increased traffic in the area. Past projects and activities that may have contributed to cumulative impacts to these species include infrastructure; residential and commercial development; recreational activity including camping, hiking, fishing, and Off Highway Vehicle (OHV) use; gravel and mining operations; agricultural activity including open range grazing; and scattered oil and gas development. Development in the CAA is widely spaced and primarily concentrated in Price Canyon and the adjacent connected canyons. Impacts from past projects are estimated to be 507.85 acres. Future projects in the CAA are unknown; however, it is anticipated that land-use practices will continue.

Construction activities for the Proposed Action would result in 70.91 acres of temporary ground disturbance. Past projects within the CAA total 507.85 acres. The Proposed Action would constitute an increase of about 14 percent to these impacts ($\frac{70.91}{507.85} * 100$). Through the implementation of mitigation measures to control the spread of invasive and noxious species, the Proposed Action would minimally contribute to cumulative impacts related to invasive and noxious species.

7.4.2 CUMULATIVE ANALYSIS OF WILDLIFE RESOURCES

Mexican spotted owl: Suitable Mexican spotted owl habitat is present throughout the CAA, especially along the Price River. Past development and activities have likely resulted in the loss of foraging habitat; however, impacts to nesting and breeding habitat are primarily related to indirect impacts from increase human activity, noise, light, traffic, and fugitive dust.

The proposed project may temporarily impact foraging habitat for Mexican spotted owl. Other impacts include construction-related disturbance, which would be temporary. Due to the minor and temporary nature of impacts related to the proposed project, and the presence of existing, ongoing disturbance from Hwy 6, the UPRR, and recreational activity in the CAA, it is not anticipated that the Proposed Action would significantly contribute to cumulative impacts.

Greater Sage-Grouse: The project area is within the Carbon County Habitat Management Area for greater sage-grouse and suitable habitat is abundant in the CAA. Additionally, two leks are located within the CAA. Approximately 2,571.05 acres of suitable greater sage-grouse habitat were mapped within one-half mile of the project ROW associated with sagebrush steppe communities. Development within the CAA has contributed to the loss of greater sage-grouse as well as to indirect impacts, including disturbance from human activity—most prominent OHV activity, which may result in the loss and degradation of suitable habitat—as well as noise and fugitive dust disturbance. Disturbance near the identified leks may disrupt breeding behaviors of greater sage-grouse. Past development within the CAA total 790.78 acres. Future projects in the CAA are unknown; however, it is anticipated that land-use practices will continue.

The Proposed Action would directly impact 1.93 acres of suitable foraging and nesting habitat for greater sage-grouse. Past projects within the CAA total 790.78 acres. Based on past impacts to potential habitat, the Proposed Action would contribute less than one percent to impacts ($\frac{1.93}{790.78} * 100$). Due to the abundance of suitable habitat within the CAA, and the implementation of mitigation measures, including pre-construction surveys, the Proposed Action would not significantly contribute to cumulative impacts.

8.0 CONSERVATION MEASURES

Conservation measures have been developed to reduce environmental impacts resulting from the Proposed Action. Table 8-1 summarizes the mitigation measures that would be implemented.

Table 8-1. Applicant-committed conservation measures for the Proposed Action.

MITIGATION MEASURES
Plant Resources
<i>S. diluvialis</i>: **BLM input for required mitigation measures requested.
Revegetation/Reclamation of the Project Area: • Vehicles and equipment used in the project area will be moderated to reduce compaction of soils as much as possible. • Low-compaction grading methodology will be implemented in areas where earthwork is necessary, leaving surfaces loose and uncompacted. Soils will be loosely dumped onsite, and finish grading will be completed with smaller equipment, such as a bobcat, to avoid unnecessary soil compaction. Soils will not be “tracked-in” (Sweigard et al. 2007). • Reclamation seed mixes will exclude introduced and non-native species in all habitat types that are restored. • All areas subject to temporary disturbance will be reclaimed with native plant seed mixes.
Noxious and Invasive Weed Control: • An Application for Pesticide Use Permit (PUP) will be required for chemical treatment of Utah Class A, B, and C noxious weeds. • Whenever possible, mechanical removal will be used for Utah Class A, B, and C noxious weeds within the proposed project area. • To reduce the potential spread/introduction of noxious and invasive weed species via project-related vehicles and equipment into the project area, project employees and contractors will not drive off-road (unless on approved roads).
Wildlife Resources
Migratory Birds: • No more than seven (7) days prior to any surface disturbing activity, avian surveys will be conducted within one-half mile of the project area for migratory birds, including raptors (January 1 through August 31). • If occupied/active nests are found, onsite work will not occur during the critical nesting season for that species within the species-specific spatial buffer, unless the nest is obscured from visual or noise-related impacts through vegetative or topographic screening.
Greater sage-grouse: **BLM input for required mitigation measures requested.
Other: • To reduce the potential for wildlife-human interactions in the project area, the project area will be managed to minimize garbage accumulation. • To reduce the potential for wildlife-vehicle collisions, Price City would encourage employees and contractors to carpool to and from the project area and to always observe the posted speed limits. • Firearms are prohibited. Employees and contractors will be notified of this restriction at the beginning of each day of construction. This, in turn, will minimize the potential for illegal poaching.

9.0 REFERENCES

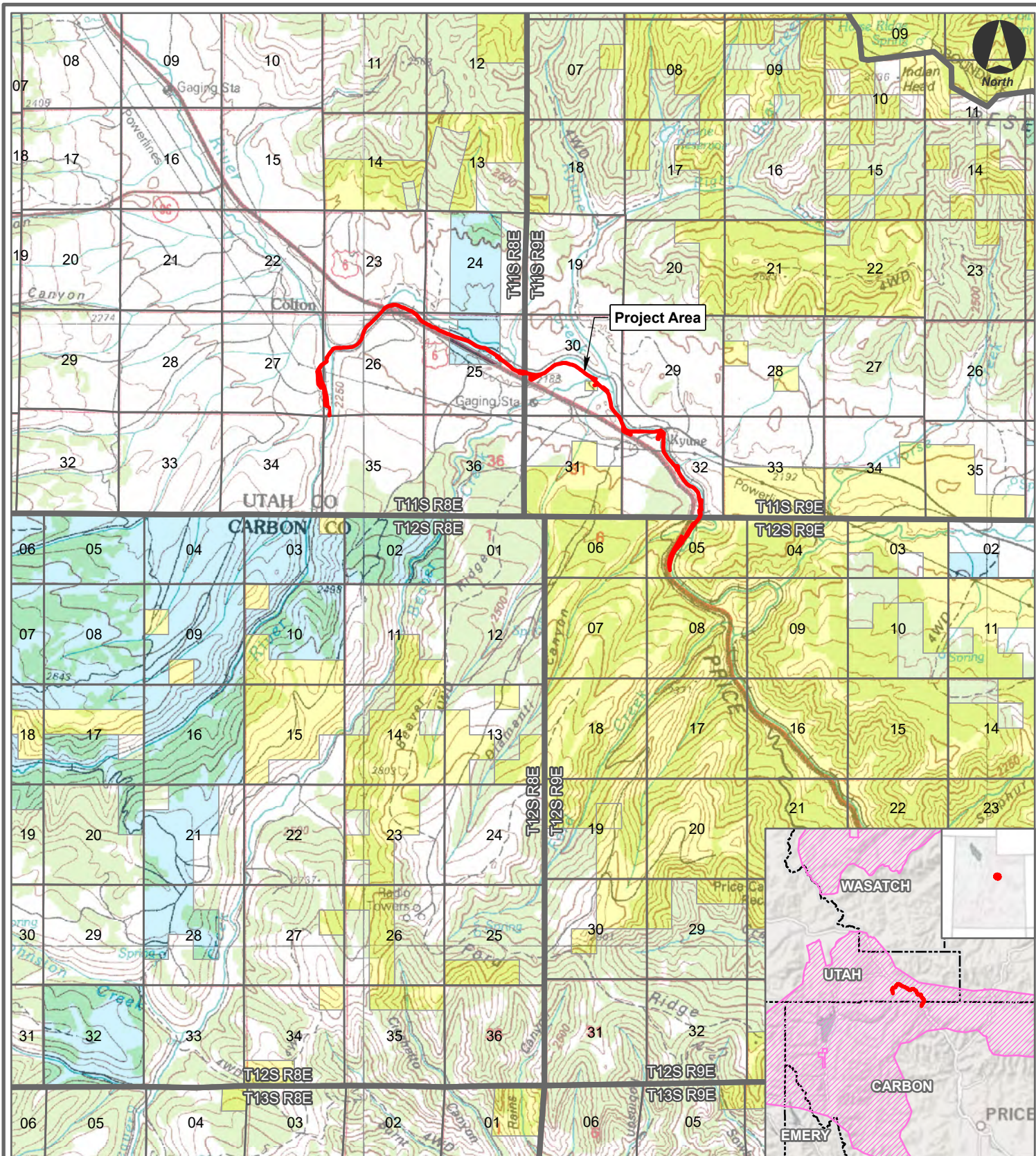
- Colorado Division of Wildlife [CDOW]. 2008. Colorado Greater Sage-grouse Conservation Plan. Colorado Greater Sage-grouse Steering Committee, Denver, Colorado.
- Department of the Interior [DOI]. 1994. Endangered and Threatened Wildlife and Plants; Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback Sucker, Colorado Squawfish, Humpback Chub, and Bonytail Chub. Federal Register. CFR 50 Part 17. Vol. 59 No. 54. November 21, 1994.
- Fertig, W., R. Black, and P. Wolken. 2005. Rangewide Status Review of Ute Ladies'-Tresses (*Spiranthes diluvialis*). U.S. Fish and Wildlife Service and Central Utah Water Conservancy District. Salt Lake City, Utah. 101 pp.
- Goodrich, S. and A. Huber. 2014. Uinta Flora. USDA Forest Service-Intermountain Region. Ogden, Utah.
- Halterman, M., M.J. Johnson, J.A. Holmes and S.A. Laymon. 2015. A Natural History Summary and Survey Protocol for the Western Distinct Populations Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45p.
- Howe, W. H. 1986. Status of the Yellow-billed Cuckoo (*Coccyzus americanus*) in New Mexico. Rep. 516.6-75-09. Department of Game Fish, Santa Fe, New Mexico.
- Minckley, W. L., P. C. Marsh, J. E. Brooks, J. E. Johnson, and B. L. Jensen. 1991. Management Towards Recovery of the Razorback Sucker. pp. 303–317. in Minckley W.L., Deacon J.E., eds. Battle against
- Sweigard R., J. Burger, C. Zipper, J. Skousen, C. Barton, and P. Angel. 2007. Low Compaction Grading to Enhance Reforestation Success on Coal Surface Mines. The Appalachian Regional Reforestation Initiative. Forest Reclamation Advisory No. 3.
- U.S. Fish and Wildlife Service [USFWS]. 1987. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. U.S. Forest Service, Region 6, Denver, Colorado.
- U.S. Fish and Wildlife Service [USFWS]. 1998. Razorback Sucker (*Xyrauchen texanus*) Recovery Plan. Denver, Colorado. 81 pp.
- U.S. Fish and Wildlife Service. 2002. Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. i-ix + 210 pp., Appendices A-O.
- U.S. Fish and Wildlife Service [USFWS]. 2007. Ute Ladies-tresses Field Survey Guidelines. U.S. Fish and Wildlife Service – Utah Ecological Services Field Office March 12, 2007. Memorandum. 3 pp.
- U.S. Fish and Wildlife Service [USFWS]. 2011. Utah Field Office Guidelines for Conducting and Reporting Botanical Inventories and Monitoring of Federally Listed, Proposed and Candidate Plants. USFWS Utah Field Office. Salt Lake City, Utah.

- U.S. Fish and Wildlife Service [USFWS]. 2012. Mexican Spotted Owl Recovery Plan, First Revision (*Strix occidentalis lucida*). Prepared by the Mexican Spotted Owl Recovery Team. Region 2, Southeast Region. Albuquerque, New Mexico.
- U.S. Fish and Wildlife Service [USFWS]. 2014. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary; Final Rule. 79 Federal Register 177 (September 12, 2014), pp. 54782.
- U.S. Fish and Wildlife Service [USFWS]. 2019. Migratory Bird Program Strategic Plan. Migratory Bird Program. Washington DC. March 20, 2019.
- U.S. Fish and Wildlife Service [USFWS] 2020. Endangered and Threatened Wildlife and Plant; 12-Month Finding for the Monarch Butterfly. 50 CFR Part 17. Federal Register Vol. 85, No. 243, PG 81813 December 17, 2020.
- U.S. Fish and Wildlife Service [USFWS]. 2024. Species Status Assessment Report for the Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*), Version 1.0. August 2024. Alaska Region. 131 pp.
- U.S. Fish and Wildlife Service [USFWS]. 2026a. United States Fish and Wildlife Service. ECOS Environmental Conservation Online System. Available online: <https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=UT&stateName=Utah&statusCategory=Listed>. Accessed January 2026.
- U.S. Fish and Wildlife Service [USFWS]. 2026b. United States Fish and Wildlife Service. IPaC Information for Planning and Consultation. Available online: <https://ipac.ecosphere.fws.gov/>. Accessed January 2026.
- Utah Division of Wildlife Resources (UDWR). 2019. Utah Conservation Plan for Greater Sage-Grouse. State of Utah, Salt Lake City, Utah. Effective January 2019.
- Utah Division of Wildlife Resources [UDWR]. 2026a. Wildlife Habitat Analysis Tool (WHAT), Utah Division of Wildlife Resources, Utah Department of Natural Resources. <https://wildlife.utah.gov/wildlife-habitat-analysis-tool.html>. Accessed January 2026.
- Weiss, M.P., Witkind, I.J., and Cashion, W.B. 2003. Geologic Map of the Price 30' x 60' Quadrangle, Carbon, Duchesne, Uintah, Utah and Wasatch Counties, Utah. Utah Geological Survey, Map 198DM (digital compilation of USGS Map I-1981).
- Welsh, S.L., Atwood, N.D., Goodrich, S., and L.C. Higgins, editors. 2015. A Utah Flora. Fifth edition, revised. Brigham Young University, Provo, Utah.

10.0 APPENDICES

APPENDIX A

MAPS



WESTERN-ENVIRO
RESOURCES

Project
Location

0 1,400 2,800 4,200 5,600 7,000
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area
- Utah Sage Grouse Management Area

■ Federal ■ State ■ Private

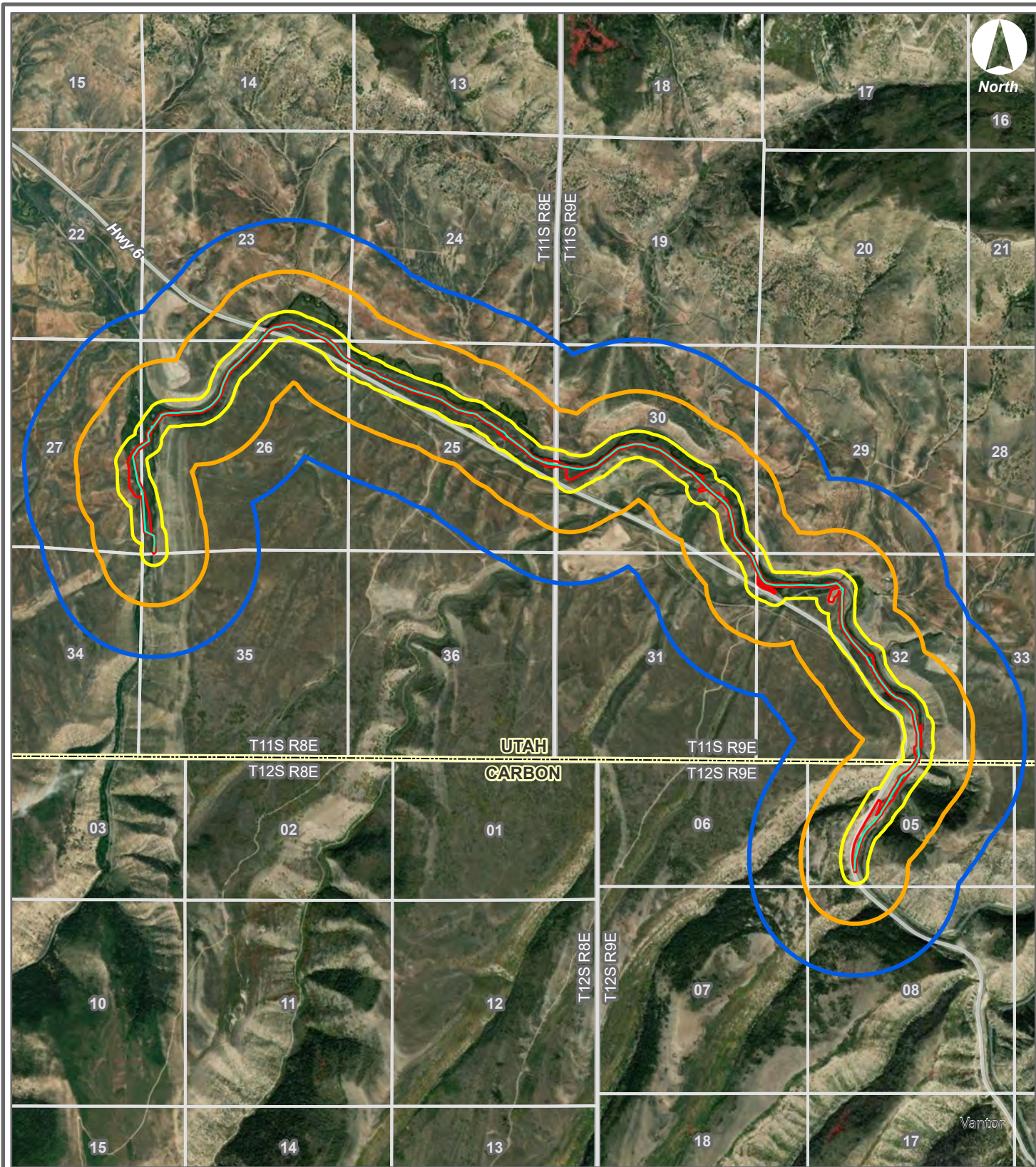
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

100k
USGS
Topo

FEB 11, 2026
SCALE: 1" = 7,000'
AUTHOR: JH

MAP
1



WESTERN-ENVIRO
RESOURCES

Survey
Areas

0 700 1,400 2,100 2,800 3,500
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Plant Survey Area (558.95 Ac)
- Burrowing Owl Survey Area (2,266.00 Ac)
- Federally Listed Wildlife and Raptor Survey Area (4,620.31 Ac)

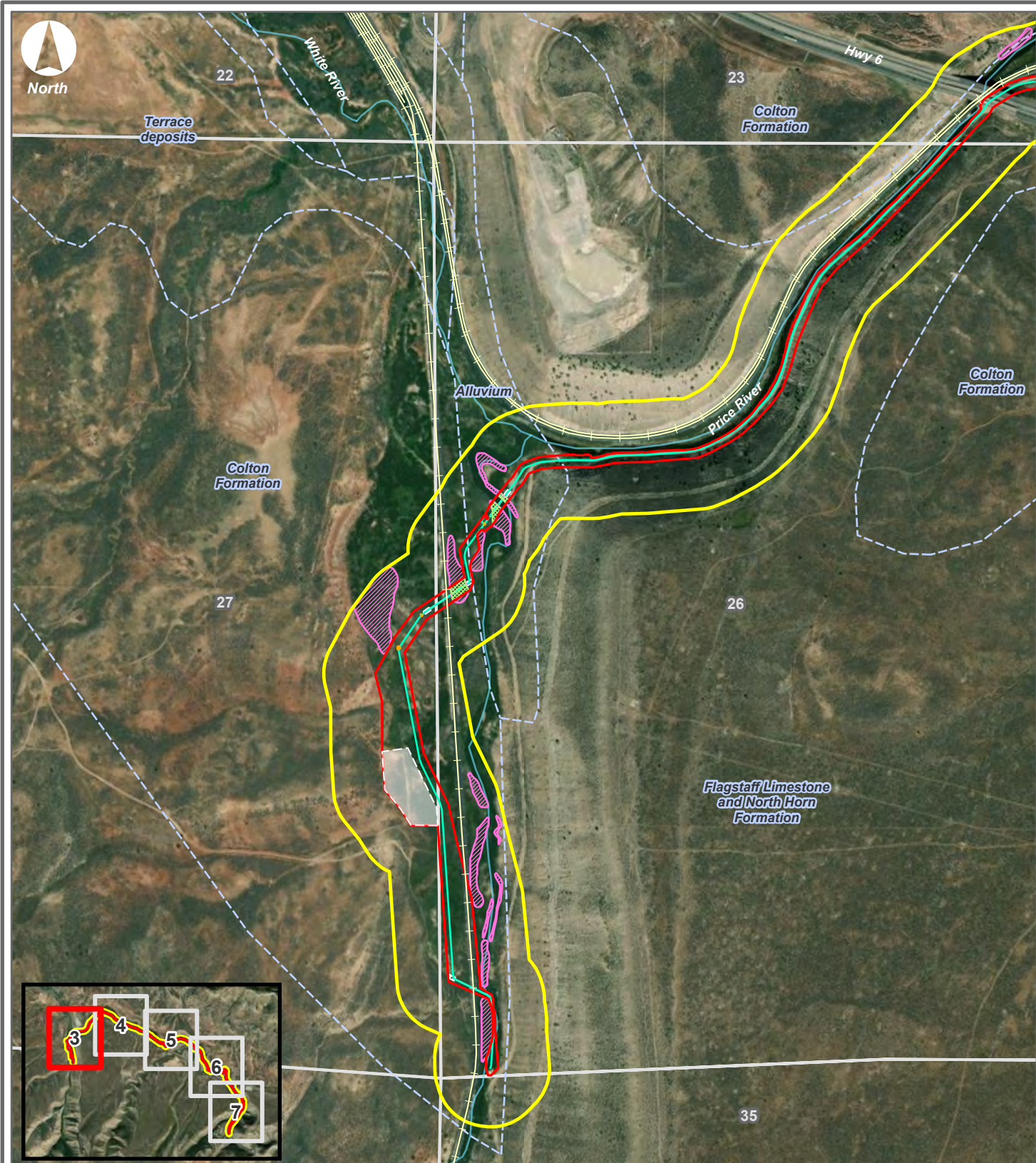
**Price City Project 9C 2025 -
Spring Water Transmission
Line Replacement**

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 3,500'
AUTHOR: JH

MAP
2



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

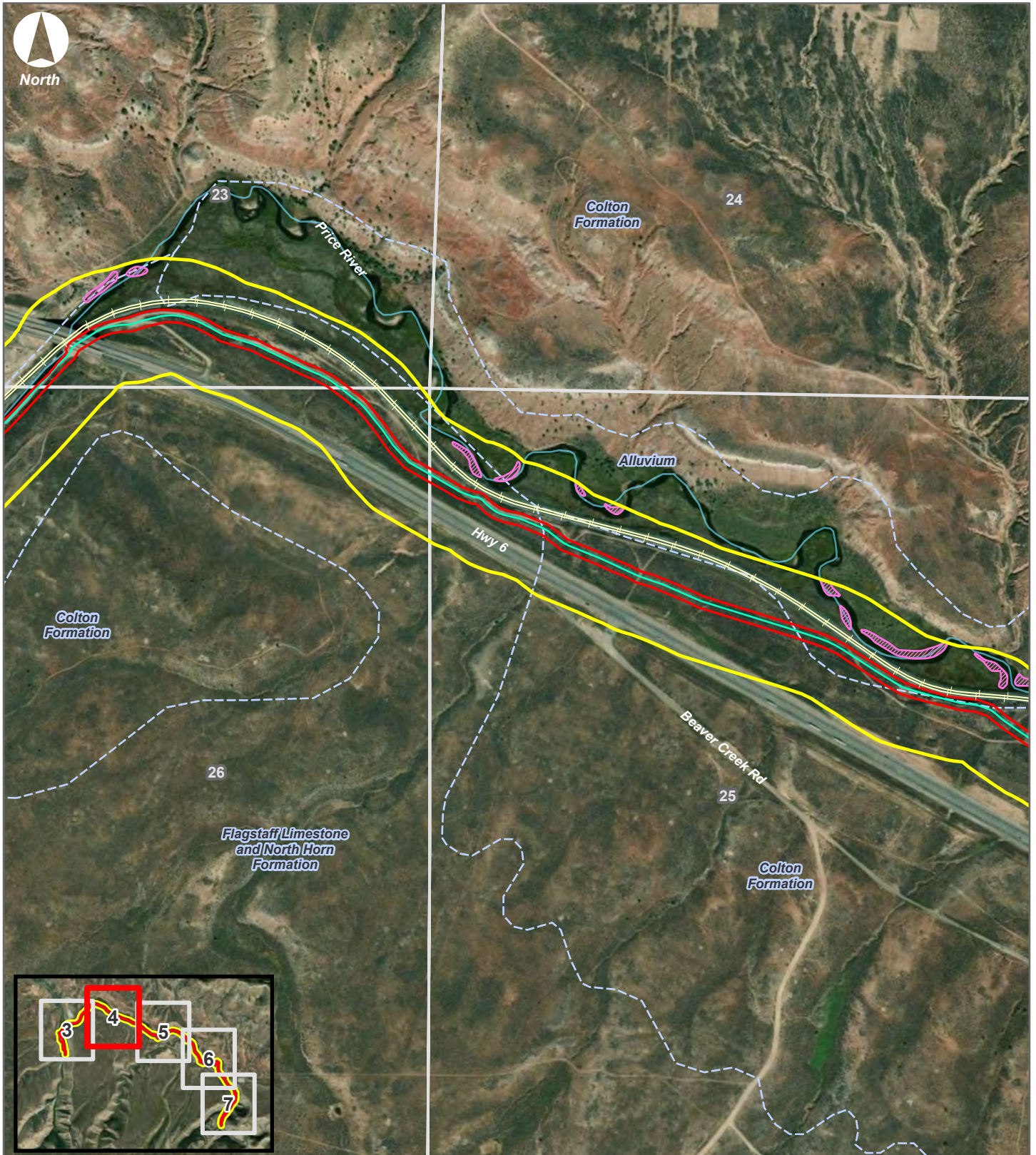
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
3



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

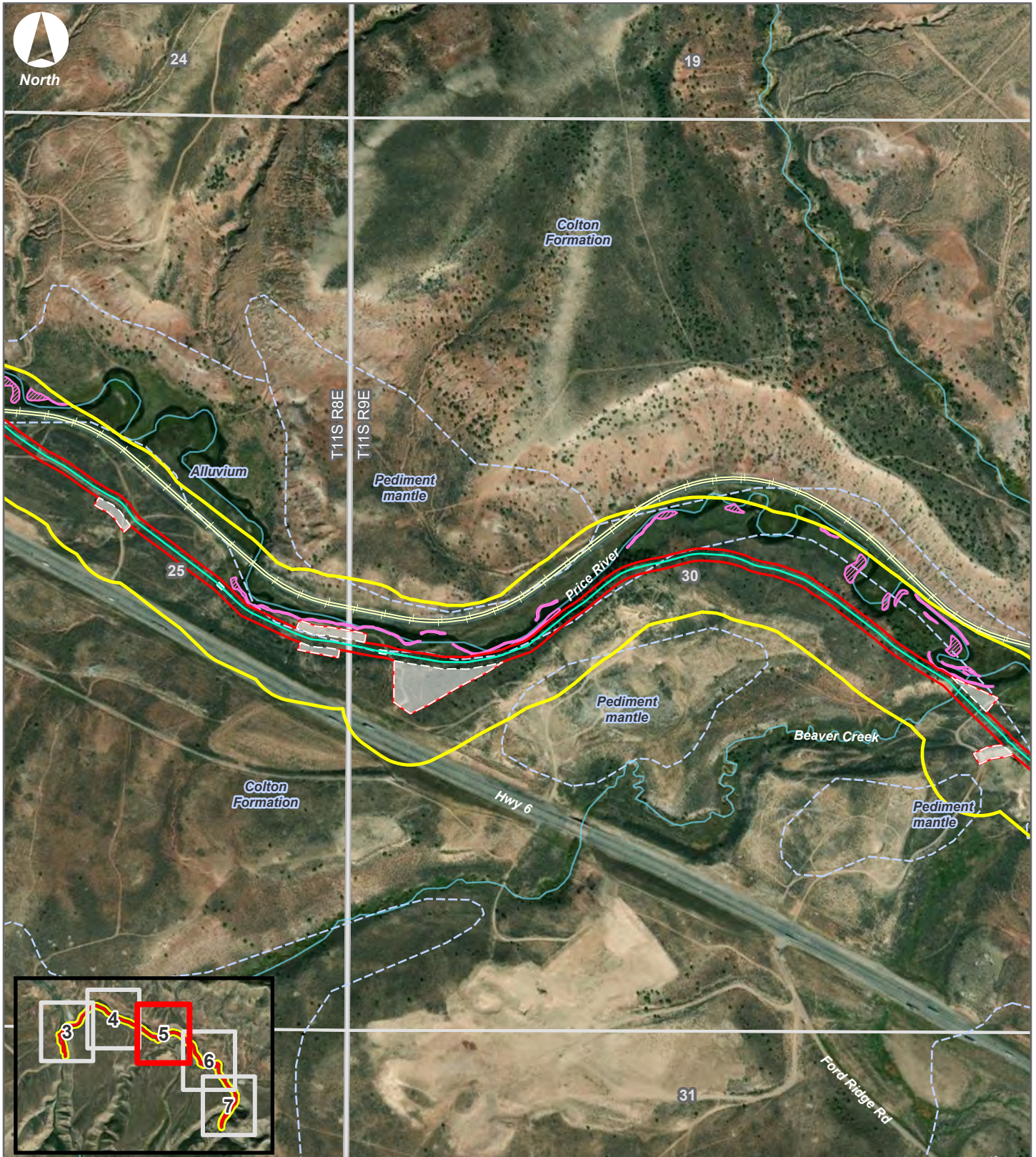
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
4



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500
Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

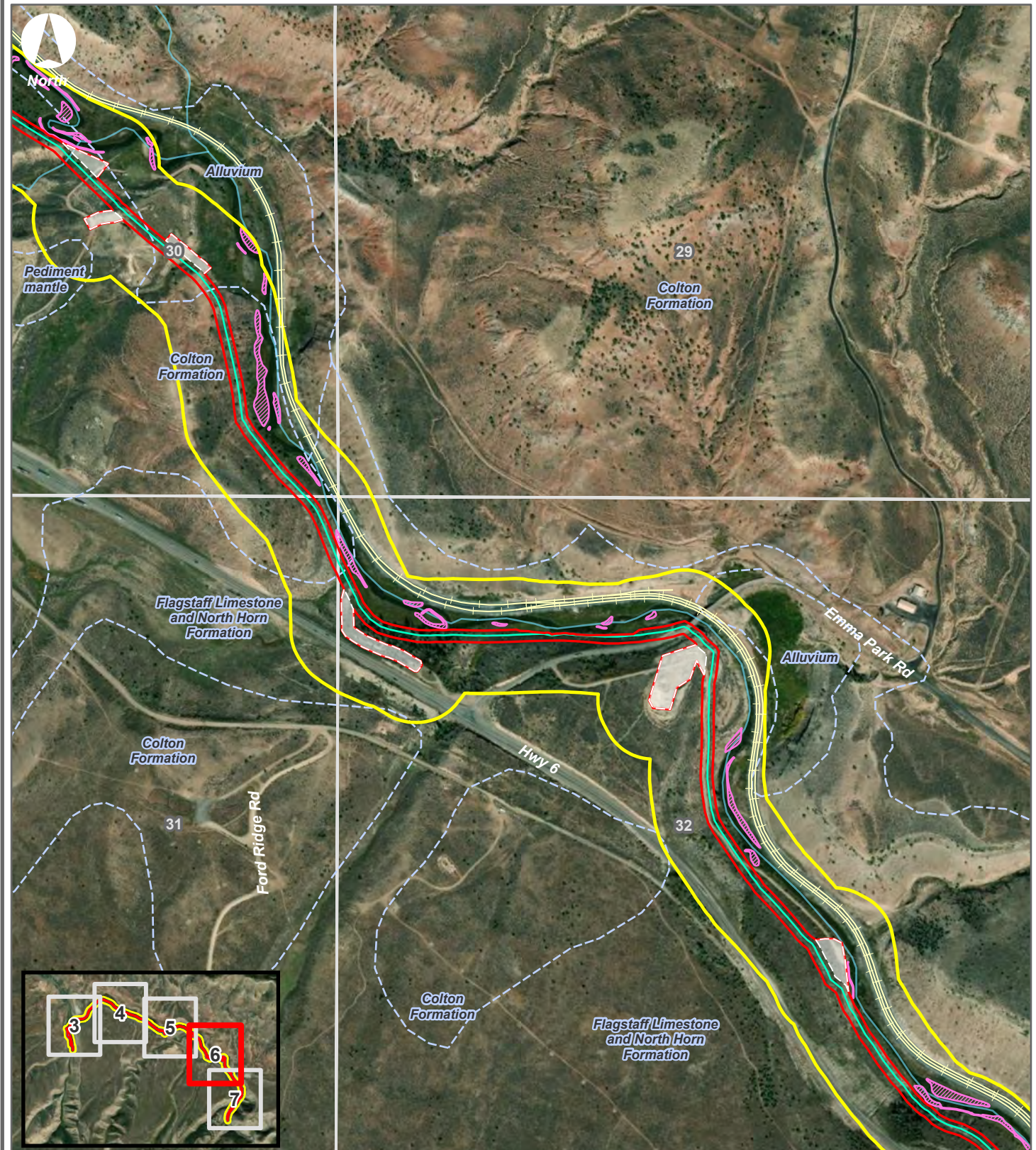
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
5



WESTERN-ENVIRO RESOURCES

Botanical Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

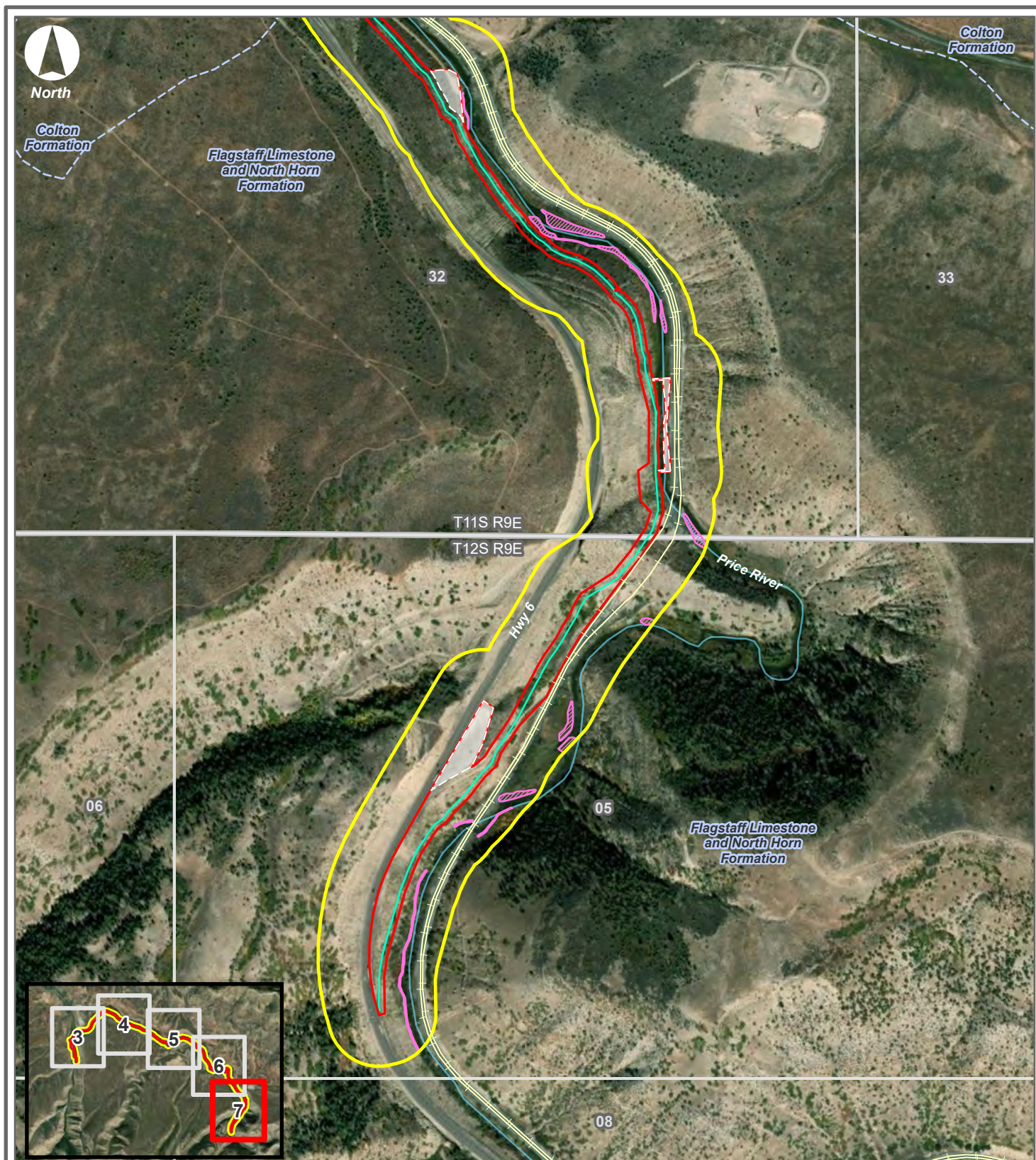
Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
6



WESTERN-ENVIRO
RESOURCES

Botanical
Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Junction Box
- Staging Area
- Bore Pad/Bored Pipeline Section
- Plant Survey Area (558.95 Ac)
- Suitable *Spiranthes* Habitat (11.65 Ac)
- Spiranthes* Habitat - Avoided with Pipeline Bore (0.32 Ac)
- Geologic Unit
- Railroad

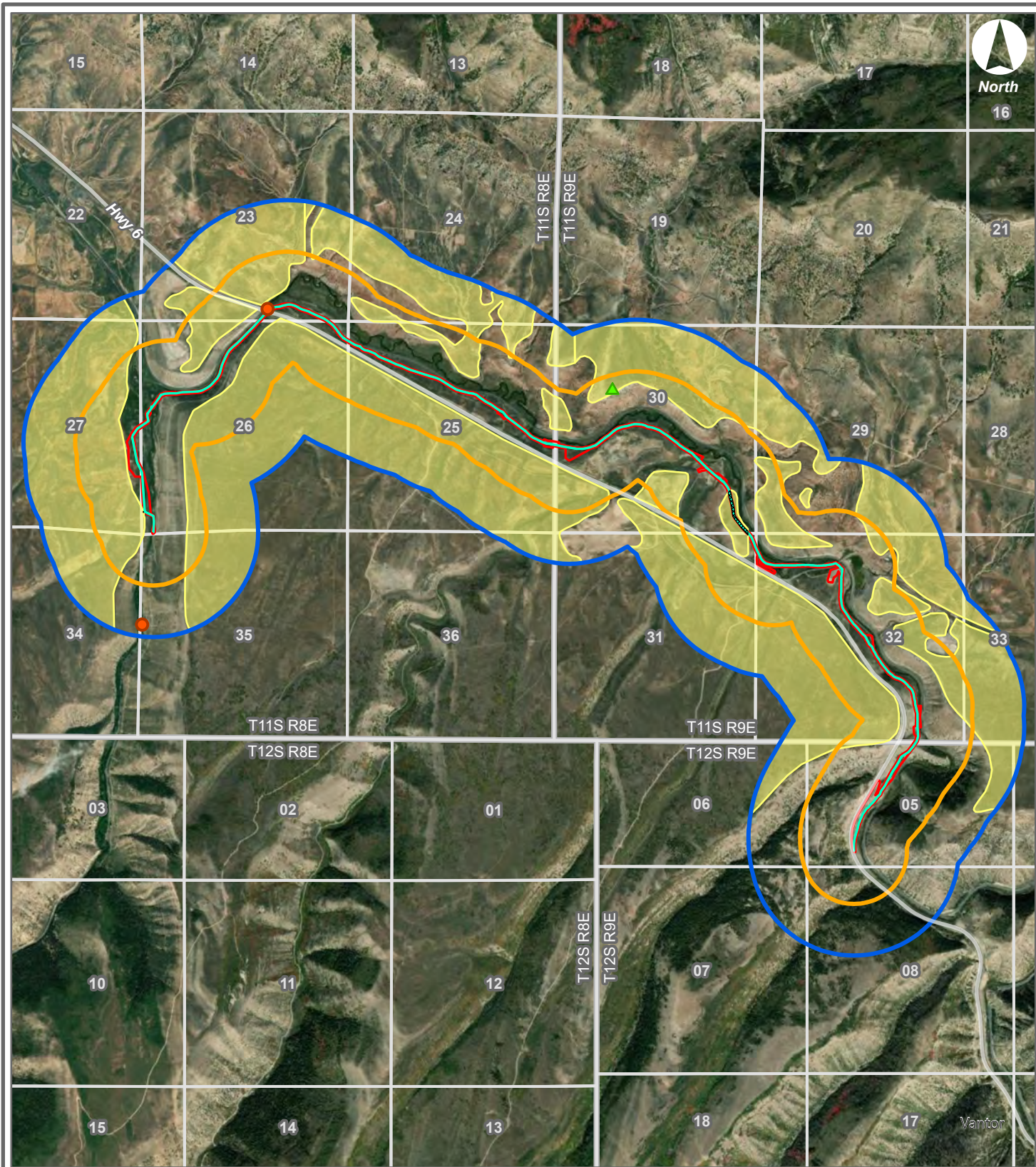
**Price City Project 9C 2025 -
Spring Water Transmission
Line Replacement**

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 800'
AUTHOR: JH

MAP
7



WESTERN-ENVIRO RESOURCES

Wildlife Survey Results

0 700 1,400 2,100 2,800 3,500 Feet

VERSION: NA
SURVEYED: NA

LEGEND

- Project Area (70.91 Ac)
- Proposed Pipeline
- Burrowing Owl Survey Area (2,266.00 Ac)
- Federally Listed Wildlife and Raptor Survey Area (4,620.31 Ac)
- Suitable Sage Grouse Habitat (2,571.05 Ac)
- Habitat Impacts (1.93 Ac)
- ▲ Sage Grouse Hen Sighting
- Raptor Nest

Price City Project 9C 2025 - Spring Water Transmission Line Replacement

Sections 23, 25, 26 & 27 in T.11S. R.8E.;
Sections 30, 31 & 32 in T.11S. R.9E.; and
Section 5 in T.12S. R.9E., S.L.B.&M.
Utah and Carbon Counties, Utah

ESRI
Imagery

FEB 11, 2026
SCALE: 1" = 3,500'
AUTHOR: JH

MAP
8

APPENDIX B

QUALIFICATIONS

BRIDGET ATKIN – PLANT ECOLOGIST and ENVIRONMENTAL PLANNER – Ms. Atkin has 22 years of plant and environmental planning experience in the Intermountain West. She is experienced in the preparation and application of NEPA documents from scoping to project construction and compliance. She has managed projects involving the Clean Water Act and Section 404 Wetlands and was the primary coordinator with federal and state agencies. She is experienced with surveying and monitoring TEPC species, water-related planning, and permitting processes. She has managed hundreds of projects focusing on monitoring and mapping plant resources throughout the Intermountain West and has conducted natural resources surveys, inventories, and plant identification. Ms. Atkin holds a B.S. degree in Horticulture, an M.S. degree in Plant Science, and has an M.L.A. from the Landscape Architecture and Environmental Planning department, all from Utah State University (USU), Logan, Utah.

RAYCE BRYAN – PLANT ECOLOGIST – Mr. Bryan has 10 years of plant and natural resources management experience in the Great Basin. He is experienced in post-fire rangeland restoration and is well versed in a wide range of rangeland and vegetation monitoring techniques. He has experience in surveying and monitoring TEPC species and mapping their suitable habitats in the Uinta Basin. He has also organized field projects and led crews in remote locations, including leading crews to complete various federal contracts to monitor greater sage-grouse ecosystem health. Mr. Bryan holds a B.S. degree in Rangeland Ecology and Management and an M.S. degree in Rangeland Ecology and Management with emphasis in post-fire revegetation ecology, both from USU.

KARI COY – PLANT TAXONOMIST and ENVIRONMENTAL PLANNER – Ms. Coy has 18 years of environmental planning and natural resources experience and is an expert in plant biology, TEPC species, wetland resources, and NEPA analysis. She has knowledge and experience in environmental permitting, including Section 404 Individual and Nationwide permits, Section 401 Water Quality Certificates, and PGP 10 Stream Alteration Permits. Ms. Coy has conducted extensive rare plant clearance surveys for transportation, oil and gas, restoration, biological inventory, and various development projects. She has coordinated with federal, state, local, and tribal organizations on environmental projects and has experience in the NEPA process as both a subject matter expert and project manager for CatEx EA and EIS documents. Ms. Coy holds a B.S. in Botany from Weber State University, Ogden, Utah, and a NEPA Certificate and an M.S. in Natural Resources, both from USU.

GLEN GANTZ – CERTIFIED WILDLIFE BIOLOGIST and COMMERCIAL PILOT – Mr. Gantz has 38 years of experience conducting ground-based and low-level aerial surveys. He is certified by The Wildlife Society as a Wildlife Biologist. In addition, he is a commercial pilot. Aerial surveys include aerial telemetry in mountainous areas. Training and certifications include Mexican spotted owl surveys, Utah prairie dog surveys, Southwest willow flycatcher surveys, raptor surveys and monitoring, and migratory bird surveys. Mr. Gantz holds a B.S. in Wildlife Science from Pennsylvania State University, University Park, Pennsylvania, and an M.S. in Wildlife Ecology from USU. In recent years, Mr. Gantz has conducted wildlife analysis on nearly 400 well sites and associated infrastructure proposed for oil and gas development, including 1,600 miles of proposed pipelines, roads, and powerlines and two large seismic projects in Utah, Wyoming, and Nevada. Specifically, during the past five years, Mr. Gantz has surveyed over 200,000 acres. A high concentration of work has been within the Uinta Basin of Utah. During this time, he has mapped more than 800 raptor nests and 32,000 acres of white-tailed prairie dog towns and associated burrowing owl habitat.

APPENDIX C

USFWS MIGRATORY BIRD CONSERVATION ACTIONS

Migratory Bird Conservation Actions for Projects to Reduce the Risk of Take during the Nesting Season*

U.S. Fish and Wildlife Service (USFWS) Region 6, Migratory Bird Management

June 2014

Goal: Avoid take of migratory birds and/or minimize the loss, destruction, or degradation of migratory bird habitat while completing the proposed project or action. Under the Migratory Bird Treaty Act (MBTA) take is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture or collect” a migratory bird (50 CFR § 10.12). **

1. Determine if the proposed project or action will involve below- and/or above-ground construction or habitat-altering activities, because recommended practices and timing of surveys could differ accordingly.
2. If the proposed project or action includes a reasonable likelihood that take of migratory birds will occur, then complete the project or those actions expected to take migratory birds outside of their nesting season to the greatest extent possible. Examples of actions that may take migratory birds include, clearing or cutting of vegetation, burning vegetation, driving or parking equipment on vegetation that may harbor nesting birds, etc. The primary nesting season for migratory birds varies greatly among species and geographic locations, but generally extends from early April to mid-July. However, the maximum time period for the migratory bird nesting season can extend from early January through late August. Due to this variability, project proponents should consult with the USFWS for specific nesting seasons of birds in your project or action area. As early as possible please consult the USFWS in the planning stages of your project for other input on conservation measures to avoid and minimize the take of migratory birds.
3. Complete all project activities that could result in migratory bird take outside the maximum migratory bird nesting season (early January through late August) to the greatest extent possible. If this is not possible, then avoid any habitat alteration, removal, or destruction during the primary nesting season for migratory birds (early April to mid-July).
4. If a proposed project or action includes the potential for take of migratory birds and/or the loss or degradation of migratory bird habitat, and work cannot occur outside the migratory bird nesting season (either the maximum or primary nesting season), project proponents should provide USFWS with an explanation for why work has to occur during the migratory bird nesting season. Further, in these cases, project proponents also should demonstrate that all efforts to complete work outside the migratory bird nesting season were attempted, and that the reasons work needs to be completed during the nesting season were beyond the proponent’s control.

5. Where project work must occur during the migratory bird nesting season, project proponents should utilize a qualified biologist to survey those portions of the project area during the nesting season (but prior to the project or action occurring) to determine if migratory birds are present and nesting in those areas. These bird surveys should occur no more than 7-10 days prior to when work actually begins on the project site. In addition to conducting surveys during the nesting season, entities may also benefit from conducting surveys during the previous nesting season. Such surveys will serve to inform the likely presence of nesting migratory birds in the proposed project or work area. While individual migratory birds will not necessarily return to nest at the exact site as in previous years, a survey in the nesting season the year before the project or action allows the company to become familiar with bird species and numbers present in the project area well before the nesting season in the year of proposed action. Migratory bird surveys also should be completed during the best timeframe for detecting the presence of nesting migratory birds, using accepted bird survey protocols. USFWS Offices can be contacted for recommendations on appropriate survey guidance. Project proponents should also be aware that results of migratory bird surveys are subject to spatial and temporal variability.
6. If no migratory birds are found nesting in proposed project or action areas immediately prior to the time when construction and associated activities are to occur, then proceed with your project activity as planned.
7. If migratory birds are present and nesting in the proposed project or action area, contact your nearest USFWS Ecological Services Field Office and/or USFWS Regional Migratory Bird Management Office for guidance on appropriate next steps to avoid and minimize impacts to (and take of) migratory birds associated with the proposed project or action. Although bald and golden eagles are protected under MBTA they are also covered under BGEPA. Please consult USFWS if there are eagles or eagle nests in or near your proposed project area ***.

* Note: these recommended conservation measures assume that there are no Endangered or Threatened migratory bird species present in the project/action area, or any other Endangered or Threatened animal or plant species, or any designated critical habitat for Endangered or Threatened species present in this area. If Endangered or Threatened species or designated critical habitat are present, or they could potentially be present, and the project/action may affect these species or designated critical habitat for them, then consult with your nearest USFWS Ecological Services Office before proceeding with any project/action.

** The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, and transportation, (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the MBTA has no provision for allowing unauthorized take, the USFWS realizes that some birds may be killed during construction or through other project activities, even if all known reasonable and effective measures to protect birds are used. The USFWS Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships

with individuals, companies, and industries that have taken effective steps to avoid take of migratory birds and by encouraging others to implement measures to avoid take of migratory birds. It is not possible to absolve individuals, companies, or agencies from liability even if they implement bird mortality avoidance, or other similar protective measures. However, the Office of Law Enforcement focuses its resources on investigating and undertaking enforcement actions against individuals and companies that take migratory birds without identifying and implementing all reasonable, prudent, and effective measures to avoid that take. Companies are encouraged to work closely with USFWS biologists to identify available protective measures when developing project plans and/or avian protection plans, and to implement those measures prior to/during construction or similar activities.

*** Also note that Bald and Golden Eagles receive additional protection under the Bald and Golden Eagle Protection Act (BGEPA). BGEPA prohibits the take, possession, sale, purchase, barter, offer to sell, purchase, or barter, transport, export or import, of any Bald or Golden Eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. BGEPA also defines take to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb,” 16 U.S.C. 668c, and includes criminal and civil penalties for violating the statute. Further, activities that would disturb Bald or Golden Eagles are prohibited under BGEPA. “Disturb” means to agitate or bother a Bald or Golden Eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an Eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. If a proposed project or action would occur in areas where nesting, feeding, or roosting eagles occur, then project proponents may need to take additional conservation measures to achieve compliance with BGEPA. New regulations (50 CFR § 22.26 and § 22.27) allow the take of bald and golden eagles and their nests, respectively, to protect interests in a particular locality provided that the USFWS finds that such take is compatible with the goal of maintaining stable or increasing eagle breeding populations. However, consultation with the USFWS Migratory Bird, Ecological Services, and Law Enforcement programs will be required before a permit may be issued.

APPENDIX D

BREEDING BIRD SPECIES BY HABITAT TYPE

Breeding Bird Species on the Colorado Plateau in Utah, that occur in Grassland Habitat Type, Utah PIF Conservation Scores, and Migration Status . Utah PIF Priority Species are listed in bold type. Adapted from Utah Partners in Flight (Parrish et al. 2002).

Common Name ¹	UPIF Score ²	1 ⁰ Breeding ⁴	2 ⁰ Breeding ⁵	Winter Habitat ⁶	Migratory Status ⁷	Utah Status ^{8, 9, 10}	Federal Status ¹²	BLM Status ¹³	FS Status ¹⁴
Grasshopper Sparrow ⁸	32	Grassland	Grassland	Migrant	A	Special Concern ⁸		Sensitive	
Horned Lark	14	Grassland	High Desert Scrub	Grassland	B				
Lark Bunting	27	Grassland	High Desert Scrub	Migrant	A				
Long-billed Curlew⁸	34	Grassland	Agriculture	Migrant	A	Special Concern ⁸		Sensitive	
Savannah Sparrow	22	Grassland	Wet Meadow	Grassland	B				
Ring-necked Pheasant	27	Agriculture	Grassland	Wetland	P				
Burrowing Owl ⁸	28	High Desert Scrub	Grassland	Migrant	A	Special Concern ⁸		Sensitive	
Western Meadowlark	24	High Desert Scrub	Grassland	Agriculture	B				
Short-eared Owl ⁸	29	Wetland	Grassland	Agriculture	B	Special Concern ⁸		Sensitive	
Ferruginous Hawk⁹	33	Pinyon-Juniper	Shrubsteppe	Grassland	B	Threatened ⁹		Sensitive	

¹ Priority Species are listed in bold type; See Appendix B for Scientific Names

² See text for explanation of Utah PIF conservation scores (possible range 10-50)

⁴ 1⁰ Breeding Habitat: Primary habitat used during the breeding season in Utah (nesting habitat)

⁵ 2⁰ Breeding Habitat: Secondary habitat used during the breeding season in Utah (nesting or foraging habitat; habitat specialists may have identical 1E and 2E habitats)

⁶ Winter Habitat: Primary Winter Habitat in Utah.

⁷ Neotropical Migratory Status: A = species breeds North of US/Mexican border, winters south of border; B = species breeds North of US/Mexican border, some winter south of border; C = some breed South of US/Mexican border, winters south of border; M = Non-Neotropical migratory species (e.g., waterfowl); P = Permanent Resident species; for remaining status codes see Finch and Martin 1991, Gauthreaux 1992, and Hunter and Pashley 1999)

⁸ State Species of Special Concern; 1998 Utah Sensitive Species List (UDWR 1998)

⁹ State Threatened Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹⁰ State Endangered Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹¹ Sage-grouse includes Greater and Gunnison species

Breeding Bird Species on the Colorado Plateau in Utah, that occur in Pinyon-Juniper Habitat Type, Utah PIF Conservation Scores, and Migration Status . Utah PIF Priority Species are listed in bold type. Adapted from Utah Partners in Flight (Parrish et al. 2002).

Common Name ¹	UPIF Score ²	Colorado Plateau	1 ⁰ Breeding ⁴	2 ⁰ Breeding ⁵	Winter Habitat ⁶	Migratory Status ⁷	Utah Status ^{8, 9, 10}	Federal Status ¹²	BLM Status ¹³	FS Status ¹⁴
Ash-throated Flycatcher	23	X	Pinyon-Juniper	Low Desert Scrub	Migrant	A				
Black-chinned Hummingbird	28	X	Pinyon-Juniper	Mountain Shrub	Migrant	A				
Black-throated Gray Warbler	32	X	Pinyon-Juniper	Mountain Shrub	Migrant	A				
Blue-gray Gnatcatcher	25	X	Pinyon-Juniper	Lowland Riparian	Migrant	A				
Bushtit	26	X	Pinyon-Juniper	Mountain Riparian	Mountain Riparian	P				
Common Nighthawk	23	X	Pinyon-Juniper	Lowland Riparian	Migrant	A				
Common Poorwill	28	X	Pinyon-Juniper	Lowland Riparian	Migrant	B				
Ferruginous Hawk⁹	33	X	Pinyon-Juniper	Shrubsteppe	Grassland	B	Threatened ⁹		Sensitive	
Gray Flycatcher	32	X	Pinyon-Juniper	High Desert Scrub	Migrant	A				
Gray Vireo	36	X	Pinyon-Juniper	Northern Oak	Migrant	A				
Juniper Titmouse	30	X	Pinyon-Juniper	Pinyon-Juniper	Pinyon-Juniper	P				
Pinyon Jay	31	X	Pinyon-Juniper	Ponderosa Pine	Pinyon-Juniper	P				
Common Raven	17	X	Cliff	Pinyon-Juniper	Agriculture	P				
Loggerhead Shrike	28	X	High Desert Scrub	Pinyon-Juniper	High Desert Scrub	B				
Scott's Oriole	29	X	Low Desert Scrub	Pinyon-Juniper	Migrant	A				
Bewick's Wren	26	X	Lowland Riparian	Pinyon-Juniper	High Desert Scrub	P				
Black-billed Magpie	24	X	Lowland Riparian	Pinyon-Juniper	Agriculture	P				
Cassin's Kingbird	29	X	Lowland Riparian	Pinyon-Juniper	Migrant	A				
Mountain Chickadee	29	X	Mixed Conifer	Pinyon-Juniper	Mountain Riparian	P				
Western Scrub-Jay	26	X	Mountain Shrub	Pinyon-Juniper	Mountain Shrub	P				
Virginia's Warbler	36	X	Northern Oak	Pinyon-Juniper	Migrant	A				
Western Bluebird	27	X	Ponderosa Pine	Pinyon-Juniper	Pinyon-Juniper	B				

¹ Priority Species are listed in bold type; See Appendix B for Scientific Names

² See text for explanation of Utah PIF conservation scores (possible range 10-50)

⁴ 1⁰ Breeding Habitat: Primary habitat used during the breeding season in Utah (nesting habitat)

⁵ 2⁰ Breeding Habitat: Secondary habitat used during the breeding season in Utah (nesting or foraging habitat; habitat specialists may have identical 1E and 2E habitats)

⁶ Winter Habitat: Primary Winter Habitat in Utah.

⁷ Neotropical Migratory Status: A = species breeds North of US/Mexican border, winters south of border; B = species breeds North of US/Mexican border, some winter south of border; C = some breed South of US/Mexican border, winters south of border; M = Non-Neotropical migratory species (e.g., waterfowl); P = Permanent Resident species; for remaining status codes see Finch and Martin 1991, Gauthreaux 1992, and Hunter and Pashley 1999)

⁸ State Species of Special Concern; 1998 Utah Sensitive Species List (UDWR 1998)

⁹ State Threatened Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹⁰ State Endangered Species; 1998 Utah Sensitive Species List (UDWR 1998)

¹¹ Sage-grouse includes Greater and Gunnison species

Breeding Bird Species on the Colorado Plateau in Utah, that occur in Shrubsteppe Habitat Type, Utah PIF Conservation Scores, and Migration Status . Utah PIF Priority Species are listed in bold type. Adapted from Utah Partners in Flight (Parrish et al. 2002).

[illegible]

Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 12:22 PM
To: fema-r8-private-sector@fema.dhs.gov
Cc: Sam Fankhauser; Rex Carpenter; Jonathan Johansen; milesn@priceutah.gov
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf;
Attachment B - Project Location Maps.pdf

Dear FEMA,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

The Project includes the replacement of approximately 6.5 miles of new pipe to connect its raw water source located near Soldier Summit to an existing section of the transmission line. A future project will be completed to replace the remaining pipeline with its terminus at the City's Water Treatment Plant. This current Project is limited to the priority upper sections based on a condition assessment completed in 2024 (see Attachment A). The new pipeline will be largely positioned adjacent to the existing pipe, with its size and material proposed to include a combination of 8", 16", and 24" HDPE. Its alignment will generally run parallel to the Price River. Installation will be completed through an open trenching method, with all disturbed areas restored to pre-construction conditions, including adhering to current grades to the maximum extent practicable. Installation will in some sections involve some boring at the railroad crossings and the hill near the railroad tunnel.

The Area of Potential Effect (APE) is estimated at approximately 35 acres for the entire Project (see Attachment B), assuming 20 feet of ground disturbance on either side of the pipeline installation (40 feet total width). It is likely that some sections of the existing pipe will be abandoned and left in place to reduce overall construction-related environmental impacts. There are multiple wetlands throughout the proposed pipe alignment (see Attachment B). As such, a wetland delineation is planned to identify the specific boundaries, and any unavoidable impacts will be permitted and mitigated accordingly. Further, three river crossings are necessary. Two exist on Lower Fish Creek, and the third is on Beaver Creek (see Attachment B). Work is already underway with the appropriate agencies to permit these crossings and will continue throughout the Project's design stages.

Preliminary research has been completed regarding potential Federal Emergency Management Agency (FEMA) Floodway impacts. Flood zone information was acquired for the Project's extent through Carbon County; however, similar data is not available for the applicable portion of Utah County. It is the intent that the mapped floodplain will be avoided where possible. In cases where there is a

floodplain intersection with the existing alignment, the new alignment may be modified to avoid intrusions.

Most construction activities will take place on existing and prescriptive pipeline easements located on private land. There are some sections that go through public land with their respective easements. Other land considerations include one highway crossing and boring under two railroad crossings. The design team is in the process of coordinating with applicable agencies and working through permitting procedures.

The Project is scheduled for the 2026 and 2027 construction seasons. Project funding is anticipated to be provided primarily by the Utah Drinking Water State Revolving Fund (SRF). Through the funding procurement process, community engagement and public notification will continue to occur. Any comments will be used to comply with environmental review requirements. The Project has been discussed at several public meetings to date, with no negative feedback from residents other than concerns related to the financial impact of the work (i.e., recent water rate increase). The City does not expect any notable public opposition, given the critical nature of the Project and minimal aesthetic impacts beyond the temporary construction phase.

To ensure that all social, economic, and environmental effects are considered in the development of this Project, we are soliciting your review and comment on the proposed Project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act (NEPA) of 1969, as amended. Information or comments relating to environmental or other matters that you may furnish will help us determine the impacts of the Project. Currently, we request that you review the enclosed attachments and provide written comments or recommendations relating to the impact of this Project on resources or programs under your jurisdiction.

We request that any comments and information be forwarded to our office, with a receipt deadline of January 5th, 2026. Thank you for your assistance, and please do not hesitate to contact me at (801) 331-8489 or sam.fankhauser@ae2s.com if you have any questions or require further information.

Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
AE2S



**Top 5 Best Firm
To Work For**



Ella Leonelli

Engineering Assistant

Email: Ella.Leonelli@AE2S.com

Address: 3400 N Ashton Blvd Ste 105

Lehi, UT 84048

Office Phone: (801) 331-8489

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 11:46 AM
To: president.buunygren@navajo-nsn.gov
Cc: Sam Fankhauser; Jonathan Johansen; milesn@priceutah.gov; Rex Carpenter
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf;
Attachment B - Project Location Maps.pdf

Dear Buu Nygren,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

The Project includes the replacement of approximately 6.5 miles of new pipe to connect its raw water source located near Soldier Summit to an existing section of the transmission line. A future project will be completed to replace the remaining pipeline with its terminus at the City's Water Treatment Plant. This current Project is limited to the priority upper sections based on a condition assessment completed in 2024 (see Attachment A). The new pipeline will be largely positioned adjacent to the existing pipe, with its size and material proposed to include a combination of 8", 16", and 24" HDPE. Its alignment will generally run parallel to the Price River. Installation will be completed through an open trenching method, with all disturbed areas restored to pre-construction conditions, including adhering to current grades to the maximum extent practicable. Installation will in some sections involve some boring at the railroad crossings and the hill near the railroad tunnel.

The Area of Potential Effect (APE) is estimated at approximately 35 acres for the entire Project (see Attachment B), assuming 20 feet of ground disturbance on either side of the pipeline installation (40 feet total width). It is likely that some sections of the existing pipe will be abandoned and left in place to reduce overall construction-related environmental impacts. There are multiple wetlands throughout the proposed pipe alignment (see Attachment B). As such, a wetland delineation is planned to identify the specific boundaries, and any unavoidable impacts will be permitted and mitigated accordingly. Further, three river crossings are necessary. Two exist on Lower Fish Creek, and the third is on Beaver Creek (see Attachment B). Work is already underway with the appropriate agencies to permit these crossings and will continue throughout the Project's design stages.

Preliminary research has been completed regarding potential Federal Emergency Management Agency (FEMA) Floodway impacts. Flood zone information was acquired for the Project's extent through Carbon County; however, similar data is not available for the applicable portion of Utah County. It is the intent that the mapped floodplain will be avoided where possible. In cases where there is a

floodplain intersection with the existing alignment, the new alignment may be modified to avoid intrusions.

Most construction activities will take place on existing and prescriptive pipeline easements located on private land. There are some sections that go through public land with their respective easements. Other land considerations include one highway crossing and boring under two railroad crossings. The design team is in the process of coordinating with applicable agencies and working through permitting procedures.

The Project is scheduled for the 2026 and 2027 construction seasons. Project funding is anticipated to be provided primarily by the Utah Drinking Water State Revolving Fund (SRF). Through the funding procurement process, community engagement and public notification will continue to occur. Any comments will be used to comply with environmental review requirements. The Project has been discussed at several public meetings to date, with no negative feedback from residents other than concerns related to the financial impact of the work (i.e., recent water rate increase). The City does not expect any notable public opposition, given the critical nature of the Project and minimal aesthetic impacts beyond the temporary construction phase.

To ensure that all social, economic, and environmental effects are considered in the development of this Project, we are soliciting your review and comment on the proposed Project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act (NEPA) of 1969, as amended. Information or comments relating to environmental or other matters that you may furnish will help us determine the impacts of the Project. Currently, we request that you review the enclosed attachments and provide written comments or recommendations relating to the impact of this Project on resources or programs under your jurisdiction.

We request that any comments and information be forwarded to our office, with a receipt deadline of January 5th, 2026. Thank you for your assistance, and please do not hesitate to contact me at (801) 331-8489 or sam.fankhauser@ae2s.com if you have any questions or require further information.

Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
AE2S



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Ella Leonelli

Engineering Assistant

Email: Ella.Leonelli@AE2S.com

Address: 3400 N Ashton Blvd Ste 105
Lehi, UT 84048

Office Phone: (801) 331-8489

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 11:50 AM
To: leejuan.tendoy@sbtribes.com
Cc: Sam Fankhauser; Rex Carpenter; milesn@priceutah.gov; Jonathan Johansen
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf;
Attachment B - Project Location Maps.pdf

Dear Lee Tendoy,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

The Project includes the replacement of approximately 6.5 miles of new pipe to connect its raw water source located near Soldier Summit to an existing section of the transmission line. A future project will be completed to replace the remaining pipeline with its terminus at the City's Water Treatment Plant. This current Project is limited to the priority upper sections based on a condition assessment completed in 2024 (see Attachment A). The new pipeline will be largely positioned adjacent to the existing pipe, with its size and material proposed to include a combination of 8", 16", and 24" HDPE. Its alignment will generally run parallel to the Price River. Installation will be completed through an open trenching method, with all disturbed areas restored to pre-construction conditions, including adhering to current grades to the maximum extent practicable. Installation will in some sections involve some boring at the railroad crossings and the hill near the railroad tunnel.

The Area of Potential Effect (APE) is estimated at approximately 35 acres for the entire Project (see Attachment B), assuming 20 feet of ground disturbance on either side of the pipeline installation (40 feet total width). It is likely that some sections of the existing pipe will be abandoned and left in place to reduce overall construction-related environmental impacts. There are multiple wetlands throughout the proposed pipe alignment (see Attachment B). As such, a wetland delineation is planned to identify the specific boundaries, and any unavoidable impacts will be permitted and mitigated accordingly. Further, three river crossings are necessary. Two exist on Lower Fish Creek, and the third is on Beaver Creek (see Attachment B). Work is already underway with the appropriate agencies to permit these crossings and will continue throughout the Project's design stages.

Preliminary research has been completed regarding potential Federal Emergency Management Agency (FEMA) Floodway impacts. Flood zone information was acquired for the Project's extent through Carbon County; however, similar data is not available for the applicable portion of Utah County. It is the intent that the mapped floodplain will be avoided where possible. In cases where there is a

floodplain intersection with the existing alignment, the new alignment may be modified to avoid intrusions.

Most construction activities will take place on existing and prescriptive pipeline easements located on private land. There are some sections that go through public land with their respective easements. Other land considerations include one highway crossing and boring under two railroad crossings. The design team is in the process of coordinating with applicable agencies and working through permitting procedures.

The Project is scheduled for the 2026 and 2027 construction seasons. Project funding is anticipated to be provided primarily by the Utah Drinking Water State Revolving Fund (SRF). Through the funding procurement process, community engagement and public notification will continue to occur. Any comments will be used to comply with environmental review requirements. The Project has been discussed at several public meetings to date, with no negative feedback from residents other than concerns related to the financial impact of the work (i.e., recent water rate increase). The City does not expect any notable public opposition, given the critical nature of the Project and minimal aesthetic impacts beyond the temporary construction phase.

To ensure that all social, economic, and environmental effects are considered in the development of this Project, we are soliciting your review and comment on the proposed Project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act (NEPA) of 1969, as amended. Information or comments relating to environmental or other matters that you may furnish will help us determine the impacts of the Project. Currently, we request that you review the enclosed attachments and provide written comments or recommendations relating to the impact of this Project on resources or programs under your jurisdiction.

We request that any comments and information be forwarded to our office, with a receipt deadline of January 5th, 2026. Thank you for your assistance, and please do not hesitate to contact me at (801) 331-8489 or sam.fankhauser@ae2s.com if you have any questions or require further information.

Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
AE2S



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Ella Leonelli

Engineering Assistant

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Address: 3400 N Ashton Blvd Ste 105
Lehi, UT 84048

Office Phone: (801) 331-8489

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 12:17 PM
To: cespkr-regulatory-info@usace.army.mil
Cc: Sam Fankhauser; Rex Carpenter; Jonathan Johansen; milesn@priceutah.gov
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf;
Attachment B - Project Location Maps.pdf

Dear US Army Corps of Engineers,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

The Project includes the replacement of approximately 6.5 miles of new pipe to connect its raw water source located near Soldier Summit to an existing section of the transmission line. A future project will be completed to replace the remaining pipeline with its terminus at the City's Water Treatment Plant. This current Project is limited to the priority upper sections based on a condition assessment completed in 2024 (see Attachment A). The new pipeline will be largely positioned adjacent to the existing pipe, with its size and material proposed to include a combination of 8", 16", and 24" HDPE. Its alignment will generally run parallel to the Price River. Installation will be completed through an open trenching method, with all disturbed areas restored to pre-construction conditions, including adhering to current grades to the maximum extent practicable. Installation will in some sections involve some boring at the railroad crossings and the hill near the railroad tunnel.

The Area of Potential Effect (APE) is estimated at approximately 35 acres for the entire Project (see Attachment B), assuming 20 feet of ground disturbance on either side of the pipeline installation (40 feet total width). It is likely that some sections of the existing pipe will be abandoned and left in place to reduce overall construction-related environmental impacts. There are multiple wetlands throughout the proposed pipe alignment (see Attachment B). As such, a wetland delineation is planned to identify the specific boundaries, and any unavoidable impacts will be permitted and mitigated accordingly. Further, three river crossings are necessary. Two exist on Lower Fish Creek, and the third is on Beaver Creek (see Attachment B). Work is already underway with the appropriate agencies to permit these crossings and will continue throughout the Project's design stages.

Preliminary research has been completed regarding potential Federal Emergency Management Agency (FEMA) Floodway impacts. Flood zone information was acquired for the Project's extent through Carbon County; however, similar data is not available for the applicable portion of Utah County. It is the intent that the mapped floodplain will be avoided where possible. In cases where there is a

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To ensure that all social, economic, and environmental effects are considered in the development of this Project, we are soliciting your review and comment on the proposed Project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act (NEPA) of 1969, as amended. Information or comments relating to environmental or other matters that you may furnish will help us determine the impacts of the Project. Currently, we request that you review the enclosed attachments and provide written comments or recommendations relating to the impact of this Project on resources or programs under your jurisdiction.

We request that any comments and information be forwarded to our office, with a receipt deadline of January 5th, 2026. Thank you for your assistance, and please do not hesitate to contact me at (801) 331-8489 or sam.fankhauser@ae2s.com if you have any questions or require further information.

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Sincerely,
AE2S



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Ella Leonelli

Engineering Assistant

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 2:05 PM
To: terron.pickett@usda.gov
Cc: Sam Fankhauser; Rex Carpenter; milesn@priceutah.gov; jonathan@jandtengineering.com
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf; Attachment B - Project Location Maps.pdf

Dear Terron Pickett,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

The Project includes the replacement of approximately 6.5 miles of new pipe to connect its raw water source located near Soldier Summit to an existing section of the transmission line. A future project will be completed to replace the remaining pipeline with its terminus at the City's Water Treatment Plant. This current Project is limited to the priority upper sections based on a condition assessment completed in 2024 (see Attachment A). The new pipeline will be largely positioned adjacent to the existing pipe, with its size and material proposed to include a combination of 8", 16", and 24" HDPE. Its alignment will generally run parallel to the Price River. Installation will be completed through an open trenching method, with all disturbed areas restored to pre-construction conditions, including adhering to current grades to the maximum extent practicable. Installation will in some sections involve some boring at the railroad crossings and the hill near the railroad tunnel.

The Area of Potential Effect (APE) is estimated at approximately 35 acres for the entire Project (see Attachment B), assuming 20 feet of ground disturbance on either side of the pipeline installation (40 feet total width). It is likely that some sections of the existing pipe will be abandoned and left in place to reduce overall construction-related environmental impacts. There are multiple wetlands throughout the proposed pipe alignment (see Attachment B). As such, a wetland delineation is planned to identify the specific boundaries, and any unavoidable impacts will be permitted and mitigated accordingly. Further, three river crossings are necessary. Two exist on Lower Fish Creek, and the third is on Beaver Creek (see Attachment B). Work is already underway with the appropriate agencies to permit these crossings and will continue throughout the Project's design stages.

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We request that any comments and information be forwarded to our office, with a receipt deadline of January 5th, 2026. Thank you for your assistance, and please do not hesitate to contact me at (801) 331-8489 or sam.fankhauser@ae2s.com if you have any questions or require further information.

Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
AE2S



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Ella Leonelli

Engineering Assistant

Email: Ella.Leonelli@AE2S.com

Address: 3400 N Ashton Blvd Ste 105

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 12:16 PM
To: utahfieldoffice_esa@fws.gov
Cc: Sam Fankhauser; Rex Carpenter; Jonathan Johansen; milesn@priceutah.gov
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf;
Attachment B - Project Location Maps.pdf

Dear Utah Field Office Supervisor,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

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floodplain intersection with the existing alignment, the new alignment may be modified to avoid intrusions.

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The Project is scheduled for the 2026 and 2027 construction seasons. Project funding is anticipated to be provided primarily by the Utah Drinking Water State Revolving Fund (SRF). Through the funding procurement process, community engagement and public notification will continue to occur. Any comments will be used to comply with environmental review requirements. The Project has been discussed at several public meetings to date, with no negative feedback from residents other than concerns related to the financial impact of the work (i.e., recent water rate increase). The City does not expect any notable public opposition, given the critical nature of the Project and minimal aesthetic impacts beyond the temporary construction phase.

To ensure that all social, economic, and environmental effects are considered in the development of this Project, we are soliciting your review and comment on the proposed Project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act (NEPA) of 1969, as amended. Information or comments relating to environmental or other matters that you may furnish will help us determine the impacts of the Project. Currently, we request that you review the enclosed attachments and provide written comments or recommendations relating to the impact of this Project on resources or programs under your jurisdiction.

We request that any comments and information be forwarded to our office, with a receipt deadline of January 5th, 2026. Thank you for your assistance, and please do not hesitate to contact me at (801) 331-8489 or sam.fankhauser@ae2s.com if you have any questions or require further information.

Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
AE2S



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To Work For**



Ella Leonelli

Engineering Assistant

Email: Ella.Leonelli@AE2S.com

Address: 3400 N Ashton Blvd Ste 105
Lehi, UT 84048

Office Phone: (801) 331-8489

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 2:37 PM
To: rdcc@utah.gov
Cc: Sam Fankhauser; Rex Carpenter; milesn@priceutah.gov; jonathan@jandtengineering.com
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf; Attachment B - Project Location Maps.pdf

Dear Utah Public Lands Coordination Office,

On behalf of Price City (City), the team of Johansen & Tuttle Engineering and Advanced Engineering and Environmental Services, LLC (AE2S) is completing engineering services for a Water Transmission Main Replacement Project (Project) in the vicinity of Price City, Utah. The work will span Carbon and Utah Counties. The Project is necessary since the City's existing water transmission pipe is at the end of its useful life, rapidly deteriorating, and possesses several portions of pipe that are failing. The work will mitigate the City's ongoing public health and safety threat and ensure it can supply safe and reliable drinking water for future decades.

The Project includes the replacement of approximately 6.5 miles of new pipe to connect its raw water source located near Soldier Summit to an existing section of the transmission line. A future project will be completed to replace the remaining pipeline with its terminus at the City's Water Treatment Plant. This current Project is limited to the priority upper sections based on a condition assessment completed in 2024 (see Attachment A). The new pipeline will be largely positioned adjacent to the existing pipe, with its size and material proposed to include a combination of 8", 16", and 24" HDPE. Its alignment will generally run parallel to the Price River. Installation will be completed through an open trenching method, with all disturbed areas restored to pre-construction conditions, including adhering to current grades to the maximum extent practicable. Installation will in some sections involve some boring at the railroad crossings and the hill near the railroad tunnel.

The Area of Potential Effect (APE) is estimated at approximately 35 acres for the entire Project (see Attachment B), assuming 20 feet of ground disturbance on either side of the pipeline installation (40 feet total width). It is likely that some sections of the existing pipe will be abandoned and left in place to reduce overall construction-related environmental impacts. There are multiple wetlands throughout the proposed pipe alignment (see Attachment B). As such, a wetland delineation is planned to identify the specific boundaries, and any unavoidable impacts will be permitted and mitigated accordingly. Further, three river crossings are necessary. Two exist on Lower Fish Creek, and the third is on Beaver Creek (see Attachment B). Work is already underway with the appropriate agencies to permit these crossings and will continue throughout the Project's design stages.

Preliminary research has been completed regarding potential Federal Emergency Management Agency (FEMA) Floodway impacts. Flood zone information was acquired for the Project's extent through Carbon County; however, similar data is not available for the applicable portion of Utah County. It is the intent that the mapped floodplain will be avoided where possible. In cases where there is a

floodplain intersection with the existing alignment, the new alignment may be modified to avoid intrusions.

Most construction activities will take place on existing and prescriptive pipeline easements located on private land. There are some sections that go through public land with their respective easements. Other land considerations include one highway crossing and boring under two railroad crossings. The design team is in the process of coordinating with applicable agencies and working through permitting procedures.

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Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
AE2S



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Ella Leonelli

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Rex Carpenter

From: Ella Leonelli
Sent: Monday, December 1, 2025 12:03 PM
To: juliusm@utetribes.com
Cc: Sam Fankhauser; Rex Carpenter; milesn@priceutah.gov; Jonathan Johansen
Subject: Request for Review and Environmental Comment, Price City Water Transmission Main Replacement Project, Price City, Utah
Attachments: Atachemnt A - Price City Transmission Line Condition Assessment Report.pdf;
Attachment B - Project Location Maps.pdf

Dear Julius Murray,

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Copied on this email is Miles Nelson with Price City and Jonathan Johansen with Johansen & Tuttle Engineering. Copies of this letter will be sent via certified mail.

Sincerely,
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Engineering Assistant

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Price Field Office
125 South 600 West
Price, Utah 84501

In Reply Refer To:
6841 – Price City Water Transmission Line Replacement

Memorandum

To: Field Supervisor, U.S. Fish and Wildlife Service, 236
Valley City, Utah 84119

From: Nick LaFazio, Field Manager

Subject: Request for Concurrence with Determinations of Effects to Endangered and
Threatened Species; and Conclude Informal Consultation for the Price City Water
Transmission Line Replacement

Attached is the Biological Assessment (BA) which analyzes the impacts to listed species from the proposed Price City Water Transmission Line Replacement. Informal consultation, through emails and phone calls, has been conducted between this office and USFWS. Pursuant with Section 7 of the Endangered Species Act (ESA) of 1973, and in conformance with 50 CFR Part 402.13, we are requesting concurrence with the determination and conclusion of informal consultation on the project.

The Bureau of Land Management (BLM) Price Field Office (PFO) is reviewing a proposal from Price City to replace the existing culinary water within Price Canyon through an Environmental Assessment –Price City Water Transmission Line Replacement. Through this proposal, the BLM would amend the Right-Of-Way (ROW) for an existing pipeline to give it an authorization consistent with the Federal Land Policy and Management Act of 1967 (FLPMA). The pipeline would be replaced with a new pipeline to be installed directly adjacent to the existing one. Due to the presence of potential habitat on BLM lands, federal funding and required Federal permits, the BLM has been designated as the lead agency for consultation with the USFWS. The other parties participating in the project are the Utah Department of Natural Resources, the United States Army Corp of Engineers, and the city of Price, Utah. Because some of the pipeline runs through and adjacent to suitable habitat for Ute Ladie's-tresses (*Spiranthes diluvialis*), the BLM has determined that this proposed action **May Affect but is Not Likely to Adversely Affect** the *S. diluvialis*.

Discovery Stipulation: Re-initiation of Section 7 consultation with the USFWS will be sought immediately if additional impacts to *S. diluvialis* are observed or anticipated as a result of project activities.

The U.S. Fish and Wildlife Service concurs with your determination that the proposed action *may affect*, and is *not likely to adversely affect*:

Species: Ute ladies'-tresses (*Spiranthes diluvialis*)

Critical Habitat: None

The proposed action is expected to be:
Insignificant ☒ Discountable ☐ Beneficial ☐

The U.S. Fish and Wildlife Service concurs with your determination that the action is *not likely to jeopardize the continuing existence of*:
Species:

U.S. Fish and Wildlife Utah Field Supervisor

Office Code: 06E23000 Project Code: 0.04+ ./.0642

We appreciate your review and assistance in this process as to fulfill our consultation responsibilities under the Act.

For additional information, please contact PFO wildlife biologist Sarah Baldwin at (435) 636-3617 or Assistant Field Manager Dana Truman at (435) 636-3624.

Attachments:

1. Biological Assessment
2. GIS project shapefiles
3. GIS file guide

Biological Assessment for Price City Water Transmission Line Replacement

UPDATE - 2026

Carbon County, UT



**Bureau of Land Management
Price Field Office**

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Introduction

The Bureau of Land Management (BLM) Price Field Office (PFO) is reviewing a proposal from Price City to replace the existing culinary water pipeline from the spring source through Price Canyon to the water treatment facility. The existing pipeline crosses private, TLA, and BLM administered lands. For the portion of the pipeline on BLM managed lands, the BLM would issue a Right-Of-Way (ROW) authorization consistent with the Federal Land Policy and Management Act of 1967 (FLPMA). The existing pipeline would be replaced with a new pipeline to be installed adjacent to the existing one. Due to federal funding and the requirements to obtain a Clean Water Act Section 404 permit from the US Army Corp of Engineers, all portions of the project are considered a federal action under Section 7 of the Endangered Species Act of 1973 as amended (ESA). The BLM is the lead federal agency for Section 7 consultation. The other parties participating in the project are the Utah Department of Natural Resources, the United States Army Corp of Engineers, and the city of Price, Utah. The purpose of this Biological Assessment (BA) is to review potential effects of the Proposed Action on applicable threatened, endangered, proposed and candidate species. Preparation of this BA was done in accordance with legal requirements set forth under Section 7 of the ESA (Endangered Species Act of 1973), as amended (16 U.S.C. 1536).

Purpose and Need

The purpose of the Proposed Action is to replace an existing water pipeline which is the primary source of culinary water for Price City and other surrounding communities. The current pipeline is over 50 years old, is in a state of disrepair and would be abandoned in place. The replacement of the existing water pipeline is critical for continued, reliable access to clean drinking water for residents of Price City and the surrounding communities.

The BLM's purpose for this project is to respond to the proposed project ROW application and fulfill the BLM's multiple-use mandate as outlined in the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC ch 35 § 1701 et seq.).

Location

The Proposed Action begins approximately 18 miles northwest of Price City and runs for 12.2 miles to the Price City Water Treatment Plant, located north of Price City. Forty-four percent (44%) of the pipeline is within Utah County, primarily on privately owned and TLA administered lands (Map 1). Fifty-six percent (56%) of the pipeline (6.87 miles) of the pipeline extends into Carbon County, primarily on BLM-administered land in the Price Canyon. The proposed pipeline would be constructed roughly parallel to the existing

pipeline within the existing ROW. In the narrow Price Canyon, the route follows the Price River and Union Pacific Railroad (UPRR) adjacent to U.S. Highway 6 (Hwy 6).

Proposed Project Description

The project would install approximately 12 miles of new pipeline adjacent to the existing pipeline to convey drinking water to the City of Price. The Project Area for the Proposed Action includes the ROW as well as the extent of the staging areas and bore pads, which would facilitate construction activities and the pipeline. For the majority of the proposed pipeline, there is a 70-foot permanent ROW, with 40 feet on one side of center and 30 feet on the other side of center. However, the ROW width has been reduced in some sections to avoid sensitive resources and habitats. Although pipeline construction does not typically disturb an entire ROW, for analysis purposes, it is assumed that the full ROW, or 102.1 acres, would be utilized and disturbed during construction (Table 1). With the addition of the staging areas and bore pads to the ROW, the Project Area covers a total of 120 acres (Table 2).

Table 1: Acres within the full ROW and miles of pipeline

Feature	Miles of pipeline			ROW Land Status			Total miles (mi) / Acres (ac)
	Private	TLA	BLM	Private	TLA	BLM	
Proposed Pipeline	5.25	0.56	6.5	53.6	4.8	43.7	12.3 mi / 102.1 ac

Table 2: Acres of each land management/ownership within the Project Area

Land Status	Acres
Private	67
TLA	5
BLM	48.2
Total	120

The proposed pipeline alignment would begin in the same spot as the existing pipeline at natural springs at the western end of the Project Area. It then would run north to an existing junction point. From there, the pipeline would head northeast, extending under the UPRR and reaching another essential junction point (Map 3). It would then pass under the Price River and Hwy 6, before turning southeast. The proposed pipeline would terminate at the existing Price City Water Treatment Plant at the southern end of the Project Area (Map 1).

A final timeline for the Proposed Action has not been developed; however, the pipeline replacement work is currently anticipated to begin in November of 2026. The section of pipeline within the suitable habitat is in extremely fragile condition making repairs difficult and ineffective. There are active leaks within this section, so Price City will begin

construction there and then continue down the canyon as funding is available. The construction work will likely be completed within 2 years.

Species Evaluated

Threatened, Endangered, Proposed and Candidate Species

Table 3 lists the threatened and endangered species with potential to occur within the Project Area, as well as candidate and those proposed for listing was generated via the IPaC system from the USFWS. The updated report was generated on June 12th, 2026, from the Utah Ecological Services Office (Project Code 2026-0102864).

Table 3: Threatened and endangered species identified by the IPaC system that could potentially be affected by components within the Proposed Action. Species that are not known or suspected to occur in the project area, and for which no suitable habitat is present will not be evaluated further in this document.

Plants		
Species	Status	Occurrence Within the Project Area
Ute Ladies'-tresses (<i>Spiranthes diluvialis</i>)	Threatened	Suitable habitat: • <i>S. diluvialis</i> grows in wet meadows and on the banks of perennial streams and rivers. Sites were evaluated in accordance with known <i>S. diluvialis</i> habitat parameters outlined in the Ute Ladies'-Tresses Field Survey Guidelines (USFWS 2007) and Rangewide Status Review of Ute Ladies'-Tresses (<i>S. diluvialis</i>) (Fertig et al. 2005), and from surveyor personal knowledge of the area and the species requirements. • The project area is within the known distribution range of the species and suitable habitat was documented.
Clay phacelia (<i>Phacelia argillacea</i>)	Endangered	No potential to occur: • <i>P. argillacea</i> is restricted to Spanish Fork Canyon in Utah County. This species occurs on sparsely vegetated Green River Shale Formation in pinyon-juniper mountain brush vegetation communities. <i>P. argillacea</i> is found at elevations from 6,150 to 6,600 feet (Welsh et al. 2015). • The project area does not contain habitat suitable to this species, nor was it observed during field surveys.
Terrestrial Wildlife		

Species	Status	Occurrence Within the Project Area
Mexican Spotted Owl (<i>Strix occidentalis lucida</i>)	Threatened	No potential to occur: • Suitable habitat is characterized by rough, narrow, steep-walled canyons with caves and ledges and patches of woodland vegetation (USFWS 2012). • A small amount of modeled habitat occurs within the Project Area (Lewis 2014 model); however, the area lacks the suitable rocky cliff nesting substrate utilized by the owls in Utah (USFWS 2012), and it is directly adjacent to the heavily trafficked Highway 6. • Because of the adjacent infrastructure and lack of suitable habitat, the Project Area was determined to be unsuitable for the species. Additionally, a ½-mile buffer around the Project Area was also determined to be unsuitable habitat. For further details, refer to Staff Report: Review of Mexican Spotted Owl Habitat for the Price City Water Transmission Line Replacement (BLM 2026).
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Threatened	No potential to occur: • Suitable habitat in Utah is described as areas of multi-layered riparian vegetation 12 acres in size or greater, with at least one layer of canopy and understory shrubby vegetation at elevations below 8,500 ft. (Halterman et al. 2015). • Suitable habitat does not occur along the section of the Price River in the Project Area.
Aquatic Wildlife		
Species	Status	Occurrence Within the Project Area
Humpback chub (<i>Gila cypha</i>)	Threatened	No potential to occur: • Humpback chub is endemic to the Colorado River basin, including Carbon County, Utah. Humpback chub populations are found in river canyons where they use a variety of habitats including pools, rifles, and eddies. Further, humpback chub has been associated with boulder-strewn canyons, pools, backwaters, flooded bottoms, flooded mouths of tributary streams, slow runs, sandy rifles, and others (USFWS 1987). • The Project Area is outside designated critical and the known range of the species. • The Proposed Action would not result in water depletions from the watershed.
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	Endangered	No potential to occur: • Colorado pikeminnow habitat includes large rivers of the Colorado Basin with warm, swift waters and seasonally variable flows. Adult fishes are migratory and inhabit pools and eddies just outside of the main

		current. Young Colorado pikeminnow have been observed in backwater areas (USFWS 1987). • The Project Area is outside designated critical and the known range of the species. Based on the minimization and mitigation measures, the effects of the ground disturbance would attenuate before reaching the boundary of the species range, located roughly 30 miles downstream from the Project Area at the Farnham Dam. • The Proposed Action would not result in water depletions from the watershed.
Bonytail (<i>Gila elegans</i>)	Endangered	No potential to occur: • Bonytail chub is adapted to mainstream rivers and has been documented in pools, eddies, and reservoirs in a variety of habitats. This species is endemic to the Colorado River basin, including Carbon County, Utah (USFWS 1987). • The Project Area is outside designated critical and the known range of the species. • The Proposed Action would not result in water depletions from the watershed.
Razorback sucker (<i>Xyrauchen texanus</i>)	Threatened	No potential to occur: • Razorback sucker is endemic to the Colorado River Basin, including Carbon County, Utah. The species requires riverine habitats for spawning and moves into flooded areas in early spring. Spawning occurs over rocky runs and gravel bars (USFWS 1987 & 1998, Minkley 1991). • The Project Area is outside designated critical and the known range of the species. • The Proposed Action would not result in water depletions from the watershed.
Insects		
Species	Status	Occurrence Within the Project area
Monarch butterfly (<i>Danaus plexippus</i>)	Proposed Threatened	Suitable habitat: • Habitat suitable for migrating adults contains sufficient flowering resources with nectar (Xerces 2018). Members of the <i>Asclepias</i> genus are necessary for reproduction as the required source of food for caterpillars. • <i>D. plexippus</i> individuals migrate through Utah in the mid-summer through the early fall. A public record sighting of a monarch has occurred within Price Canyon, south of the Project Area (WMWM, 2026). • Due to the size and scope of the Proposed Action, it is not expected to jeopardize the continued existence of <i>D. plexippus</i>.

Suckley's Cuckoo bumble bee (<i>Bombus suckleyi</i>)	Proposed Endangered	Potential habitat: • Suitable habitat supports foraging, nesting & overwintering in a wide array of habitat types in elevations ranging from 6,000 – 10,000 ft. (USFWS 2024). Relies on pollen and nectar from plants from the <i>Asteraceae</i>, <i>Fabaceae</i>, <i>Rosaceae</i>, <i>Plantaginaceae</i>, and <i>Salicaceae</i> families (USFWS 2024) • The Project Area is within the lower elevational bound of suitable habitat but does contain flowering forbs associated with the species. The species has not been observed in the United States since 2016 (USFWS 2024). • Due to the size and scope of the Proposed Action, it is not expected to jeopardize the continued existence of <i>B. suckleyi</i>.
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Effects of the Proposed Action on Species Evaluated

Plants

Ute Ladie's-tresses (*Spiranthes diluvialis*)

Analysis methodology

The entirety of the pipeline is 12.2 miles long. However, only the first 6.5 miles are within habitats that could support *S. diluvialis* because the river then changes from a slow meandering system to a fast-moving system as the grade of the surrounding area increases. Because of this, the Analysis Area only covers the first 6.5 miles of the Project Area with a 300-foot buffer around it (Map 1) for a total of 559.4 acres (Table 4). Due to the habitat characteristics observed, only 11.65 acres of the Analysis Area was considered suitable for *S. diluvialis* (Maps 2-9). Within the Analysis Area the suitable habitat occurs along the Price River associated in fringe wet meadows, with the highest-quality habitat observed directly adjacent to the open water of the river. All of the National Wetland Inventory areas within the Analysis Area contain habitat suitable for *S. diluvialis*. Table 4 details the land management or landowner of the suitable habitat within the analysis area.

Table 4: Total acres in the Analysis Area

Area	Acres
Analysis Area	559.4
Suitable habitat in the Analysis Area	11.65
Suitable habitat in the Project Area (ROW)	0.18

Table 5: Acres of suitable habitat by land status in the Analysis Area

Land Status	Acres of suitable habitat
-------------	---------------------------

BLM	0.79
SITLA	1.02
Private	9.84

Botanical Survey

In 2025 the entirety of the Project Area and Analysis Area was assessed for *S. diluvialis* habitat, with 11.65 acres considered suitable (Maps 3-9) (WESTERN-ENVIRO Resources, Inc. 2026a). Vegetation associations, geology, hydrology, and substrate qualities were considered indicators of habitat suitability, in accordance with documented and surveyor personal knowledge of known habitat parameters specific to the species. The 2025 assessment took place outside of the survey window for *S. diluvialis* and focused on identifying and mapping suitable habitat. In August of 2026 surveys for *S. diluvialis* took place in all 11.65 acres of suitable habitat within the Analysis Area. There were no *S. diluvialis* individuals found (WESTERN-ENVIRO Resources, Inc. 2026b). No occurrences of *S. diluvialis* have been reported within two miles of the project ROW (UDWR 2026, Fertig et al. 2005). The nearest known occurrence of the species is located 10.4 miles south of the southeastern end of the Project Area within the Price River Watershed.

Critical Habitat

No critical habitat has been designated for this species.

Direct & Indirect Effects

Approximately 11.65 acres of suitable *S. diluvialis* habitat were mapped within the Analysis Area; 9.84 acres on private property, 1.02 acres of SITLA, and 0.79 acres on BLM administered land (Table 4). Where possible, the ROW width was adjusted to avoid direct impacts to suitable habitat (Maps 3-9). Because of this, the Proposed Action is able to avoid direct impacts to 0.47 acres of habitat. This includes one section where 0.08 acres of habitat will be avoided by using directional drilling to install the pipe underground without any surface disturbance. Following this mitigation, 0.11 acres of suitable habitat are within the Project Area. Because of the need to connect to an essential junction point, there are three areas of suitable habitat within the ROW that cannot be avoided (Map 3). There, 0.06 acres would be directly impacted due to the proximity to the ROW and the digging of a trench in which the new pipeline would be buried. Additionally, 0.05 acres of suitable habitat are within the Project Area adjacent to the spring connection point. To minimize direct impacts, the ROW width has been decreased down to 30 feet where it crosses suitable habitat (Maps 3-9). Indirect disturbance could occur within 300ft of the construction activities within the ROW. Indirect impacts to suitable habitat could include degradation of habitat related to the establishment and spread of invasive species, spread of fugitive dust, and potential sedimentation into suitable habitat. Approximately 120 acres of disturbance within the ROW could become more vulnerable to establishment and

spread of noxious weeds. Indirect effects are reduced through weed control and dust suppression requirements, see table 5. In addition, construction activities would occur outside the bloom window.

Table 6: Acres of direct and indirect impacts to suitable *S. diluvialis* habitat expected to occur from the Proposed Action

Impact type	Acres of impact
Direct	0.11
Indirect	11.54

Determination & Rationale

Potential impacts to *S. diluvialis* from the Proposed Action would be both direct and indirect. Although 11.65 acres of suitable habitat occurs in the Project Area, only 0.05 acres of the suitable habitat would be directly disturbed through the digging of a trench for the new pipeline. The ROW was narrowed to 30 feet where it touched the suitable habitat, the pipeline was routed around habitat where possible to reduce direct impacts, and the applicant would bore under 0.08 acres of suitable habitat. In addition, the disturbance will be temporary and outside the bloom window, as the construction activities are anticipated for up to three months. Following the work, the area would be reseeded with a native seed mix.

Indirect impacts could occur in 11.54 acres of suitable habitat in the Project Area. These impacts would primarily be related to construction disturbance and would be temporary. Less than three months of construction work would take place and occur outside the bloom window. Therefore the effects of dust would be minimized. Weed control measures would be implemented to reduce impacts related to non-native and invasive plant species and erosion control measures would be implemented to minimize adverse impacts related to sedimentation (Table 7).

The **Proposed Action May Affect but is Not Likely to Adversely Affect** *S. diluvialis* because the project will directly impact less than 0.11 acres of suitable habitat that was unoccupied after 1 year of survey and the disturbance will be limited to three months, as well as occur outside the bloom window.

Applicant Committed Conservation Measures

Conservation measures have been developed to reduce the impacts resulting from the Proposed Action to *S. diluvialis* individuals and suitable habitat. Table 5 summarizes mitigation measures that would be implemented.

Table 7: Applicant committed conservation measures for the Proposed Action.

Specific Activity	Applicable conservation measures
Habitat Avoidance	• To minimize direct impacts to suitable <i>S. diluvialis</i> habitat, directional drilling would be utilized to install the pipeline underneath 0.08 acres of suitable habitat within the ROW.
Reclamation & Revegetation of the Project Area	• Vehicles and equipment used in the project area will be moderated to reduce compaction of soil as much as possible. • Low-compaction grading methodology will be implemented in areas where earthwork is necessary, leaving surfaces loose and uncompacted. Soils will be loosely dumped onsite, and finish grading will be completed with smaller equipment, such as a bobcat, to avoid unnecessary soil compaction. Soils will not be “tracked-in” (Sweigard et al. 2007). • Reclamation seed mixes will exclude introduced and non-native species in all habitat types that are restored. • All areas subject to temporary disturbance will be reclaimed with native plant seed mixes.
Noxious and Invasive Weed Control	• An Application for Pesticide Use Permit (PUP) will be required for chemical treatment of Utah Class A, B, and C noxious weeds. • Whenever possible, mechanical removal will be used for Utah Class A, B, and C noxious weeds within the proposed project area. • To reduce the potential spread/introduction of noxious and invasive weed species via project-related vehicles and equipment into the project area, project employees and contractors will not drive outside of approved roads. • Post-construction monitoring to detect infestations of noxious species for early detection and treatment would occur.

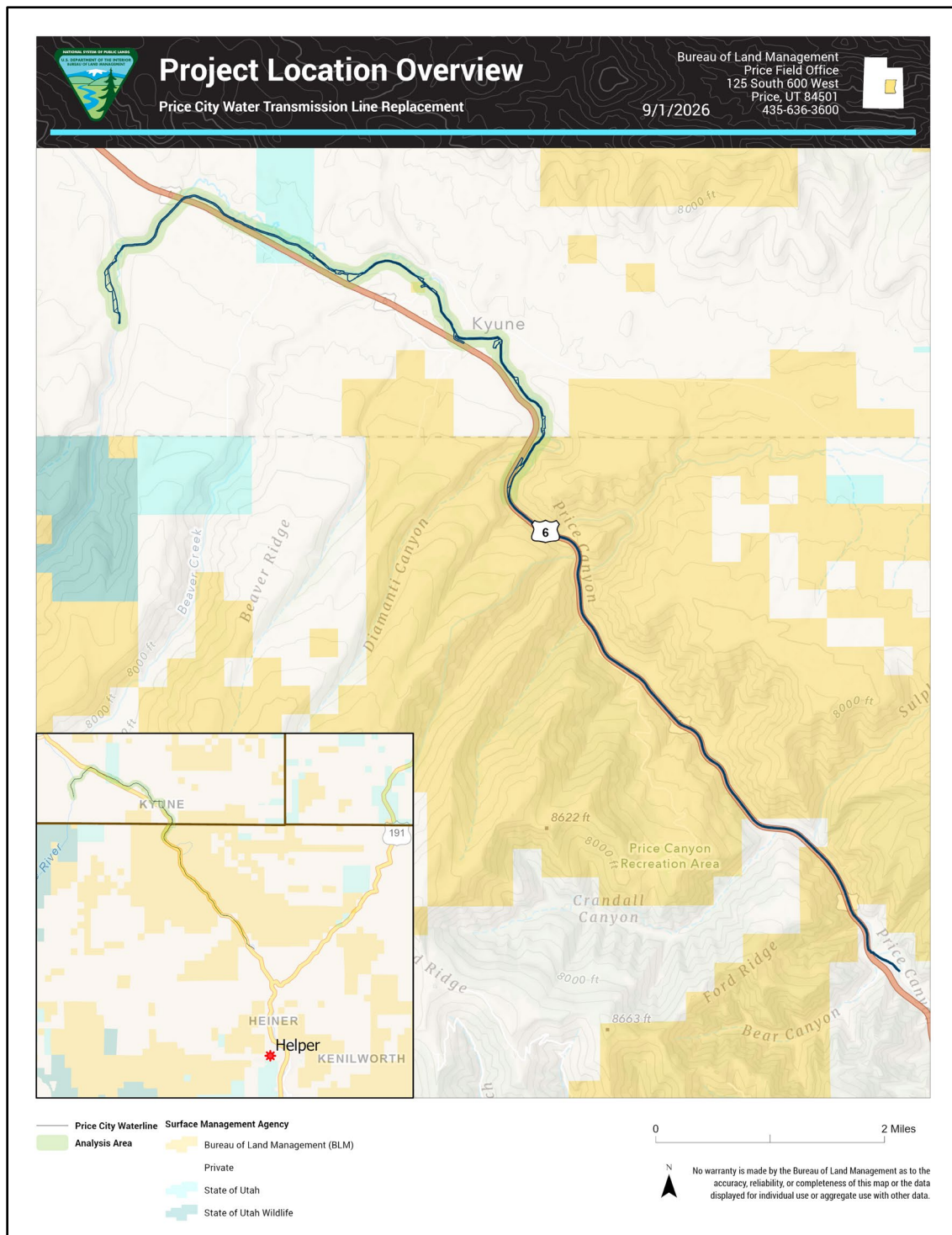
Literature Cited

- Bureau of Land Management. 2026. Staff Report: Review of Mexican Spotted Owl Habitat for the Price City Water Transmission Line Replacement. Sarah Baldwin. Price Field Office, Price, UT, USA.
- Fertig, W., R. Black, and P. Wolken. 2005. Rangewide Status Review of Ute Ladies'-Tresses (*Spiranthes diluvialis*). U.S. Fish and Wildlife Service and Central Utah Water Conservancy District. Salt Lake City, Utah. 101 pp.
- Halterman, M., M.J. Johnson, J.A. Holmes and S.A. Laymon. 2015. A Natural History Summary and Survey Protocol for the Western Distinct Populations Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45p.
- Lewis, L. R. 2014. Habitat Characteristics of Mexican Spotted Owls (*Strix occidentalis lucida*) in the Canyonlands of Southern Utah. All Graduate Theses and Dissertations, Spring 1920 to Summer 2023. 3335.
<https://digitalcommons.usu.edu/etd/3335>
- Minckley, W. L., P. C. Marsh, J. E. Brooks, J. E. Johnson, and B. L. Jensen. 1991. Management Towards Recovery of the Razorback Sucker. pp. 303–317.
- St. John, L., Ogle, D. 2009. USDA Plant Guide. Ute Lady's Tresses (*Spiranthes diluvialis*). USDA-Natural Resources Conservation Service, Idaho Plant Materials Center. Aberdeen, ID.
- Sweigard R., J. Burger, C. Zipper, J. Skousen, C. Barton, and P. Angel. 2007. Low Compaction Grading to Enhance Reforestation Success on Coal Surface Mines. The Appalachian Regional Reforestation Initiative. Forest Reclamation Advisory No. 3
- U.S. Fish and Wildlife Service. 1987. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. U.S. Forest Service, Region 6, Denver, Colorado.
- U.S. Fish and Wildlife Service. 1998. Razorback Sucker (*Xyrauchen texanus*) Recovery Plan. Denver, Colorado. 81 pp.
- U.S. Fish and Wildlife Service. 2007. Ute Ladies-tresses Field Survey Guidelines. U.S. Fish and Wildlife Service – Utah Ecological Services Field Office March 12, 2007. Memorandum. 3 pp.
- U.S. Fish and Wildlife Service. 2012. Mexican Spotted Owl Recovery Plan, First Revision (*Strix occidentalis lucida*). Prepared by the Mexican Spotted Owl Recovery Team. Region 2, Southeast Region. Albuquerque, New Mexico.

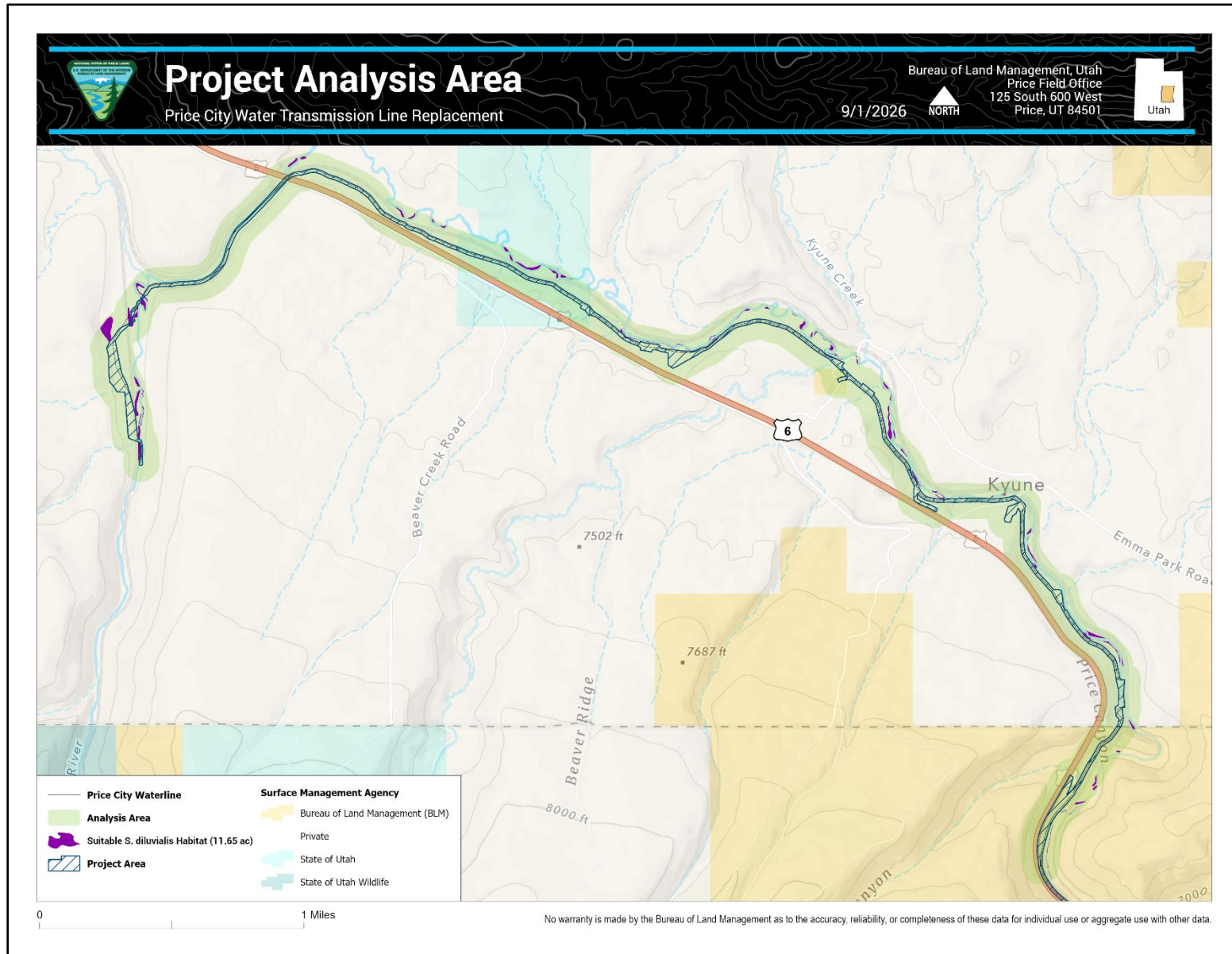
- U.S. Fish and Wildlife Service. 2024. Species Status Assessment Report for the Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*), Version 1.0. August 2024. Alaska Region. 131 pp.
- Utah Division of Wildlife Resources. 2026. Wildlife Habitat Analysis Tool (WHAT), Utah Division of Wildlife Resources, Utah Department of Natural Resources. <https://wildlife.utah.gov/wildlife-habitat-analysis-tool.html>. Accessed January 2026.
- Welsh, S.L., Atwood, N.D., Goodrich, S., and L.C. Higgins, editors. 2015. A Utah Flora. Fifth edition, revised. Brigham Young University, Provo, Utah.
- WESTERN-ENVIRO Resources, Inc. 2026a. Final Biological Assessment – Botanical and Wildlife Resources. Prepared for PROPOSED PRICE City Project 9C-2025 – Spring Water Transmission Line Replacement. 58 pages.
- WESTERN-ENVIRO Resources, Inc. 2026b. Spring Water Transmission Line Replacement – *Spiranthes diluvialis* Survey Results –2026. Memo.
- Western Monarch Milkweed Mapper. 2026. <https://www.monarchmilkweedmapper.org>. [Accessed July 2026].
- Xerces Society for Invertebrate Conservation. 2018. Managing for Monarchs in the West: Best Management Practices for Conserving the Monarch Butterfly and its Habitat. 106+vi pp. Portland. (Available online at www.xerces.org).

Appendix A – Maps

Map 1: Project location overview



Map 2: Overview of the Project Analysis Area





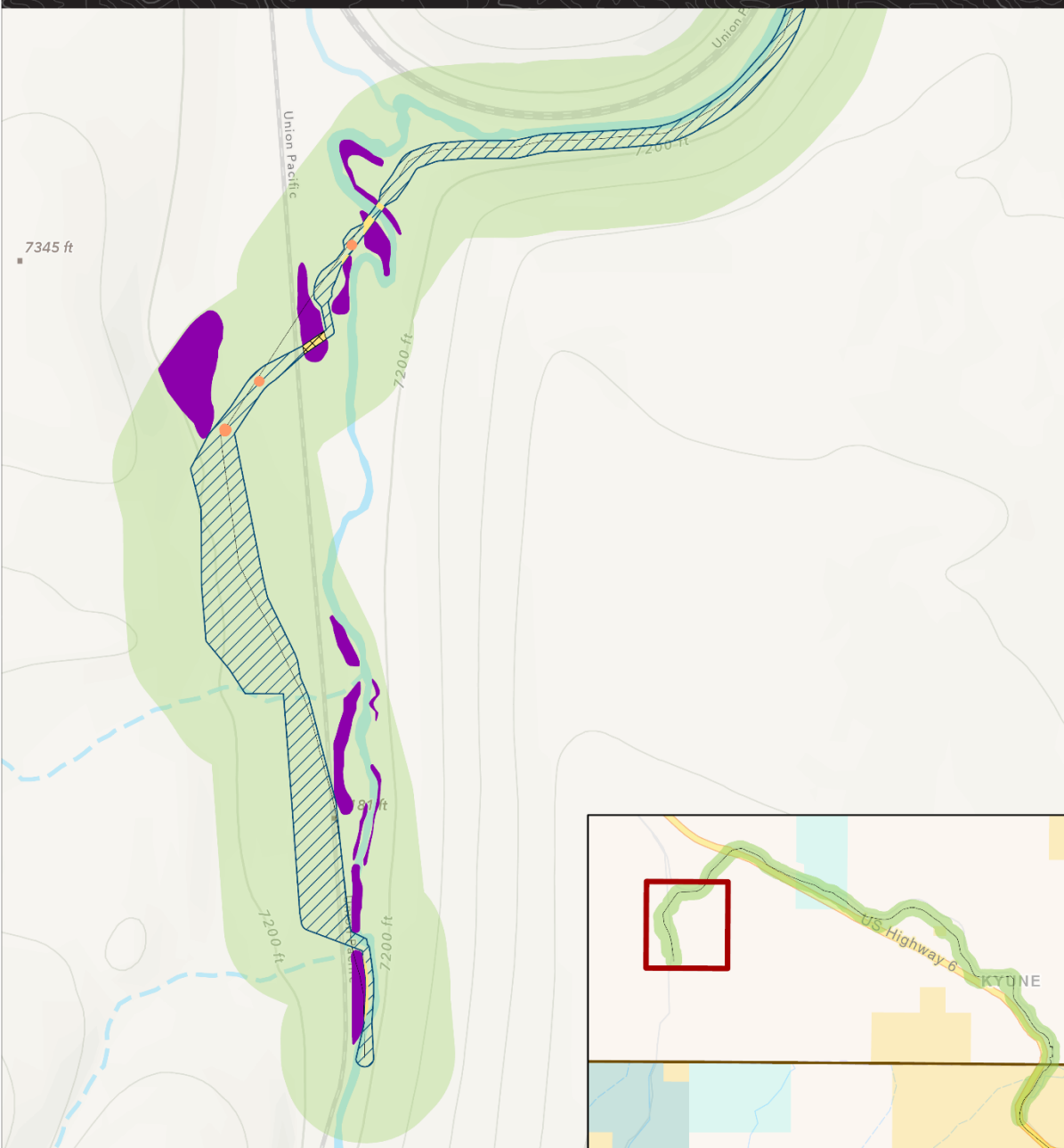
Map 3: Project Location Detail

Price City Water Transmission Line Replacement

Bureau of Land Management
Price Field Office
125 South 600 West
Price, UT 84501
435-636-3600

9/1/2026





Price City Waterline

- Analysis Area
- Suitable *S. diluvialis* Habitat (4.86 ac)
- Suitable Habitat in Project Area (0.18 ac)
- Suitable Habitat Drilled Under (0.08 ac)
- Junction Box

Surface Management Agency

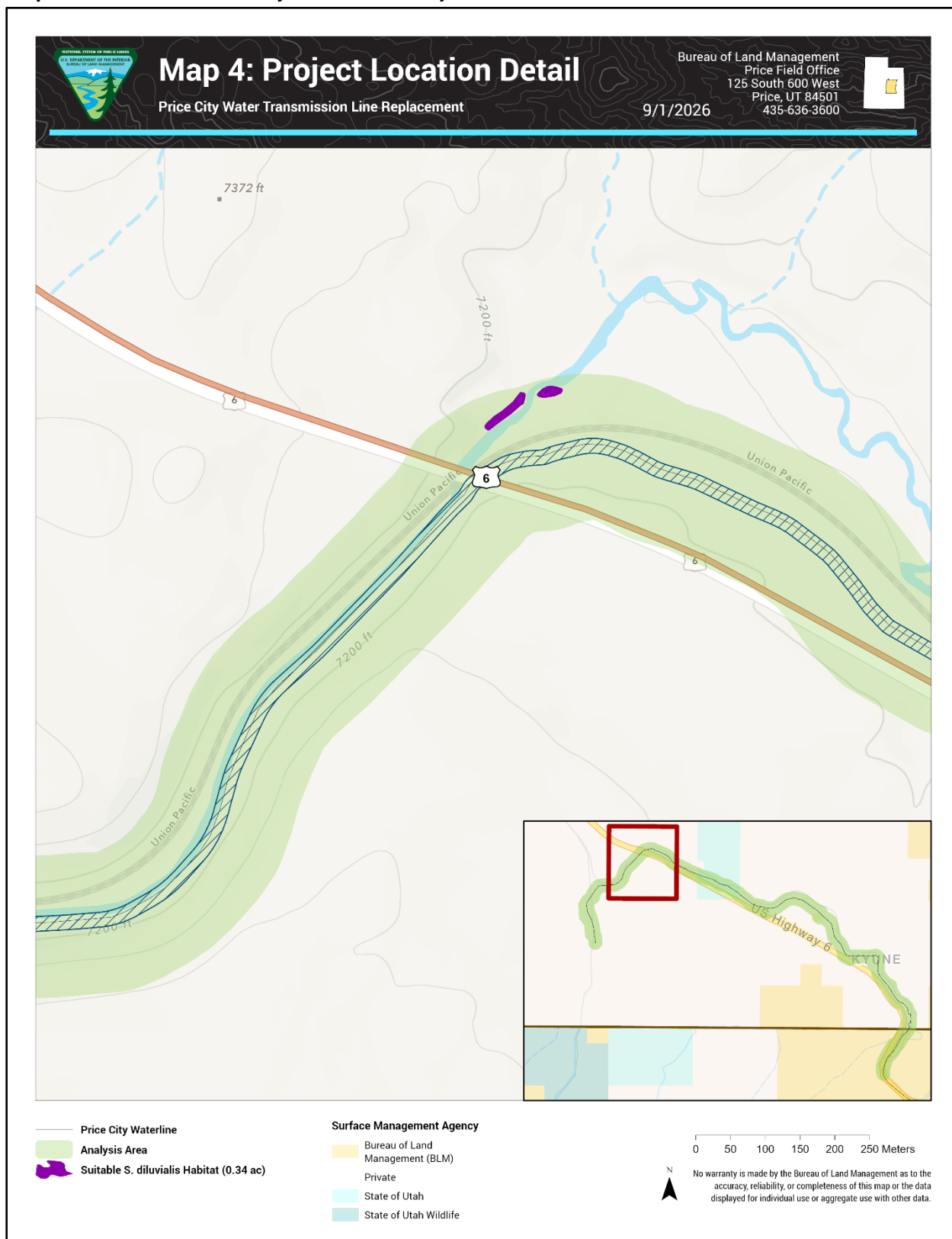
- Bureau of Land Management (BLM)
- Private
- State of Utah
- State of Utah Wildlife

0 50 100 150 200 250 Meters

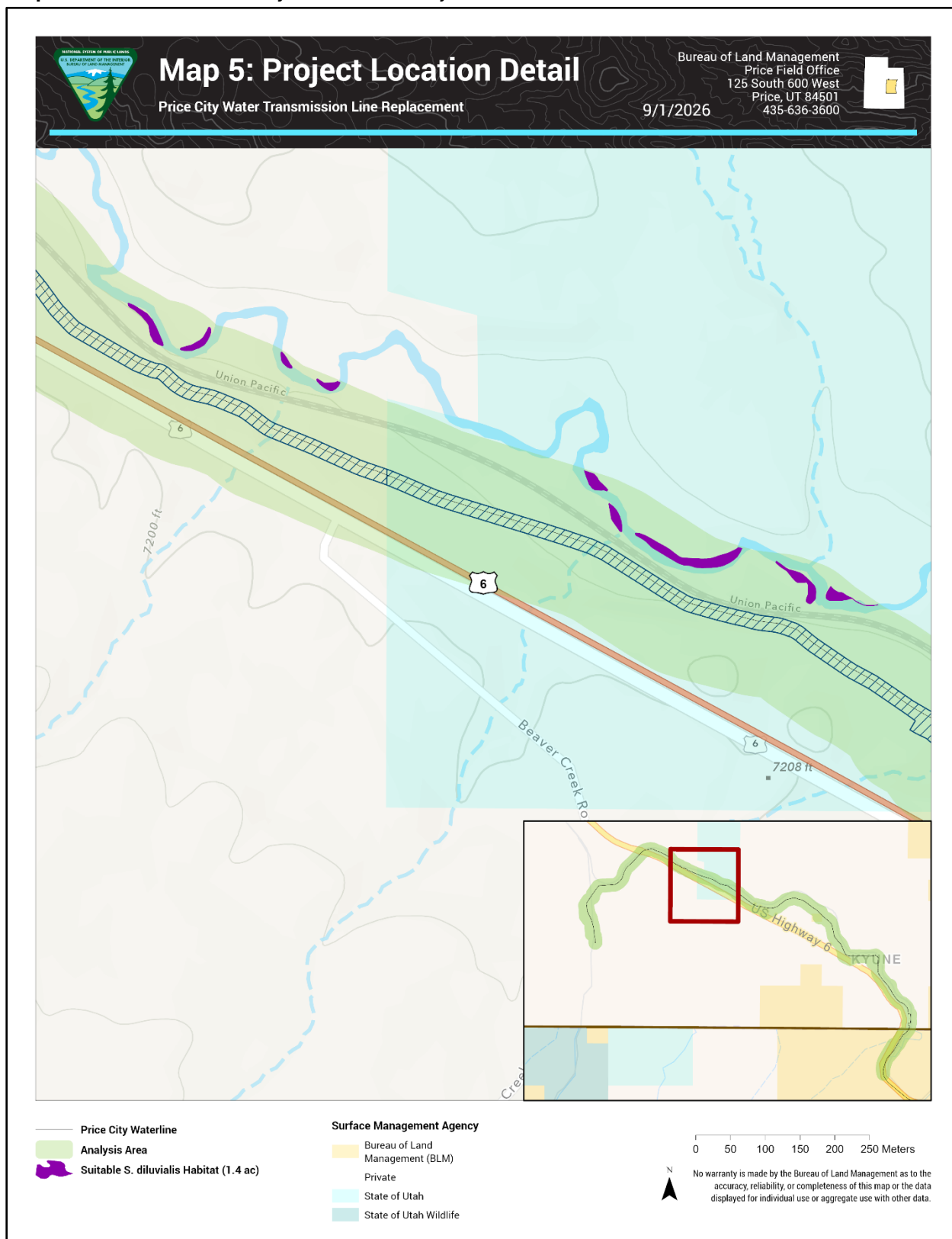


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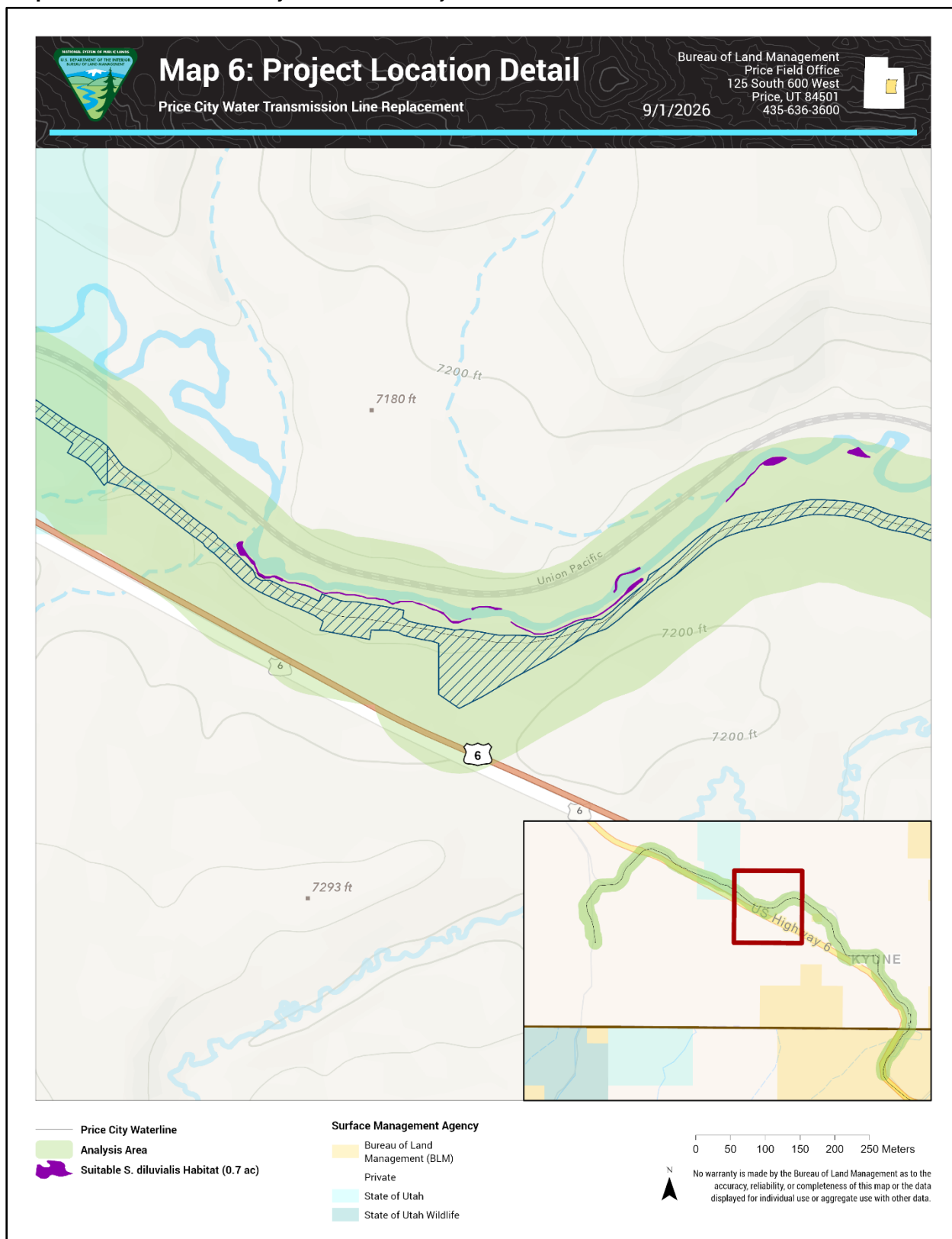
Map 4: Detailed view of Analysis Area and Project Area



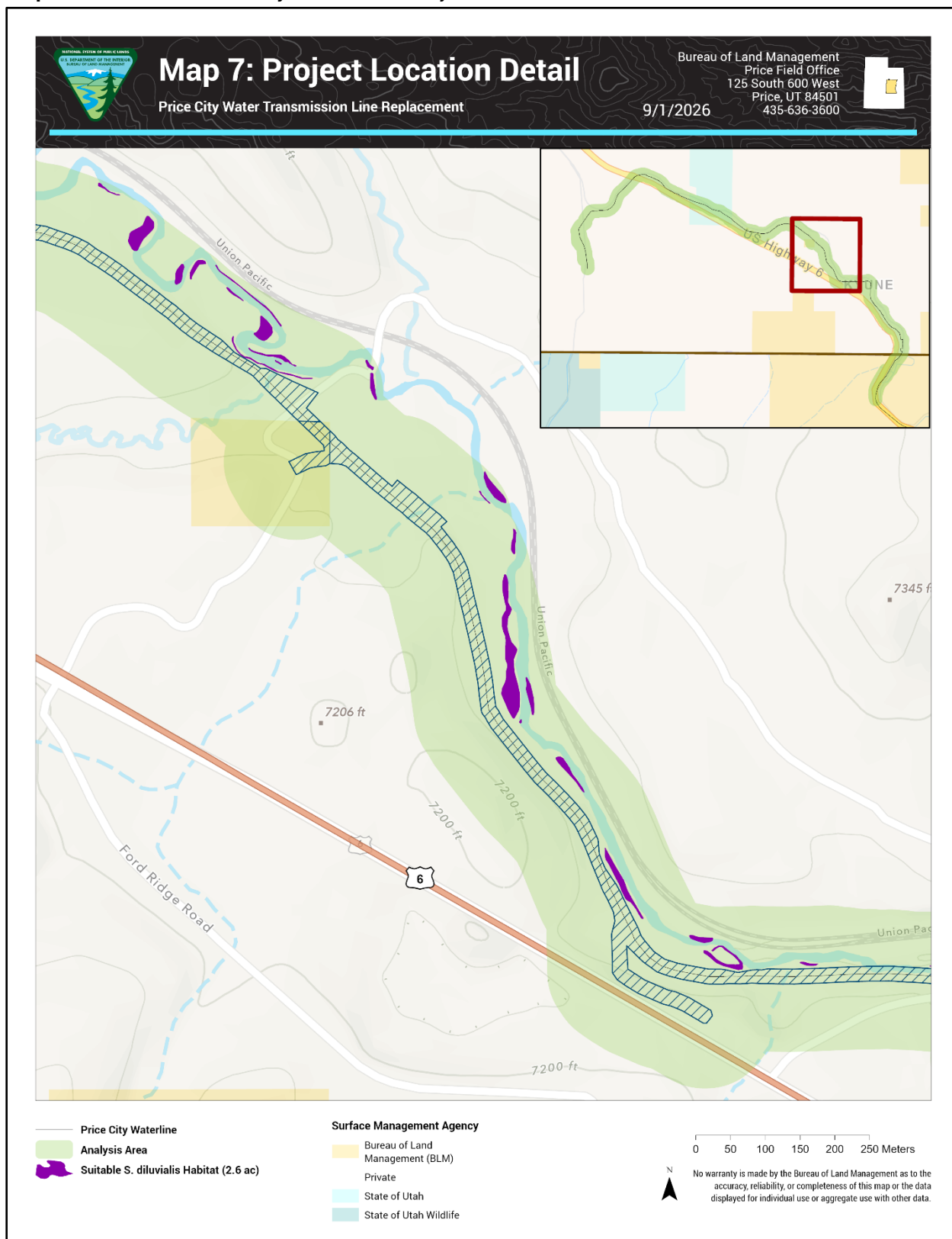
Map 5: Detailed view of Analysis Area and Project Area



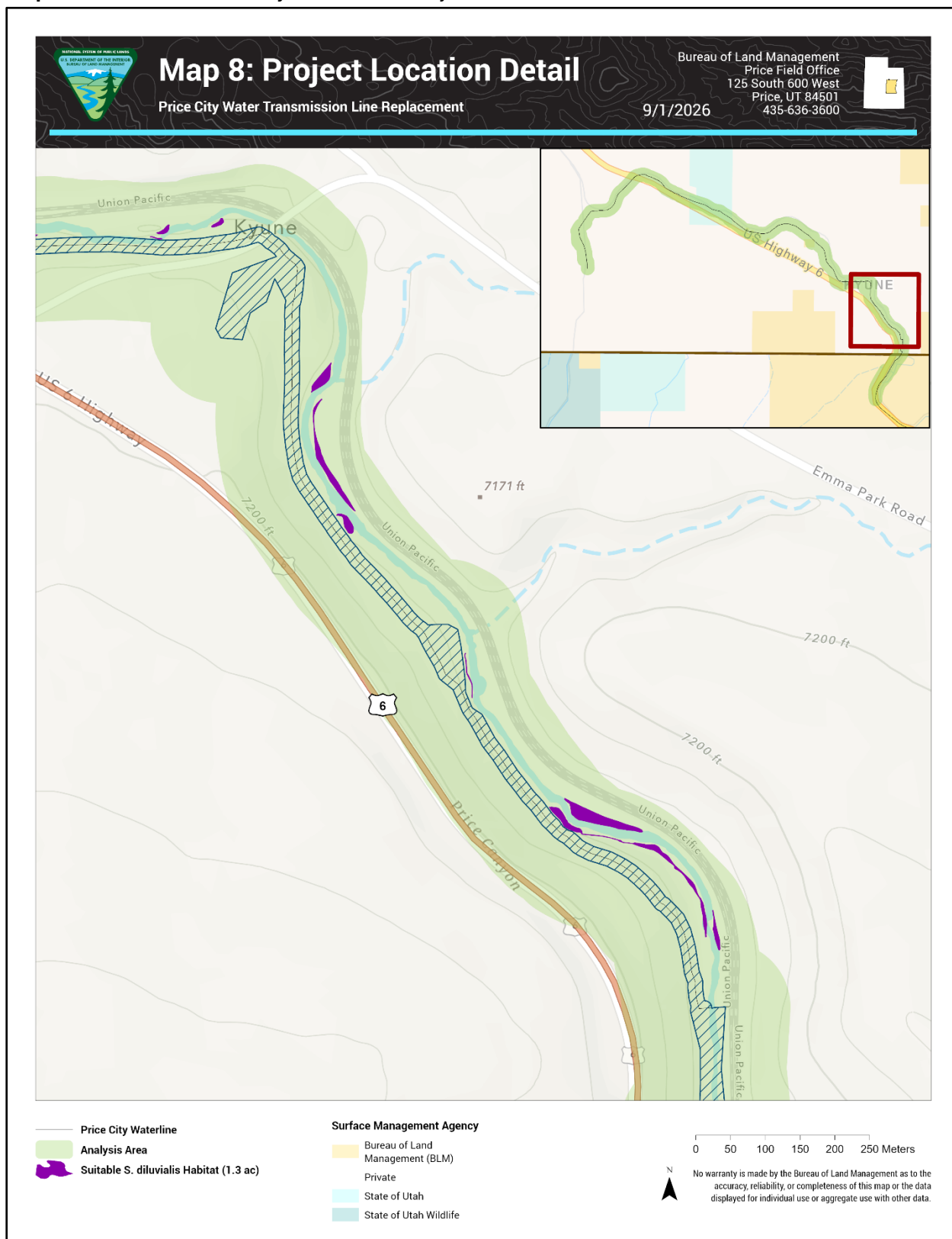
Map 6: Detailed view of Analysis Area and Project Area



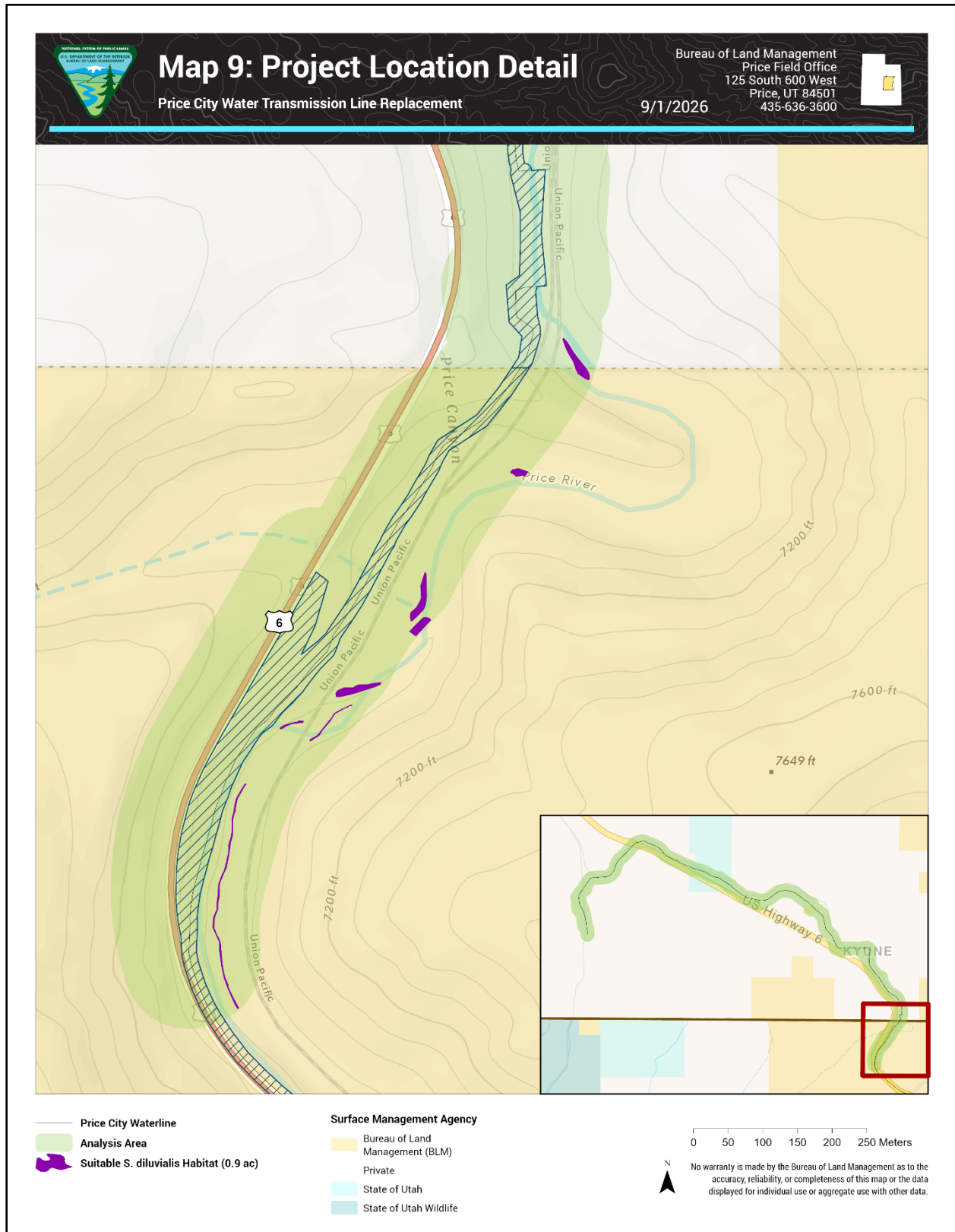
Map 7: Detailed view of Analysis Area and Project Area



Map 8: Detailed view of Analysis Area and Project Area



Map 9: Detailed view of Analysis Area and Project Area



Appendix B – Photos of the Project Area

Image 1: Suitable habitat for *S. diluvialis* on BLM managed land at the western end of the Project Area. Picture taken in July of 2026 facing south.



Image 2: Price River floodplain in the norther portion of the Project Area. Image taken October 2025 facing northeast (WESTERN-ENVIRO Resources, Inc. 2026a).



Image 3: View of Price Canyon with the Price River and existing infrastructure, including Highway 6, the UPRR, and overhead powerlines. Photo taken at the western end of the Project Area on October 2025, facing south (WESTERN-ENVIRO Resources, Inc. 2026).

