

May 24, 2024

WILDLIFE PROTECTION PLAN

TULIP OIL AND GAS LOCATIONS
WELD COUNTY, CO

PREPARED FOR:



Kerr-McGee Oil & Gas Onshore, LP
1099 18th St.
Denver, CO 80202

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 Protection Plan (WPP) for the proposed Tulip Oil and Gas Development Plan (OGDP), which includes two locations, the multi-well pad, production facility pad, and associated access roads, which for the purposes of this WPP will be evaluated as one site, heron cumulatively referred to as, “Site.” This WPP has been developed pursuant to the Energy and Carbon Management Commission (ECMC; formerly Colorado Oil and Gas Conservation Commission, effective July 1, 2023, per SB23-285) Rules 304.c.(17) and 1201.a for Oil and Gas locations situated outside of Colorado Parks and Wildlife (CPW) designated High Priority Habitat (HPH). This WPP describes measures KMOG will deploy at the Site to avoid or minimize potentially adverse impacts to wildlife.

2.0 SITE DESCRIPTION AND DEVELOPMENT OVERVIEW

The Site is located in Section 30, Township 4 North, Range 67 West, in Weld County. Total acreages for the Site’s working pad surface (WPS) is 8.32 acres and the Site’s disturbance area (DA) is 14.18 acres (**Appendix I:** Figure 1). Land use within the Site is agricultural as depicted in the photographic log in **Appendix II.** KMOG anticipates pad construction and drilling to begin in the second quarter of 2025, followed by completion in the third quarter of 2025. Existing access roads will be utilized to the extent practicable.

3.0 DESKTOP ANALYSIS AND SITE ASSESSMENT

2DOT completed a desktop review prior to conducting a site assessment of the Site. The desktop review was used to identify potential state and federally protected wildlife, critical high-priority habitat for state and federally protected species, surface water features, and suitable habitat for migratory and protected avian species.

2DOT conducted the following waters of the US and aquatic resource desktop review:

1. United States Fish and Wildlife (USFWS) National Wetland Inventory (NWI) - (USFWS 2022)
2. United States Geological Survey (USGS) National Hydrography Dataset (NHD) – (USGS 2022)
3. Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) – (FEMA 2023)
4. Colorado Water Conservation Board (CWCB) Colorado Hazard Mapping Program (CHAMP) – (CWCB 2023)

4.0 SUMMARY

During the site assessment on 9/5/23, 2DOT verified two man-made water features, upgradient of the Site, with an ordinary high-water mark (OHWM) within 500 feet of the Site. One NHD/NWI-mapped pond (Hartford Reservoir), characterized as an excavated intermittently exposed unconsolidated palustrine pond is within 500 feet of the Site. The Hartford Reservoir is privately owned and primarily used for irrigation of agriculture. The second NWI-mapped pond, characterized as an excavated, semi permanently flooded, unconsolidated palustrine pond (**Appendix I:** Figure 2) is also within 500 feet of the Site. This resource appears to have been constructed sometime between 2008 and 2010 and serves a catchment for the pivot irrigation in the down gradient agricultural field to the east. The Colorado Water Conservation Board for Weld County, CO indicates the nearest 100-year floodplain (Zone A) is over 1.46 miles to the north of the Site.

A wetland delineation was performed on 10/31/2023. Wetlands were delineated in accordance with the 1987 Manual and Great Plains Regional Supplement. Paired determination points (i.e., sample points)

were collected within wetland and upland communities to verify the extent of wetlands within and adjacent to the Site. A total of 4 sample points were collected in the vicinity of the Site. Wetland sample points include those that achieved all three wetland criteria: hydrophytic vegetation, hydric soil, and hydrology. Two wetlands and one ditch were delineated in the immediate vicinity of the Site. One wetland (Wetland 1), an NWI-mapped freshwater pond, was delineated and was determined to be located within 500 feet of the Site. A second wetland (Wetland 2), is a roadside swale located within 500 feet of the Site. Wetlands identified during the on-site assessment were upgradient of the Site. One man-made agricultural ditch was identified, located within 500 feet, south of the Site, with an elevation profile that slopes from west to east. The ditch was dry at the time of the survey and no characteristics of an OHWM were observed. A full wetland delineation report is included in **Appendix III**. No water resources were identified within the Site and no water resources would be disturbed by the project.

2DOT conducted the following natural resources desktop review:

1. USFWS Information for Planning and Consultation (IPaC) system (USFWS 2023)
2. Colorado Parks and Wildlife (CPW)
3. CPW High Priority Habitat (HPH) data layers (CPW 2023a)
4. Species Activity Mapping (SAM) data (CPW 2023b)

2DOT confirmed the presence of suitable habitat for migratory and protected avian species approximately 172 ft, west/northwest of the Site. One historic great horned owl (*Bubo virginianus*) nest previously active in 2020 (RNest_1166) was unoccupied as of 9/5/2023 (**Appendix I**: Figure 3). During the site visit on 9/5/2023, RNest_1166 was not occupied, however, one adult bald eagle (*Haliaeetus leucocephalus*) was perched in the nest tree prior to flying south. Pre-construction CPW protocol raptor nest surveys will be conducted prior to vegetation removal if planned during the nesting season. If an active nest(s) is identified and operations fall within a CPW recommended species buffer, KMOG will consult with CPW.

Publicly available data from the USFWS IPaC system was generated on 09/27/2023. The results of the data indicate no presence of federally protected species. During the site visit on 9/5/2023, 2DOT confirmed no unique habitat features exist that would support the presence of federally protected species.

Publicly available data from CPW, including SAM data, was generated on 08/31/2023. The results of the data indicate no presence of state-protected species. During the site visit on 9/5/2023, 2DOT confirmed no unique habitat features exist that would support the presence of state protected species.

2DOT confirmed no mapped HPH habitat exists within the Site. During the site visit on 9/5/2023, 2DOT confirmed no unique habitat features exist that would support the presence of HPH species. The nearest HPH-mapped aquatic habitat is over 4,500 feet north of the Site within the Hillsborough Ditch drainage system.

2DOT confirmed the presence of suitable habitat for migratory and protected avian species approximately 172 ft, west/northwest of the Site. There is a potential for adverse impacts to occur if migratory and protected avian species nest within line of sight to the Site.

There are no known migratory and protected avian species, state or federally listed species, jurisdictional water features, floodplains, or high priority habitat features that would be adversely impacted from the Construction activities proposed in 2024.

5.0 ENERGY AND CARBON MANAGEMENT COMMISSION 1202 BEST MANAGEMENT PRACTICES

In accordance with ECMC (2022) 1202, Operating Requirements, KMOG will maintain compliance with applicable operating requirements as outlined below:

1. Per Rule 12.02.a.(1)., While in black bear habitat, KMOG will utilize appropriate bear-proof facilities that produce or store trash. This Site is not within black bear habitat.
2. Per Rule 1202.a.(2). A. & B., KMOG will disinfect water suction hoses and water tanks withdrawing from or discharging into natural surface waters using a CPW-approved disinfectant or with water greater than 140° F for at least 10 minutes.
3. Per Rule 1202.a.(3)., 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 obtain a waiver from CPW.
4. Per Rule 1202.a.(4).A., B., & C., KMOG will fence and net or install other CPW-approved exclusion devices on new or existing (if ECMC determines it's necessary to protect Wildlife Resources) drilling pits, production pits, and other pits associated with Oil and Gas Operations that are intended to contain Fluids.
5. Per Rule 1202.a.(5)., KMOG will install wildlife exit ramps every ¼ mile for any trenches that are left open for more than 5 consecutive days.
6. Per Rule 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.
7. Per Rule 1202.a.(7)., KMOG will use CPW-recommended fence designs when consistent with the Surface Owner's approval and any Relevant Local Government requirements.
8. Per Rule 1202.a.(8)., KMOG will conduct all vegetation removal necessary for operations outside of the nesting season for migratory birds (April 1 to August 31). Pre-construction nesting migratory bird surveys will be performed at the Site prior to vegetation removal during nesting season. If an active nest is discovered, construction will be delayed, or a work-zone buffer will be provided around active nests. Pre-construction nesting bird surveys will be conducted no more than two weeks prior to the start of site disturbing activities.
9. Per Rule 1202.a.(9)., KMOG will treat drilling pits, production pits, and any other pits containing water that provides a medium for breeding mosquitoes to control mosquito larvae that may spread West Nile virus to Wildlife Resources.
10. Per Rule 1202.a.(10).A. - E., The Site is not between 500 feet and 1000 feet hydraulically upgradient from a High Priority Habitat identified in Rule 1202.c.(1).Q-S. At sites subject to 1202.c.(1).Q-S, KMOG:
 - a. contains flowback and stimulation fluids in tanks with downgradient perimeter berming;
 - b. constructs lined berms or other lined containment devices around new crude oil, condensate, and produced water storage tanks installed after January 15, 2021;
 - c. inspects locations on a daily basis, unless otherwise specified in an approved Form 2A;
 - d. maintains adequate spill response equipment at the location during drilling and completion operations; and

- e. does not construct or utilize pits, except existing previously operated and maintained in compliance prior to January 15, 2021.
11. Per Rule 1202.b, No 1202.b resource is within 500 feet of the Site area. If KMOG identifies the need to bore utility crossings or perennial streams identified as aquatic High Priority Habitat, KMOG must obtain a signed waiver from CPW and an approved Form 4 Sundry Notice from ECMC.

6.0 BEST MANAGEMENT PRACTICES

Additionally, KMOG will implement the following site-specific BMP practices to mitigate any potential environmental impacts:

1. Construction is currently scheduled to begin in the second quarter of 2025 and coincides with the raptor nesting season (December 1 – July 15). Pre-construction CPW protocol raptor nest surveys will be conducted prior to vegetation removal if planned during the nesting season. If an active nest(s) is identified and operations fall within a CPW recommended species buffer, KMOG will consult with CPW.
2. Inform and educate employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife.
3. Consolidate and centralize fluid collection and distribution facilities to minimize impact to wildlife.
4. Protect culvert inlets from erosion and sedimentation and install energy dissipation structures at outfalls.
5. Implement fugitive dust control measures.
6. Install screening or other devices on openings to prevent entry by migratory birds.
7. Mow or brush hog vegetation where appropriate, leaving root structure intact, instead of scraping the surface, where allowed by the surface owner.
8. Use existing access roads to the extent possible based on local government approval.
9. Post speed limits and caution signs to the extent allowed by state regulations, local government, and land use policies.
10. The Integrated Operations Center (IOC) will be used to remotely monitor wells.
11. Utilize pipeline infrastructure to reduce traffic during completion operations.
12. Utilize pipelines during operations to minimize truck traffic for hydrocarbon and gas takeaway.
13. Produced liquids will be transported through pipelines reducing traffic.
14. During drilling and completions, sound walls will be constructed around the well pad, to dampen noise and minimize dispersed light.
15. Lighting will be directed inward and downward toward the Site in order to minimize lighting impact.
16. Minimize rig mobilization and demobilization by completing or re-completing all wells from a given well pad before moving rigs to a new location.
17. Engineer new pipelines to reduce field fitting and reduce excessive right-of-way widths and reclamation.
18. Limit access to oil and gas access roads where approved by surface owners, surface managing agencies, or local government.
19. Use wildlife-appropriate fencing where acceptable to the surface owner.
20. Use topographic features and vegetative screening to create seclusion areas, where acceptable to the surface owner.

21. Install automated emergency response systems (e.g., high tank alarms, emergency shutdown systems).

7.0 REFERENCES

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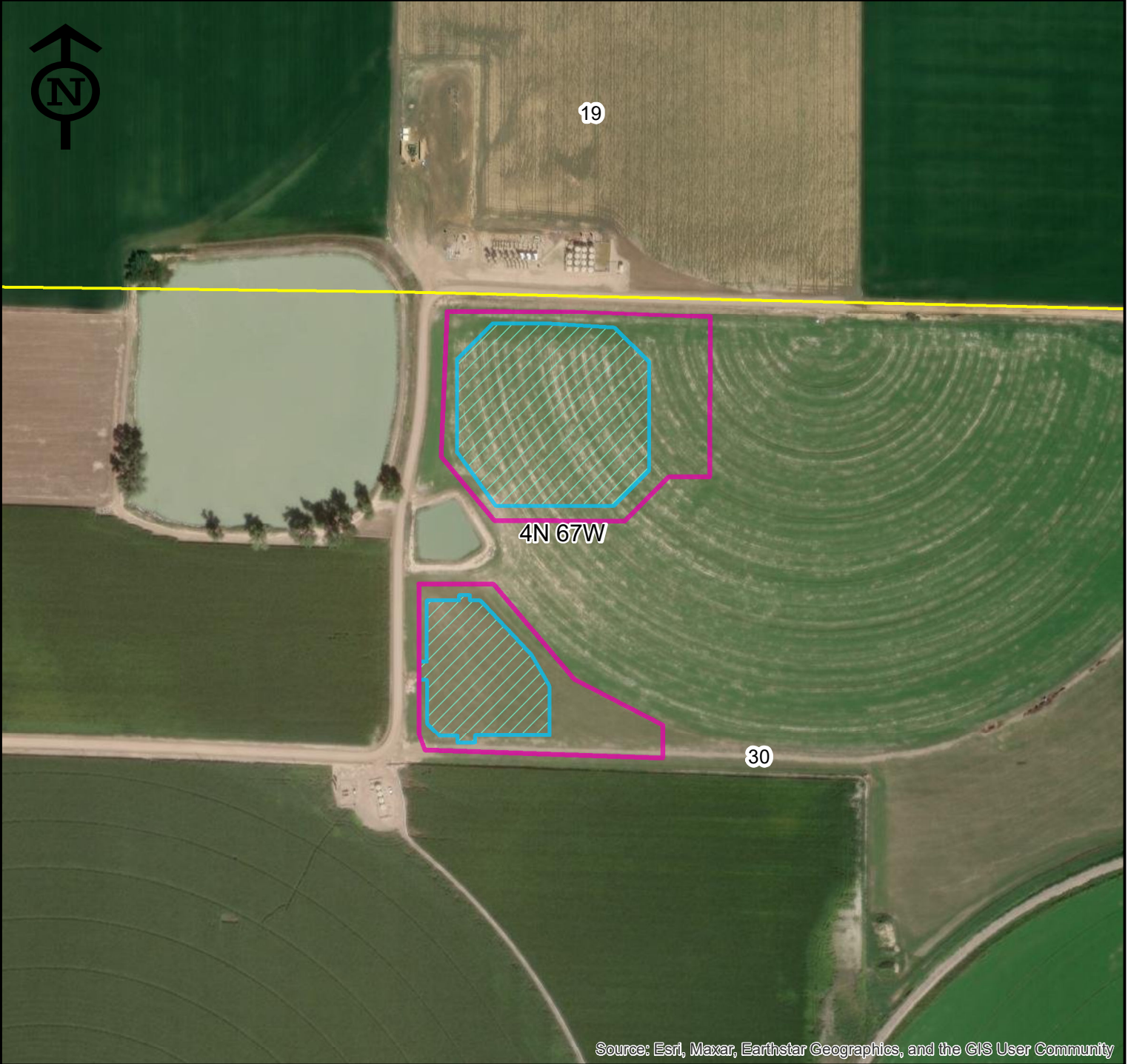
<https://www.usgs.gov/core-science-systems/ngp/national-hydrography/access-national-hydrography-products>

APPENDIX I





Site Figures

(602-117) Tulip

SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO



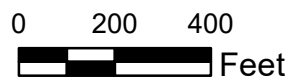
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

-  Working Pad Surface
-  Township
-  Disturbance Area
-  Section

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SOURCES:
Project Features, 2DOT 2023
and Kerr-McGee 2023.
Source Data Updated: 3/2023

PREPARED FOR:



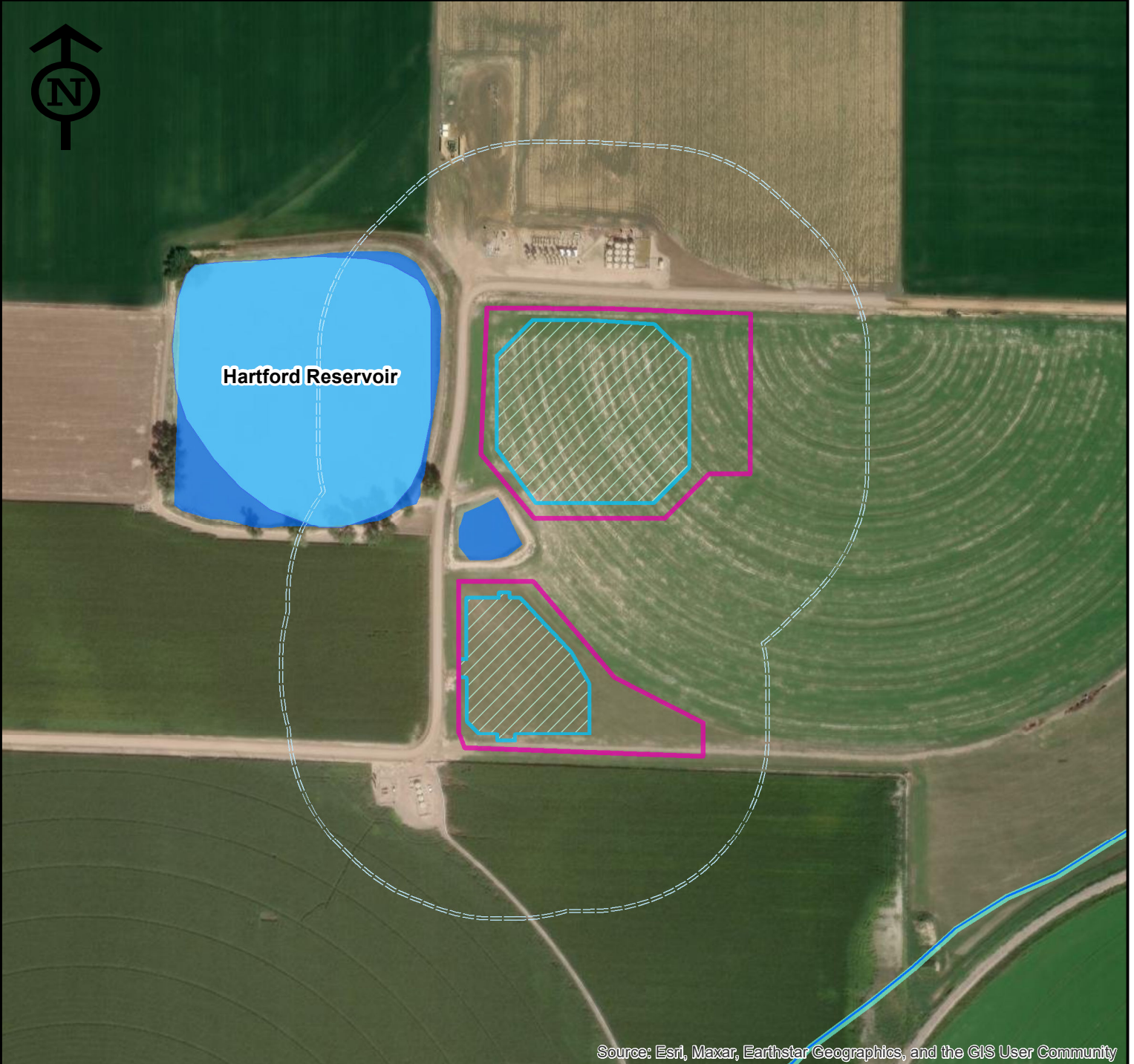
Projection: Nad83 UTM 13N Date: 5/1/2024
Drafted By: JH Reviewed By: DS

Wildlife Protection Plan
Figure 1








Map Location: X:\APC\602_Preliminary\602-117 Tulip_PSF\Maps\WPP_Maps\602-117 Tulip_WPP Figure 1_230927.mxd

(602-117) Tulip

SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO



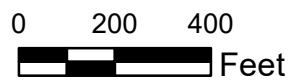
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- | | |
|---|--|
|  Working Pad Surface |  NHD Mapped Reservoir |
|  Disturbance Area |  NWI Mapped Freshwater Pond |
|  500ft Buffer |  NWI Mapped Riverine |
|  NHD Mapped Stream | |

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SOURCES:
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Source Data Updated: 3/2023

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Projection: Nad83 UTM 13N Date: 5/1/2024
Drafted By: JH Reviewed By: DS

Wildlife Protection Plan
Figure 2

(602-117) Tulip

SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO

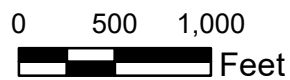


- | | |
|---|---|
|  Working Pad Surface |  GREAT HORNED OWL |
|  Disturbance Area |  Great Horned Owl 100 Meter Buffer |
|  1/2 Mile Buffer |  Raptor Nest 600 ft Buffer |
|  1/4 Mile Buffer | |

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Projection: Nad83 UTM 13N Date: 5/1/2024
Drafted By: JH Reviewed By: DS

Wildlife Protection Plan
Figure 3

APPENDIX II

Photographic Log



Photograph 1. Representative photo of the Site, viewing North.



Photograph 2. Representative photo of the Site, viewing East.



Photograph 3. Representative photo of the Site, viewing South.



Photograph 4. Representative photo of the Site, viewing West.

APPENDIX III

Wetland Delineation Report



Wetland Delineation Report

Kerr-McGee Oil & Gas Onshore LP

TULIP OIL AND GAS LOCATIONS

Weld County, Colorado

May 14, 2024

Prepared by:



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ATTACHMENT I Project Figures

ATTACHMENT II Wetland Delineation Field Forms

ATTACHMENT III Photographic Log

1.0 INTRODUCTION

On behalf of Kerr-McGee Oil & Gas Onshore LP (KMOG), Two Dot Consulting (2DOT) has performed a wetland assessment to quantify the extent of aquatic resources in proximity to the proposed Tulip Oil and Gas Development Plan (OGDP), which includes the multi-well pad and production facility pad, hereon referred to collectively as the “Site”. The Site is located in Section 30, Township 4 North, Range 67 West, Weld County, Colorado. The wetland assessment included a desktop assessment to characterize ecological conditions in and immediately adjacent to the Site, followed by an on-site delineation of wetland boundaries and associated Ordinary High Water Marks (OHWM). No known wetland delineations have been previously performed in this Site.

1.1 ECOLOGY

The Site is located within the Central High Plains – Southern Part Major Land Resource Area (MLRA). This MLRA encompasses much of eastern Colorado and is comprised of predominantly (>50%) rangeland. Croplands comprised approximately 35% of this MRLA (Natural Resource Conservation Service [NRCS] 2005). Soils in this MRLA are largely sands, ranging from sandy loam to loamy sand. This MRLA receives an average of 15 inches of precipitation annually and is dominated by mixed grass prairie communities (NRCS 2005).

1.2 WATERSHED AND HYDROLOGY

The Site is located within the Outlet Little Thompson River Subwatershed (HUC: 101900060504), which encompasses approximately 31 square miles Weld County (United States Geological Service [USGS] 2022a). The nearest potential Waters of the United States (WOTUS) includes Little Thompson River, located approximately 1.5 miles north of the Site. Little Thompson River is mapped as National Wetland Inventory (NWI) riverine and is labeled on the National Hydrograph Dataset as a perennial stream.

1.3 JURISDICTIONAL WATERS OF THE UNITED STATES

As a result of a U.S. Court order vacating the 2020 Navigable Waters Protection Rule, the U.S. Army Corps of Engineers (USACE) has reverted their interpretation of WOTUS back to the pre-2015 regulatory regime until further notice (i.e., Rapanos). The Denver USACE office has since confirmed that Approved Jurisdictional Determinations (AJDs) have resumed under the Rapanos definition beginning September 3, 2021. As such, WOTUS are currently interpreted as:

- Traditional Navigable Waters (TNWs)
- Relatively permanent waters, and their adjacent wetlands.
 - Adjacent wetlands include those bordering, neighboring, or contiguous.
- All tributaries with a bed and bank or OHWM that have a significant nexus to a TNW, and,
- Wetlands, ponds, impoundments, and lakes located adjacent to said tributaries.

1.4 REGIONAL REGULATION

Wetlands protected under Section 404 of the Clean Water Act (CWA) are assessed using the 1987 Corps of Engineers Wetland Delineation Manual, hereon referred to as the “1987 Manual”. The USACE has since published Regional Supplements to 1987 Manual to address regional variation in wetland criteria. The Site is located within the Great Plains Region and is subject to the 2010 Great Plains Regional Supplement (Version 2.0), which takes precedence over the 1987 Manual, where applicable. The Great Plains Regional Supplement is divided into 5 subregions or Land Resource Regions (LRRs), including the Northern Great Plains (LRR F), Western Great Plains (LRR G), Central Great Plains (LRR H), Southwestern Prairies (LRR J), and the Southwest Plateaus and Plains (LRR I). The Site is located in LRR G.

2.0 METHODS

2.1 DESKTOP REVIEW

A review of available information was performed via desktop prior to performing a site visit to identify surface water resources in the immediate vicinity of the Site. The following data sources were used to characterize aquatic resources:

- Aerial photographs of the Site, including Google Earth Imagery.
- U.S. Department of Agriculture, NRCS, Soil Survey of Weld County (Soil Survey Staff 2022) and NRCS National Hydric Soil List.
- NWI data and NRCS NHD data (USFWS 2022 and USGS 2022b).

2.1.1 AERIAL PHOTOGRAPH REVIEW

Aerial photographs were reviewed prior to the on-site delineation. Aerial imagery suggests one potential freshwater pond is present immediately adjacent to the Site. Aerial imagery indicates that adjacent properties support agricultural, residential, and Oil and Gas uses.

2.1.2 NRCS SOIL SURVEY

The NRCS Web Soil Survey was used to identify soil series intersecting the Site. The Site is comprised of two soil series: Nunn clay loam, 1 to 3 percent slopes, and Wiley-Colby complex, 1 to 3 percent slopes (**ATTACHMENT I**: Project Figures, Figure 2).

2.1.3 NATIONAL WETLAND INVENTORY AND NATIONAL HYDROLOGY DATASET

Data layers from the NWI indicate the extent, approximate location, and type of wetlands within the U.S. This data delineates the aerial extent of wetlands and surface waters as defined by Cowardin et al. (1979). NWI and NHD data indicate that one potential pond exists west of the preliminary study area (**ATTACHMENT I**: Project Figures, Figure 3). This feature is identified as a freshwater pond (PUBFx; USFWS 2016).

2.2 WETLAND DELINEATION METHODOLOGY

The on-site wetland delineation was performed on 10/31/2023. Wetlands within the Site were delineated in accordance with the 1987 Manual and Great Plains Regional Supplement. Paired determination points (i.e., sample points) were collected within wetland and upland communities to verify the extent of wetlands within the Site. A total of 4 sample points were collected within the Site. Wetlands sample points include those that achieved all three wetland criteria: hydrophytic vegetation, hydric soil, and hydrology.

Great Plains Regional Supplement Wetland Delineation Forms were populated at each upland and wetland sample point (**ATTACHMENT II**: Wetland Delineation Field Forms). The upland boundary was delineated using on-site data collected using a hand-held GPS unit (**ATTACHMENT I**: Project Figures, Figure 4).

2.3 DELINEATOR STATEMENT OF QUALIFICATIONS

This delineation was performed by 2DOT staff well-versed in aquatic resource assessments in Colorado. 2DOT staff performing wetland delineations receive their wetland delineation training certificate from the Wetland Training Institute and have demonstrated wetland competencies in the Great Plains, Arid West, and Western Mountains, Valleys, and Coasts regions. 2DOT staff expertise include wetland delineation and mapping, biota assessments, and local, state, and federal regulatory compliance.

3.0 RESULTS

Two wetlands and one ditch were delineated in the immediate vicinity of the Site. Wetland 1 is an NWI-mapped freshwater pond which was confirmed to be present. Two sets of paired wetland determination forms were recorded to determine the extent of this feature. Wetland 2 is a roadside swale immediately west of Wetland 1. One man-made earthen ditch was identified immediately south of the preliminary survey area. The ditch was dry at the time of the survey and no characteristics of an Ordinary High Water Mark (OHWM) were observed.

The wetland characteristics observed during the delineation are summarized in Sections 3.1 through 3.3. Photos of each resource are included as an attachment (**ATTACHMENT III**: Photographic Log).

3.1 WETLAND VEGETATION

Dominant hydrophytic vegetation within the wetland community included pale smartweed (*Persicaria lapathifolia*) and smooth horsetail (*Equisetum laevigatum*) (**ATTACHMENT II**: Wetland Delineation Field Forms). Within the Great Plains Region, these species exhibit an obligate and a facultative status, respectively.

3.2 WETLAND SOILS

The wetland soils were noted as predominantly silty clay loam. Primary hydric soil indicators observed included hydrogen sulfide(A4) and depleted matrix (F3). Redox concentrations were observed predominantly as concentrations in the soil matrix. Hydric soil indicators were primarily observed in the upper soil profile due to a clay loam lining approximately 2 inches from the soil surface.

3.3 WETLAND HYDROLOGY

Primary indicators of hydrology observed at wetland sample points included saturation (A3), inundation visible on aerial imagery (B7), water stained leaves (B9), hydrogen sulfide odor (C1), and oxidized rhizospheres on living roots (C3). The Site is not located within a FEMA 100-Year Zone floodplain.

4.0 REFERENCES

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<https://www.usgs.gov/core-science-systems/ngp/national-hydrography/access-national-hydrography-products>

ATTACHMENT I





Project Figures

(602-117) Tulip

SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO



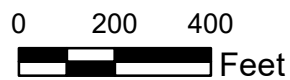
Map Location: X:\APC\602_Preliminary\602-117 Tulip_PSF\Maps\Wetland Report\602-117 Tulip Wetland Report Figure 1_240514.mxd

-  Working Pad Surface
-  Disturbance Area
-  Township
-  Section

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Source Data Updated: 3/2023

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Projection: Nad83 UTM 13N Date: 5/14/2024
Drafted By: JH Reviewed By: DS

Wetland Report
Figure 1

(602-117) Tulip

SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO



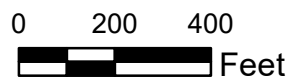
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- | | | | |
|--|---------------------|--|----------------------------|
| | Working Pad Surface | | NHD Mapped Reservoir |
| | Disturbance Area | | NWI Mapped Freshwater Pond |
| | NHD Mapped Stream | | NWI Mapped Riverine |

PREPARED BY:



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



SOURCES:
Project Features, 2DOT 2023
and Kerr-McGee 2023.
Source Data Updated: 3/2023

PREPARED FOR:

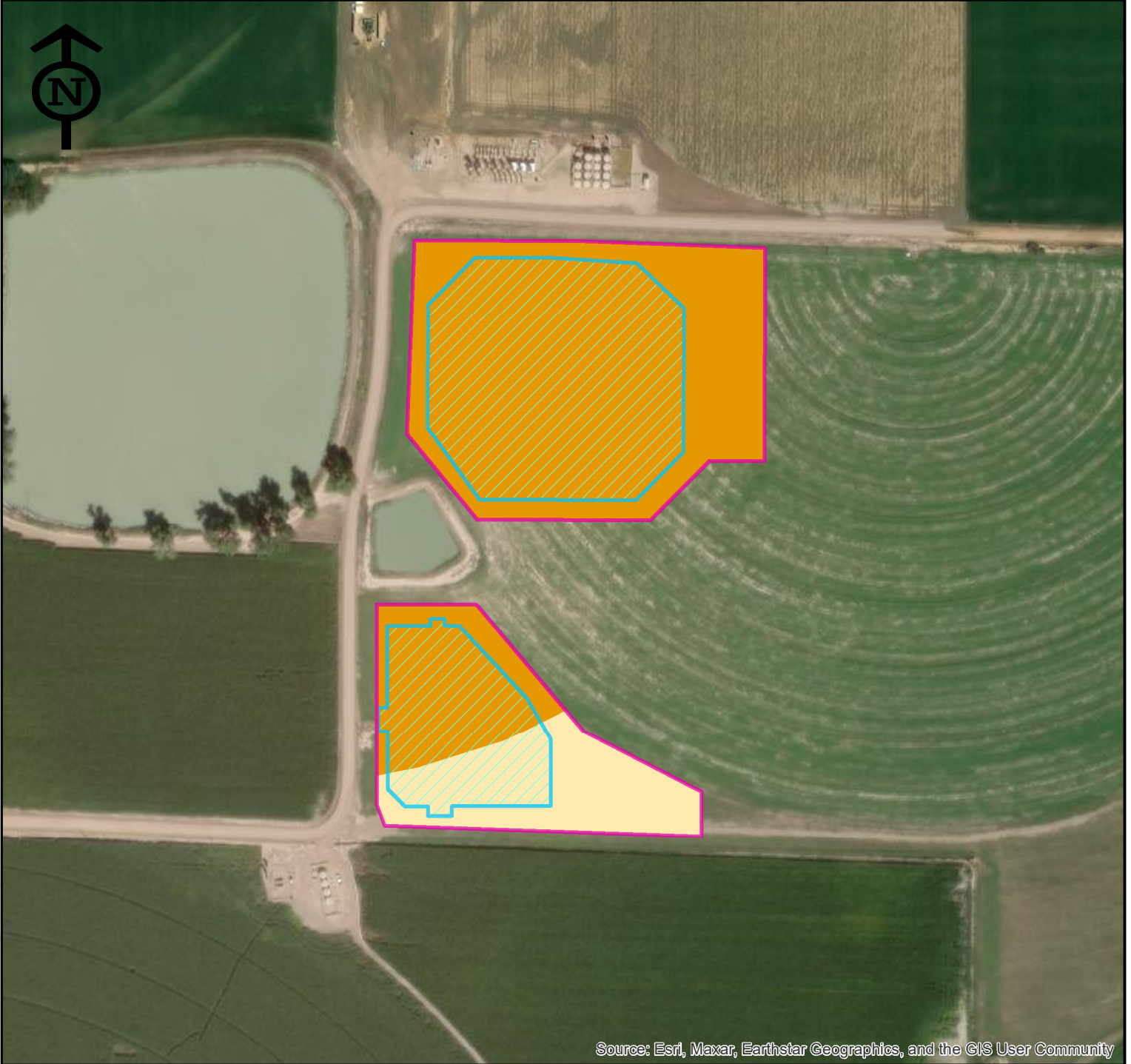


Projection: Nad83 UTM 13N Date: 5/14/2024
Drafted By: JH Reviewed By: DS





Wetland Report
Figure 2

(602-117) Tulip

SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO



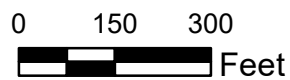
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

-  Working Pad Surface
-  Nunn clay loam, 1 to 3 percent slopes
-  Disturbance Area
-  Wiley-Colby complex, 1 to 3 percent slopes

PREPARED BY:



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



SOURCES:
Project Features, 2DOT 2023
and Kerr-McGee 2023.
Source Data Updated: 3/2023

PREPARED FOR:



Projection: Nad83 UTM 13N Date: 5/14/2024
Drafted By: JH Reviewed By: DS

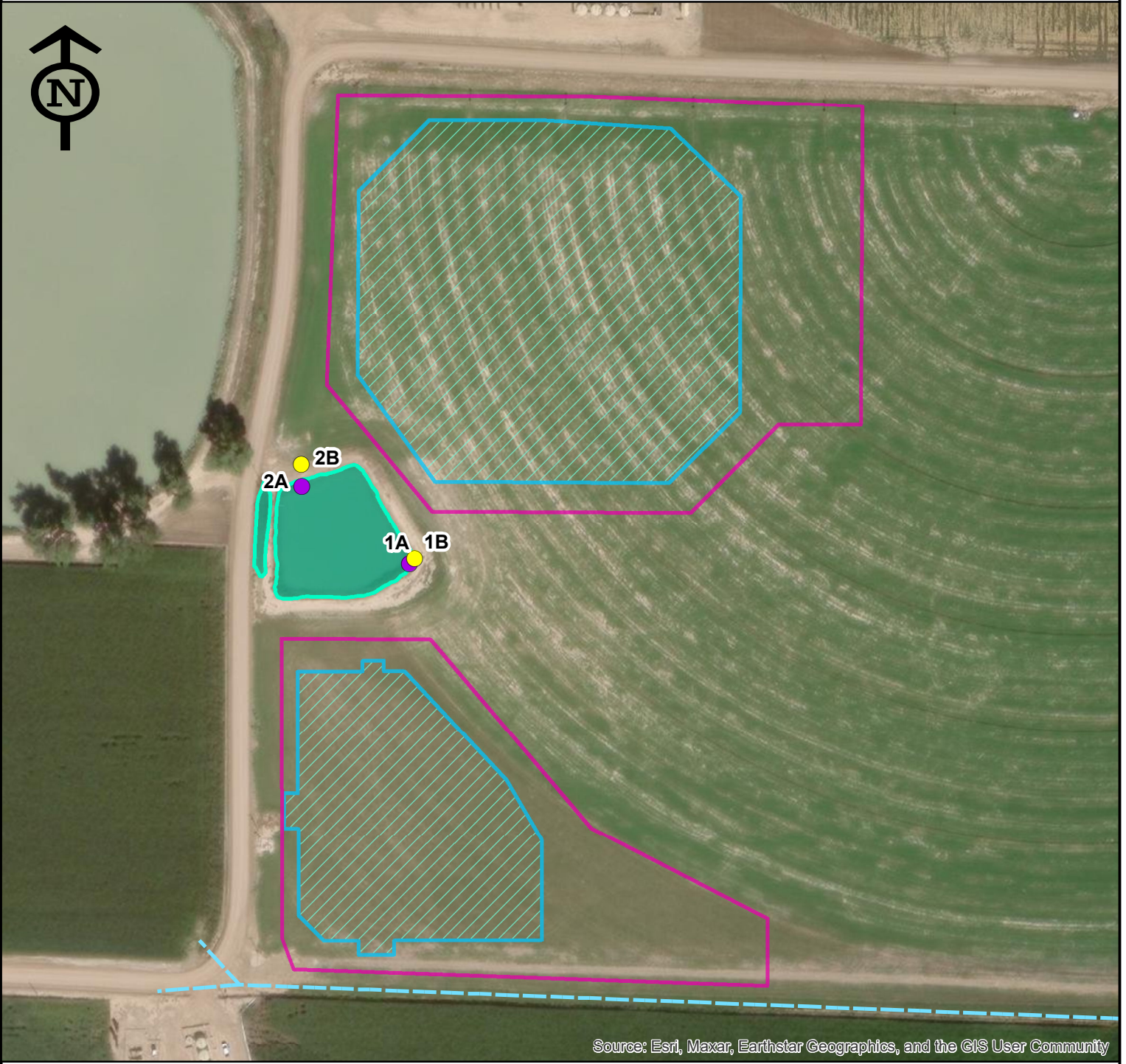
Wetland Report
Figure 3

(602-117) Tulip








SECTION 30, TOWNSHIP 4N, RANGE 67W, WELD COUNTY, CO



Map Location: X:\APC\602_Preliminary\602-117_Tulip_PSF\Maps\Wetland Report\602-117_Tulip_Wetland_Report_Figure 4_240514.mxd



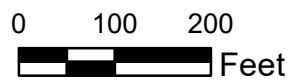
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- | | |
|--|---|
|  Working Pad Surface |  Earthen Ditch |
|  Disturbance Area |  Wetland Boundary |
|  Wetland Soil Pit |  Delineated Wetlands |
|  Non-wetland Soil Pit | |

PREPARED BY:



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



SOURCES:
Project Features, 2DOT 2023
and Kerr-McGee 2023.
Source Data Updated: 3/2023

PREPARED FOR:



Projection: Nad83 UTM 13N Date: 5/14/2024
Drafted By: JH Reviewed By: DS

Wetland Report
Figure 4

ATTACHMENT II

Wetland Delineation Field Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Tulip PSIF City/County: Weld County Sampling Date: 2023-10-31
 Applicant/Owner: Occidental State: Colorado Sampling Point: 1A
 Investigator(s): Julia Auckland Section, Township, Range: S30 T4N R67W
 Landform (hillslope, terrace, etc.): Rim Local relief (concave, convex, none): Concave Slope (%): 20
 Subregion (LRR): G 67B Lat: 40.28976211 Long: -104.9316581 Datum: WGS 84
 Soil Map Unit Name: 82 - Wiley-Colby complex, 1 to 3 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Persicaria lapathifolia</u>	<u>90</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 90 x 1 = 90
 FACW species 0 x 2 = 0
 FAC species 0 x 3 = 0
 FACU species 0 x 4 = 0
 UPL species 0 x 5 = 0
 Column Totals: 90 (A) 90 (B)
 Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks:
Higher upslope, stinkgrass (Eragrostis cilianesis - FACU) is dominant.

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 2	2.5Y 4/1	55	5YR 5/6	3	C	PL / M	Silty Clay Loam	
0 - 2	10YR 4/3	22	N 2.5/	20		M	Silty Clay Loam	muck described in redox section; muck ~0.5 cm, patchy layer
2 - 15	10YR 4/3	70	10YR 3/2	10	D	M	Clay Loam	
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- 5 cm Mucky Peat or Peat (S3) (LRR F)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR F, G, H)
- Dark Surface (S7) (LRR G)
- High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Some muck but less than 1 cm, so does not meet A9. Soils are weakly hydric, likely because the pond is higher than usual.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes No _____ Depth (inches): 0 _____

Wetland Hydrology Present? Yes No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Point on pond edge

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Tulip PSIF City/County: Weld County Sampling Date: 2023-10-31
 Applicant/Owner: Occidental State: Colorado Sampling Point: 1B
 Investigator(s): Julia Auckland Section, Township, Range: S30 T4N R67W
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 15
 Subregion (LRR): G 67B Lat: 40.2897808 Long: -104.9316322 Datum: WGS 84
 Soil Map Unit Name: 82 - Wiley-Colby complex, 1 to 3 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <p style="font-size: 1.2em; margin-top: 10px;">Slope - 4 feet above pond</p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Eragrostis cilianensis</u>	<u>45</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Echinochloa crus-galli</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>	
3. <u>Tribulus terrestris</u>	<u>5</u>	<input type="checkbox"/>	<u>UPL</u>	
4. <u>Bassia scoparia</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>65</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>35</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 10 x 3 = 30
 FACU species 50 x 4 = 200
 UPL species 5 x 5 = 25
 Column Totals: 65 (A) 255 (B)
 Prevalence Index = B/A = 3.92

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Tulip PSIF City/County: Weld County Sampling Date: 2023-10-31
 Applicant/Owner: Occidental State: Colorado Sampling Point: 2A
 Investigator(s): Julia Auckland Section, Township, Range: S30 T4N R67W
 Landform (hillslope, terrace, etc.): Rim Local relief (concave, convex, none): Concave Slope (%): 10
 Subregion (LRR): G 67B Lat: 40.29005964 Long: -104.9322032 Datum: WGS 84
 Soil Map Unit Name: 82 - Wiley-Colby complex, 1 to 3 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: North and west pond banks have dense Equisetum. Point on north bank ~18 inches above water surface.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Equisetum laevigatum</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Persicaria lapathifolia</u>	<u>10</u>	_____	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 10 x 1 = 10
 FACW species 0 x 2 = 0
 FAC species 70 x 3 = 210
 FACU species 0 x 4 = 0
 UPL species 0 x 5 = 0
 Column Totals: 80 (A) 220 (B)
 Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks:
Persicaria along edge of water. Equisetum continues up the bank.

SOIL

Sampling Point: 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 2	2.5Y 4/3	69	2.5Y 4/1	30	D	M	Silty Clay Loam	
0 - 2			7.5YR 5/6	1	C	PL	Silty Clay Loam	
2 - 16	10YR 4/3	100					Clay Loam	
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- 5 cm Mucky Peat or Peat (S3) (LRR F)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR F, G, H)
- Dark Surface (S7) (LRR G)
- High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Soils are very weakly hydric. Most indicators near the surface. Likely due to pond lining of clay loam soil, plus due to seasonal inundation and pond is relatively new.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Artificial pond, moist throughout. Surface saturation closer to water surface.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Tulip PSIF City/County: Weld County Sampling Date: 2023-10-31
 Applicant/Owner: Occidental State: Colorado Sampling Point: 2B
 Investigator(s): Julia Auckland Section, Township, Range: S30 T4N R67W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR): G 67B Lat: 40.2901459 Long: -104.9322053 Datum: WGS 84
 Soil Map Unit Name: 82 - Wiley-Colby complex, 1 to 3 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salsola tragus</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Eragrostis cilianensis</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Medicago sativa</u>	<u>10</u>	_____	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>75</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>25</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 0 x 3 = 0
 FACU species 65 x 4 = 260
 UPL species 10 x 5 = 50
 Column Totals: 75 (A) 310 (B)
 Prevalence Index = B/A = 4.13

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

SOIL

Sampling Point: 2B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 15	10YR 4/4	100					Clay Loam	
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ATTACHMENT III

Photographic Log



Photo 1. Representative view of Wetland 1



Photo 2. Sample point 1A soil profile



Photo 3. Representative view of upland adjacent to Wetland 1



Photo 4. Sample point 1B soil profile



Sep 14, 2023 at 12:18:50 PM
+40.290056,-104.932287
Weld County
Tulip
Wetland swale

Photo 5. Representative view of Wetland 2



Sep 14, 2023 at 8:56:12 AM
+40.288072,-104.931733
Weld County
Tulip
Ditch facing east

Photo 6. Representative view of earthen ditch

W