



COLORADO

**Oil & Gas Conservation
Commission**

Department of Natural Resources

Wildlife Mitigation Plan

Kerr-McGee Oil and Gas Onshore LP

Swartz 2-4HZ

Weld County, Colorado

April 11, 2022

Prepared by:



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1.0 INTRODUCTION

Two Dot Consulting, LLC (2DOT) was contracted by Kerr-McGee Oil & Gas Onshore LP (KMOG), to complete a Wildlife Mitigation Plan (WMP) for the Swartz 2-4HZ project, which encompasses the proposed working pad surface (WPS), multi well pad, production facility, and access road (hereon cumulatively referred to as, "Site"). 2Dot, on behalf of KMOG, developed this WMP pursuant to Rules 304.c.(17) and 1201.b for Oil and Gas Locations within High Priority Habitat (HPH) and to reduce impacts to wildlife resources at the proposed Site. Consultation with Colorado Parks and Wildlife (CPW) was conducted on Site on December 8, 2021. The wildlife mitigation plan has been developed for approval by CPW. This wildlife mitigation plan is site specific to the proposed Swartz 2-4HZ facility and will apply for the life of the planned development.

2.0 SITE DESCRIPTION

2.1 SITE AND DEVELOPMENT OVERVIEW

The Site is approximately 4.55 miles northwest of Platteville, Colorado; it is located in section 4, township 3 north, range 67 west, southwest of the intersection of County Road 19 and County Road 38. UTM coordinates for the approximate center of the Site are Easting -509235 Northing -4456564. Total acreage for the Site is 15.79 and the WPS is approximately 10.45 acres. The parcel (120904100029) is privately owned and leased by KMOG for oil and gas operations. Land use within the Site is agricultural and the surrounding land use includes agriculture, rangeland, and residential properties.

2.1.1 HIGH PRIORITY HABITATS

SB 181 309.e1 HPH

A bald eagle winter night roost with direct line of sight to the Site is located within 0.25 mile of the Site.

SB 181 1202.d HPH

The Site intersects mule deer severe winter range and mule deer migration corridor. However, due to the existing fence surrounding the proposed disturbance, CPW confirmed the mule deer HPH is inaccessible and waived application of 1202.d HPH based on field determination.

2.1.2 ALTERNATIVE LOCATION ANALYSIS

Pursuant to Rule 304.b.(2).B, an Alternative Location Analysis (ALA) was completed, please refer to Appendix A for the ALA.

2.2 DEVELOPMENT ACTIVITY

KMOG anticipates construction to begin in late spring/summer of 2023; tentatively scheduled from May-September. All phases of construction, including pad construction, drilling, and completion, will be scheduled to avoid timing stipulations for bald eagle winter night roosts. The duration of the drilling phase lasts approximately one month; during that time, a rig approximately 185-200 feet in height will be used on site and will be equipped with rig lights. Sound barriers will be utilized at this location to reduce noise and light pollution.

3.0 WETLANDS AND OTHER SURFACE WATERS

National Wetland Inventory (NWI) mapped freshwater emergent wetlands, ponds, and a riverine feature are located within 500 feet of the Site (United States Fish and Wildlife Service 2021). A National Hydrography Dataset (NHD) mapped lake is also located within 500 feet of the Site (United States Geological Survey 2021). These features have connectivity to Saint Vrain Creek. The nearest ordinary high-water mark (OHWM) was delineated downgradient of the Site, approximately 79 feet to the south.

Topography slopes east-southeast; surface water runoff will flow downgradient and towards the water features located south of the Site.

4.0 COLORADO OIL AND GAS COMMISSION 1202 OPERATING REQUIREMENTS

In accordance with COGCC (2021) 1202, Operating Requirements, KMOG will maintain compliance with applicable operating requirements as outlined below:

Yes	No	N/A	Operating Requirement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	304.c.(17) This Wildlife Mitigation Plan satisfies Rule 304.c.(17) and 1201.b.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1202.a.(1) The Site will be surveyed by 3 rd party biological contractor for black bear habitat suitability prior to permit submittal. In black bear habitat, KMOG will utilize appropriate bear-proof facilities that produce or store trash. A 3rd party survey determined this Site is not within black bear habitat.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1202.a.(2) KMOG will maintain a Standard Operating Procedure (SOP) for water suction hoses and transportation Tanks that meets 1202.a.(2). KMOG's 3 rd party contractors will use a CPW-approved disinfectant solution capable of killing whirling disease spores and other aquatic nuisance species defined by CPW. Disinfectant solution information will be made available upon request.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1202.a.(3) The Site will be surveyed by 3 rd party biological contractor prior to permit submittal. When it is suspected that a new location is within 500 feet of a water feature, an OHWM survey will be conducted. If the new Oil and Gas Location is within 500 feet of the OHWM of any river, perennial or intermittent stream, lake, pond, or wetland, KMOG will not situate new staging, refueling, or Chemical storage areas at the Oil and Gas Location; or KMOG will request a waiver from CPW and the COGCC. A 3rd party survey determined this Site is located within 500 feet of an OHWM and KMOG has received a waiver from the CPW and COGCC.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1202.a.(4) KMOG does not use Drilling Pits, Production Pits or any other Pits at Oil and Gas Locations in the Denver-Julesburg Basin (DJ Basin).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1202.a.(5) During construction of Pipelines regulated pursuant to the Commission's 1100 Series rules, KMOG will install wildlife exit ramps every ¼ mile for any trenches that are left open for more than 5 consecutive days.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1202.a.(6) KMOG will use CPW-recommended seed mix based on present soil conditions for interim and final reclamation conducted pursuant to Rules 1003 and 1004 and when consistent with the Surface Owner's approval and any local soil conservation district requirements. A Site-specific plan can be found in the reclamation plan. Seed mix information will be made available upon request.

Yes	No	N/A	Operating Requirement	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1202.a.(7)	Where fencing is required, KMOG will use CPW-recommended fence design when consistent with the Surface Owner’s approval and any Relevant Local Government requirements. Fence design specifications will be made available upon request.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1202.a.(8)	The Site will be surveyed by 3 rd party biological contractor for nests prior to permit submittal. Approximately two weeks prior to construction start, the approved location will be surveyed by 3 rd party biological contractor for nests. If an active nest is discovered, construction will be delayed, or a work-zone buffer will be provided around active nests. If no active nests are discovered, construction will proceed. Avian protection will be utilized throughout all operations.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1202.a.(9)	KMOG does not use Drilling Pits, Production Pits, or any other Pits at Oil and Gas Locations in the DJ Basin.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1202.a.(10)	The Site will be surveyed by 3 rd party biological contractor prior to permit submittal to identify WPS located between 500 feet and 1000 feet hydraulically upgradient from a High Priority Habitat identified in Rule 1202.c.(1).Q–S: Waters identified by CPW as “Gold Medal” (within 500 feet of OHWM); Cutthroat trout designated crucial habitat and native fish and other native aquatic species conservation waters (within 500 feet of OHWM); and/or Sportfish management waters not identified by CPW as “Gold Medal” (within 500 feet of OHWM). A 3rd party survey determined this Site is not between 500 feet and 1000 feet hydraulically upgradient from a High Priority Habitat identified in Rule 1202.c.(1).Q–S.

5.0 BEST MANAGEMENT PRACTICES

5.1 AVOIDANCE MEASURES

- Pad construction and drilling will be scheduled to avoid the timing stipulations of bald eagle winter night roost (November 15th - March 15th).

5.2 MINIMIZATION MEASURES

- The gates surrounding the operations area will remain closed and locked at all times to prevent wildlife from entering the property.
- A sound barrier will be installed during pad construction for drilling and completion operations to reduce noise pollution.
- Light pollution will be minimized by directing rig lighting downward and away from the Saint Vrain Creek river corridor; this practice will minimize impacts to BEWNR.
- KMOG will use CPW-recommended seed mix based on present soil conditions for interim and final reclamation conducted pursuant to Rules 1003 and 1004 and when consistent with the Surface Owner’s approval and any local soil conservation district requirements. Location specific plan can be found in the reclamation plan. Seed mix information will be made available upon request.

- Openings greater than two inches on equipment not running 24 hours a day will have avian protection installed.
- Approximately two weeks prior to construction start, the approved Site will be surveyed by 3rd party biological contractor for nests.
- A site-specific spill prevention, control, and countermeasure plan compliant with EPA rule 40 CFR 112 Subpart A, B, C will be created for this Site.
- Automated emergency response systems and emergency shutdown systems will be installed.
- Remote monitoring systems will be utilized at this Site.
- Vegetation will be controlled on the active Site throughout the life of the project.
- A Water On Demand system and pipelines will be utilized to bring water to location during completions to minimize truck traffic on Site.
- Periodic inspections for nests and of avian protection will occur throughout the life of the project.
- Training is provided to employees and contractors on wildlife conservation practices, including no harassment, feeding of wildlife, or illegal hunting.
- Fluids will be consolidated and centralized for collection and distribution to minimize impact to wildlife.
- Infrastructure and facility are adequately sized to accommodate planned production.
- Employees and contractors visiting the Site will follow KMOG rules for accessing the Site, including speed limits and access timing.

5.3 MITIGATION MEASURES

Direct Impacts

Consultation with CPW concluded that no direct mitigation fees are necessary to offset direct impacts to the mule deer severe winter range and the mule deer migration corridor. CPW waived this application of 1202.d HPH requirements for mule deer based on field determinations. The total acreage of the proposed disturbance is 15.79 acres.

Indirect Impacts

Following CPW consultation, it was confirmed that the Swartz 2-4HZ Site is in an area exceeding five active locations per square mile. Therefore, Rule 1203.d requirements for indirect impacts do not apply.

5.4 NOISE PLAN

In accordance with COGCC Rule 423.b(4) and Weld County Code Section 21-5-435.A.3, KMOG consulted with CPW staff on a noise plan for the Site. Pursuant to Rule 423, (5) A. B. KMOG will comply with the Continuous Monitor Placement at the Site. Four continuous monitors are currently planned; however, the number will be finalized and included in the Noise Monitoring Plan submitted with the Oil and Gas Development Plan application.

6.0 REFERENCES

Colorado Oil and Gas Conservation Commission. 2021. Available from:

<https://cogcc.state.co.us/reg.html#/rules>

United States Fish and Wildlife Service. 2021. National Wetland Inventory. Surface Water and Wetlands Mapper. Available from: <https://www.fws.gov/wetlands/Data/Mapper.html>

United States Geological Survey. 2021. National Hydrography Dataset. Available from:

<https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer>

APPENDIX I

Alternative Location Analysis

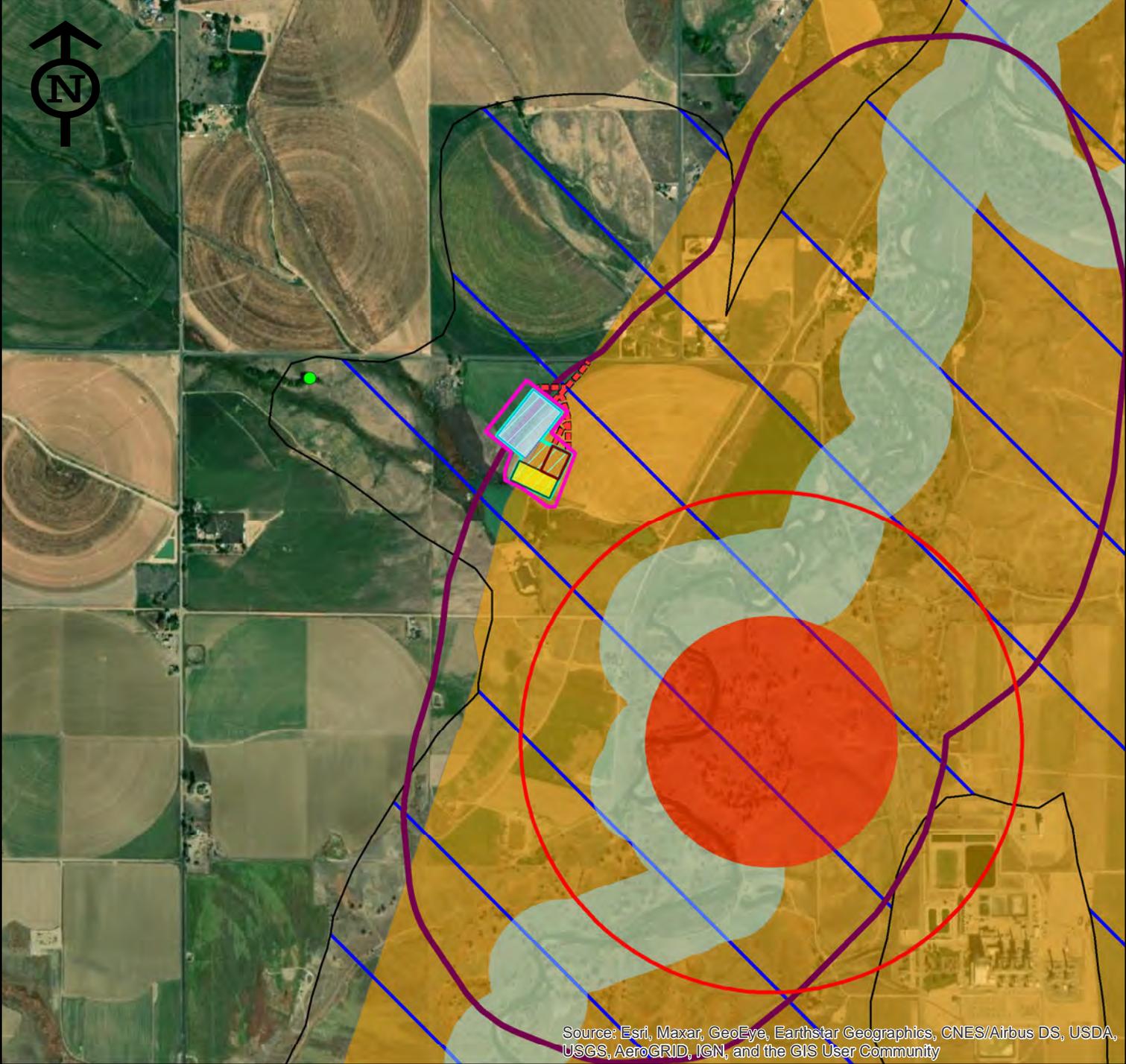
APPENDIX II

Site Figures

(602-90) Swartz 2-4HZ Refresh Preliminary Survey

SECTION 4, TOWNSHIP 3N, RANGE 67W, 6TH P.M. WELD COUNTY, CO

Map Location: X:\APC\602_Preliminary\602-90 Swartz Preliminary Survey\602-90 Refresh\Maps\COGCC\602-90 Swartz 3-4HZ_High Priority Habitat_211103.mxd



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- | | |
|------------------------------|---|
| Temporary Equipment Pad Area | Bald Eagle Active Nest Site - Half Mile Buffer |
| Working Pad Surface | Bald Eagle Roost - Quarter Mile Buffer |
| Production Facility | Aquatic Native Species Conservation Water |
| Multi Well Pad | Bald Eagle Active Nest Site - Quarter Mile Buffer |
| Disturbance Area | Mule Deer Migration Corridor |
| Raptor Nest | Mule Deer Severe Winter Range |
| Access Road | |

PREPARED BY:



7674 Grandview Ave., Ste. 210
Arvada, CO 80002

0 1,500
Feet



SOURCES:
Project Features, 2DOT 2021
and Kerr-McGee 2021.
Source Data Updated: 2/2021

PREPARED FOR:

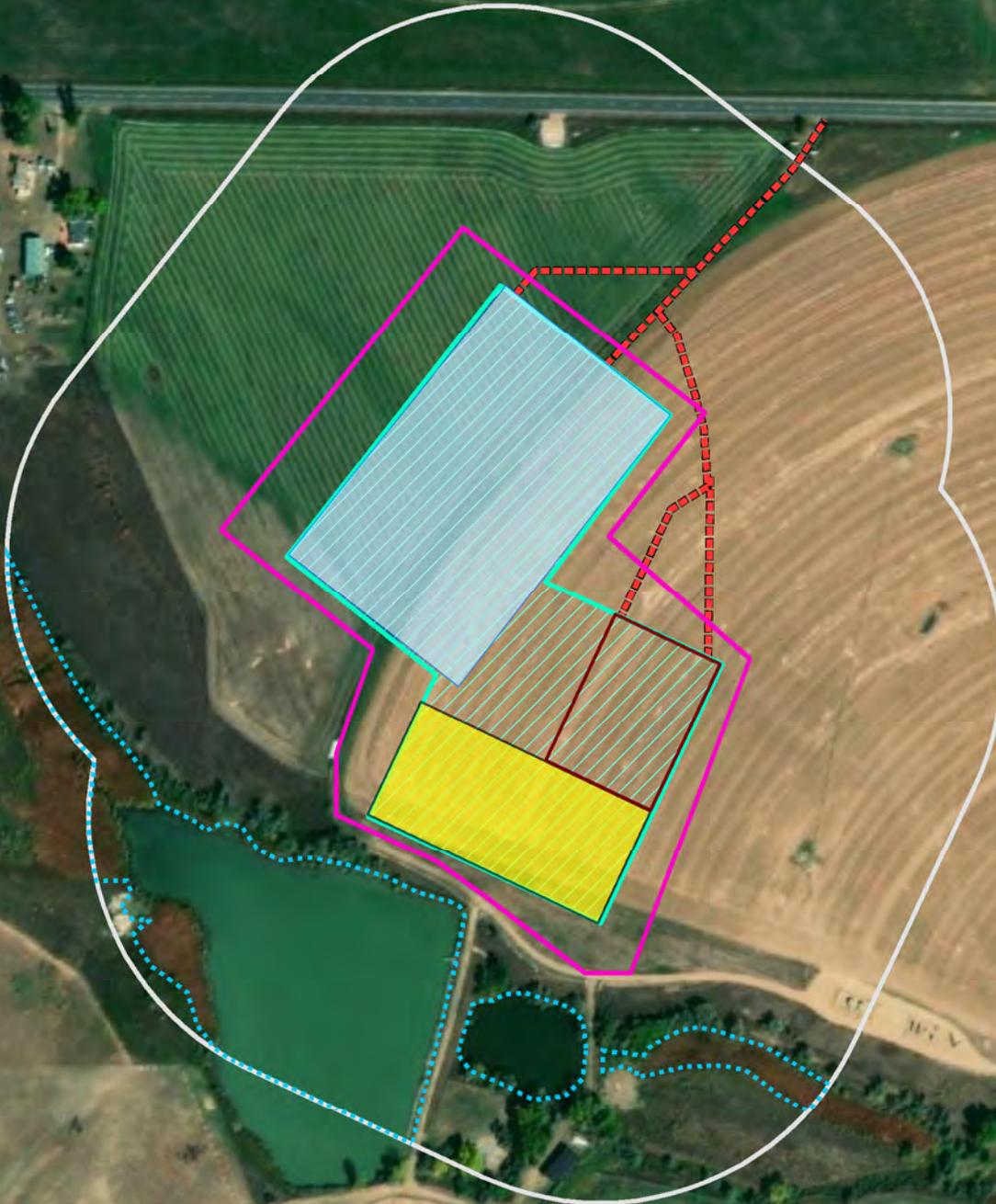


Projection: Nad83 UTM 13N Date: 11/12/2021
Drafted By: MC Reviewed By: MC

High Priority Habitat Map
Figure 1

(602-90) Swartz 2-4HZ Refresh

SECTION 4, TOWNSHIP 3N, RANGE 67W, 6TH P.M. WELD COUNTY, CO



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- Temporary Equipment Pad Area
- Working Pad Surface
- Production Facility
- Multi Well Pad
- Disturbance Area
- Access Road
- OHWM
- Kerr-McGee Facilities 500 Foot Buffer

PREPARED BY:



7674 Grandview Ave., Ste. 210
Arvada, CO 80002



SOURCES:
Project Features, 2DOT 2022
and Kerr-McGee 2022.
Source Data Updated: 2/2021

PREPARED FOR:



Projection: Nad83 UTM 13N Date: 1/5/2022
Drafted By: MC Reviewed By: SJ

Ordinary High
Water Mark
Figure 2

APPENDIX III

Photographic Log



Photo 1. Center of Site, facing north.
Photo Date: 02/10/2021



Photo 2. Center of Site, facing east.
Photo Date: 02/10/2021



Photo 3. Center of Site, facing south.
Photo Date: 02/10/2021



Photo 4. Center of Site, facing west.
Photo Date: 02/10/2021



Photo 5. Wetland fringe located south of the Site, facing east.
Photo Date: 02/10/2021