

**AQUATIC WILDLIFE HABITAT ASSESSMENT  
CAERUS OIL AND GAS  
PCU A27-197 CDP PAD**



*Cover Photo: General habitat conditions surrounding the proposed CDP pad location.*

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## INTRODUCTION

Caerus Oil and Gas (Caerus) requested that WestWater Engineering (WestWater) conduct an aquatic wildlife habitat assessment for the proposed PCU A27-197 CDP pad location and adjoining access road (Figure 1). The project would be located on surface administered by the Bureau of Land Management (BLM) White River Field Office (WRFO) in Section 27, Township 1 South, Range 97 West.

The habitat assessment was conducted on September 21, 2022. The objective of the survey was to document potential habitat for aquatic wildlife within ¼ mile of the project area within areas identified as Aquatic Sportfish Management Waters by Colorado Parks and Wildlife (Figure 2).

## PROJECT AREA DESCRIPTION

### Terrain

The proposed PCU A27-197 CDP pad would be located in the valley bottom of Lee Gulch at an elevation of approximately 6,300 feet. The area surrounding the proposed pad location is composed of gently rolling ridges divided by draws and drainages that flow west towards Piceance Creek. There are no prominent topographic features present in the general vicinity.

### Vegetation

The proposed CDP pad and access road would be located in an area primarily composed of Basin big sagebrush shrublands with an understory of grass and forb species. Common plants observed in the project area are presented in Table 1.

**Table 1. Common plant species observed during surveys.**

| Common Name          | Scientific Name                  | Abundance* | Habitat Type         |
|----------------------|----------------------------------|------------|----------------------|
| <b>Grasses</b>       |                                  |            |                      |
| Cheatgrass           | <i>Bromus tectorum</i>           | xx         | Sagebrush shrublands |
| Indian ricegrass     | <i>Achnatherum hymenoides</i>    | x          | Sagebrush shrublands |
| Muttongrass          | <i>Poa fendleriana</i>           | xx         | Sagebrush shrublands |
| Squirreltail         | <i>Elymus elymoides</i>          | xx         | Sagebrush shrublands |
| Western wheatgrass   | <i>Pascopyrum smithii</i>        | xxx        | Sagebrush shrublands |
| <b>Forbs</b>         |                                  |            |                      |
| Curveseed butterwort | <i>Ceratocephala testiculata</i> | xxx        | Sagebrush shrublands |
| Desert madwort       | <i>Alyssum desertorum</i>        | xxx        | Sagebrush shrublands |
| Flatspine stickseed  | <i>Lappula occidentalis</i>      | xxx        | Sagebrush shrublands |
| Plains prickly pear  | <i>Opuntia polyacantha</i>       | xxx        | Sagebrush shrublands |

| Common Name  | Scientific Name                        | Abundance* | Habitat Type                         |
|--|--|------------|--------------------------------------|
| Scarlet gilia  | <i>Ipomopsis aggregata</i>             | x          | Sagebrush shrublands                 |
| <b>Shrubs/Trees</b>  |  |            |                                      |
| Basin big sagebrush  | <i>Artemisia tridentata tridentata</i> | xxx        | Sagebrush shrublands                 |
| Broom snakeweed  | <i>Gutierrezia sarothrae</i>           | x          | Sagebrush shrublands                 |
| Greasewood   | <i>Sarcobatus vermiculatus</i>         | xx         | Sagebrush shrublands                 |
| Prairie sagewort   | <i>Artemisia frigida</i>               | xx         | Sagebrush shrublands, pinyon/juniper |
| Rubber rabbitbrush   | <i>Ericameria nauseosa</i>             | xx         | Sagebrush shrublands, pinyon/juniper |
| *Abundance: x = uncommon frequency, xx = moderate frequency, xxx= common frequency |  |            |                                      |

## AQUATIC WILDLIFE HABITAT ASSESSMENT

### Survey Methods

WestWater biologists conducted pedestrian surveys within ¼ mile of the project features in areas identified by CPW as Aquatic Sportfish Management Waters. All observations and survey tracks were recorded using handheld Global Positioning System (GPS) receivers and locations were recorded as Universal Transverse Mercator (UTM) coordinates (Datum: NAD 83, Zone: 12). Photographs were taken of the habitat, terrain, and biological features found during the survey.

### Results

The proposed pad would be located in the valley of Lee Gulch within the 500-foot buffer for CPW-mapped Aquatic Sportfish Management Waters as shown on Figure 2. Lee Gulch is an ephemeral channel with no Ordinary High Water Mark (OHWM). No signs of ponding or perennial water sources were observed during the surveys within ¼ mile upstream or downstream of the pad location along Lee Gulch. The drainage lacked a defined bed and bank as shown in Photo 1, below. The channel is nearly always dry, except after storm events. The channel does not contain habitat that would support aquatic wildlife species. The drainage bottom is also used as a two-track road to access Bureau of Land Management (BLM) administered lands. After storm events, sheetflow likely occurs along the two-track road where the channel would be located. Additional photographs of the project area and the drainage are attached in Appendix A.

The proposed CDP pad would be located 5,183 feet upstream from Piceance Creek (a perennial stream). Piceance Creek is mapped as Gold Medal Waters and Aquatic Native Species Conservation Waters (COGCC 2022a). Rio Blanco County Road 5 is located between Piceance Creek and Lee Gulch.





*Photo 1: Ephemeral channel depicted as Photo Point 1 on Figure 2.*

## **Conclusion**

CPW defines Aquatic Sportfish Management Waters as waters where the protection and enhancement of these habitats is important to maintaining sportfish and their associated recreational opportunities. The management emphasis for these waters is directed towards both native and non-native fish populations that are sustained through natural reproduction (wild sportfish) or sustained through fish stocking based on various levels of water productivity (optimum versus intensive management) (CPW 2020). Based on CPW's definition of Aquatic Sportfish Management Waters, WestWater biologists determined that the stream reach within  $\frac{1}{4}$  mile of the proposed PCU A27-197 CDP pad location does not meet the definition for Aquatic Sportfish Management Waters and should be exempt from the COGCC 1202.c Rule (COGCC 2022b).

The proposed project has the potential to impact downstream water quality in Piceance Creek from potential spills occurring onsite during drilling and completions activities and by increased sedimentation during construction activities; however, with the implementation of appropriate spill prevention and stormwater management plans and installation of proper erosion control methods, impacts from the proposed project on aquatic species present downstream of the project should be negligible.

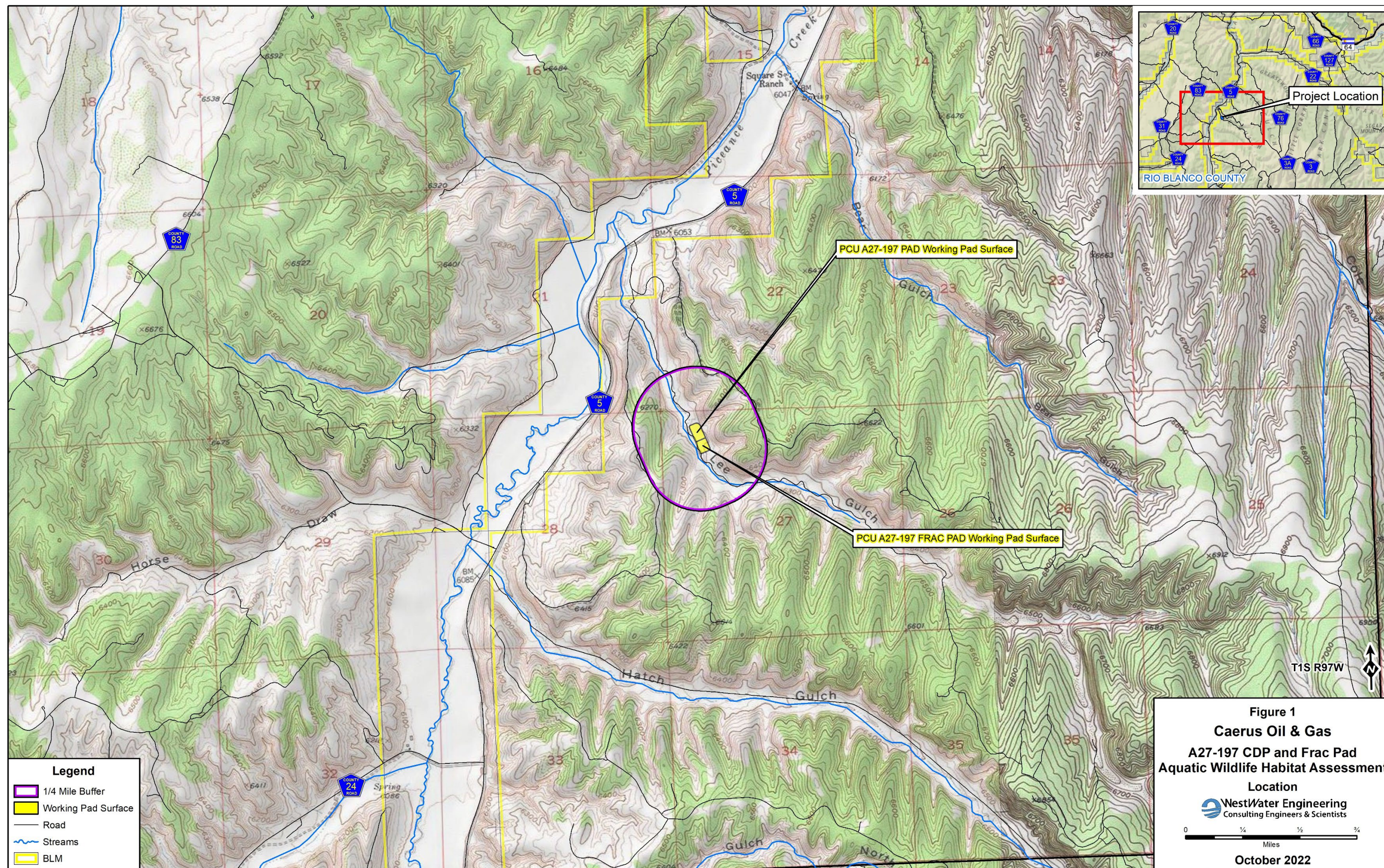
## REFERENCES

CPW. 2020. Native and Sportfish Definitions and Species Lists, Final 10/22/20. Colorado Parks and Wildlife.

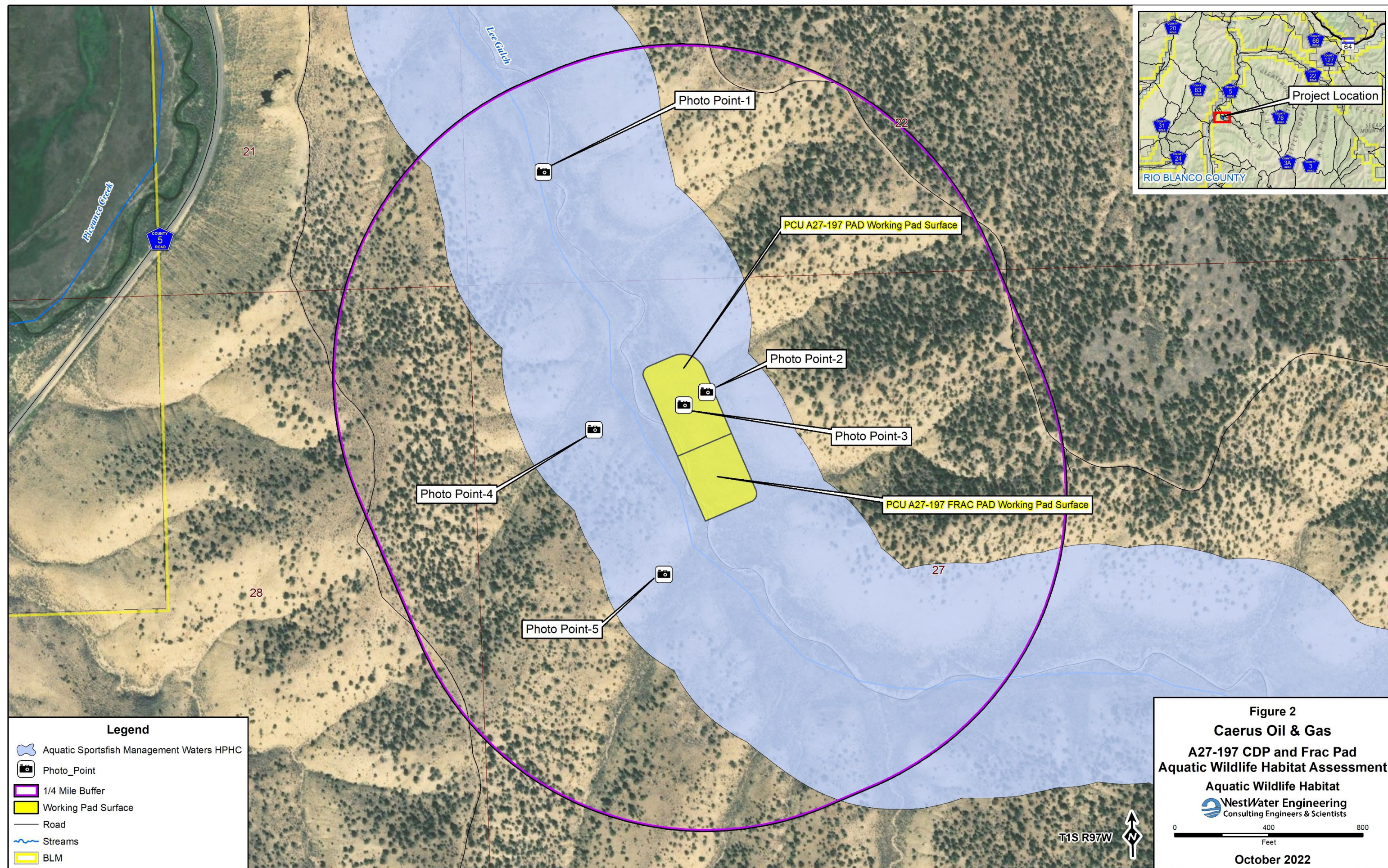
COGCC. 2022a. COGCC GIS Online available at:  
[https://cogccmap.state.co.us/cogcc\\_gis\\_online/](https://cogccmap.state.co.us/cogcc_gis_online/)

COGCC. 2022b. Protection of Wildlife Resources, 1200 Series Rules. Available online:  
<https://cogcc.state.co.us/documents/reg/Rules/LATEST/1200%20Series%20-%20Protection%20of%20Wildlife%20Resources.pdf>.











**APPENDIX A**  
**PHOTOGRAPHS**





Photo Point 1: View of Lee Gulch within survey area.



Photo Point 2: View of proposed CDP pad location.



Photo Point 3: View of proposed pad location.

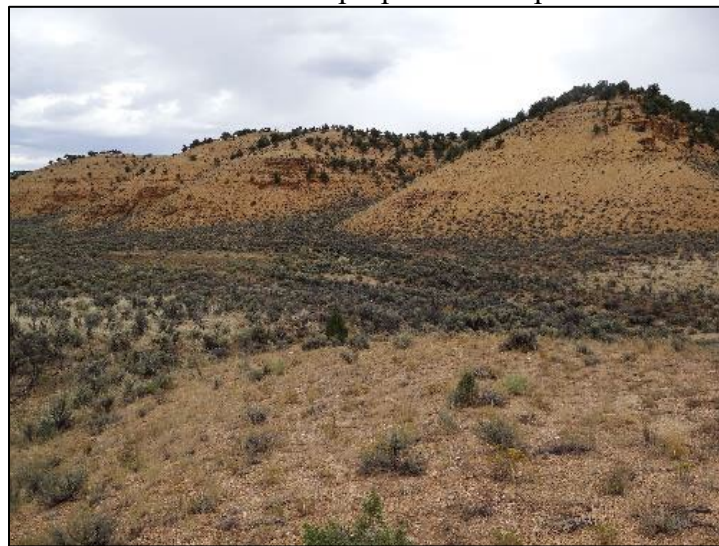


Photo Point 4: View of survey area.





Photo Point 5: View of project area looking northeast.



Photo A2: View of Lee Gulch drainage near CDP pad location.



Photo A1: View of Lee Gulch drainage near CDP pad location.



Photo A3: View of Lee Gulch drainage near CDP pad location.