Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Rocky View County, Alberta

July 22, 2025
Trace Project No. 100-2415

Prepared for:
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EXECUTIVE SUMMARY

Trace Associates Inc. prepared this Biophysical Impact Assessment (BIA), on behalf of Kineticor Holdings LP#3 c/o Cassa Development Services, in support of the proposed Kineticor Area Structure Plan ("the Site") located within portions of 14, 15, and 23-26-28-W4M, Rocky View County, Alberta. The purpose of the BIA is to provide information on the environmental components present at the Site and to inform site planning.

The Site is within Rocky View County. It is bounded to the north, east, and west by cultivated lands and country residential and/or commercial lands, and to the south by Highway 566. The surrounding land is predominately cultivated or country residential, with some commercial present. The Site is currently used as agricultural land (primarily row cultivation) and has two active oil and gas wellsites and one residence. Several wetlands are present. The environmental components present within the Site are detailed below.

- Topography and Landforms: The Site has undulating topography, with elevation ranging between 1,082 m above sea level (masl) and 1,021 masl. No provincially significant or other notable landforms are present on the Site.

- Soils: Soils of the Delacour soil series are dominant and are classified as an Orthic Black Chernozemic soil; however, as this soil occurs in areas that are subjected to saline groundwater discharge, some profiles may also exhibit the weak solonetzic features associated with Solonetzic Black Chernozems. Erosion potential by wind ranges from moderate to high, and erosion potential by water ranges from low to moderate, increasing with slope. Soils of the Rockyview and Beddington soil series may also be present as these form a minor component of the soil polygon. Soils have been tilled and cultivated either continuously or periodically since at least 1950.

- Surface Water: The desktop review of aerial photography identified 19 potential ephemeral waterbodies and 26 potential wetlands on the Site, ranging in class from temporary to seasonal wetlands. One of the temporary and two of the seasonal wetlands are associated with the two watercourses on site. Most of the ephemeral waterbodies, wetlands, and watercourses were tilled continuously in the reviewed historical imagery.

- Vegetation: The Site is primarily cultivated (row crop and hayland) (70.01%), and remaining portions are wetland (16.36%), grasslands (native and non-native) (12.78%), commercial/residential (wellsite / dugout / rural residential / hedgerow) (0.82%), or forestland (0.03%). Native vegetation is limited to grassland and wetland species and some native shrubs and trees (likely planted). No rare ecological communities or rare plants were identified.

- Wildlife: The Site lies within two provincially mapped key wildlife ranges, Sensitive Raptor Range and Sharp-tailed Grouse (*Tympanuchus phasianellus*). Several species of conservation concern (SOCC) were reported by the Fisheries and Wildlife Management Information System (FWMIS) within a 3-km radius of the Site, and an additional four SOCC were noted in the field assessment. Eight of the SOCC identified through FWMIS and field surveys have on-site habitat that is considered low or moderately suitable.

- Landscape Connectivity: Within the Site, there are no large continuous habitat patches or terrain features that would likely concentrate wildlife movement in one area, nor are there any features that would create a barrier to wildlife movement. Regionally, barriers to wildlife movement exist to the west and south.

- Environmentally Significant Areas (ESA): According to Fiera Biological Consultants Ltd., the Site is not environmentally significant. Trace identified 11 polygons as ESAs, including native grassland, wetlands, and waterbodies.

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APPENDICES

1.0 INTRODUCTION

Trace Associates Inc. (Trace) prepared this Biophysical Impact Assessment (BIA), on behalf of Kineticor Holdings LP#3 c/o Cassa Development Services (the Proponent), in support of the proposed Kineticor Area Structure Plan (ASP) ("the Site") located within portions of 14, 15, and 23-26-28-W4M, Rocky View County, Alberta (Figure 1). The purpose of this BIA is to provide information on the environmental components present at the Site and to inform site planning.

The Proponent provided Trace with written authorization to proceed with the BIA on February 3, 2025. Trace prepared this BIA in accordance with the Rocky View County *Servicing Standards* (RVC, 2013), generally accepted environmental consulting practices, and Trace's Professional Report Conditions (Appendix A).

1.1 Site Description and Study Area

The Site is within Rocky View County. It is bounded to the north, east, and west by cultivated lands and country residential and/or commercial lands, and to the south by Highway 566. The surrounding land is predominately cultivated or country residential, with some commercial present. The Site is currently used as agricultural land (primarily row cultivation) and has two active oil and gas wellsites and one residence. Several wetlands are present.

2.0 RELEVANT ENVIRONMENTAL LEGISLATION

Trace personnel reviewed and considered legislation and policies (Table A) applicable to the Site.

Table A: Relevant Environmental Legislation

Title	Objective	Site Requirements
Federal		
Species at Risk Act (SARA)	The SARA aims to prevent plant and wildlife species from becoming extinct or lost from the wild, to help in the recovery of species that are at risk as a result of human activities, and to manage species of special concern to prevent them from becoming endangered or threatened (GOC, 2002).	The SARA protects listed species observed on the Site from harm, and care during land development phases is necessary to reduce the risk of causing harm to species (e.g., wildlife sweeps conducted prior to site clearing and stripping) or in some cases negative impacts to critical habitat. If nests or dens are identified, land use planning must consider these features and their retention.

Table A: Relevant Environmental Legislation		
Title	Objective	Site Requirements
Federal		
Migratory Birds Convention Act and Regulations (MBCA)	The MBCA and its Regulations protect and conserve migratory birds, as defined in Article I as populations and individual birds and their nests. The MBCA prohibits the "killing, capturing, injuring, taking or disturbing of migratory birds or the damaging, destroying, removing, or disturbing of nests" on all lands within Canada (GOC, 1994).	Schedule construction activities, including site clearing and stripping, outside the general nesting period for the area (mid-April to end of August for the Site), as specified by Environment and Climate Change Canada (GOC, 2018a). If activities cannot avoid the general nesting period, then a qualified professional must conduct a wildlife sweep to identify any potential active nests and dens on the Site prior to construction beginning. Construction must begin within seven days of the sweep. If construction stops for more than seven days, a new wildlife sweep is required. If active features are identified, appropriate species-specific mitigation measures must be developed in consultation with a qualified professional.
Provincial		
Environmental Protection and Enhancement Act (EPEA)	EPEA regulates the management of air, land, water, and biodiversity within Alberta and supports the protection, enhancement, and wise use of the environment (GOA, 2000a). EPEA designates proposed activities where an approval or registration is required, including potable water, wastewater, and storm drainage systems.	The development of any proposed potable water and wastewater systems, and stormwater ponds requires an EPEA approval.
Water Act	The *Water Act* governs how water is managed in Alberta, including the diversion, allocation, and use of water (GOA, 2000e). It regulates and enforces actions that affect water and water use management, the aquatic environment, fish habitat protection practices, and stormwater management. The Alberta Wetland Policy falls under the *Water Act*, and the Policy details how wetlands are managed in Alberta (GOA, 2013b).	The Proposed Development requires an Approval under the *Water Act* to remove any wetlands, watercourses, or waterbodies or to integrate these features into a stormwater system. Compliance matters related to unauthorized activities under the *Water Act* require resolution before Alberta Environment and Protected Areas (Alberta EPA) will issue an Approval.

Table A: Relevant Environmental Legislation		
Title	Objective	Site Requirements
Provincial		
Public Lands Act	The *Public Lands Act* regulates activities on provincially regulated Crown-owned land to ensure they are conducted in a safe and orderly manner that protects the land for future generations (GOA, 2000d). The *Public Lands Act* regulates various land uses (e.g., developments, forestry, grazing, lands dispositions, etc.) on Crown-owned land in Alberta, including the beds of permanent surface waterbodies such as lakes, creeks, rivers, wetlands, and drainage areas, and/or the permanent surface waterbodies themselves.	If the Proposed Development will impact wetlands classified as seasonal or higher or watercourses classified as intermittent or higher, then determination of Crown ownership is necessary, as well as *Public Lands Act* Approval if Crown-claimed features will be impacted.
Weed Control Act and Regulation	The *Weed Control Act* declares species that present significant economic, social, or ecological risks as Noxious or Prohibited Noxious weeds (GOA, 2008). Species declared Noxious or Prohibited Noxious are listed in the *Weed Control Act Regulation* (GOA, 2016b). The *Weed Control Act* lays out the duties of individuals, local authorities, municipalities, and the Crown, related to the prevention, control, and destruction of weed species described in the *Weed Control Act*.	If any are present on the Site, the landowner or occupant must destroy Prohibited Noxious weeds and control Noxious weeds from growing or spreading. Prior to stripping and grading the Site, the municipality may require the landowner to submit a weed management plan to show how the landowner plans to meet their obligations under the *Weed Control Act* (GOA, 2008).
Wildlife Act and Regulations	The *Wildlife Act* protects and conserves wild animals in Alberta (GOA, 2000f) by stipulating that no person shall, "willfully molest, disturb or destroy a house, nest or den of prescribed wildlife or a beaver dam in prescribed areas at prescribed times." Wildlife, as defined under the *Wildlife Act*, includes "big game, birds of prey, fur-bearing animals, migratory game birds, non-game animals, non-licensed animals and upland game birds" (GOA, 2000f).	Schedule construction activities, including site clearing and stripping, outside of the general nesting period for the area (mid-April to end of August for the Site), as specified by Environment and Climate Change Canada (GOC, 2018a). If activities cannot avoid the general nesting period, then a qualified professional must conduct a wildlife sweep to identify potential active nests and dens on the Site prior to construction beginning. Construction must begin within seven days of the sweep. If construction stops for more than seven days, a new wildlife sweep is required. If active features are identified, appropriate species-specific mitigation measures must be developed in consultation with a qualified professional.

Table A: Relevant Environmental Legislation		
Title	Objective	Site Requirements
Provincial		
Municipal Government Act (MGA)	The MGA grants municipalities with the authority to designate a parcel of land as Municipal Reserve (MR), Environmental Reserve (ER), or Conservation Reserve (CR) for the purpose of preserving natural features, preventing pollution, ensuring public access, and/or in situations where natural features present a risk of personal injury occurring during development or use (GOA, 2000c). A subdivision authority may require the owner of a parcel of land to provide part of that parcel to the municipality as MR, ER, or CR under a number of conditions, as specified in the MGA.	The municipality may request or require dedication of certain areas of the Site as MR, ER, or CR during the development approval process or in future land use planning initiatives. Areas that can be designated as ER include "part of that parcel of land…consisting of: a swamp, gully, ravine, coulee or natural drainage course; land that is subject to flooding or is, in the opinion of the subdivision authority, unstable or; a strip of land, not less than 6 m in width, abutting the bed and shore of any body of water" (GOA, 2000c).
Historical Resources Act	According to the Government of Alberta (GOA, 2000b), the *Historical Resources Act* provides for the use, designation and protection of historic resources. It provides mechanisms for designating historic resources, establishing historic areas, and naming geographical features. In addition, it governs research permits, title to historical resources and the transport of historic resources out of province.	Most development activities require approval under the *Historical Resources Act* prior to the commencement. A *Historical Resources Act* application review may indicate a Historical Resources Impact Assessment is required or other conditions such as monitoring for activities to proceed. If proponents become aware of historic resources during development activities, they are required to report discoveries to the Heritage Division of Alberta Arts, Culture and Status of Women (GOA, 2022).
Municipal		
Municipal Development Plan (MDP)	The MDP "sets out the guidelines for growth and development in the County over the next 20 years. The MDP provides a comprehensive land use policy framework which outlines where and how development and growth may take place across the County" (RVC, 2021). It provides a vision and guiding principles for development across Rocky View County (the County) as well as County-wide policies to provide direction in decision making for services, operations, and infrastructure.	Site development must follow the MDP, associated plans, and the development application process.
Wetland Conservation and Management (WCM) Policy	The WCM Policy is designed to conserve and manage wetlands to ensure the proper function of Alberta's watersheds, to allow them to continue to perform their various important functions. The WCM Policy helps ensure the County fulfills all legislative mandates and provide direction for the use and development of municipal and private lands containing or in proximity to wetlands (RVC, 2010b).	The WCM Policy aligns with the Alberta Wetland Policy with respect to the mitigation hierarchy. Where compensation is required, the County prioritizes restoration of existing wetlands, construction of new wetlands over the enhancement of wetlands or restoration of environmentally sensitive areas. The County may require the dedication of wetlands as ER or ER easements. Development of the Site requires the consideration of policy statements for land containing or adjacent to wetlands (RVC, 2010b)

Table A: Relevant Environmental Legislation		
Title	Objective	Site Requirements
Municipal		
Riparian Land Conservation and Management (RLCM) Policy	The RLCM Policy is designed to conserve and manage riparian lands to allow them to continue to perform their various important functions. The RLCM Policy helps ensure the County fulfills legislative mandates and provides direction for the use and development of municipal and private lands containing or in proximity to riparian lands (RVC, 2010a).	When approving development, the County requires developers to consider plans for the maintenance and/or restoration of riparian lands to a functional or improved condition and will protect riparian land from impacts through mitigation plans (i.e., stormwater management plans, erosion and sedimentation control plans, construction plans, biophysical impact assessments, and environmental protection plans). The County may require the dedication of riparian lands as ER or ER easements. Development of the Site requires the consideration of policy statements for land containing or adjacent to riparian zones (RVC, 2010a).

3.0 REGIONAL BIOPHYSICAL SETTING

The Site and surrounding area are located within the Foothills Fescue Natural Subregion of the Grassland Natural Region (GOA, 2006). The Foothills Fescue Natural Subregion is defined by rolling to hummocky uplands which are typical of the southern and western portions of this Subregion, with undulating plains to the north and east. The Subregion includes part of the rolling Southern Alberta Uplands and Foothills and extends northward into the undulating to rolling Western Alberta Plains.

Mountain rough fescue (*Festuca campestris*)-dominated communities are found on average sites in remnant areas of native prairie. Most of the subregion is cultivated, although the amount of cultivation is variable, ranging from 80% in the plains to less than 20% in the hilly uplands where grazing predominates. The Foothills Fescue Natural Subregion has many plant species in common with the adjacent Mixedgrass, Foothills Parkland, and Montane Natural Subregions. Grass-dominated native communities on reference sites differentiate this Natural Subregion from other Subregions, which are characterized by forested or shrubby reference sites.

Orthic Black Chernozems are the dominant soils, reflecting moister, cooler conditions and the incorporation of relatively high organic matter. Open water and wetlands are uncommon in the hillier foothills area; only about 1% of the Foothills Fescue Natural Subregion is occupied by water, and wetlands occur over about 3% of the Subregion. The Foothills Fescue subregion has the highest precipitation, warmest winters, and shortest growing season of any of the grassland Natural Subregions. Proximity to the mountains and a greater incidence of chinooks are both responsible for these characteristics.

4.0 TOPOGRAPHY AND LANDFORMS

4.1 Methods

Trace personnel assessed topography and landforms on the Site through a review of:

- Detailed contours, provided by B&A Studios
- *Significant Landforms of Alberta: An Introduction* (Alberta Parks, 2014) data layer

- Hydrological layer data from Base20 (AltaLIS, n.d.)
- Wet Areas Mapping data (AEP, 2020)
- Historical aerial photographs (1950 to 2024) obtained from Alberta EPA, georeferenced imagery obtained from Google Earth™ (variable dates), and satellite and aerial imagery through Esri ArcMap
- Data collected during field assessments conducted between May and June 2025

4.2 Results

The Site has undulating topography, with elevation ranging between 1,082 m above sea level (masl) and 1,021 masl. Topography is highest along the southwest site boundary and generally slopes from the southwest to northeast (Figure 2).

According to the provincial dataset, the Site does not contain a provincially identified Significant Landform (Alberta Parks, 2014) and Trace personnel observed no notable landforms on the Site, including bedrock outcrops and glacial erratics.

5.0 SOILS

5.1 Methods

Trace personnel assessed soils on the Site through a review of:

- *Soil Survey of the Calgary Urban Perimeter* (MacMillan, 1987).
- Agricultural Region of Alberta Soil Inventory Database (AGRASID) Version 4.1 (AAF, n.d.) (Appendix B).
- Historical aerial photographs (1950 to 2024) obtained from Alberta EPA, georeferenced imagery obtained from Google Earth™ (variable dates), and satellite and aerial imagery through Esri ArcMap.

Trace personnel characterized soils profiles adjacent to on-site wetlands as part of the process for wetland delineation. Detailed methods are outlined in Section 6.1.1.

5.2 Results

AGRASID polygons DEL1/H1l, DEL7/U1h, and DERK1/U1h cover the Site's area, all of which are primarily comprised of the Delacour Soil series (50 to 80%) (Table 1, Figure 2) (AAF, n.d.). Delacour is classified as an Orthic Black Chernozemic soil; however, as it occurs in areas that are subjected to saline groundwater discharge, some profiles may also exhibit the weak solonetzic features associated with Solonetzic Black Chernozems (MacMillan, 1987). These soils have a thick black to dark brown surface horizon (15 to 25 cm) overlying a strongly structured, prismatic, oxidized subsurface horizon. The parent material is medium-textured till and is typically well drained. Wind erosion potential is moderate, and water erosion potential is low with slopes under 9%, increasing to moderate with slopes over 9%. Delacour soils have slight limitations for agriculture, with inadequate soil temperatures for specific crops, and slopes that can be steep enough to be at risk for water erosion. In some areas, the soils have severe limitations for agriculture, due to the presence of excess water.

Full details on the AGRASID polygons within the Site are available in Table 1, including descriptions and compositions of all soil series, land suitability ratings for agriculture, and percentage of the site each polygon encompasses.

Soils within the Site have been tilled and cultivated either continuously or periodically since at least 1950.

6.0 SURFACE WATER

6.1 Methods

Trace personnel assessed surface water on the Site through a review of:

- Detailed contours, provided by B&A Studios.
- Hydrological layer data from Base20 (AltaLIS, n.d.).
- Historical aerial photographs (1950 to 2024) obtained from Alberta EPA, georeferenced imagery obtained from Google Earth™ (variable dates), and satellite and aerial imagery through Esri ArcMap.
- Wetland data from the Alberta Merged Wetland Inventory (GOA, n.d.-b) and the Alberta Biodiversity Monitoring Institute (ABMI) (ABMI, 2021).
- Data collected during field assessments conducted between May and June 2025
- Crown ownership response from Alberta EPA, Water Boundaries, pending.

6.1.1 Wetlands and Waterbodies

Trace personnel delineated potential wetlands and waterbodies as per the *Alberta Wetland Identification and Delineation Directive* (GOA, 2015b) using the appropriate ecological boundary, based on the full extent of the wetland in most years.

Wetlands were preliminarily classified as per the *Alberta Wetland Classification System* (GOA, 2015a). Wetland permanence was determined according to the *Guide for Assessing Permanence of Wetland Basins* (GOA, 2016a), using instances of bare ground, standing water, patchy vegetation, and tilling to infer wetland permanency and class. To assist in preliminary wetland classification, Trace personnel reviewed the climatic conditions prior to each historical aerial photograph using historical precipitation data for the Township between 1955 and 2021. Wet and dry years or months are years or months above or below the calculated 25% and 75% quartiles, respectively.

To distinguish between naturally occurring and human-made wetlands and waterbodies, Trace personnel reviewed historical aerial photographs and imagery to see if the feature occurs in all or most years, without evidence that human activity created it. Human-made features occur only in later historical imagery, with desktop evidence that human-made alterations to the landscape affected surface drainage causing water to pool where it would not normally accumulate. Trace personnel classified human-made still water (not flowing) features as dugouts (e.g., used for agricultural purposes) or ponds (e.g., used for residential or other non-agricultural related purposes).

During the field assessment, qualified Trace personnel verified wetland delineation boundaries based on vegetation and soil indicators (e.g., the abundance of facultative and obligate wetland species and the

presence or absence of hydric soils), as outlined in the *Alberta Wetland Identification and Delineation Directive* (GOA, 2015b). Qualified Trace personnel recorded the plant species present and percent cover in a 1 m x 1 m representative plot, and classified wetlands primarily based on vegetation with support from soil observations and historical aerial photographs. If wetlands were present, Trace personnel assessed the wetlands using the Alberta Wetland Rapid Evaluation Tool – Actual (ABWRET-A) as per the *ABWRET-A Guide* (GOA, 2015c).

Trace personnel submitted a request for Crown ownership review of all wetlands and waterbodies within 14, 15, and 23-26-28 W4M to the Water Boundaries unit of Alberta EPA on July 21, 2025, and had not yet received a response at the time this report was written. Crown ownership results will be appended when received.

As part of 2025 post-field data analysis, Trace personnel refined the desktop delineated boundaries and classifications of wetlands based on field data.

6.1.2 Watercourses

For mapped watercourses, Trace personnel referred to the Base20 hydrological layers (AltaLIS, n.d.), and used the available imagery to adjust the centreline as needed. For unmapped watercourses, the centreline was mapped based on the available imagery and contour information.

Trace personnel classified the watercourses on or intersecting the Site according to the provincial classification system provided in the *Pre-application Requirements for Formal Dispositions* (AEP, 2019). Evidence of channels or permanent surface water visible in the historical imagery were used to determine watercourse permanence and evidence of human alteration to determine if the feature is naturally occurring.

In 2025, Trace personnel confirmed or updated the watercourse inventory based on site observations in May and June. A watercourse was considered naturally occurring if the feature occurs in all or most of the historical imagery, without evidence that human activity created the feature. A watercourse was considered human-made if the feature occurs only in later historical imagery, and there was desktop evidence that human-made alterations to the landscape affected surface drainage, causing water to flow where it would not normally. Trace personnel classified human-made flowing features as irrigation canals or ditches.

Trace personnel submitted a request for Crown ownership review of all watercourses within 14, 15, and 23-26-28 W4M to the Water Boundaries unit of Alberta EPA on July 21, 2025, and had not yet received a response at the time of reporting. Crown ownership results will be appended when received.

6.2 Results

6.2.1 Wetlands and Waterbodies

Based on the review of desktop information sources, Trace personnel identified 19 potential ephemeral waterbodies and 26 potential wetlands on the Site, ranging in class from temporary to seasonal wetlands (Table B; Figures 3.1 to 3.4). One of the temporary (Polygon WL75) and two of the seasonal (Polygons WL70 and WL74) wetlands are associated with the watercourses on site.

Historical aerial photographs show disturbances within on-site wetlands from cultivation in multiple years (Appendix C; Table 2). Disturbances such as recontouring or infilling within the wetlands are not apparent in the historical aerial photographs, but four dugouts within wetlands were identified as well as ditching within ephemeral waterbodies.

Based on the field assessment, Trace confirmed 45 wetlands and waterbodies on the Site, ranging from ephemeral waterbodies to seasonal graminoid marshes (Table B, and Figures 3.1 to 3.4). Wetland datasheets are provided as Appendix D; ABWRET-A results for wetlands on the Site are provided in Table B and Appendix E. The desktop wetland delineations were updated based on field data, including merging wetlands that are hydrologically connected, and wetland classes were confirmed or updated.

Table B: On-site Wetlands and Waterbodies							
Polygon	Total Wetland Area (ha)	(AEP, 2019; GOA, 2015a)	Subject to the *Water Act*	Subject to the *Alberta Wetland Policy*	Subject to the *Public Lands Act* (claimable by the Crown)*	Relative Wetland Value	Disturbances
WL31	0.105	Temporary Graminoid Marsh	Yes	Yes	No	D	Waterbody was cropped through at the time of the 2025 field assessment.
WB32	0.040	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB33	0.099	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WL35-1	0.224	Temporary Graminoid Marsh	Yes	Yes	No	D (Same as WL61)	Wetland was cropped through at the time of the 2025 field assessment.
WB36	0.279	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB40	4.219	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB41	0.044	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB42	1.179	Ephemeral Waterbody	Yes	No	No	N/A	None noted in 2025 field assessment.
WB43	1.132	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB44	3.628	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB45	1.458	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WL47	0.083	Temporary Graminoid Marsh	Yes	Yes	No	C	Waterbody was cropped through at the time of the 2025 field assessment.

Table B: On-site Wetlands and Waterbodies							
Polygon	Total Wetland Area (ha)	(AEP, 2019; GOA, 2015a)	Subject to the *Water Act*	Subject to the *Alberta Wetland Policy*	Subject to the *Public Lands Act* (claimable by the Crown)*	Relative Wetland Value	Disturbances
WL48	1.026	Temporary Graminoid Marsh	Yes	Yes	No	C	Wetland was cropped through at the time of the 2025 field assessment.
WB49	6.285	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WL50	0.297	Seasonal Graminoid Marsh	Yes	Yes	TBD	C	Wetland shows evidence of chemical weed control and limited vegetation growth.
WL51	0.135	Temporary Graminoid Marsh	Yes	Yes	No	D	Wetland was cropped through at the time of the 2025 field assessment.
WL52	20.347	Temporary Graminoid Marsh	Yes	Yes	No	C (Same as WL74)	Wetland was cropped through at the time of the 2025 field assessment and shows partial cultivation in 1985.
WB53	0.154	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody appeared to have been cleared at the time of the 2025 field assessment.
WL55	0.200	Temporary Graminoid Marsh	Yes	Yes	No	C	Wetland was cropped through at the time of the 2025 field assessment.
WL56	1.435	Seasonal Graminoid Marsh	Yes	Yes	TBD	C	Wetland was cropped through at the time of the 2025 field assessment.
WL57	0.763	Temporary Graminoid Marsh	Yes	Yes	No	C	Wetland was cropped through at the time of the 2025 field assessment.
WL58	2.007	Seasonal Graminoid Marsh	Yes	Yes	TBD	C	Wetland was cropped through at the time of the 2025 field assessment.
WL59	0.466	Temporary Graminoid Marsh	Yes	Yes	No	C	Wetland was cropped through at the time of the 2025 field assessment.
WB60	0.931	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.

Table B: On-site Wetlands and Waterbodies							
Polygon	Total Wetland Area (ha)	(AEP, 2019; GOA, 2015a)	Subject to the *Water Act*	Subject to the *Alberta Wetland Policy*	Subject to the *Public Lands Act* (claimable by the Crown)*	Relative Wetland Value	Disturbances
WL61	1.687	Seasonal Graminoid Marsh	Yes	Yes	TBD	D (same as WL35-1)	Wetland was cropped through at the time of the 2025 field assessment.
WL62	0.189	Temporary Graminoid Marsh	Yes	Yes	No	D	None noted in 2025 field assessment.
WL63	0.260	Seasonal Graminoid Marsh	Yes	Yes	TBD	D	Wetland was cropped through at the time of the 2025 field assessment.
WB66	0.428	Ephemeral Waterbody	Yes	No	No	N/A	Wetland was cropped through at the time of the 2025 field assessment.
WB67	0.999	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.
WB68	1.059	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody shows a history of cultivation since 1962.
WL69	0.329	Temporary Graminoid Marsh	Yes	Yes	No	D	Wetland was cropped through at the time of the 2025 field assessment.
WL70	3.707	Seasonal Graminoid Marsh	Yes	Yes	TBD	D	Wetland showed recreation impacts.
WB71	8.136	Ephemeral Waterbody	Yes	No	No	N/A	Wetland shows a history of cultivation of south portion since 1950 and entire portion since 1985.
WL73	0.258	Temporary Graminoid Marsh	Yes	Yes	No	D	Wetland was cropped through at the time of the 2025 field assessment.
WL74	2.584	Seasonal Graminoid Marsh	Yes	Yes	TBD	C	None noted in 2025 field assessment.

Table B: On-site Wetlands and Waterbodies							
Polygon	Total Wetland Area (ha)	(AEP, 2019; GOA, 2015a)	Subject to the *Water Act*	Subject to the *Alberta Wetland Policy*	Subject to the *Public Lands Act* (claimable by the Crown)*	Relative Wetland Value	Disturbances
WB75	6.117	Ephemeral Waterbody	Yes	No	No	N/A	Wetland shows a history of cultivation since 1950.
WB77	0.783	Ephemeral Waterbody	Yes	No	No	N/A	Waterbody was cropped through at the time of the 2025 field assessment.

N/A = Not Applicable
TBD = To Be Determined upon receipt of the Crown ownership review

6.2.2 Watercourses

Base 20 data (AltaLIS, n.d.) shows two watercourses on the Site (Figures 3.1 to 3.4). The most permanent watercourse (Watercourse A, WBID 111792) enters the site at 6-23-26-28 W4M, flows southwest through a seasonal wetland (Polygon WL74), and continues off site through 1-23-26-28 W4M. The watercourse is intermittent and has portions of defined channel through its reach on the Site. The watercourse has been impacted by cultivation and cattle (i.e., erosion). Pools of water were present during the field assessment. The other watercourse (Watercourse D, WBID 112100) begins in 14-14-26-28 W4M, flows southeast, and continues off site through 8-14-26-28 W4M. This watercourse is ephemeral and flows through a seasonal wetland (Polygon WL70) and an ephemeral wetland (Polygon WL75). There is no defined channel for this watercourse.

All watercourses identified on the Site are presented in Table C and Figures 3.1 to 3.4.

Table C: Watercourses

Polyline	Watercourse Classification[1]	Subject to the *Water Act*	Subject to the *Public Lands Act*	Comments
A	Intermittent	Yes	TBD	Portions have a defined channel. Connects with the Western Irrigation District (WID) canal downstream (off site to the southeast).
B	Ephemeral	Yes	No	Originates from spring, flows unchannelized east-northeast to Watercourse A.
C	Ephemeral	Yes	No	Partially cultivated with portions with hydrophytic vegetation because of ditching and basin modification. Flows north to its confluence with Watercourse A off site and connects with the WID canal downstream (off site to the southeast).
D	Ephemeral	Yes	No	Base 20 data, FWMIS
E	Ephemeral	Yes	No	Ditched, cattle impacts
F	Ephemeral	Yes	No	Cultivated swale
H	Ephemeral	Yes	No	Cultivated swale

Table C: Watercourses				
Polyline	Watercourse Classification[1]	Subject to the *Water Act*	Subject to the *Public Lands Act*	Comments
I	Ephemeral			Cultivated swale
J	Ephemeral			Ditched
L	Ephemeral			Cultivated swale
M	Ephemeral			Cultivated swale

[1](AEP, 2019)
TBD = To Be Determined

7.0 VEGETATION

7.1 Methods

Trace personnel assessed vegetation on the Site through a review of:

- Historical aerial photographs (1950 to 2024) obtained from Alberta EPA, georeferenced imagery obtained from Google Earth™ (variable dates), and satellite and aerial imagery through Esri ArcMap.
- Alberta Conservation Information Management System (ACIMS) data (Alberta Parks, 2022) (Appendix F).
- Data collected during field assessments conducted between May and June 2025

Trace personnel mapped plant communities on the Site into polygons, using Esri ArcMap, based on the available aerial imagery. Polygons were differentiated based on land uses, soil moisture (as indicated by tonal differences), and visible vegetation, using instances of bare ground, standing water, patchy vegetation, and tilling to infer community type. Trace personnel overlaid mapped polygons on aerial photographs from previous years to compare and evaluate changes to land use and site conditions between years, and to adjust the boundaries and classifications accordingly. This approach accounts for short-term and long-term climatic fluctuations, which produce marked seasonal differences in surface moisture conditions from year to year. Upland polygons of less than 0.03 hectares were not mapped due to their small size.

Qualified Trace personnel conducted one field assessment of the Site (early season) and a late-season assessment is scheduled to take place with results to be reported as an amendment to this report. Field assessments were conducted to assess plant communities, rare ecological communities, rare plant species, and weed species. Field assessments were conducted in accordance with the Alberta Native Plant Council Guidelines for Rare Vascular Plant Surveys in Alberta (ANPC, 2012). Plant communities were classified according to the Alberta Public Lands Glossary of Terms (GOA, 2023), the Foothills Parkland

Range Plant Community Guide (DeMaere et al., 2012), and species' abundance determined using the dominant, abundant, frequent, occasional, rare scale (Hearnshaw & Hughey, 2010). As scientific and common names vary depending on information source, naming conventions used within this document follow those used by the ACIMS (GOA, 2024c).

Rare plants are considered those species with limited occurrences within Alberta and are listed by the province (GOA, 2018) as Tracked or Watched to aid in their conservation. Rare plants generally have the provincial conservation ranking of S1 (five or fewer occurrences within Alberta) to S3 (100 or fewer occurrences within Alberta), or are listed as "Extirpated," "Endangered," "Threatened," or "of Special Concern" under the SARA (GOC, 2002) or by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (COSEWIC, 2023). The ACIMS Standard Subnational Conservation Status Ranks are presented in Appendix F.

Rare ecological communities are uncommon assemblages of plant species that often occur together due to the presence of certain site conditions. They are listed on the ACIMS *Ecological Community Tracking List* (Allen, 2014). These rare ecological communities generally have the provincial conservation ranking of S1 to S3.

The *Alberta Weed Control Act Regulation* (GOA, 2016b) lists select invasive non-native plant species as Noxious or Prohibited Noxious.

7.2 Results

7.2.1 Plant Communities

The Site is primarily cultivated (row crop and hayland) (70.01%), with remaining portions of wetland (16.36%), grasslands (native and non-native) (12.78%), commercial/residential (wellsite / dugout / rural residential / hedgerow) (0.82%), or forestland (0.03%) (Figures 3.1 to 3.4; Table D). Cultivation has been occurring since at least 1950. Trace found that most areas not currently under cultivation are dominated by non-native species, such as smooth brome (*Bromus inermis*), quackgrass (*Elymus repens*), and Kentucky bluegrass (*Poa pratensis* ssp. *pratensis*). Remaining areas of native grassland are largely associated with or adjacent to watercourses and drainages and contain native grasses and forbs in varying abundance and diversity with portions dominated by non-native grasses (due to encroachment from surrounding areas). Common caragana (*Caragana arborescens*) hedgerows are present near crop edges and residence along Highway 566, along with planted balsam poplar (*Populus balsamifer*a) and trembling aspen (*Populus tremuloides*) trees. Similar hedgerows were encountered near the residence within the Site.

Trace personnel observed no rare ecological communities on the Site, and ACIMS contains no records of previously reported rare ecological communities within the Site (Appendices F and G) (Alberta Parks, n.d.). A late-season rare plant survey will be conducted to confirm the absence of rare ecological communities.

Table D: Land Cover / Land Cover Classes

Land Cover	Percent of the Site	Total Area (ha)
Cultivated	70.01	313.612
Cropland	62.18	278.536
Hayland	7.83	35.076

Table D: Land Cover / Land Cover Classes		
Land Cover	Percent of the Site	Total Area (ha)
Grassland	12.78	57.256
Native Grassland	8.33	37.293
Non-native Grassland	4.46	19.964
Commercial/Residential	0.82	3.685
Disturbed (Oil and Gas Wellsite)	0.36	1.601
Disturbed (Dugout)	0.11	0.484
Rural Residential	0.17	0.744
Hedgerow	0.19	0.857
Forest	0.03	0.124
Deciduous Dominated Forestland	0.03	0.124
Wetland	16.36	73.261
Ephemeral Waterbody	8.30	37.160
Temporary Graminoid Marsh	5.39	24.124
Seasonal Graminoid Marsh	2.67	11.977
Total		**447.938**

[1] Areas calculated in Esri ArcGIS in NAD83 3TM 114 Grid, [2] (DeMaere et al., 2012)

7.2.2 Plant Species

Trace personnel identified 95 native vegetation species within the Site, with the majority being ranked S4 (Apparently Secure) to S5 (Secure) (Appendix G). Dominant species included slender wildrye (*Elymus trachycaulus*), Kentucky bluegrass, buckbrush (*Symphoricarpus occidentalis*), and aspen.

Trace personnel observed no rare species on the Site and ACIMS contains no records of previously reported rare plants within the Site (Appendix F) (Alberta Parks, 2022). A late-season rare plant survey will be conducted to confirm the absence of rare plants.

Provincially listed Noxious Weed species, including Canada thistle (*Cirsium arvense*) and perennial sow thistle (*Sonchus arvensis*), were also present.

8.0 WILDLIFE

8.1 Methods

8.1.1 Wildlife Species

Trace personnel assessed wildlife species and wildlife habitat on the Site through a review of:

- Wildlife Sensitivity Maps (Alberta EPA, n.d.)
- Landscape Analysis Tool (GOA, n.d.-c) (Appendix H)
- Fisheries and Wildlife Management Information System (FWMIS) results (Appendix I) within a 1-km and 3-km radius of the Site (GOA, n.d.-a)
- Important Bird Area Canada data (IBA Canada, 2010)
- eBird (eBird, n.d.).
- Data collected during field assessment conducted in May 2025

Qualified Trace personnel conducted field surveys to determine the presence of wildlife, wildlife habitat features (e.g., stick nests, burrows, dens, etc.), and wildlife habitat. Wildlife surveys were conducted in accordance with the *Sensitive Species Inventory Guidelines* (GOA, 2013a). Wildlife surveys included: visual and auditory surveys for amphibians and breeding birds, raptor nest searches, snake hibernacula search, as well as incidental observations for mammals, reptiles, and wildlife sign (e.g., scat, tracks, foraging, trails) on the Site. Wildlife survey points are presented as Figures 4.1 to 4.4.

As scientific and common names vary depending on information source, naming conventions used within this document follow those used by the Government of Alberta (GOA, 2020). Wildlife species of conservation concern (SOCC) are defined as those listed as Sensitive, May Be At Risk, or At Risk under the *Alberta Wild Species General Status Listing* (GOA, 2020), and/or or listed as Endangered, Threatened, or Special Concern under the *Alberta Wildlife Act* (GOA, 2000f), SARA (GOC, 2002), or by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC, 2023).

8.1.2 Landscape Connectivity

Trace personnel assessed landscape connectivity on the Site through a review of:

- Historical aerial photographs (1950 to 2024) obtained from Alberta EPA, georeferenced imagery obtained from Google Earth™ (variable dates), and satellite and aerial imagery through Esri ArcMap.

Landscape connectivity is, “the degree to which the landscape facilitates or impedes movement among resource patches” and is described based on behavioral processes of individual wildlife species (functional connectivity) and the physical structure (structural connectivity) of the landscape and how this facilitates or impedes movement among habitat patches (Taylor et al., 2006). Therefore, when assessing landscape connectivity, it is necessary to consider how each species interacts, or behaves, with the physical environment since the level of connectivity across a landscape will vary from species to species. More specifically, there is likely to be higher landscape connectivity for generalist species than specialist species in more developed areas, since generalist species are more adaptable (Boukall, 2017).

To evaluate landscape connectivity, Trace assessed the natural and altered landscapes of the Site and the regional area, including presence of intact, continuous habitat, terrain features that would concentrate wildlife, stepping stones (e.g., small patches of intact habitat that provide shelter, feeding, and resting opportunities, and that facilitate movement between at least two other habitat patches (Saura et al., 2014), and barriers to wildlife movement. Trace also considered the behavioral characteristics of wildlife species likely in or using the Site, and the wildlife species that have the potential to occur in the regional area.

8.2 Results

8.2.1 Wildlife Species

The Site is within two key provincial wildlife layers: Sensitive Raptor Range and Sharp-tailed Grouse (Table E). These layers provide the approximate range for specific wildlife species at risk and provide an indication of where these species may occur given the appropriate habitat.

Table E: Wildlife Sensitivity Layers

Scientific Name	Common Name	Provincial Status[1]	COSEWIC Status[2]	Habitat Preference[3]	Habitat Present On Site
Sensitive Raptor Range					
Haliaeetus leucocephalus	bald eagle	Sensitive	Not at Risk	Areas near large fish-bearing inland lakes or rivers, particularly where large trees are available for nesting.	No large mature nesting trees on site and the location is not adjacent to permanent waterbodies or watercourses. In the winter and migratory periods, outlying agricultural area attract overwintering waterfowl, that in turn present feeding opportunities for these raptors.
Aquila chrysaetos	golden eagle	Sensitive	Not at Risk	Open and semi-open country featuring native vegetation. Nest on cliffs and steep escarpments in grassland, shrubland, forest, and other vegetated areas. Forage mainly on small and medium-sized mammals.	No nesting habitat present.

Table E: Wildlife Sensitivity Layers					
Scientific Name	Common Name	Provincial Status[1]	COSEWIC Status[2]	Habitat Preference[3]	Habitat Present On Site
Sensitive Raptor Range					
Falco mexicanus	prairie falcon	Sensitive	Not at Risk	Open areas including grasslands, areas of mixed shrubs, or alpine tundra that supports abundant ground squirrel populations. Forage on small mammals, game birds and waterfowl.	Very limited foraging habitat within upland and wetlands during the summer and winter (waterfowl and ground squirrels).
Sensitive Raptor Range					
Buteo regalis	Ferruginous hawk	Sensitive	Threatened	Open areas including grasslands, areas of low shrubs that support abundant ground squirrel populations	Limited foraging habitat within grassland and pasture habitats. Very limited nesting opportunity with single isolated trees in the general area.
Sharp-tailed Grouse					
Tympanuchus phasianellus	sharp-tailed grouse	Sensitive	Not Listed	Relatively dry, open grassland with a patchwork of tree and shrub cover that can be found throughout Alberta.	Very limited habitat present site. This species requires more continuous areas of pasture and grassland for nesting and lekking opportunities.

[1](GOA, 2020), [2](COSEWIC, 2023), [3](CLO, n.d.)

The Site does not contain an Important Bird Area (IBA Canada, 2010). According to eBird (eBird, n.d.), the nearest bird hot spot (publicly accessible birding locations) is Twin Lakes, a waterbody located 1.03 km southeast of the Site (eBird, n.d.). A total of 98 bird species are recorded at this hot spot.

According to FWMIS (GOA, n.d.-a), nine wildlife species, all considered SOCC, were previously recorded within 3 km of the Site (Appendix I). As per the Alberta FWMIS database, the fish and wildlife inventory data accessible for the Site does not represent a complete record of all fish and wildlife collections and observations available. It only represents the data currently residing in the FWMIS. Many areas in Alberta have not been subjected to a comprehensive species inventory.

Table 3 provides a full list of the wildlife species observed on the Site during the field assessments.

8.2.1.1 Fish

Water levels in on-site wetlands and watercourses are not deep enough to sustain fish populations and are connected to waterbodies with barriers to fish presence. The records of previously FWMIS-reported fish species are associated with an unnamed waterbody located 3.2 km east and downstream of the Site.

8.2.1.2 Amphibians

FWMIS does not contain records of any amphibian species within 3 km of the Site (GOA, n.d.-a). The Site contains some suitable habitat on site for common species, such as boreal chorus frog (*Pseudacris maculata*), which uses wetlands of all classes for breeding and was observed during the 2025 field assessments.

8.2.1.3 Mammals

FWMIS does not contain records of any mammal species within 3 km of the Site (GOA, n.d.-a); however, an American badger (*Taxidea taxus*) was observed during the field assessments. Remaining pasture areas on site are too small and isolated to sustain a badger population; however, the ground squirrel population in the pasture is concentrated and plentiful where pasture persists and badgers moving through the landscape would find temporary foraging opportunities before moving on.

The Site contains habitat for some disturbance-adapted large and small mammal species, such as coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), white-tailed deer (*Odocoileus virginianus*), Richardson's ground squirrel (*Spermophilus richardsonii*), and a variety of small rodents.

8.2.1.4 Birds

FWMIS contains a record of nine bird SOCC within 3 km of the Site, and an additional four SOCC of birds were noted in the field assessment, of which eight have on-site habitat that is considered low or moderately suitable (Tables 4 and 5).

Habitat on the Site consists of five primary types: cultivated, watercourses, ephemeral waterbodies, wetlands, and grasslands.

Cultivated and grassland areas typically provide foraging and/or breeding habitat for a variety of common species such as black-billed magpie (*Pica hudsonia*), American crow (*Corvus brachyrhynchos*), savannah sparrow (*Passerculus sandwichensis*), house sparrow (*Passer domesticus*), and clay-coloured sparrow (*Spizella pallida*). Native and non-native grassland areas also typically provide foraging habitat during the breeding season for a variety of small songbirds and mammals, which may be preyed upon by common raptors and other birds of prey, such as red-tailed hawk (*Buteo jamaicensis*), and Swainson's hawk (*Buteo swainsoni*), both of which were observed in the field assessment.

SOCC relevant to this site (FWMIS reported and/or field observed), include American kestrel (*Falco sparverius*), bald eagle (*Haliaeetus leucocephalus*), barn swallow (*Hirundo* rustica), black tern (*Chlidonias niger*), black-necked stilt (*Himantopus mexicanus*), eastern kingbird (*Tyrannus tyrannus*), horned grebe (*Podiceps auritus*), long-billed curlew (*Numenius americanus*), pileated woodpecker (*Dryocopus pileatus*), sharp-tailed grouse (*Tympanuchus phasianellus*), sora (*Porzana carolina*), trumpeter swan (*Cygnus buccinator*) and upland sandpiper (*Bartramia longicauda*). These SOCC are strongly associated with higher-quality habitat potentially available on site and in surrounding areas. The black tern, black-necked stilt, horned grebe, and trumpeter swans were species associated with the semi-permanent and permanent wetlands. The pileated woodpecker is associated with mature deciduous, mixedwoods features. Long-billed curlew and American kestrel are strongly associated with open grasslands and pastures. SOCC observed on site were the barn swallow, eastern kingbird, sora, trumpeter swan, and upland sandpiper.

8.2.1.5 Reptiles

FWMIS does not contain records of any reptile species within 3 km of the Site (GOA, n.d.-a) and the field assessment did not identify any garter snakes or hibernacula locations.

8.2.2 Landscape Connectivity

Within the Site, there are no continuous large habitat patches or terrain features, such as forests, native grasslands, or river valleys, that would concentrate wildlife movement in one area. There are no major barriers to wildlife movement within the Site, such as highways. However, the watercourses on site, which are associated with wetlands and native grassland, may provide preferred wildlife movement areas, particularly if they provide cover and forage compared to cultivated areas. Therefore, wildlife can move freely within the Site and may not strongly concentrate on movement corridors.

9.0 ENVIRONMENTALLY SIGNIFICANT AREAS

9.1 Methods

Trace personnel assessed potential Environmentally Significant Areas (ESAs) on the Site through a review of:

- *Environmentally Significant Areas in Alberta: 2014 Update* (Fiera, 2014)
- *Biophysical Impact Assessment Framework* (COC, 2010)
- Field assessment data presented in Sections 4.0 through 8.0

According to the provincial report (Fiera, 2014), ESAs are defined as areas that are important for the long-term maintenance of biological diversity, physical landscape features, and other natural processes at multiple-spatial scales. An ESA contains rare or unique elements, or elements that may require special management consideration due to their conservation needs. The purpose of ESAs is to assist in identifying environmentally important areas for land use planning processes (Fiera, 2014).

Fiera conducted the identification, ranking, and mapping of provincial ESAs remotely at the scale of a quarter section based on 4 main criteria, 10 sub-criteria, and 25 indicators. The four main criteria used were: areas that contain focal species, species groups, or their habitats (CR1); areas that contain rare, unique, or focal habitat (CR2); areas with ecological integrity (CR3); and areas that contribute to water quality and quantity (CR4) (Fiera, 2014). Fiera assigned each quarter section a score between 0 and 0.4375, based on each of the four criteria, and set an ESA cutoff value of 0.189. Quarter sections with scores above 0.189 are considered environmentally significant, and those with scores below are not (Fiera, 2014).

To establish environmental significance, Trace personnel evaluated polygons on the Site based on the criteria established by the COC in the *Biophysical Impact Assessment Framework* (COC, 2010). Trace personnel established sub-criteria informed by the *Environmentally Sensitive Areas Background Study* (O2, 2019) for the Calgary metropolitan region. The two aforementioned documents are specific to the COC and the surrounding area and provide the most applicable criteria for the Site, given the location. Although many of the sub-criteria are measurable, several rely on the professional judgement of the individuals conducting the assessment. A list of the criteria and sub-criteria is presented in Table F:

Table F: Environmentally Significant Area Assessment	
Criteria[1]	Sub-criteria[2]
1) Quality of Biotic Community	a) Minimal disturbance (i.e., less than 10% human disturbance present, including trails, bare soil areas, houses, etc.).
	b) High richness of native plants/wildlife.
	c) Rated as healthy as per the Riparian Health Assessment (Ambrose et al., 2009; Fitch et al., 2009)
	d) Rated as healthy as per or Range Health Assessment (Adams et al., 2016) (applies to grassland, forest, and tame pasture).
2) Ecological Function	a) Wildlife corridor: presence of intact, continuous habitat, terrain features that would concentrate wildlife.
	b) Part of a wetland complex: where two or more wetlands separated by a non-wetland area that are functionally linked via surface water.
	c) Wildlife stepping stones, staging areas, or stopover areas: small patches of intact habitat that provide shelter, feeding, and resting opportunities, and that facilitate movement between at least two other habitat patches and are used annually during migration (must be natural cover).
	d) A native vegetation patch that meets key habitat requirements, including the presence of important habitat features that are known breeding, roosting, or foraging sites, or overwintering areas for a wide range of wildlife species (e.g., brushy grasslands, young forests, mature forests, riparian areas / floodplains, native grasslands, and Important Bird Areas).
3) Distinctive and/or Unusual Landform	a) The presence of seeps or springs.
	b) The presence of regionally, provincially, or nationally significant landforms (e.g., coulee, gully, rocky outcrop, avalanche path, ravine, escarpment, esker, pattern fen, oxbow, glacial erratic, steep slopes, etc.).
	c) Containing unique or sensitive soils (i.e., in the Solonetzic or Vertisolic soil orders).
4) Uniqueness	a) Ecosites with low abundance in the regional area (e.g., foothills fescue grasslands, forested areas in grassland areas, etc.).
	b) Containing a rare ecological community: community types that have been described as unusual, uncommon, of limited extent or encountered infrequently. Including community types that could be described by an experienced vegetation ecologist as in decline or as threatened in some way. Includes those listed in the Ecological Community Tracking and Watchlist (Allen, 2014).
	c) Containing or providing habitat for one or more rare lichen, plant (vascular or non-vascular), or wildlife SOCC.
	d) Containing a piping plover waterbody, trumpeter swan waterbody, or colonial nesting birds (as per the provincial dataset).
	e) Class A and B watercourses (as per the provincial dataset).

Notes: [1](COC, 2010), [2](O2, 2019)

To be considered environmentally significant, a polygon must meet one or more sub-criteria listed in Table F.

9.2 Results

According to Fiera (2014), the ESA score for the Site ranges from 0.025 to 0.1404; therefore, it is not considered significant.

Based on the Trace environmental significance assessment, the Site contains 11 polygons that are determined to be ESAs (Figure 5). Table G provides a summary of the results and Table 6 presents the detailed evaluation.

Table G: Environmental Significance Area Assessment Results

Polygon ID	Land Cover Class	Total Sub-criteria met	Total Criteria Met	Sub-criteria Results Summary
NG26	Native Grassland	2	2	1b: High richness of native plants/wildlife 2d: A native vegetation patch that meets key habitat requirements (native grassland)
NG28	Native Grassland	4	3	1b: High richness of native plants/wildlife 2c: Wildlife stepping stone 2d: A native vegetation patch that meets key habitat requirements (native grassland) 4c Containing or providing habitat for SOCCs
WL48	Temporary Graminoid Marsh	1	1	2b: Catchment area of wetland complex
WL52	Temporary Graminoid Marsh	4	2	2b: Catchment area of wetland complex 2c: Wildlife stepping stone 3a: Presence of a spring 4c Containing or providing habitat for SOCCs
WL56	Seasonal Graminoid Marsh	1	1	2b: Catchment area of wetland complex
WL57	Temporary Graminoid Marsh	1	1	2b: Catchment area of wetland complex
WL58	Seasonal Graminoid Marsh	1	1	2b: Catchment area of wetland complex
WL70	Seasonal Graminoid Marsh	1	1	2c: Wildlife stepping stone
WB71	Ephemeral Waterbody	1	1	2c: Wildlife stepping stone
WL74	Seasonal Graminoid Marsh	4	2	2b: Part of wetland complex

Table G: Environmental Significance Area Assessment Results				
Polygon ID	Land Cover Class	Total Sub-criteria met	Total Criteria Met	Sub-criteria Results Summary
				2c: Wildlife stepping stone 2d: Native vegetation patch meeting key habitat requirements (riparian area) 4c: Containing or providing habitat for SOCCs
WB75	Ephemeral Waterbody	1	1	2c: Wildlife stepping stone

10.0 PROJECT DESCRIPTION

The Site is located within Rocky View County, Alberta. The Proposed Development (Appendix J) is to be comprised primarily of large-scale technology infrastructure. Two quarter sections (SE¼-23-26-28-W4M and NE¼-14-26-28-W4M) in the northeast area of the Site will be partially retained for irrigation and stormwater management.

10.1 Methods

Trace personnel assessed impacts based on the proposed development concept for the Kineticor ASP, dated July 2025 (Appendix J).

Methods used to assess impacts in this report are generally based on federal guidance for impact assessments, the definition of which is an assessment of the effects of a project (GOC, 2019).

10.1.1 Potential Effects and Mitigations

Effects are changes to the environment or to health, social or economic conditions and the positive and negative consequences of these changes (GOC, 2019). Effects may occur directly to an environmental component because of the Proposed Development or indirectly because of a change to another environmental component. The direction of these interactions, or effects, may be considered as positive (i.e., there is a net benefit), adverse (i.e., the effect is undesirable), or neutral (i.e., a change occurs but the effect is neither positive nor adverse). Trace personnel identified where proposed project activities may directly or indirectly affect environmental components, as well as identifying the direction of the effect.

Mitigation measures help to control, reduce, or eliminate potential direct or indirect effects. For each potential effect, Trace personnel identified mitigation measures that are reasonable to implement.

10.1.2 Residual Effects

Residual effects are adverse effects that remain, or are predicted to remain, after the implementation of mitigation measures (GOC, 2012). Trace personnel prepared this residual effect analysis as a requirement of Rocky View County's Servicing Standards (RVC, 2013), in accordance with the federal guidance document entitled *Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under Canadian Environmental Assessment Act, 2012* (GOC, 2018b). To identify the residual effects associated with the Proposed Development, Trace personnel considered the effectiveness of the recommended mitigation measures.

To determine whether the predicted residual effect is significant, Trace personnel considered five factors: magnitude, geographic extent, duration, reversibility, and frequency, taking into consideration the ecological context and management thresholds where available. Ecological context may include the percent of the population affected, the importance of population, the number of generations to recovery, the affected species' sensitivity to the effect, and the effect on key life stage/cycle). The management thresholds evaluated for this BIA are those outlined in land use plans or policies, government commitments on the use or conservation of resources, or in legislation, regulations, or guidelines.

Criteria used to determine residual effects are described in Table .

Table H: Criteria Used to Determine Residual Effects[1]

Criteria	Definition	Environmental Description
Magnitude	Magnitude refers to the amount of change in a measurable parameter relative to baseline conditions or other standards, guidelines, or objectives.	Low: Effect occurs that might be detectable but is expected to be within the range of baseline or guideline values, or within the range of natural variability. Medium: Effect is expected to be at or to slightly exceed the limits of baseline or guidance values; the effect is detectable but unlikely to be a management concern. High: Effect is expected to exceed the limits of baseline or guideline values; the effect can pose a serious risk and represents a management concern.
Geographic Extent	Geographic extent refers to the spatial area over which the environmental effect is predicted to occur.	Local: Effect is confined to the Site footprint. Regional: The effect extends beyond the project footprint into the surrounding area. National: The effects extend to a national level.
Duration	Duration refers to the length of time that an environmental effect is discernible. This can refer to the amount of time required for the environmental component to return to baseline conditions, through mitigation or natural recovery.	Short-term: Effect occurs during construction and is reversible after construction ends or the completion of decommissioning. Medium-term: Effect occurs for the lifetime of the project. Long-term: Effect persists beyond decommissioning but is reversible. Permanent: Effect persists beyond decommissioning and is irreversible.
Reversibility	Reversibility refers to the potential for the environmental component to recover from the environmental effect caused by the project, either through mitigation or natural recovery	Reversible: The environmental component is expected to recover to baseline conditions or similar, following construction completion or decommissioning. Irreversible: The environmental component is not expected to recover to baseline conditions, after construction completion or decommissioning.
Frequency	Frequency describes how often the environmental effect occurs within a given time period.	Once: Effect occurs once during construction. Intermittent: Effect occurs multiple times during construction, or operation. Continuous: Effect is continuous during operation.

[1]Methods based on federal guidance (GOC, 2018b)

The significance of project-related residual effects is defined as follows.

- Not Significant: The effect is detectable, but not likely to result in a substantial change that will alter the environmental component's status or integrity beyond an acceptable level.

- Significant: The effect is measurable and is likely to result in a substantial change that will alter the environmental component's status or integrity beyond an acceptable level.

10.1.3 Cumulative Effects

Cumulative effects are effects that are likely to result from a designated project in combination with other physical activities that have been or will be carried out (GOC, 2015). This cumulative effect assessment follows the guidelines set out by the Canadian Environmental Assessment Agency (CEAA) (CEAA, 2018). Therefore, only environmental components that the Proposed Development is predicted to have a residual effect on are assessed for cumulative effects.

As per the CEAA (2018) guidelines, Trace assessed the cumulative effects based on the level of information and resources as of June 2025. Trace acknowledges that environmental data may not be available for certain components within the selected spatial boundary, which limits the ability to describe changes over time. As well, information on current and future projects may not be readily available, which limits the ability to determine how these projects may interact with the environmental components. Therefore, this cumulative effect assessment is based on publicly available information for the environmental components, and existing, approved, and planned projects and activities. However, due to these acknowledged limitations, this cumulative effect assessment provides a high-level description of the likely cumulative effects, if any, associated with the project.

10.2 Results

10.2.1 Potential Effects and Mitigations

Table I presents a summary of the identified potential effects and mitigation options proposed to reduce or eliminate the potential effect for each environmental component. The impacted area of the Site based on the Kineticor ASP is presented in Figure 6.

Table I: Potential Effects and Mitigations

Potential Effect and Direction	Description	Proposed Mitigation
Topography and Landforms		
Alteration of terrain and landforms (neutral)	The natural topography and landforms may be altered during site preparation for construction.	Minimize site grading and integrate the natural topography into the development as much as possible.

Table I: Potential Effects and Mitigations		
Soil		
Loss of soil (adverse)	Loss of soil may occur due to water or wind erosion if: ▪ Stripping and grading occur during dry, windy conditions. ▪ Soils are left exposed for an extended period. ▪ Precipitation occurs when bare soils are present.	Conduct construction activities prior to spring snowmelt and/or after the saturated areas have dried up in the fall to prevent unnecessary rutting, erosion, and siltation.
		Install erosion control measures to manage periodic runoff events during construction and prior to significant precipitation or accumulation of snowpack.
		Protect slopes from erosion using erosion matting or tackifier.
		Contain and treat sediment-laden runoff on the Site by creating sediment ponds and traps to provide adequate detention time for sediment to settle out in runoff.
		Install check dams (e.g., rock check dams, synthetic barriers, rolled sediment stops, compost socks, etc.) to control water velocity and channel erosion, in channels receiving concentrated flows.
		Avoid the channelized flow of rainwater through downspouts and use splash pads until vegetation can be re-established.
		Monitor and maintain sediment and erosion control measures until vegetation is established on the Site or areas are built out.
Alteration of soil quality (adverse)	Soil quality may be affected through: ▪ Admixing due to improper handling during stripping/grading. ▪ Compaction due to heavy equipment or storage of supplies and materials (especially on wet soil). ▪ Potential contamination due to leaky equipment or fuel spills.	Strip topsoil during dry conditions to prevent rutting and compaction.
		Salvage topsoil material separately from underlying subsoil materials in a two-lift procedure.
		Cover salvaged topsoil and subsoil stockpiles, store them separately, and maintain an appropriate setback distance of at least 1 m between the bases of stockpiles.
		When replacing soils in areas to be landscaped, spread subsoil first and then topsoil on top.
		Leave topsoil rough and loose to increase receptive seedbeds for plants to establish.
		Maintain equipment and inspect for leaks.
		Have spill kits present on site during construction. If a spill occurs, immediately implement spill response and reporting measures.

Table I: Potential Effects and Mitigations		
Surface Water		
Loss of wetlands and ephemeral waterbodies (adverse)	Nineteen wetlands and nineteen ephemeral waterbodies in the development area will be permanently lost.	As per provincial requirements, compensate in full for impacted wetland area by restoring wetlands off site or providing an in-lieu fee to Alberta EPA, based on the wetlands' relative values.
		The Proponent has retained qualified professionals to Design, construct, and maintain a stormwater management system as per Rocky View County standards (RVC, 2011). The stormwater management system will convey and/or store runoff from the Site, as appropriate, based on pre-disturbance conditions.
Alteration of natural drainage (adverse)	Natural drainage patterns will be altered during stripping, grading, and development including flow within all ephemeral watercourses excluding part of Watercourse B. Watercourse A, the intermittent watercourse will be retained.	Natural drainage within the intermittent watercourse (Watercourse A) will be maintained through avoidance (as per the development concept, the area will remain undeveloped).
		Qualified professionals will design the stormwater management system, and the Proponent will properly construct it in accordance with the design. The stormwater management system will convey and/or store runoff from the Site, as appropriate, based on pre-disturbance conditions.
Impacts to Spring/Seep (adverse)	The on-site spring may be impacted during stripping/grading.	The Proponent will retain the downstream portion of Watercourse B.
		Follow recommendations in the stormwater master drainage plan.
Vegetation		
Loss of native vegetation and plant communities (adverse)	Plant communities containing native species, including native and non-native grassland, forestland, and wetlands will be removed during stripping and grading.	Use native species appropriate for the natural subregion for landscaping, where appropriate.
Introduction and spread of non-native (weed) species (adverse)	Seeds from weed species may be: ▪ Introduced onto the Site by construction equipment and workers, spreading new weed species in the work area. ▪ Spread off-site if vehicles are not cleaned before leaving.	Clean equipment and vehicles of soil and weed seeds before the equipment arrives at the Site, to prevent the introduction of weed species from other areas, and after leaving the Site, to prevent transporting weed seeds to other areas.
		Park equipment and vehicles within the Site boundaries, away from known weed infestations, and wherever possible, on hardened surfaces.
		Use certified weed-free revegetation materials.
		Complete inspections during construction and landscaping phases of the project to assess if weeds are a problem and identify issues.

Table I: Potential Effects and Mitigations		
Vegetation		
Introduction and spread of non-native (weed) species (adverse)		Control or destroy any Noxious or Prohibited Noxious weeds occurring on the Site using appropriate species-specific weed control measures, in accordance with the Alberta *Weed Control Act* (GOA, 2008).
Wildlife		
Temporary sensory disturbance during construction (adverse)	The noise created by the construction equipment, including heavy equipment and workers, may result in avoidance by wildlife species while construction is occurring.	Shut off vehicles and equipment when not in use. Avoid unnecessary travel on as well as to and from the Site. Follow posted speed limits.
Loss of wildlife habitat (adverse)	Wildlife habitat including non-native grassland, modified grassland, deciduous forestland, wetlands and waterbodies will be removed during stripping and grading.	Use native species appropriate for the natural subregion for landscaping, where appropriate.
Wildlife mortality or injury (adverse)	Direct mortality or injury of wildlife may result from construction activities, due to the movement of construction vehicles and equipment: ▪ Active nests may be present within native and non-native grasslands, forestlands, and the wetlands. Small mammals and their dens may be present on site and in surrounding areas. ▪ Vehicles traveling on nearby roads may cause collisions with wildlife. ▪ Vehicles traveling on nearby roads may cause collisions with wildlife. ▪ Garbage and construction materials could negatively affect wildlife health if ingested or by causing entrapment.	Avoid unnecessary travel on and to and from the Site. For migratory birds covered by the MBCA: ▪ Conduct site clearing and grading outside of the migratory breeding bird window applicable to the area of the Site (approximately April 1 to August 31 [(GOC, 2018a)]) to avoid the destruction of nests and breeding birds. ▪ If construction must occur during the migratory breeding bird window, employ a qualified person to conduct a wildlife sweep preferably within 72 hours but no more than seven days prior to clearing of vegetation in accordance with the *Wildlife Sweep Protocol* (GOA, 2021). ▪ If activities on the Site are suspended for four or more days, conduct an additional wildlife sweep prior to resuming construction. ▪ If nests/dens are detected during the sweep, stop all work and contact the appropriate authorities (i.e., Canadian Wildlife Service) to implement mitigation measures.

Table I: Potential Effects and Mitigations		
Wildlife		
Wildlife mortality or injury (adverse)		For non-migratory birds (i.e., owls, hawks, and falcons) not covered by the MBCA: ▪ Conduct site clearing and grading outside of the migratory breeding bird window applicable to the area of the Site (approximately March 15 to July 31 to avoid the destruction of nests and breeding birds. Timing may be adjusted dependent upon the likelihood of these species being present and on sensitivity of species in question. ▪ If construction must occur during the non-migratory breeding bird window, employ a qualified person to conduct a wildlife sweep preferably within 72 hours but no more than seven days prior to clearing of vegetation in accordance with the *Wildlife Sweep Protocol* (GOA, 2021). ▪ If activities on the Site are suspended for four or more days, conduct an additional wildlife sweep prior to resuming construction. If nests/dens are detected during the sweep, stop all work and contact the appropriate authorities (i.e., Alberta EPA wildlife biologists) to implement mitigation measures.
Historical Resources		
Disturbance to historical resources (adverse)	Historical resources may be encountered and/or impacted during excavation activities.	As per Section 31 of the HRA, incidental discoveries will require work to stop and Alberta Culture and Status of Women to be contacted following their standard reporting guidelines (GOA, 2000b).
Environmentally Significant Areas		
Loss of ESAs (adverse)	Nine ESAs will be fully or partially removed during construction.	Use native plants appropriate to the natural subregion for landscaping, wherever possible.

10.2.2 Residual Effects

Table J presents a summary of the identified potential effects associated with the project, and whether a residual adverse effect is predicted after the implementation of proposed mitigation measures. Where a residual effect is predicted, the following sections describe that residual effect in more detail and the effect's significance is evaluated.

Table J: Predicted Residual Effects		
Predicted Effect	Rationale	Predicted Residual Effect
Topography and Landforms		
Alteration of terrain and landforms	Alteration is considered neutral in direction.	No

Table J: Predicted Residual Effects		
Predicted Effect	Rationale	Predicted Residual Effect
Soil		
Loss of soil	Proper implementation of soil handling and erosion control measures is expected to fully eliminate this effect.	No
Alteration of soil quality	Proper implementation of mitigation measures is expected to fully eliminate this effect.	No
Surface Water		
Loss of ephemeral waterbodies and wetlands	The proponent will undertake in-lieu replacement as the provincially required method to mitigate the effect of infilling temporary and seasonal wetlands on the Site. Alberta EPA will allocate the funds to restore or create another equivalent wetland. In-lieu replacement is expected to mitigate the loss of wetlands but does not eliminate this impact on the Site itself.	Yes
Alteration of natural drainage (adverse)	Proper development and implementation of stormwater management on site and in consideration of off-site conditions are expected to fully eliminate this effect. Off-site drainage through mapped watercourses will be maintained at pre-development conditions through the controlled release of treated stormwater.	No
Impacts to Spring/Seep (adverse)	Implement recommendations of the stormwater master drainage plan. to avoid impacts to the groundwater discharge and incorporate into stormwater management on site.	No
Vegetation		
Loss of native plant communities, and associated native vegetation	The native plant communities and associated native vegetation will be permanently lost as a result of the development.	Yes
Damage to off-site vegetation	Dust mitigation measures are expected to fully eliminate this effect.	No
Introduction and spread of non-native species	Proper implementation of weed control measures is expected to fully eliminate this effect.	No
Wildlife		
Sensory disturbance during commissioning, operation, and decommissioning	Sensory disturbance is expected to occur throughout the lifecycle of the project.	Yes
Loss of wildlife habitat	Habitat associated with native grassland and wetland will be lost. Some wildlife habitats will be replaced as part of the in-lieu wetland replacement; however, this replacement will not occur on-site.	Yes

Table J: Predicted Residual Effects		
Predicted Effect	Rationale	Predicted Residual Effect
Wildlife		
Wildlife mortality or injury	Proper implementation of mitigation measures is expected to fully eliminate this effect for breeding birds and medium-sized mammals but only reduces the potential effect on small mammals and amphibians who may be killed or injured during stripping and grading activities as they may not be able to move away in time.	Yes
Environmentally Significant Areas		
Loss of areas meeting ESA Criteria	Nine areas meeting ESA criteria will be permanently lost.	Yes

The characteristics and significance of each predicted residual effect is summarized in Table and described in further detail below.

Table K: Evaluation of Residual Effect Significance						
Residual Effect	Magnitude	Geographic Extent	Duration	Reversibility	Frequency	Significance
Loss of ephemeral waterbodies and wetlands	Medium	Local	Permanent	Irreversible	Once	Not Significant
Loss of native plant communities, and associated native vegetation	Medium	Local	Permanent	Irreversible	Once	Not Significant
Sensory disturbance during commissioning, operation, and decommissioning	Medium	Regional	Short-term	Reversible	Intermittent	Not Significant
Loss of wildlife habitat	Medium	Local	Short-term	Irreversible	Once	Not Significant
Wildlife mortality or injury	Low	Local	Permanent	Irreversible	Intermittent	Not Significant
Loss of areas meeting ESA criteria	Medium	Local	Permanent	Irreversible	Once	Not Significant

10.2.2.1 Loss of Ephemeral Waterbodies and Wetlands

Through the *Alberta Wetland Policy* (GOA, 2013b), the Province of Alberta has stated that high-relative value (i.e., A value) wetlands are a priority for retention, and their loss is of management concern. The loss of on-site wetlands will be medium in magnitude. Development will be restricted to the Site boundaries, keeping the residual effect local in extent. The residual effect will be permanent and irreversible as the development will be permanent. The effect will occur only once during development. Given the criteria, the effects will be detectable, but not likely to result in a substantial change that will alter the environmental

component's status or integrity beyond an acceptable level. Thus, the residual effects are not considered to be significant.

10.2.2.2 Loss of Native Plant Communities and Associated Native Vegetation

The loss of native plant communities and native vegetation is considered medium in magnitude as the on-site native grassland communities are relatively intact with high species diversity. The effect is local in geographic extent since development will be restricted to the Site so the effect will not extend beyond the Site's boundary. The residual effect will be short-term in duration and irreversible.

The effect will occur only once during development and will not continue once the Site has completed development. Given the low percentage of native grassland on site, the loss is unlikely to result in a measurable change in native grassland area or native vegetation species within the natural subregion. Based on these criteria, the removal of grassland and associated native vegetation residual effect is not considered to be significant.

10.2.2.3 Sensory Disturbance During Development

Noise threshold distances, or the distance where noise at a given level elicits some response, vary greatly between wildlife species. It also depends on a number of factors, including noise level and frequency, distance and event duration, equipment type and condition, topography, weather conditions, previous exposure to noise, hearing sensitivity, and distance from the noise.

Sensory disturbance is considered medium in magnitude as some species are likely to avoid the area, either during working hours only or permanently until construction is completed. However, species, such as American crow (*Corvus brachyrhynchos*) and coyote, that are sensory tolerant are likely to remain relatively unaffected. The effect is considered regional as the sound will travel to a certain degree and affect a larger area than the Proposed Development itself. The duration is short-term, reversible, and intermittent as the noise will primarily occur during operating hours and development. Given the criteria, the effects will be detectable, but not likely to result in a substantial change that will alter the environmental component's status or integrity beyond an acceptable level. Thus, the residual effects are not considered to be significant.

10.2.2.4 Loss of Wildlife Habitat

The loss of wildlife habitat is considered medium in magnitude since the on-site native grassland and wetland communities are relatively intact, providing habitat to a variety of wildlife, including at least one wildlife SOCC. The effect is local in geographic extent since stripping and grading will be restricted to the Site so the effect will not extend beyond the Site's boundary. The residual effect will be long term in duration and irreversible, since the wildlife habitat replaced post-development will be limited to landscaping.

The effect will occur only once during development and will not continue once the Site has been developed. Given the relative size and condition of the Site, the loss of this wildlife habitat is unlikely to result in a measurable change in wildlife species abundance within the natural subregion. Based on these criteria, the removal of wildlife habitat for the residual effect is not considered to be significant.

10.2.2.5 Wildlife Mortality and Injury

Wildlife mortality or injury is considered low in magnitude since mitigation measures will reduce the potential of occurrence, and local in geographic extent since development will be restricted to the Site, so the effect will not extend beyond the Site's boundary. The residual effect will be permanent in duration and

irreversible. This effect may occur intermittently during construction and post-development as increased vehicle traffic throughout the Site's footprint has the potential to result in wildlife mortality or injury. As the Site is located within a quarter section that wildlife can easily navigate around and since wildlife are likely to avoid it due to sensory disturbance, the likelihood of mortalities or injury is low. Therefore, the loss is unlikely to result in a measurable change in wildlife species populations within the natural subregion. Based on these criteria, the residual effect of wildlife mortality and injury is not considered to be significant.

10.2.2.6 Loss of Environmentally Significant Areas

Based on the Development Concept, 59.9 ha of ESAs will be lost during development.

The loss of ESAs is considered medium in magnitude since approximately 70% of ESAs will be impacted due to the Proposed Development. It is local in geographic extent since stripping and grading will be restricted to the Site, so the effect will not extend beyond the Site boundary. The residual effect will be permanent in duration and irreversible. The effect will only occur during construction. Given the relative size and condition of the Site, the loss is unlikely to result in a measurable change in ESAs within the natural subregion. Based on these criteria, the loss of ESA residual effect is not considered to be significant.

10.2.3 Cumulative Effects

10.2.3.1 Spatial Boundaries

The spatial boundary is the provincial hydrologic unit code 4 Middle Red Deer River boundary (GOA, 2024a) within county boundaries, as Rocky View County and its watershed are the important environmental feature in the area.

10.2.3.2 Temporal Boundaries

The temporal boundary is from 1950 (earliest aerial photograph reviewed) to 2035. The municipal development plan is currently being updated. Therefore, the future of land use planning within the spatial boundary is currently uncertain to a degree and projecting further than 10 years creates further uncertainty in this assessment.

10.2.3.3 Cumulative Effect Identification

Past, current, and reasonably foreseeable activities in the spatial boundary include the following:

- Agricultural Activities:
  - Past: Historical and current agricultural activities include converting native grasslands, forests, and wetlands to cultivated fields, and soils have been tilled and cultivated for multiple decades. Associated wildlife habitat has also been lost.
  - Current: Wetlands within the undeveloped portions of the spatial boundary are currently being tilled and cultivated annually.
  - Foreseeable future: Undeveloped portions will continue to be cultivated.
- Commercial and Rural Development:

- Historical: Commercial and rural development has occurred and included changes in land use, development of transportation systems, an increase in population, land development, and the provision of essential services. This activity has resulted in the loss of soils, native vegetation communities, wetlands, and associated wildlife habitat, as well as increased sensory disturbance for wildlife and wildlife mortality.

- Current: Commercial and rural development activities are currently occurring, resulting in the further loss of soils, native vegetation communities, wetlands, and associated wildlife habitat, as well as increased sensory disturbance for wildlife and wildlife mortality.

- Foreseeable future: Commercial and rural development is expected to continue, resulting in the further loss of soils, native vegetation communities, wetlands, and associated wildlife habitat, as well as increased sensory disturbance for wildlife and wildlife mortality.

- Oil and Gas Development and Extraction:

  - Historical: Oil and gas development and extraction, including wellsites, pipelines, and supporting infrastructure have occurred, resulting in the loss of native vegetation communities, wetlands, and associated wildlife habitat, and sensory disturbance for wildlife. These activities can also result in wildlife mortality and contamination of soil, surface water, and groundwater.

  - Current: Oil and gas development and extraction activities are currently occurring, resulting in the loss of native vegetation communities, wetlands, and associated wildlife habitat, and sensory disturbance for wildlife. These activities can also result in wildlife mortality and contamination of soil, surface water, and groundwater.

  - Foreseeable future: Oil and gas development and extraction activities are anticipated to continue within the temporal boundary and continue to result in the impacts historically and currently occurring.

- **Loss of ephemeral waterbodies and wetlands**: Wetlands and waterbodies have been and will be lost as a result of various development and agriculture activities within the spatial boundary, including those present on the Site. To date, the cumulative effects of wetland loss have been managed provincially under the *Wetland Management in the Settled Area of Alberta: An Interim Policy* (Interim Policy) (Alberta Water Resources Commission, 1993) and more currently, the *Alberta Wetland Policy* (GOA, 2013b). The Interim Policy followed a “no net loss” approach to wetland areas, whereas the current *Alberta Wetland Policy* allows for replacement options that can be pursued by proponents or by designated replacement agents. Some limited non-replacement options are identified; however, these are under the direct purview of Alberta EPA and not available to proponents. For replacement options, the goal of the *Alberta Wetland Policy* is to replace wetlands type for type, value for value, and within the same Relative Value Watershed, where achievable. Provided that the required in-lieu replacement fee is paid by the Proponent and the funds are used to restore or create wetlands within the watershed (if not the spatial boundary).

- **Loss of native vegetation communities and associated native vegetation**: Native vegetation communities and associated native vegetation have been lost or highly disturbed within the spatial boundary, primarily because of cultivation and development. Native grassland loss has been significant across Alberta, ranging from 53 to 71%, and approximately 26% of the remaining is in a relatively natural state (MULTISAR, 2024). Native vegetation communities and native vegetation, including native grassland, will be lost because of the vegetation removal required for the Proposed Development. It is reasonable to expect that current and future development and cultivation will result in the loss of native vegetation communities and native vegetation, including native grassland, as they are not protected. As

well, current and future activities are expected to reduce the quantity of native plant communities and overall species diversity. Given the low percentage of native grassland on site, the loss is unlikely to result in a measurable change in native grassland area or native vegetation species within the natural subregion and the development will result in a minor contribution to the cumulative effect of native vegetation community and associated native vegetation loss.

- **Sensory disturbance during development and post-development**: Sensory disturbance in the spatial boundary due to development is expected to increase as additional development occurs. Species that are sensory tolerant will remain largely unaffected. Noise will increase as construction activity occurs, which will contribute to noise within the local area but is expected to make a minor contribution to noise within the spatial boundary. The duration of the impact is short term as noise is expected to reduce following the end of construction activities.

- **Loss of wildlife habitat**: Wildlife habitat has been lost or highly disturbed within the spatial boundary, primarily because of cultivation and development. Wildlife habitat will be lost because of the vegetation removal required for the Proposed Development. Patches of wildlife habitat are still present within the spatial boundary, but as they are not protected, it is reasonable to expect that current and future development and cultivation will reduce the quality and quantity of habitat for wildlife species. Lost wildlife habitat will not be replaced elsewhere within the spatial boundary; therefore, the Proposed Development is expected to make a minor contribution to the cumulative effect of wildlife habitat loss.

- **Direct mortality and injury to wildlife**: Direct mortality and injury to wildlife have likely occurred within the spatial boundary because of vehicle traffic associated with human activities. The number of wildlife species killed or injured during construction activities for the Proposed Development is expected to be minimal, as many wildlife species are highly mobile, enabling them to move to another area during disturbances. The Alberta Wildlife Watch Program collects data on animal-vehicle collisions and 60% of the reported collisions on rural highways were animal-vehicle collisions (GOA, 2024b). Within the spatial boundary, mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), red fox (*Vulpes vulpes*), moose (*Alces alces*), and porcupine (*Erethizon dorsatum*) animal-vehicle collisions have been recorded (GOA, 2024b). These species are all considered common and secure within Alberta. Therefore, a small number of losses is unlikely to affect local or regional population dynamics. As a result, the Proposed Development is not expected to contribute to the cumulative effect of direct wildlife mortality or injury.

- **Loss of ESAs**: Areas meeting the ESA criteria have likely been lost or highly disturbed within the spatial boundary because of cultivation and land development. Areas considered ESAs will be lost because of land clearing required for the Proposed Development. While areas meeting the ESA criteria are still present within the spatial boundary, it is reasonable to expect that current and future land development and cultivation will reduce the land area, qualifying as environmentally significant. ESAs will not be replaced elsewhere within the spatial boundary; therefore, the Proposed Development is expected to make a minor contribution to the cumulative effect of ESA loss.

11.0 LIMITATIONS OF REPORT

This report is based solely on the conditions which existed on site at the time of the assessment. The client, and any other parties using this report with the express written consent of the client and Trace, acknowledges that conditions affecting the environmental assessment of the Site can vary with time and that the conclusions and recommendations set out in this report are time sensitive.

The client, and any other party using this report with the express written consent of the client and Trace, also acknowledges that the conclusions and recommendations set out in this report are based on limited observations and testing on the Site and that conditions may vary across the Site which, in turn, could affect the conclusions and recommendations made.

The client acknowledges that Trace is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment, or development of the Site, the decisions on which are the sole responsibility of the client.

12.0 CLOSURE AND QUALITY MANAGEMENT

We trust this meets your requirements. Should you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Trace Associates Inc.

22-Jul-2025

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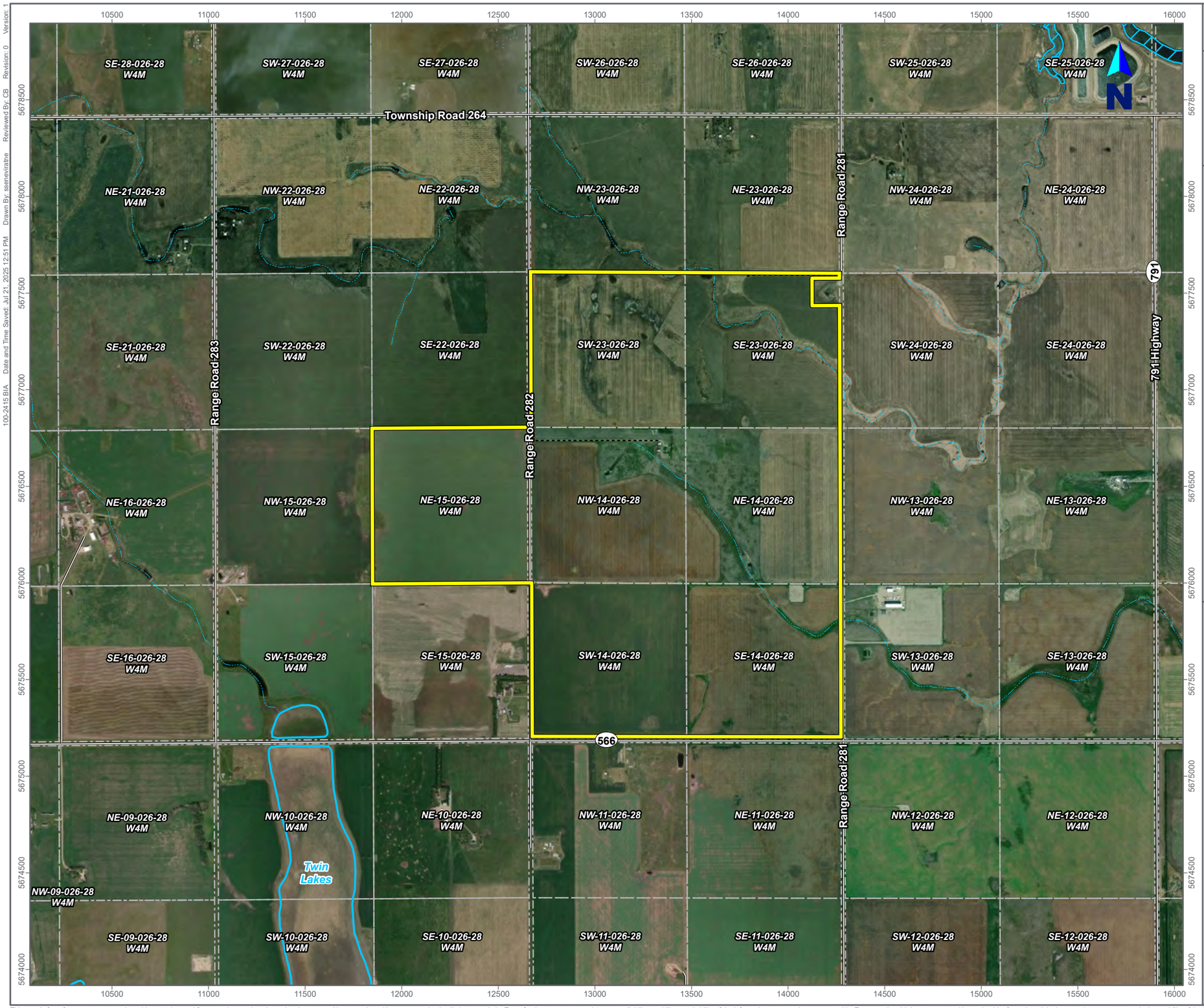
Figures



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Site Location

Kineticor Holdings LP#3
c/o Cassa Development Services

Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- Recurring Waterbody
- Reservoir
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

0 0.25 0.5 1 1.5 km

1:20,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation

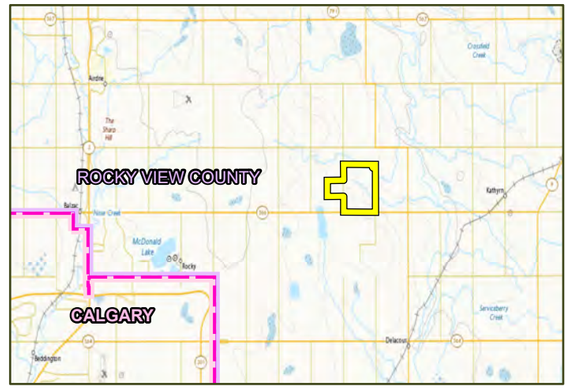

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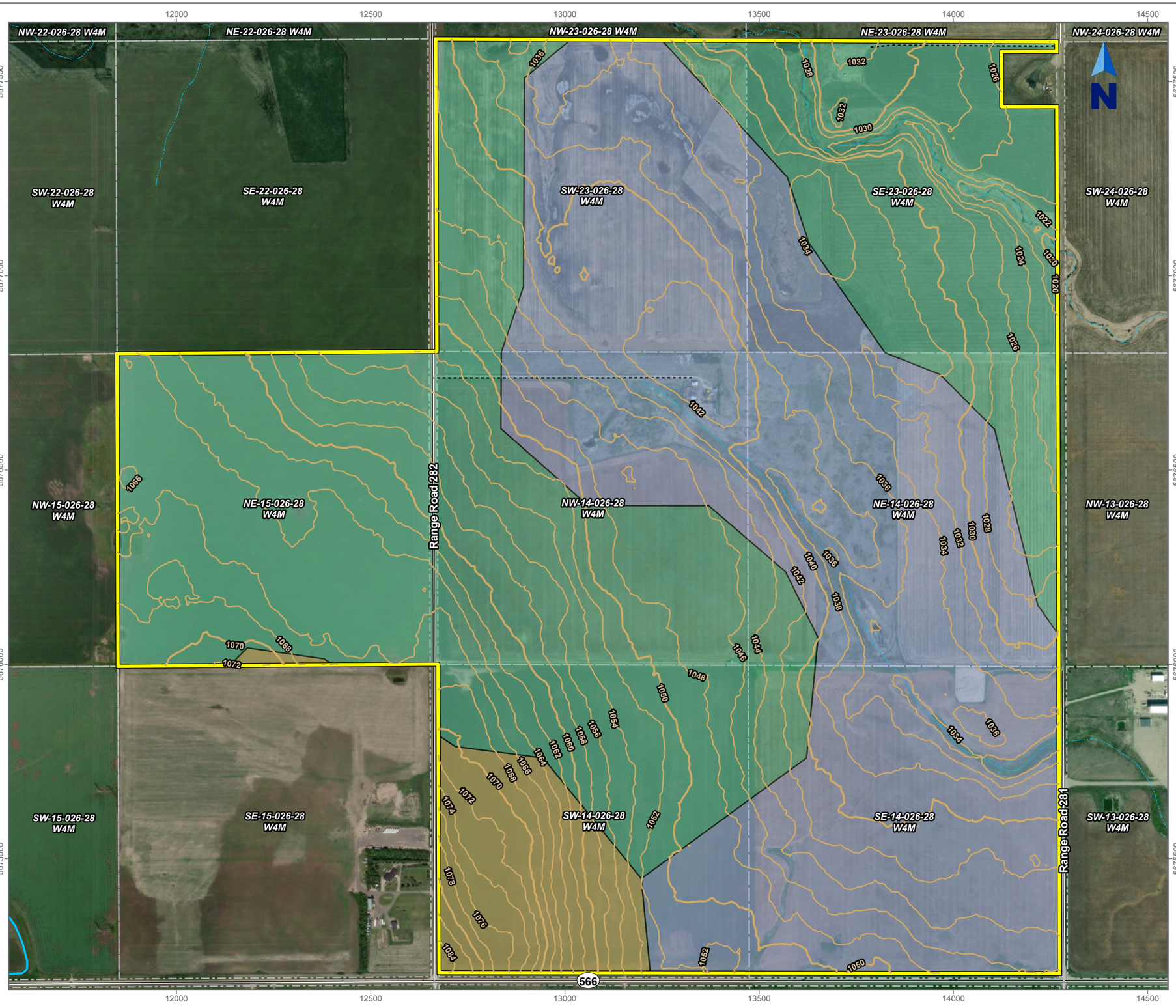
Figure No. 1



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Topography and Soils

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- Recurring Waterbody
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Contours

- Minor Contour (2 m Interval)
- Major Contour (10 m Interval)

Alberta Soil Information Centre

- BEDE2/U1h
- DEL1/H1l
- DEL1/U1h
- DEL18/U1h
- DEL7/U1h
- DERK1/U1h

Alberta Soil Information Centre

- DEL1/H1l
- DEL7/U1h
- DERK1/U1h

0 100 200 400 600 m

1:10,000 (At original plot size of 11x17)

Notes

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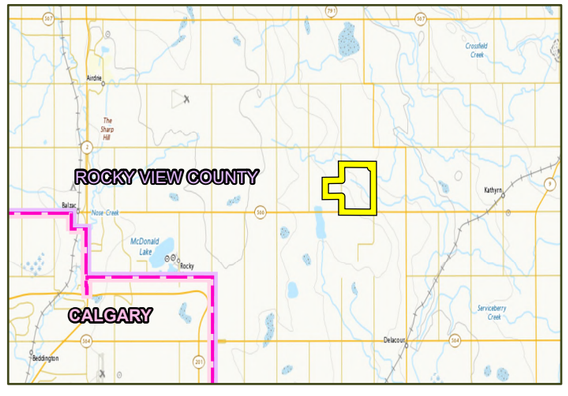

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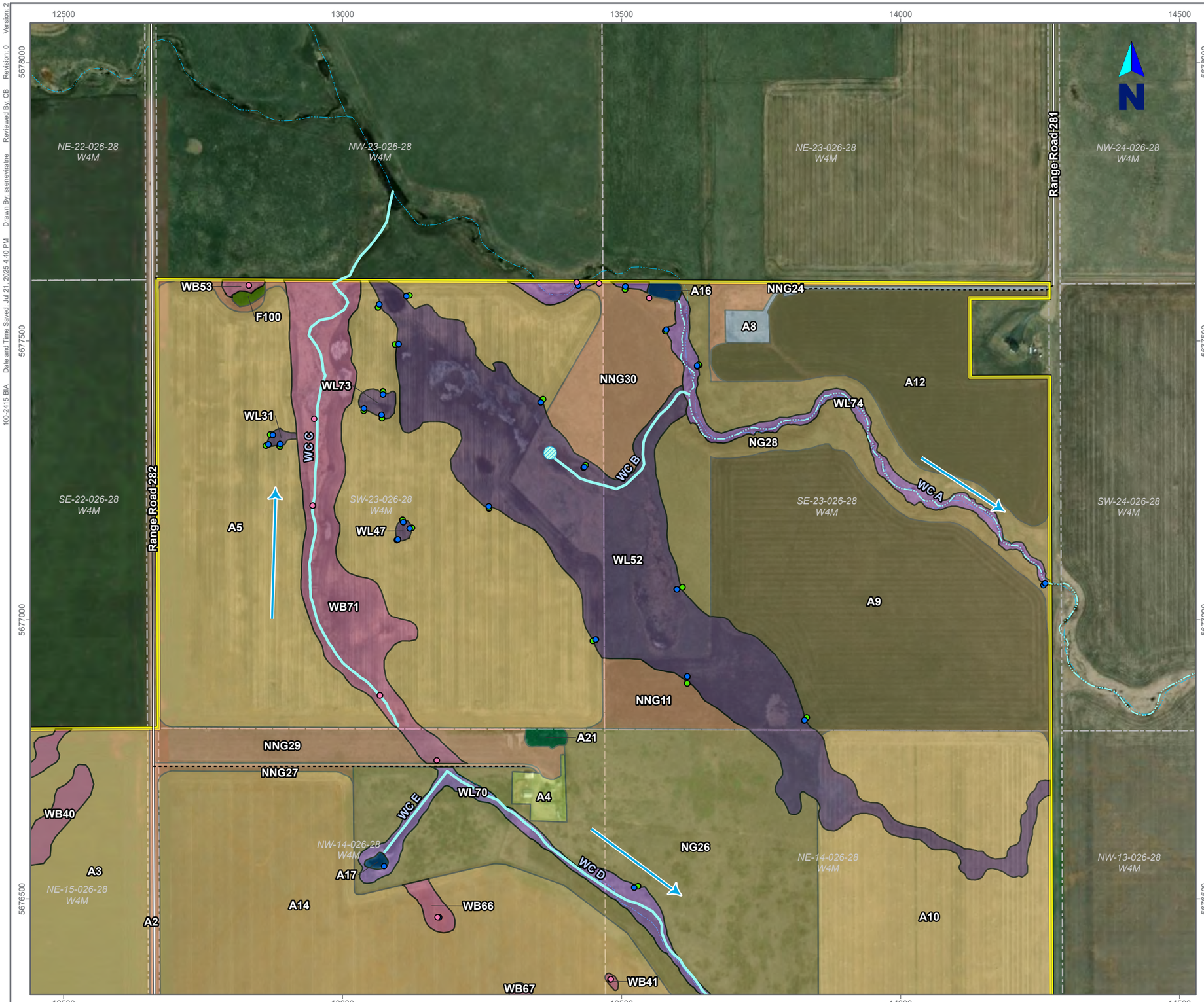
Figure No. 2

Surface Water and Vegetation

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Ephemeral Watercourse
- Intermittent Watercourse
- Flow Direction
- Spring

Wetland Delineation Plot

- Ephemeral Waterbody (Center)
- Upland (Boundary)
- Wetland (Boundary)

Anthropogenic

- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Forestland

- Deciduous Dominated Forestland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation

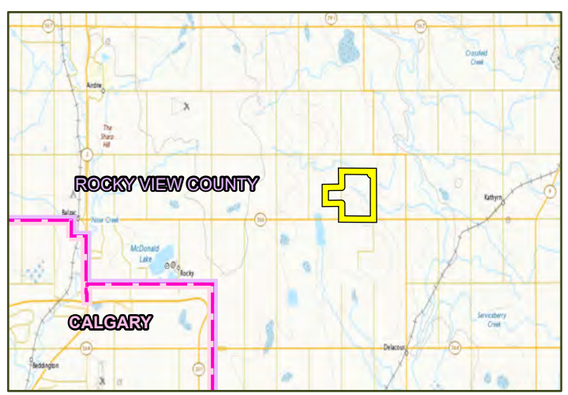


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Figure No. 3.1

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Surface Water and Vegetation

Kineticor Holdings LP#3
c/o Cassa Development Services

Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Ephemeral Watercourse
- Intermittent Watercourse
- Flow Direction
- Spring

Wetland Delineation Plot

- Ephemeral Waterbody (Center)
- Upland (Boundary)
- Upland (Center)
- Wetland (Boundary)

Anthropogenic

- Rural Residential
- Dugout
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
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4. Inset Image: Canada Base Map - Transportation

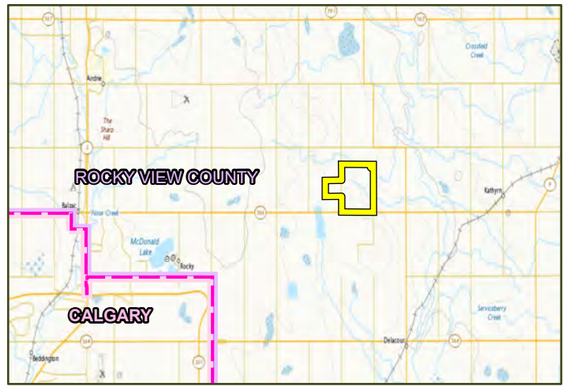

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Figure No. 3.2

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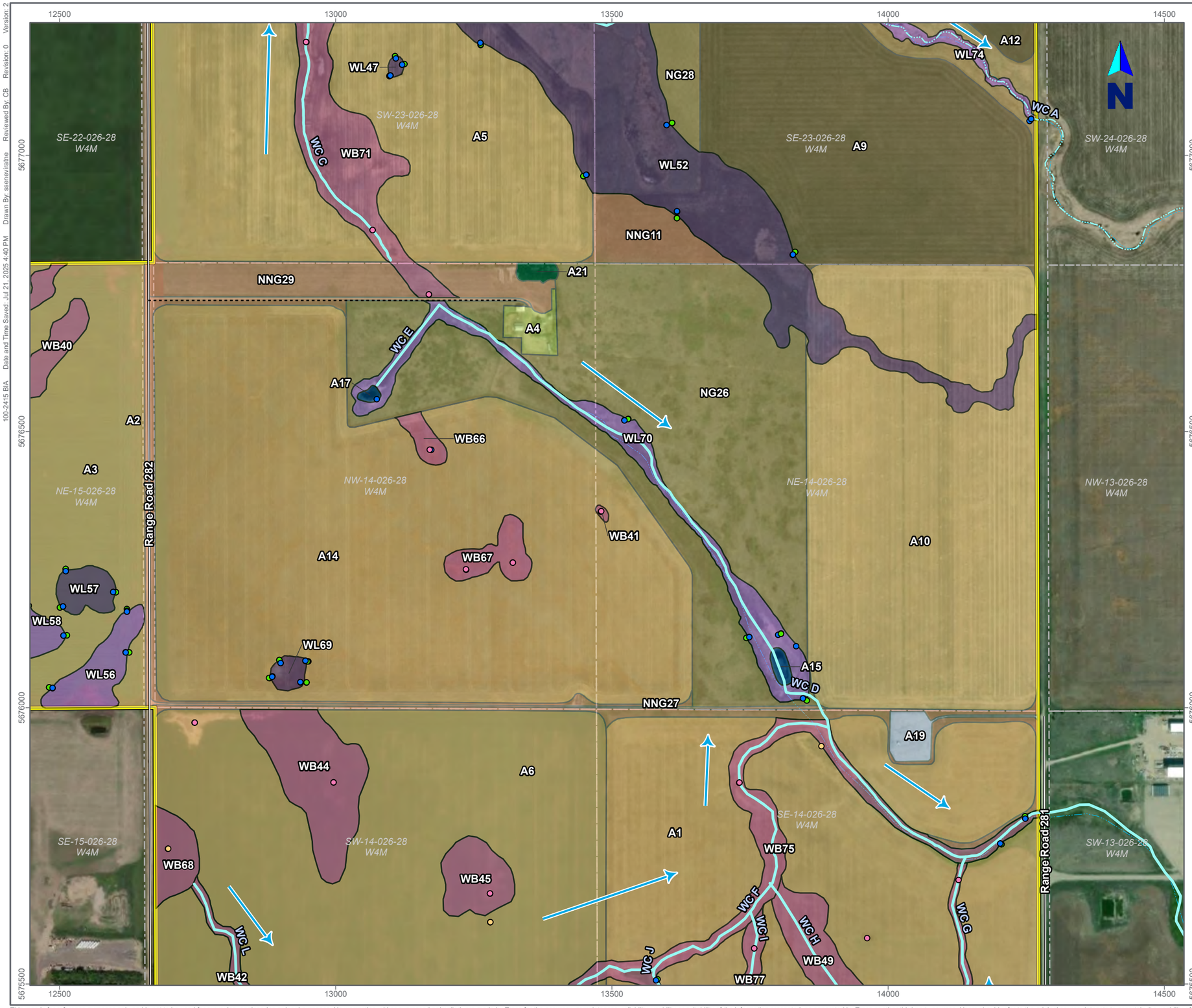
Surface Water and Vegetation

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Ephemeral Watercourse
- Intermittent Watercourse
- Flow Direction
- Spring

Wetland Delineation Plot

- Ephemeral Waterbody (Center)
- Upland (Boundary)
- Upland (Center)
- Wetland (Boundary)

Anthropogenic

- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

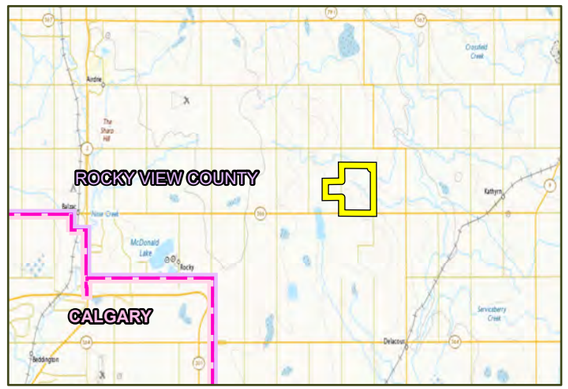
Waterbody

- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 3.3

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5676000 5675500 5675000

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NE-15-026-28 W4M | NW-14-026-28 W4M | NE-14-026-28 W4M | NW-13-026-28 W4M | SE-15-026-28 W4M | SW-14-026-28 W4M | SE-14-026-28 W4M | SW-13-026-28 W4M | NE-10-026-28 W4M | NW-11-026-28 W4M | NE-11-026-28 W4M | NW-12-026-28 W4M

WB66 WB41 WB67 WL57 WL58 WL56 WL69 WB44 WB68 WB45 WB43 WB75 WL55 WB42 WB77 WB49 WL48 WB32

NG26 NNG27 NNG25

WL70

WC D WC F WC L WC J WC I WC H WC G

Range Road 282 Range Road 281

566

N

Surface Water and Vegetation

Kineticor Holdings LP#3
c/o Cassa Development Services

Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Ephemeral Watercourse
- Intermittent Watercourse
- Flow Direction
- Spring

Wetland Delineation Plot

- Ephemeral Waterbody (Center)
- Upland (Boundary)
- Upland (Center)
- Wetland (Boundary)

Anthropogenic

- Wellsite
- Dugout
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

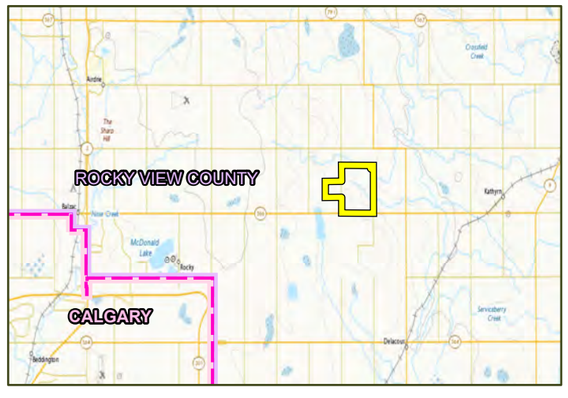
Waterbody

- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 3.4

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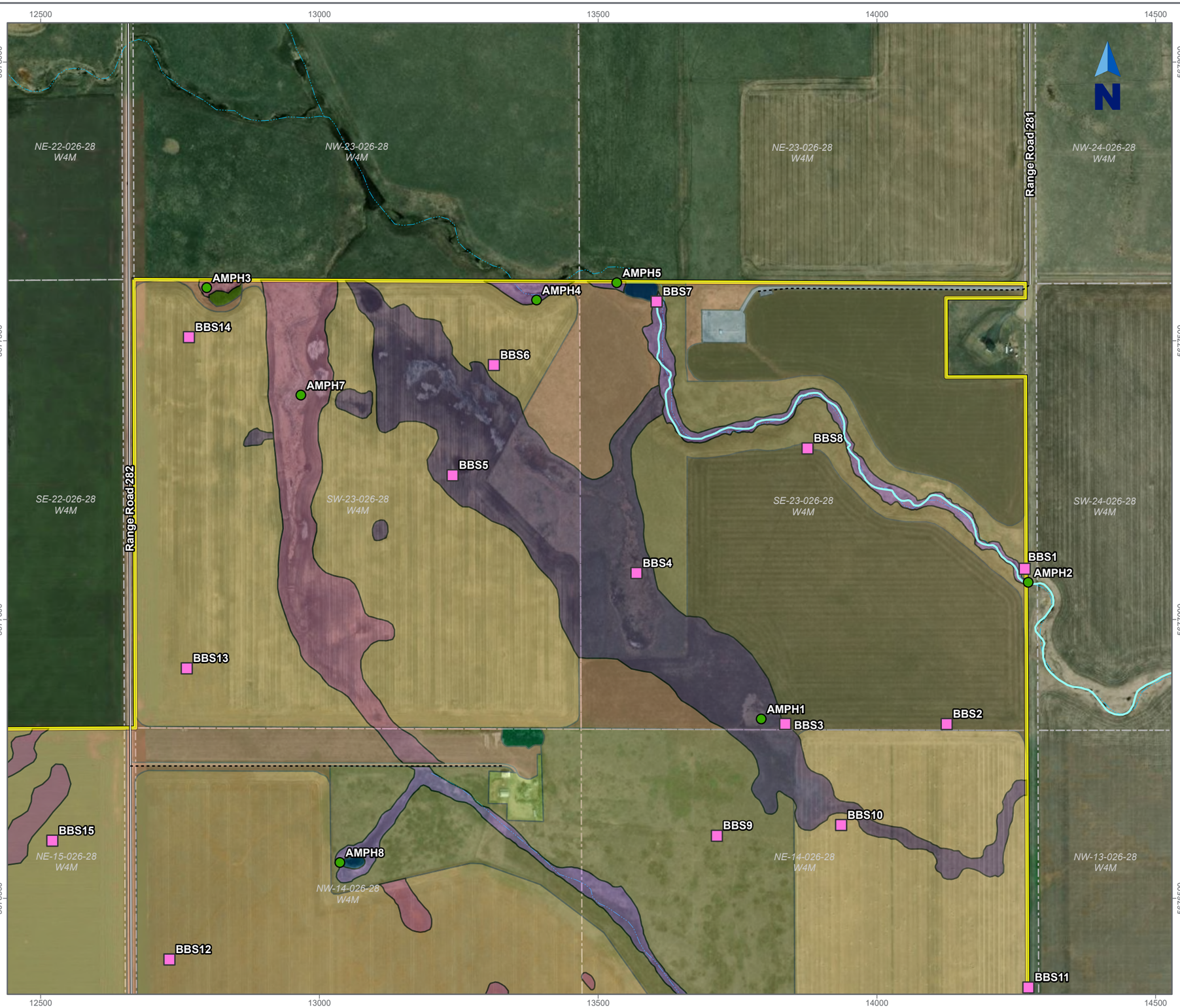
100-2415 BIA



Wildlife

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Watercourse
- Flow Direction
- Amphibian Survey Site
- Breeding Bird Survey Site

Anthropogenic

- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Forestland

- Deciduous Dominated Forestland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

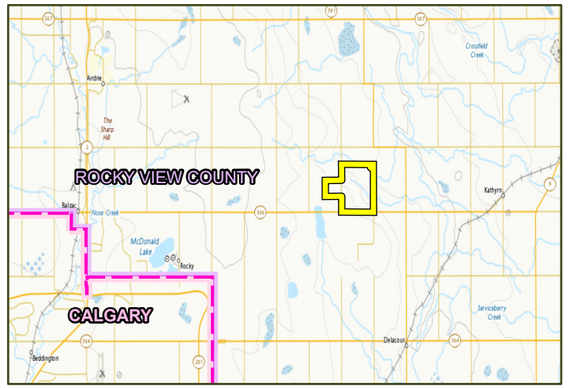
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

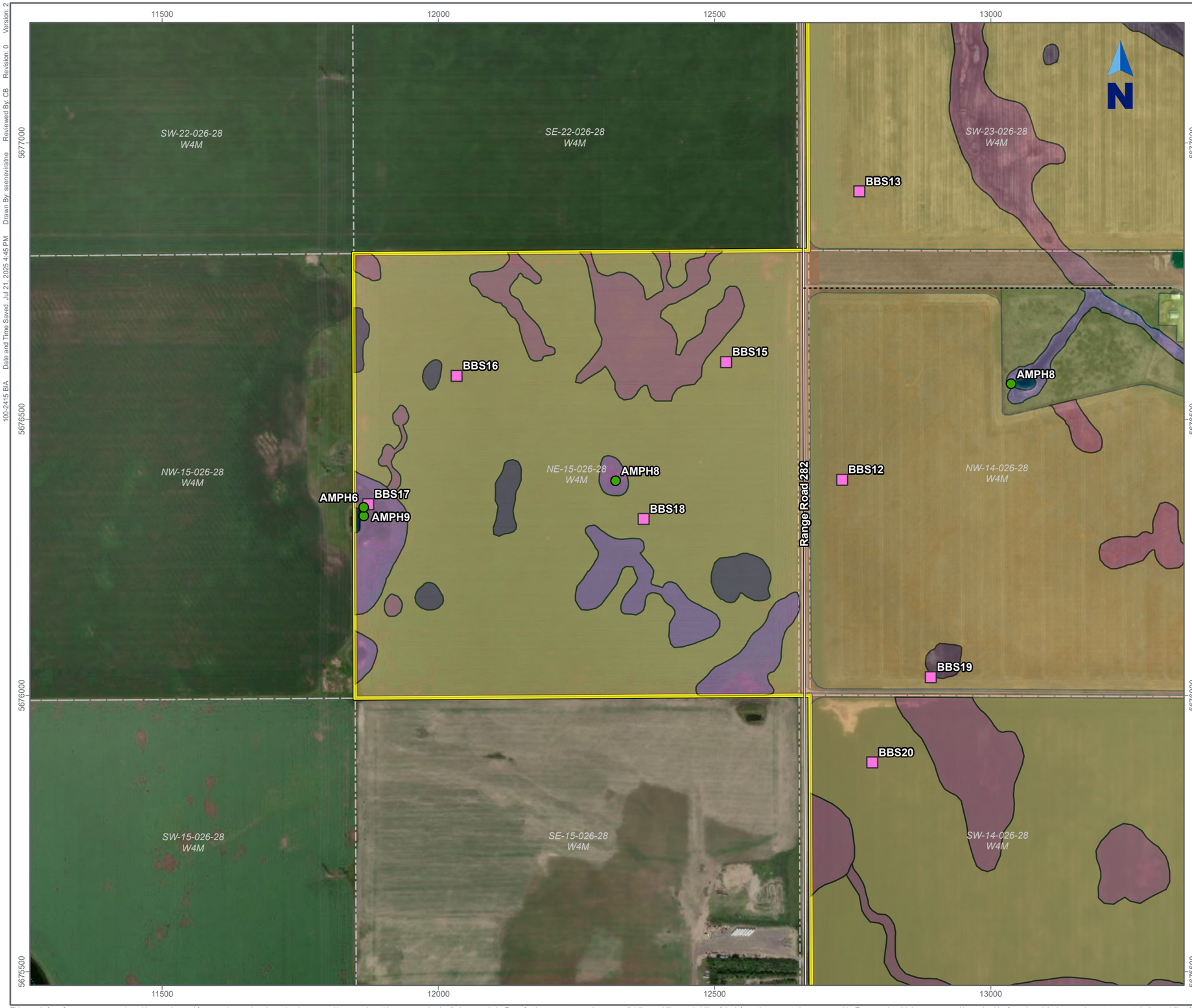
Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 4.1



Version: 2
Revision: 0
Reviewed By: CB
Drawn By: ssenevirathe
Date and Time Saved: Jul 21, 2025 4:45 PM
100-2415 BIA

Wildlife

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Flow Direction
- Amphibian Survey Site
- Breeding Bird Survey Site

Anthropogenic

- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Forestland

- Deciduous Dominated Forestland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

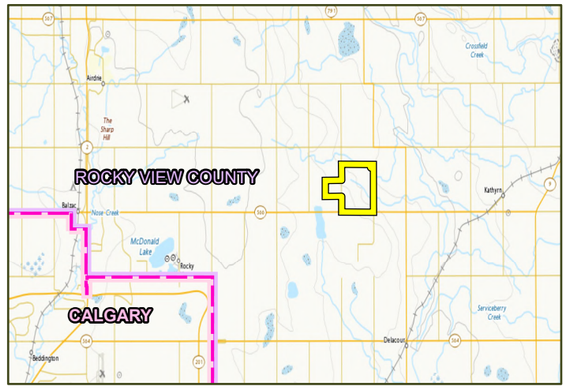
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

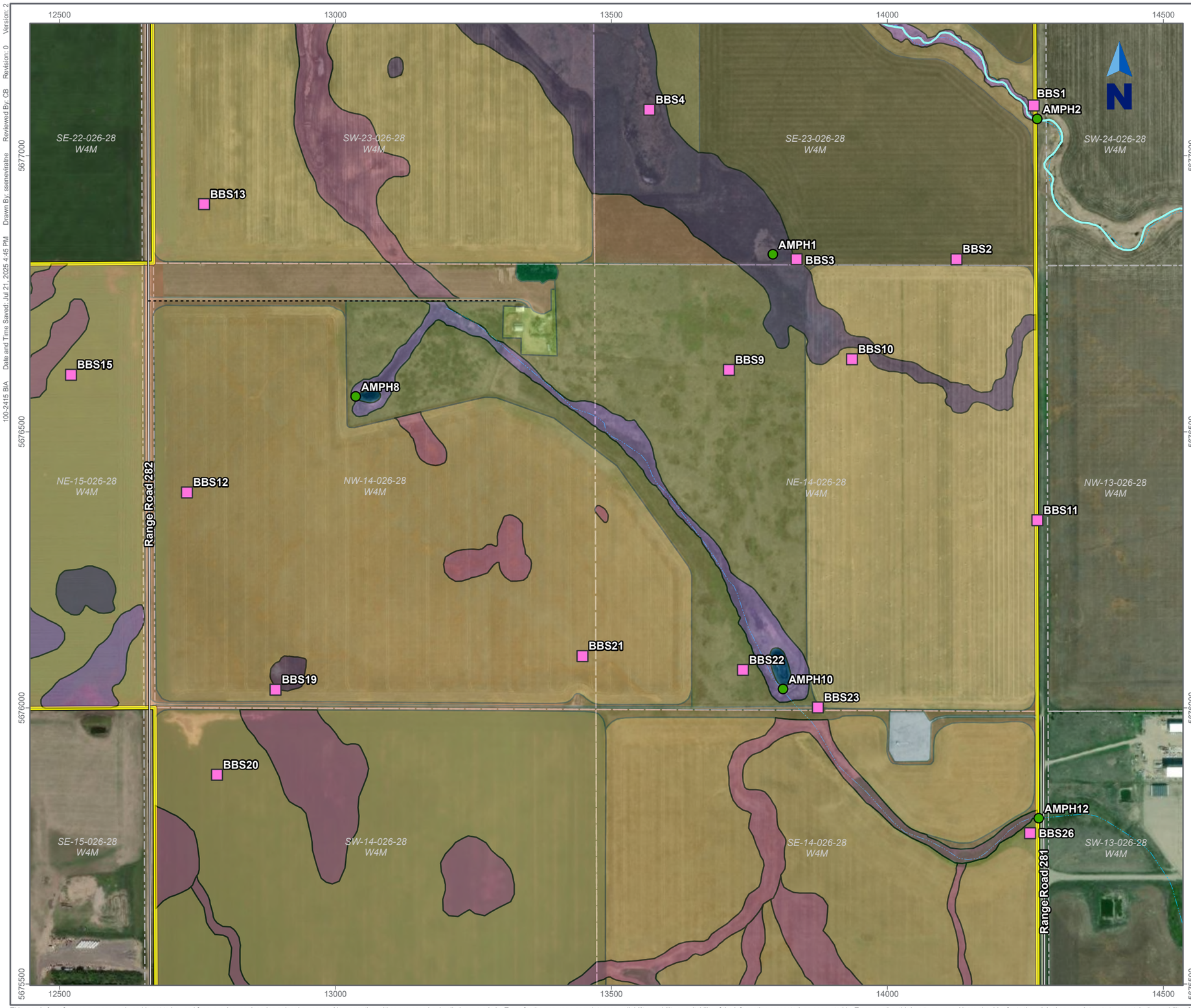
Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 4.2



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Wildlife

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Watercourse
- Flow Direction
- Amphibian Survey Site
- Breeding Bird Survey Site

Anthropogenic

- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Grassland

- Native Grassland
- Non-native Grassland

Forestland

- Deciduous Dominated Forestland

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

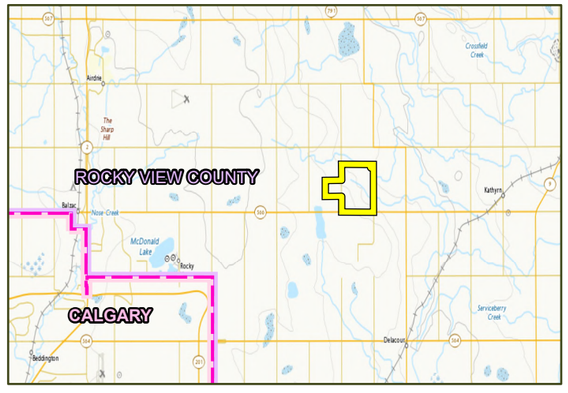
Waterbody

- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

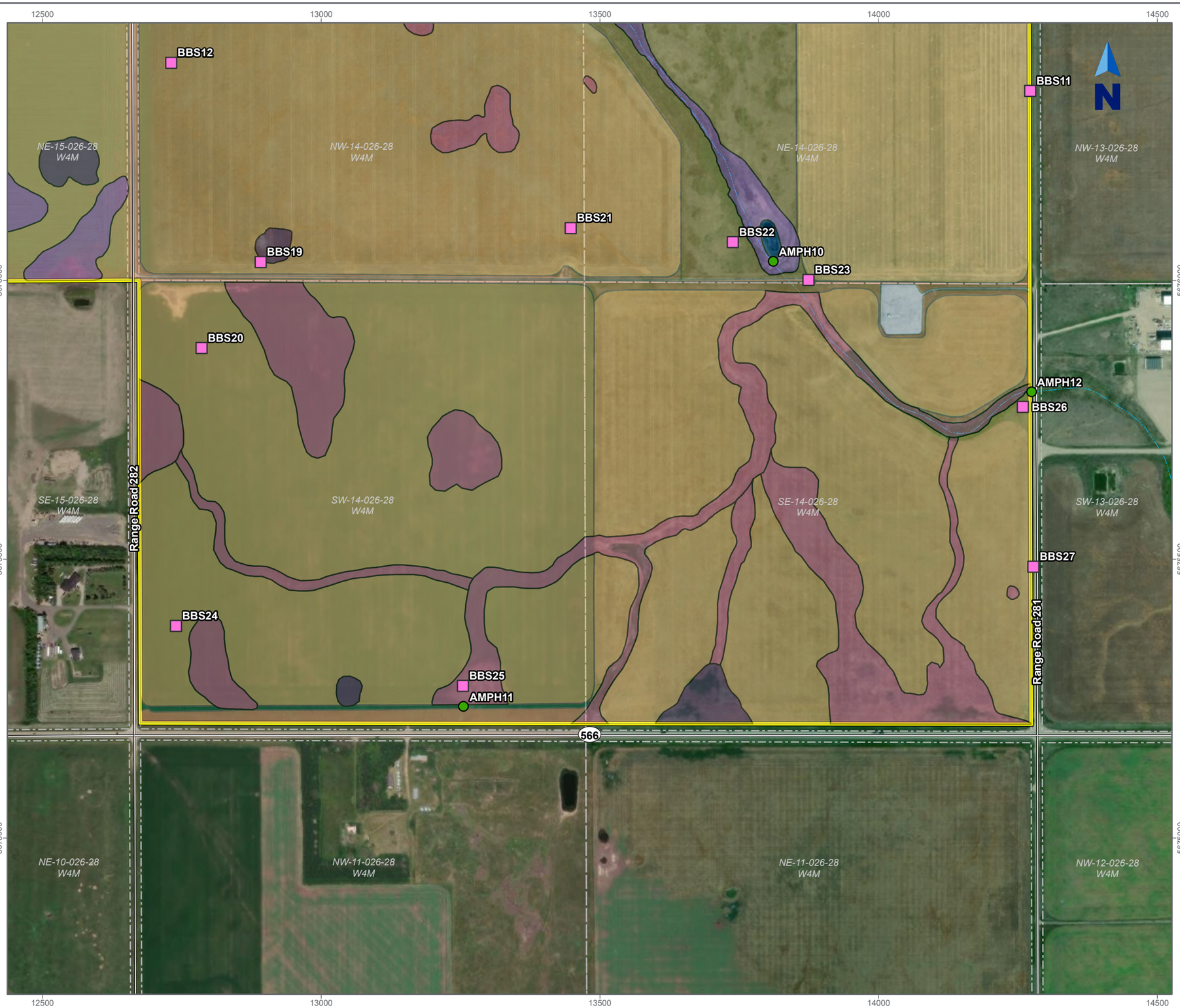
Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 4.3

Version: 2 | Revision: 0 | Reviewed By: CB | Drawn By: ssenevirathe | Date and Time Saved: Jul 21, 2025 4:45 PM | 100-2415 BIA



Wildlife

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Flow Direction
- Amphibian Survey Site
- Breeding Bird Survey Site

Anthropogenic
- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Grassland
- Native Grassland
- Non-native Grassland

Forestland
- Deciduous Dominated Forestland

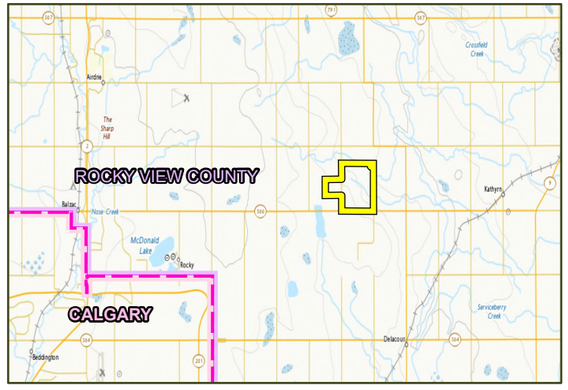
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

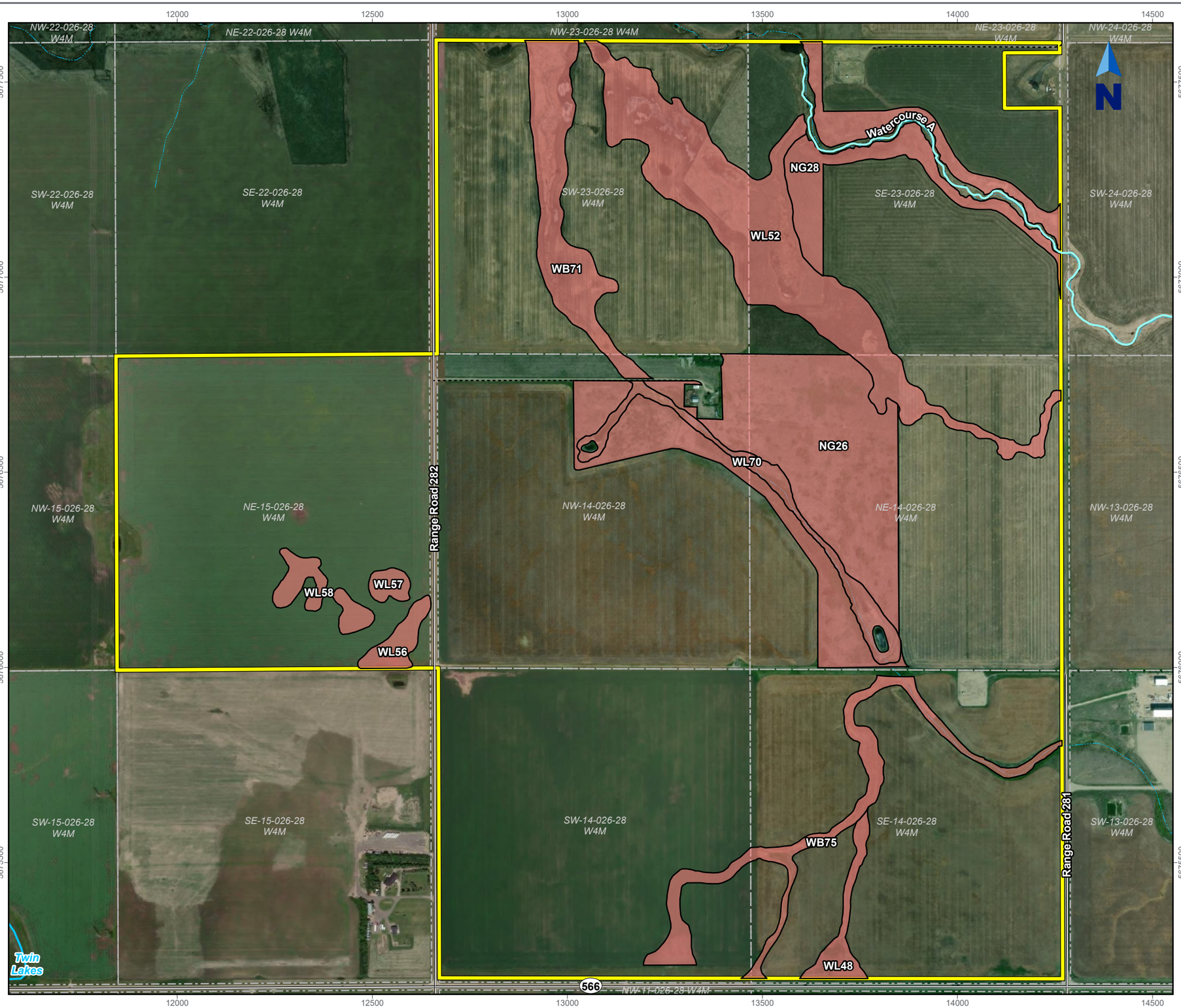
Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 4.4

Version: 2 | Revision: 0 | Reviewed By: CB | Drawn By: ssenevirathe | Date and Time Saved: Jul 21, 2025 4:55 PM | 100-2415 BIA



Environmentally Significant Areas

Kineticor Holdings LP#3
c/o Cassa Development Services

Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Environmentally Significant Area
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

0 50 100 200 300 m

1:10,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation

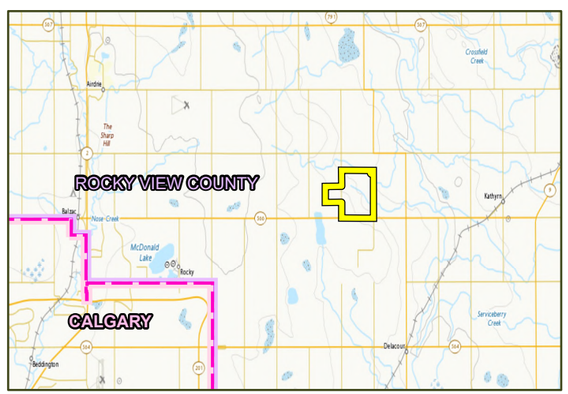


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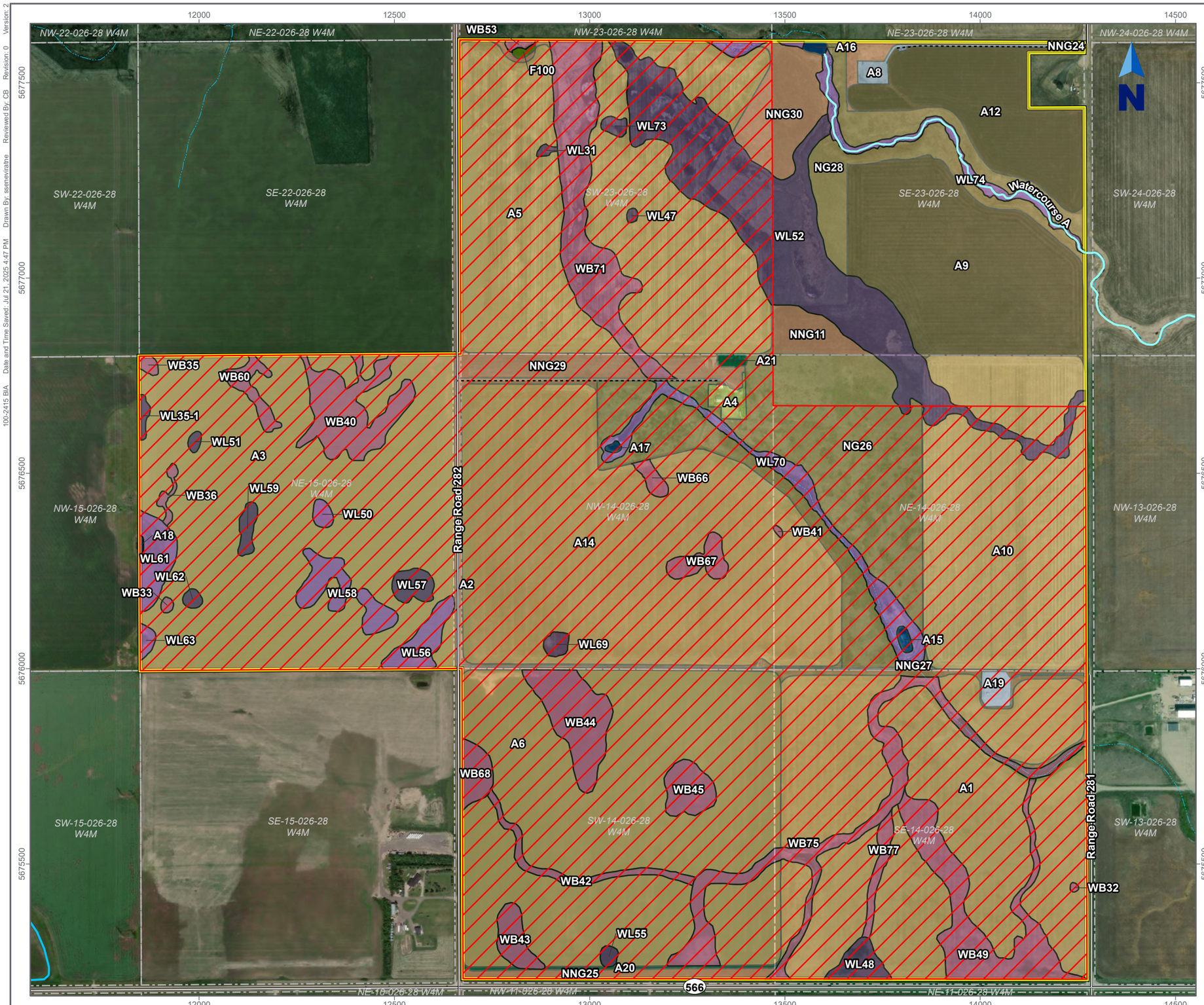
Figure No. 5

Version: 2 | Revision: 0 | Reviewed By: CB | Drawn By: ssenevirathe | Date and Time Saved: Jul 21, 2025 4:47 PM | 100-2415 BIA

Impacted Area

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15,and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Impacted Area (375.37 ha)
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features

- Watercourse
- Non-native Grassland

Anthropogenic
- Rural Residential
- Wellsite
- Dugout
- Hayland
- Cropland
- Hedgerow

Forestland
- Deciduous Dominated Forestland

Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

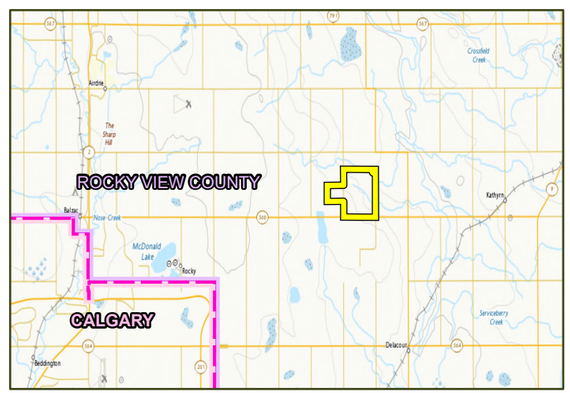
Waterbody
- Ephemeral Waterbody

Grassland
- Native Grassland

0 50 100 200 300 m

1:10,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Esri World Imagery, 2023
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. 6

Tables

Table 1 - Agricultural Region of Alberta Soil Inventory Database Soils Information for the Site

Biophysical Impact Assessment - Kineticor Holdings LP#3 c/o Cassa Development Services
Kineticor Area Structure Plan, Portions of 14, 15, and 23-026-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

AGRASID Soil Symbol (Polygon)	Soil Series	Soil Subgroup	Parent Material	Drainage	Wind Erosion Potential	Water Erosion Potential	Saline or Sodic Soil	Land Suitability Rating System for Agriculture[1]	Percent of the AGRASID Polygon (%)	Percent of the Site (%)
DEL7/U1h	DELACOUR	Orthic Black Chernozem	Medium-textured till	Well	Moderate	<5 to 9% slope = low; >9% slope = moderate	No	2HA - 5NM	60	43.25
	ROCKYVIEW	Orthic Black Chernozem	Medium-textured over medium or fine-textured till	Well	Moderate	<5 to 9% slope = low; >9% slope = moderate	No		20	
	BEDDINGTON	Black Solodized Solonetz	Medium-textured till	Moderately well	Moderate	<5% slope = low; 5 to 9% slope = moderate; >9% slope = high	Yes		20	
DERK1/U1h	DELACOUR	Orthic Black Chernozem	Medium-textured till	Well	Moderate	<5 to 9% slope = low; >9% slope = moderate	No	2HA	50	50.87
	ROCKYVIEW	Orthic Black Chernozem	Medium-textured over medium or fine-textured till	Well	Moderate	<5 to 9% slope = low; >9% slope = moderate	No		50	
DEL1/H1l	DELACOUR	Orthic Black Chernozem	Medium-textured till	Well	Moderate	<5 to 9% slope = low; >9% slope = moderate	No	2HTA	80	5.88
	ROCKYVIEW	Orthic Black Chernozem	Medium-textured over medium or fine-textured till	Well	Moderate	<5 to 9% slope = low; >9% slope = moderate	No		20	

Document Control:	Revision	Version	Entered by	Entered on	Checked by	Last checked	Last printed
	0	1.3	EH/CB	10-Apr-2025	JR	09-Apr-2025	22-Jul-2025

File Name: 100-2415 R02 T01 Soils.xlsx

Legend:
U1h = Undulating, high relief
H1l = Hummocky, low relief
AGRASID = Agricultural Region of Alberta Soil Inventory Database

Notes: [1]See Appendix D for information regarding the Land Suitability Rating System.

Table 2 - Historical Wetland Review

Biophysical Impact Assessment - Kineticor Holdings LP#3 c/o Cassa Development Services
Kineticor Asea Structure Plan, Portions of 14, 15, and 23-26-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Wetland ID	Photograph Date	Photograph ID	Season	Precipitation Year	Precipitation Month	Precipitation Day	Open Water Visible or Consistent Wetland Vegetation Signature	AWCS Class	Photograph Notes
WL31	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WB32	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB33	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB35	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL35-1	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB36	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB40	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB41	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
WB42	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WB43	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WB44	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WB45	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL47	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL48	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Temporary Graminoid Marsh	
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
WB49	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
WL50	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Seasonal Graminoid Marsh	Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated

Table 2 - Historical Wetland Review

Biophysical Impact Assessment - Kineticor Holdings LP#3 c/o Cassa Development Services
Kineticor Asea Structure Plan, Portions of 14, 15, and 23-26-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Wetland ID	Photograph Date	Photograph ID	Season	Precipitation Year	Precipitation Month	Precipitation Day	Open Water Visible or Consistent Wetland Vegetation Signature	AWCS Class	Photograph Notes
WL51	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL52	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
WB53	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
WL55	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	Cultivated
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WL56	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Seasonal Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL57	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL58	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Seasonal Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL59	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB60	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Ephemeral Waterbody	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Not Visible		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL61	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Seasonal Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Partially cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Partially cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Partially cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Partially cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Partially cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Partially cultivated
WL62	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL63	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Seasonal Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
WB66	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB67	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Open Water Visible	Ephemeral Waterbody	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WL69	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Not Visible	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB68	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Not Visible		Cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Not Visible		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Not Visible		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Not Visible		Cultivated
WL70	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Seasonal Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		North portion cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		North portion cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		North portion cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		North portion cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		North portion cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		North portion cultivated

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Kineticor Asea Structure Plan, Portions of 14, 15, and 23-26-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Wetland ID	Photograph Date	Photograph ID	Season	Precipitation Year	Precipitation Month	Precipitation Day	Open Water Visible or Consistent Wetland Vegetation Signature	AWCS Class	Photograph Notes
WB71	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	South portion cultivated
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		South portion cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		South portion cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL73	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Temporary Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WL74	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Seasonal Graminoid Marsh	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Open Water Visible		Open water in watercourse visible
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Open Water Visible		Open water in watercourse visible
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Open Water Visible		Open water in watercourse visible
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Open Water Visible		Open water in watercourse visible
WB75	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	Portions cultivated
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Portions cultivated
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		Cultivated
WB77	17-Jul-1950	0166-093	Summer	Average	Wet	0 mm (51.45 mm in the previous two weeks)	Consistent Wetland Vegetation Signature	Ephemeral Waterbody	
	19-Sep-1962	0829-101	Fall	Dry	Average	0 mm (36.26 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	12-Jun-1974	1316-242	Spring	Dry	Average	0 mm (15.70 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	06-May-1985	3151-087	Spring	Dry	Average	0 mm (3.71 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	25-Jun-2013	Google Earth	Summer	Wet	Wet	6.42 mm (66.89 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	29-Apr-2020	Google Earth	Spring	Average	Average	0 mm (3.60 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		
	28-Mar-2024	Google Earth	Spring	Average	Average	0.45 mm (16.15 mm in the previous two weeks)	Consistent Wetland Vegetation Signature		

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Legend:
- = No data
ppm = Parts per million equivalent
GPS = Global positioning system

Table 3 - Observed Wildlife Species

Biophysical Impact Assessment - Kineticor Holdings LP#3 c/o Cassa Development Services
Kineticor Area Structure Plan, Portions of 14, 15, and 23-026-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Class	Scientific Name	Common Name	Provincial Status[1]	COSEWIC Status[2]	Observation
Amphibian	*Pseudacris maculata*	boreal chorus frog	Secure	Not at Risk	Present at several wetlands, presumed breeding
Bird	*Recurvirostra americana*	american avocet	Secure	Not listed	A15
Bird	*Corvus brachyrhynchos*	American crow	Secure	Not listed	WL63
Bird	*Spinus tristis*	american goldfinch	Secure	Not listed	BBS24
Bird	*Turdus migratorius*	american robin	Secure	Not listed	BBS23, BBS24, BBS25
Bird	*Hirundo rustica*	barn swallow	May Be at Risk	Special Concern	BBS7, BBS21, BBS22, BBS24, BBS25, BBS26. Individuals seen foraging above fields and wetlands on site. May nest in area culverts, barns, industrial shops, grain bins or other structures.
Bird	*Pica hudsonia*	black-billed magpie	Secure	Not listed	BBS24
Bird	*Spatula discors*	blue-winged teal	Secure	Not listed	A18, BBS7, BBS17
Bird	*Euphagus cyanocephalus*	Brewer's blackbird	Secure	Not listed	BBS1, BBS7, BBS9, BBS13, BBS24, BBS25
Bird	*Molothrus ater*	brown-headed cowbird	Secure	Not listed	BBS1, BBS2, BBS4, BBS10, BBS12, BBS17, BBS23, BBS27
Bird	*Bucephala albeola*	bufflehead	Secure	Not listed	BBS22
Bird	*Branta canadensis*	Canada goose	Secure	Not listed	A16
Bird	*Spizella pallida*	clay-colored sparrow	Secure	Not listed	WL71, BBS1, BBS3, BBS4, BBS7, BBS8, BBS9, BBS10, BBS11, BBS22, BBS23, BBS24, BBS25, BBS26
Bird	*Quiscalus quiscula*	common grackle	Secure	Not listed	Incidental
Bird	*Corvus corax*	common raven	Secure	Not listed	BBS3
Bird	*Tyrannus tyrannus*	eastern kingbird	Sensitive	Not listed	WB53, BBS1, BBS10, BBS14. Likely nesting pairs in aspen clusters adjacent to cultivated areas on site.
Bird	*Sturnus vulgaris*	European starling	Exotic/Alien	Not listed	BBS1, BBS13, BBS14, BBS15, BBS16, BBS18, BBS26
Bird	*Mereca strepera*	gadwall	Secure	Not listed	BBS7, BBS17
Bird	*Perdix perdix*	gray partridge	Exotic/Alien	Not listed	BBS25
Bird	*Aythya marila*	greater scaup	Secure	Not listed	A18, BBS17 - More likely a lesser scaup
Bird	*Anas crecca*	green-winged teal	Secure	Not listed	BBS7
Bird	*Eremophila alpestris*	horned lark	Secure	Not listed	BBS2, BBS3, BBS4, BBS5, BBS6, BBS7, BBS9, BBS10, BBS11, BBS12, BBS13, BBS14, BBS15, BBS16, BBS18, BBS19, BBS20, BBS21, BBS23, BBS24, BBS25, BBS26
Bird	*Charadrius vociferus*	killdeer	Secure	Not listed	A10, BBS5, BBS6, BBS7, BBS17, BBS22
Bird	*Anas platyrhynchos*	mallard	Secure	Not listed	A15, BBS22
Bird	*Limosa fedoa*	marbled godwit	Secure	Not listed	BBS3, BBS22
Bird	*Falco columbarius*	merlin	Secure	Not at risk	BBS16, BBS21
Bird	*Zenaida macroura*	mourning dove	Secure	Not listed	BBS14
Bird	*Circus hudsonius*	northern harrier	Secure	Not listed	BBS3, BBS8, BBS14
Bird	*Spatula clypeata*	northern shoveler	Secure	Not listed	A15, A16, BBS22
Bird	*Buteo jamaicensis*	red-tailed hawk	Secure	Not at risk	BBS14
Bird	*Agelaius phoeniceus*	red-winged blackbird	Secure	Not listed	A18, BBS1, BBS2, BBS7, BBS14, BBS17
Bird	*Columba livia*	rock pigeon	Exotic/Alien	Not listed	BBS2
Bird	*Passerculus sandwichensis*	savannah sparrow	Secure	Not listed	BBS1, BBS2, BBS3, BBS4, BBS6, BBS7, BBS8, BBS9, BBS10, BBS11, BBS12, BBS13, BBS14, BBS15, BBS17, BBS19, BBS21, BBS23, BBS24, BBS25, BBS26
Bird	*Porzana carolina*	sora	Sensitive	Not listed	A17. Very few wetlands present on site with only 1 or 2 possible containing enough habitat for a nesting pair.
Bird	*Buteo swainsoni*	Swainson's hawk	Secure	Not listed	A21, BBS24, BBS26
Bird	*Tachycineta bicolor*	tree swallow	Secure	Not listed	BBS14
Bird	*Cygnus buccinator*	trumpeter swan	Sensitive	Not at risk	No suitable nesting habitat - migratory birds only. Most likely fly-overs.
Bird	*Bartramia longicauda*	upland sandpiper	Sensitive	Not listed	BBS1, BBS4, BBS7, BBS8. Bird seen and heard multiple times. Likely nesting in the pasture habitat on site.
Bird	*Pooecetes gramineus*	vesper sparrow	Secure	Not listed	BBS1, BBS2, BBS3, BBS4, BBS5, BBS7, BBS9, BBS10, BBS11, BBS16, BBS17, BBS18, BBS19, BBS20, BBS22, BBS25, BBS26
Bird	*Tyrannus verticalis*	western kingbird	Secure	Not listed	BBS14
Bird	*Sturnella neglecta*	western meadowlark	Secure	Not listed	BBS1, BBS2, BBS3, BBS4, BBS6, BBS7, BBS8, BBS14, BBS22
Bird	*Tringa semipalmata*	willet	Secure	Not listed	BBS22
Bird	*Phalaropus tricolor*	Wilson's phalarope	Secure	Not listed	WL74, BBS7
Mammal	*Taxidea taxus*	American badger	Sensitive	Special Concern	NG28. Remaining pasture areas on site are too small and isolated to sustain a population of badger. However, the ground squirrel population in the pasture is concentrated and plentiful where pasture persists and badgers moving through the landscape would find temporary foraging opportunities before moving on.

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	0	1.1	CB/SW	17-Jun-2025	CF	15-Jul-2025	22-Jul-2025

File Name: 100-2415 R02 T03 Wildlife Species.xlsx

References:
[1] GOA (Government of Alberta). (n.d.). *Alberta wild species general status list, 2020 status listing.* Wild Species Status Search. https://extranet.gov.ab.ca/env/wild-species-status/default.aspx
[2] COSEWIC (Committee on the Status of Endangered Wildlife in Canada). (2021). *Canadian wildlife species at risk. Committee on the Status of Endangered Wildlife in Canada.* https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/publications/canadian-wildlife-species-risk-2021.html

Legend: COSEWIC = Committee on the Status of Endangered Wildlife in Canada

Notes: ____ Underlined indicates the wildlife species of conservation concern.

Table 4 - FWMIS Reported and Field Observed Wildlife Species of Conservation Concern

Biophysical Impact Assessment - Kineticor LP#3 c/o Cassa Development Services
Kineticor Area Structure Plan, Portions of 14, 15, and 23-026-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Scientific Name		Provincial Status[4]	COSEWIC Status[5]	Habitat Preference[1,2,3,6]	Observation
Birds					
Falco sparverius	American kestrel	Sensitive	Not Listed	Open areas with short ground vegetation and sparse trees with cavities for nesting. Will also nest in nest boxes. Feed on insects, invertebrates, rodents, and birds. Attracted to many habitats modified by humans, including pastures and parkland.	FWMIS record
Haliaeetus leucocephalus	bald eagle	Sensitive	Not at Risk	Areas near large fish-bearing inland lakes or rivers, particularly where large trees are available for nesting. Large wetlands and areas where waterfowl concentrate outside of breeding season.	FWMIS record
Hirundo rustica	barn swallow	May Be at Risk	Special Concern	Found in open areas, including suburban parks and fields and beaches. Breeding habitat will include open areas for foraging, structures or cliffs to build nests on, and a source of mud such as a riverbank to provide the material for building nests.	Field observation
Chlidonias niger	black tern	Sensitive	Not at Risk	Nest in freshwater wetlands, usually on vegetation mats in dense marshes on the edge of shallow lakes in the open prairies or forests. Forage primarily on small fish and aquatic insects in or over open water.	FWMIS record
Himantopus mexicanus	black-necked stilt	Sensitive	Not Listed	Occur in shallow wetlands with limited vegetation including, alkali ponds, flooded low lands, and shallow lagoons, including human-maintained wetlands such as sewage ponds or flooded pastures. Forage primarily on aquatic invertebrates, amphibians, snails, and crustaceans. Nest on the ground near wetlands on small islands or clumps of vegetation in areas with soft substrate.	FWMIS record
Tyrannus tyrannus	eastern kingbird	Sensitive	Not Listed	Open habitats with suitable perches overlooking open or sparsely-treed areas for foraging, such as forest edges, shelter belts, riparian areas, and fields/pastures with scattered shrubs and trees.	Field observation
Podiceps auritus	horned grebe	Sensitive	Special Concern	This species generally prefers ponds ranging from 0.3 to 2.0 hectares, containing areas of open water, and beds of emergent vegetation such as cattails and bulrushes. Breed in small freshwater semi-permanent or permanent marshes and shallow bays on lake borders.	FWMIS record
Numenius americanus	long-billed curlew	May Be at Risk	Threatened	This species breeds in areas with sparse, short grasses, including short grass and mixed-grass prairies as well as modified pastures and agricultural fields. They may move to areas with taller, denser grasses after their young have left the nest and gather post-breeding along the margins of wetlands.	FWMIS record
Dryocopus pileatus	pileated woodpecker	Sensitive	Not Listed	Habitat consists of mature deciduous or mixedwood forests and sometimes in suburban areas with large trees with a diameter >35 cm. Forage primarily on insects (ants) and insect larvae but also wild fruits and nuts. Nest in cavities within standing dead or dying mature coniferous and deciduous trees.	FWMIS record
Tympanuchus phasianellus	sharp-tailed grouse	Sensitive	Not Listed	Relatively dry, open grassland with a patchwork of shrub cover that can be found throughout Alberta. Breeding leks are typically found on ridges and rises in grasslands.	FWMIS record
Porzana carolina	sora	Sensitive	Not Listed	Freshwater and brackish wetlands with dense cattail, sedges, and rushes. May use wet pastures, ditches, and flooded fields during migration and winter. Feed primarily on seeds from wetland plants, but also aquatic invertebrates.	Field observation
Cygnus buccinator	trumpeter swan	Sensitive	Not at Risk	Trumpeter swans do not nest in this area of Alberta, but can be found during migration and occasionally during the winter. At these times, they will feed in croplands, agricultural areas, and areas of open water such as wetlands and rivers.	Field observation, FWMIS record
Bartramia longicauda	upland sandpiper	Sensitive	Not Listed	Nest in grasslands, pastures, both grazed and ungrazed, and in agricultural fields, especially fallow fields, but sometimes hay or other crop fields. Minimal woody vegetation and minimal bare ground are prominent features.	Field observation

Table 4 - FWMIS Reported and Field Observed Wildlife Species of Conservation Concern

Biophysical Impact Assessment - Kineticor LP#3 c/o Cassa Development Services
Kineticor Area Structure Plan, Portions of 14, 15, and 23-026-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Scientific Name		Provincial Status[4]	COSEWIC Status[5]	Habitat Preference[1,2,3,6]	Observation
Mammals					
Taxidea taxus	American badger	Sensitive	Non-active	Open, treeless habitats with an available food source (small burrowing mammals), generally in open grasslands, pastures, aspen groves, and bushy bottomlands. Require coherent soils that can be burrowed into without collapsing for dens. Feed primarily on rodents and ground squirrels.	Field observation

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	0	1.3	EH, CB	4-Jul-2025	CF	07-Jul-25	22-Jul-2025

File Name: 100-2415 R02 T04-05 Wildlife and Habitat Suit.xlsx

References:
[1] - CLO (Cornell Lab of Ornithology). (n.d.). *All about birds.* https://www.allaboutbirds.org/news/
[2] - FAN (Federation of Alberta Naturalists). (2007). *The atlas of breeding birds of Alberta: A second look.* Federation of Alberta Naturalists.
[3] - Fisher, C., and Acorn, J. (1998). *Birds of Alberta.* Lone Pine Publishing
[4] - GOA (Government of Alberta). (n.d.). *Alberta wild species general status list, 2020 status listing. Wild Species Status Search.* https://www.alberta.ca/lookup/wild-species-status-search.aspx
[5] - GOC (Government of Canada). (n.d.). Species search. https://species-registry.canada.ca/index-en.html#/species?sortBy=commonNameSort&sortDirection=asc&pageSize=10
[6] - CHS (Canadian Herpetological Society). (n.d.). *Amphibians and reptiles of Canada* . http://canadianherpetology.ca/species/index.html

Legend:
COSEWIC = Committee on the Status of Endangered Wildlife in Canada
FWMIS = Fisheries and Wildlife Management Information System

Table 5 - Habitat Suitability for Wildlife Species of Conservation Concern

Biophysical Impact Assessment - Kineticor LP#3 c/o Cassa Development Services
Kineticor Area Structure Plan, Portions of 14, 15, and 23-026-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Common Name	Land Cover Classes						Comments
	Ephemeral Waterbody	Temporary Graminoid Marsh	Seasonal Graminoid Marsh	Watercourse	Grassland	Cultivated	
American kestrel	Low (food)	Low (food)	Low (food)	Low (food)	Moderate (food)	Low (food)	Limited feeding and nesting opportunities in semi-open areas from spring to fall. Very few patches of mature trees for nesting cavities. Much of the site has been converted to cultivation leaving only small native grasslands for foraging.
bald eagle	Low (food)	Low (food)	Low (food)	Low (food)	Low (food)	Low (food)	No large mature nesting trees on site and the location is not adjacent to permanent waterbodies or watercourses. In the winter and migratory periods, outlying agricultural area attract overwintering waterfowl, that in turn present feeding opportunities for these raptors.
barn swallow[1, 2]	Moderate (food)	Moderate (food)	Moderate (food)	Moderate (food)	Moderate (food)	Low (food)	Potential nesting on artificial and abandoned structures if present. Open habitat available for foraging in grassy fields, particularly wetlands with emergence of invertebrates.
black tern	Low (foraging)	Low (foraging)	Moderate (foraging, nesting)	Low (foraging)	Nil	Nil	Very limited foraging opportunities may be present on wetlands within the site; and, terns normally select wetlands larger than 20 hectares for nesting.
black-necked stilt[1, 2]	Low (foraging)	Low (foraging)	Low (foraging)	Low (foraging)	Nil	Nil	Foraging opportunities may be present on wetlands within the site. Nesting opportunities are limited due to the small size of wetlands on site.
eastern kingbird[1, 2]	Low (food)	Low (food)	Low (food)	Low (food)	Moderate (food)	Low (food)	Breeding habitat available on site in shrubs and on the edge of the treed areas. May forage throughout the site on insects particularly near wetlands and pastures.
horned grebe[1, 2]	Nil	Nil	Low (foraging)	Nil	Nil	Nil	Very limited foraging or nesting habitat available. There are no high quality wetlands on site that would satisfy their nesting requirements.
long-billed curlew[1, 2]	Nil	Nil	Nil	Nil	Moderate (food)	Nil	Very limited foraging habitat available. This species requires more continuous areas of pasture and grasslands. Typically found in areas more to the southeast in Alberta.
pileated woodpecker[1, 2]	Nil	Nil	Nil	Nil	Nil	Nil	No habitat present.
sharp-tailed grouse	Nil	Nil	Nil	Nil	Moderate (food)	Nil	Very limited habitat present site. This species requires more continuous areas of pasture and grassland for nesting and lekking opportunities.
sora[1,2]	Nil	Low (food)	Moderate (food)	Nil	Nil	Nil	Foraging and nesting opportunities are very limited on site as there are few adequate wetlands.
trumpeter swan[1, 2]	Low (foraging)	Low (foraging)	Low (foraging)	Low (foraging)	Low (food)	Low (foraging)	Limited foraging habitat may be available for migrant and overwintering birds particularly in cultivated areas in the spring and fall depending on the availability of waste grain.
upland sandpiper	Low (food)	Low (food)	Low (food)	Low (food)	Moderate (food)	Moderate (food)	Prefer to forage in grasslands, pastures, and croplands, and tend to avoid wetlands. Limited foraging and nesting habitat is availed is small areas of the Site.
American badger	Nil	Nil	Nil	Nil	Moderate (food)	Low (food)	Limited foraging habitat available in cultivated areas where small creatures (e.g., voles, mice, birds, etc.) reside. In pasture areas, there is a localized Richardson's ground squirrel population that could provide limited foraging opportunities.

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	0	1.2	CB	04-Jul-2025	CF	7-Jul-2025	22-Jul-2025

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References: [1]- CLO (Cornell Lab of Ornithology). (n.d.). *All about birds*. https://www.allaboutbirds.org/news/
[2]- Bird, D. et al. (2023). *Birds of Western Canada*. DK Publishing

Table 6 - Environmentally Significant Area Evaluation

Biophysical Impact Assessment - Kineticor Holdings LP#3 c/o Cassa Development Services
Kineticor Area Structure Plan, Portions of 14, 15, and 23-026-28 W4M, Rocky View County, Alberta
Trace Project No. 100-2415

Polygon ID	Land Cover	Land Cover Class	Criteria 1: Quality of Biotic Community				Criteria 2 - Ecological Function				Criteria 3 - Distinctive and/or Unusual Landform			Criteria 4 - Uniqueness					Total Number of Subcriteria Met	Total Number of Criteria Met
			A	B	C	D	A	B	C	D	A	B	C	A	B	C	D	E		
A1	Anthropogenic	Cropland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A2	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A3	Anthropogenic	Cropland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A4	Anthropogenic	Rural Residential	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A5	Anthropogenic	Cropland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A6	Anthropogenic	Cropland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A7	Anthropogenic	Rural Residential	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A8	Anthropogenic	Wellsite	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A9	Anthropogenic	Hayland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A10	Anthropogenic	Cropland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
NNG11	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A12	Anthropogenic	Hayland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A14	Anthropogenic	Cropland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A15	Anthropogenic	Dugout	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A16	Anthropogenic	Dugout	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A17	Anthropogenic	Dugout	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A18	Anthropogenic	Dugout	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A19	Anthropogenic	Wellsite	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A20	Anthropogenic	Hedgerow	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
A21	Anthropogenic	Hedgerow	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
NNG24	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
NNG25	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
NG26	Grassland	Native Grassland	No	Yes	N/A	N/A	No	No	No	Yes	No	No	No	No	No	No	No	No	2	2
NNG27	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
NG28	Grassland	Native Grassland	No	Yes	N/A	N/A	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No	4	3
NNG29	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
NNG30	Grassland	Non-native Grassland	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL31	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB32	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB33	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB35	Wetland	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL35-1	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB36	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB40	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB41	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB42	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB43	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB44	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB45	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL47	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL48	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	Yes	No	No	No	No	No	No	No	No	No	No	1	1
WB49	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL50	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL51	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL52	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	Yes	Yes	No	Yes	No	No	No	No	Yes	No	No	4	2
WB53	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL55	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	1
WL56	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	Yes	No	No	No	No	No	No	No	No	No	No	1	1
WL57	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	Yes	No	No	No	No	No	No	No	No	No	No	1	1
WL58	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	Yes	No	No	No	No	No	No	No	No	No	No	1	1
WL59	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB60	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL61	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL62	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL63	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB66	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB67	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WB68	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL69	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL70	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	No	Yes	No	No	No	No	No	No	No	No	No	1	1
WB71	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	Yes	No	No	No	No	No	No	No	No	No	1	1
WL73	Wetland	Temporary Graminoid Marsh	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0
WL74	Wetland	Seasonal Graminoid Marsh	No	No	N/A	N/A	No	Yes	Yes	Yes	No	No	No	No	No	Yes	No	No	4	2
WB75	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	Yes	No	No	No	No	No	No	No	No	No	1	1
WB77	Waterbody	Ephemeral Waterbody	No	No	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	0	0

Document Control:	Revision	Version	Entered by	Entered on	Checked by	Last checked	Last printed
	0	1.6	CB/SW	09-Jul-2024	JR	17-Jul-2025	22-Jul-2025

File Name: 100-2415 R02 T06 ESA.xlsx

References: - O2 (O2 Planning and Design). (2019). *Environmentally sensitive areas background study* . Calgary Metropolitan Region Board.
- COC (City of Calgary). (2010). *Biophysical impact assessment framework*. City of Calgary Parks and Urban Development Institute. http://www.calgary.ca/CSPS/Parks/Documents/Construction/biophysical-impact-assessment-framework.pdf

Legend: N/A = Not assessed, as riparian and range health assessments were not conducted for Sub-criteria 1c and 1d.

Appendix A

Trace Associates Inc.
Professional Report
Conditions

1.0 USE OF REPORT

This report pertains to a specific site, development, organization, or business and a specific scope of work, all as specifically identified in the within report (the "Report") (such site, development, organization or business and scope of work is hereinafter referred to as the "Subject"). It is not applicable to any other Subject. An assessment or evaluation of a Subject other than the one specifically identified in the within Report would necessitate a supplementary evaluation.

This Report and the assessments, evaluations, and recommendations contained in it are intended for the sole use of Trace Associates Inc.'s (Trace's) client, as specifically identified in the Report (the "Client"). If this Report is being read by any other person (other than from a regulatory body or government agency), such person is hereby advised that Trace is not making any observations, evaluations, or recommendations for such person's benefit and such person is unable to rely on the contents of this Report. Any such person would use this Report at their own risk, and liability is expressly declined to any person other than the Client. Accordingly, no responsibility is accepted by Trace for any damages suffered by any reader of this Report other than the Client. Diligence by all readers is assumed. Any use of or reliance on the Report by any person other than the Client is at the sole risk of the user.

This Report is subject to copyright and may not be reproduced either wholly or in part without the prior, written permission of Trace. The Client agrees that it shall use the Report for its own internal purposes, and it shall not provide the Report to another party (other than a regulatory body or government agency). The report provided is suitable for use by the client for the intended purpose only after accounts are settled for the work conducted.

2.0 LIMITATION OF REPORT

This Report is based solely on the information and conditions that existed and were presented to Trace at the time of Trace's evaluation. The Client acknowledges conditions affecting the contents of this Report can vary with time and that the conclusions and recommendations set out in this Report are time sensitive.

The Client also acknowledges that the conclusions and recommendations set out in this Report are based on limited observations and upon circumstances, assumptions and information presented or made available to Trace by the Client and, where applicable testing on the Subject site. Further, the Client acknowledges that conditions may vary across a site and with time which, in turn, could affect the conclusions and recommendations made.

The Client acknowledges that Trace is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the site, the decisions on which are the sole responsibility of the Client.

3.0 INFORMATION PROVIDED TO TRACE BY OTHERS

During the performance of the work and the preparation of this Report, Trace may have relied on information provided by persons (third parties) other than the Client if instructed to do so by the Client. Trace did not verify this information and accepts no responsibility for the accuracy or the reliability of such information and disclaims all liability with respect thereto.

4.0 LIMITATION OF LIABILITY

In consideration of Trace providing the services requested by the Client to complete the Report, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the Client, the Client agrees that Trace's liability shall be limited as follows:

1. With respect to any claims brought against Trace by the Client for damages of any kind whatsoever, including without limitation, incidental, consequential, exemplary, or punitive damages, for any reason whatsoever arising out of the observations, conclusions, or recommendations contained in the Report, the amount of such claim and the extent of Trace's liability shall be limited to the amount of fees paid by the Client to Trace under this Agreement.

2. With respect to claims brought by any third parties arising out of the contents of this Report, the Client agrees to indemnify, defend, and hold harmless Trace from and against any and all claim or claims, action or actions, demands, damages, penalties, fines, losses, costs, and expenses of every nature and kind whatsoever, including solicitor-client costs, arising or alleged to arise either in whole or part out of services provided by Trace or the Report completed by Trace.

5.0 DISCLOSURE OF INFORMATION BY CLIENT

The Client acknowledges that in conducting the scope of work (the “Scope”) and preparing the Report, Trace has relied on information provided by the Client. Trace, in conducting the Scope and preparing the Report, has assumed the accuracy, and has not attempted to verify the completeness of all such information. The Client acknowledges that Trace cannot be held liable for any damages to the Client resulting from any inaccuracies or incompleteness in the information provided by the Client to Trace.

6.0 STANDARD OF CARE

Services performed by Trace for this Report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the professional associations of which Trace's employees who worked on this Scope and this Report are members. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this Report (or under separate cover). No further warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this Report.

7.0 NOTIFICATION OF AUTHORITIES

The Client acknowledges that in certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed. The Client acknowledges and agrees that the notification of such bodies or persons remains wholly the responsibility of the Client; however, agrees that notification to such bodies or persons, as required, may be done by Trace in Trace’s reasonably exercised discretion.

8.0 OWNERSHIP OF INSTRUMENTS OF SERVICE

The Client acknowledges that all reports, plans, and data generated by Trace during the performance of the work and preparation of the Report and other documents prepared by Trace in the course of performing the scope are considered its professional work product and shall remain the copyright property of Trace. Any patents, methods, ideas, concepts, know-how, copyrights, trademarks, trade secrets, or other intellectual property rights developed by Trace prior to, during, and in the course of performing the Services

("IP") will be the exclusive property of Trace. The only exception to this is where Trace has prepared an Emergency Response Plan and associated training materials for a Client; in these cases, the Client owns these documents and is solely responsible for their implementation in an emergency.

9.0 ALTERNATE REPORT FORMAT

Where Trace submits both electronic file and hard copy versions of the Report, drawings, and other documents and deliverables (collectively termed "Trace's instruments of professional service"), the Client agrees that only the signed and stamped versions shall be considered final and legally binding. Trace shall keep the original electronic documents for record and working purposes, and, in the event of a dispute or discrepancies, Trace's electronic copy shall govern.

The Client agrees that both electronic file and hard copy versions of Trace's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party, except Trace. The Client warrants that Trace's instruments of professional service will be used only and exactly as submitted by Trace and for the purpose for which such instruments of professional service were intended.

The Client recognizes and agrees that electronic files submitted by Trace have been prepared and submitted using specific software and hardware systems. Trace makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

10.0 RECORDS RETENTION

Trace will, at its own cost and effort, retain project related Client data, including billing records, project files, documents, and final reports, for 12 years from the date of written authorization to proceed with the Scope. After 12 years, all data and information will be destroyed without notice to the Client. The Client may request in writing, within the 12-year period, copies of such information, and Trace will provide the information to the Client at the Client's cost.

11.0 GOVERNING LAW

The validity, construction, and performance of these General Conditions, which the Client shall be deemed to have accepted upon its acceptance of this Report, shall be governed by the laws in effect in the Province where the Subject site is located.

Appendix B

Agricultural Region of
Alberta Soil Inventory
Database Search
Results and Land
Suitability Rating System

AbaData

AGRASID Information

1st CO-DOMINANT SOIL (greater than 30% and less than 60%)

SERIES:	DELACOUR	**Variant:**	
Land Use:	Agricultural (Ap horizon)		
Calcareousness Class:	M	**Salinity Class:**	N

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Mapped extensively in association with Rockyview;		
SERIES:	DELACOUR	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	M	**Salinity Class:**	N

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Mapped extensively in association with Rockyview;		

2nd CO-DOMINANT SOIL (greater than 30% and less than 60%)

SERIES:	ROCKYVIEW	**Variant:**	
Land Use:	Agricultural (Ap horizon)		
Calcareousness Class:	S	**Salinity Class:**	N

First Parent Material

Texture:	ME	**Genetic Origin:**	GLLC

Second Parent Material

Texture:	MF	**Genetic Origin:**	TILL
AGRASID Texture:	Medium textured (VFSL, L, SiCL, CL) over medium or fine textured till		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		

Comments:	Texture of the veneer is variable. Clay content, 20-35%.		
SERIES:	ROCKYVIEW	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	S	**Salinity Class:**	N

First Parent Material

Texture:	ME	**Genetic Origin:**	GLLC

Second Parent Material

Texture:	MF	**Genetic Origin:**	TILL
AGRASID Texture:	Medium textured (VFSL, L, SiCL, CL) over medium or fine textured till		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Texture of the veneer is variable. Clay content, 20-35%.		

AGRASID Information

AGRICULTURAL REGION OF ALBERTA SOIL INVENTORY DATABASE

SOIL CORRELATION AREA #6

Surface Form Modifier:			
Soil Landscape of Canada #:	482268	**Generated Soil Symbol:**	DERK1/U1h
Eco District:	Delacour	**Eco Region:**	Fescue Grassland
Land System Name:	Kathryn	**Climate Rating:**	2AH
Morphological Descriptor:	Plain	**Soil Zone:**	Thin Black
Soil Order 1:	Chernozemic	**Soil Order 2:**	
Landscape Model 1:	high relief - undulating		
Slope Class 1:	2 to 3		
Landscape Model 2:	low relief - undulating		
Slope Class 2:	2		

AGRASID Information

DOMINANT SOIL (greater than 60%)

SERIES:	DELACOUR	**Variant:**	
Land Use:	Agricultural (Ap horizon)		
Calcareousness Class:	M	**Salinity Class:**	N

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Mapped extensively in association with Rockyview;		
SERIES:	DELACOUR	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	M	**Salinity Class:**	N

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Mapped extensively in association with Rockyview;		

1st SIGNIFICANT SOIL (less than 30%)

SERIES:	ROCKYVIEW	**Variant:**	
Land Use:	Agricultural (Ap horizon)		
Calcareousness Class:	S	**Salinity Class:**	N

First Parent Material

Texture:	ME	**Genetic Origin:**	GLLC

Second Parent Material

Texture:	MF	**Genetic Origin:**	TILL
AGRASID Texture:	Medium textured (VFSL, L, SiCL, CL) over medium or fine textured till		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		

Comments:	Texture of the veneer is variable. Clay content, 20-35%.		
SERIES:	ROCKYVIEW	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	S	**Salinity Class:**	N

First Parent Material

Texture:	ME	**Genetic Origin:**	GLLC

Second Parent Material

Texture:	MF	**Genetic Origin:**	TILL
AGRASID Texture:	Medium textured (VFSL, L, SiCL, CL) over medium or fine textured till		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Texture of the veneer is variable. Clay content, 20-35%.		

2nd SIGNIFICANT SOIL (less than 30%)

SERIES:	BEDDINGTON	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	M	**Salinity Class:**	M

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Moderately Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Solonetzic
Soil SubGroup:	Black Solodized Solonetz		
Comments:	Use with Delacour		

AbaData

AGRASID Information

AGRICULTURAL REGION OF ALBERTA SOIL INVENTORY DATABASE

SOIL CORRELATION AREA #6

Surface Form Modifier:			
Soil Landscape of Canada #:	482268	**Generated Soil Symbol:**	DEL7/U1h
Eco District:	Delacour	**Eco Region:**	Fescue Grassland
Land System Name:	Kathryn	**Climate Rating:**	2AH
Morphological Descriptor:	Plain	**Soil Zone:**	Thin Black
Soil Order 1:	Chernozemic	**Soil Order 2:**	
Landscape Model 1:	high relief - undulating		
Slope Class 1:	2 to 3		
Landscape Model 2:	low relief - undulating		
Slope Class 2:	2		

AbaData

AGRASID Information

DOMINANT SOIL (greater than 60%)

SERIES:	DELACOUR	**Variant:**	
Land Use:	Agricultural (Ap horizon)		
Calcareousness Class:	M	**Salinity Class:**	N

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Mapped extensively in association with Rockyview;		
SERIES:	DELACOUR	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	M	**Salinity Class:**	N

First Parent Material

Texture:	MF	**Genetic Origin:**	TILL

Second Parent Material

Texture:	-	**Genetic Origin:**	-
AGRASID Texture:	Medium textured (L to CL) till (Till Name)		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Mapped extensively in association with Rockyview;		

1st SIGNIFICANT SOIL (less than 30%)

SERIES:	ROCKYVIEW	**Variant:**	
Land Use:	Agricultural (Ap horizon)		
Calcareousness Class:	S	**Salinity Class:**	N

First Parent Material

Texture:	ME	**Genetic Origin:**	GLLC

Second Parent Material

Texture:	MF	**Genetic Origin:**	TILL
AGRASID Texture:	Medium textured (VFSL, L, SiCL, CL) over medium or fine textured till		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		

Comments:	Texture of the veneer is variable. Clay content, 20-35%.		
SERIES:	ROCKYVIEW	**Variant:**	
Land Use:	Native (Ah horizon)		
Calcareousness Class:	S	**Salinity Class:**	N

First Parent Material

Texture:	ME	**Genetic Origin:**	GLLC

Second Parent Material

Texture:	MF	**Genetic Origin:**	TILL
AGRASID Texture:	Medium textured (VFSL, L, SiCL, CL) over medium or fine textured till		
Soil Drainage:	Well Drained	**Taxonomic Char:**	
Report:	CALGARY URBAN	**Soil Order:**	Chernozemic
Soil SubGroup:	Orthic Black		
Comments:	Texture of the veneer is variable. Clay content, 20-35%.		

AGRASID Information

AGRICULTURAL REGION OF ALBERTA SOIL INVENTORY DATABASE

SOIL CORRELATION AREA #6

Surface Form Modifier:			
Soil Landscape of Canada #:	482268	**Generated Soil Symbol:**	DEL1/H1I
Eco District:	Delacour	**Eco Region:**	Fescue Grassland
Land System Name:	Kathryn	**Climate Rating:**	2AH
Morphological Descriptor:	Plain	**Soil Zone:**	Thin Black
Soil Order 1:	Chernozemic	**Soil Order 2:**	
Landscape Model 1:	high relief - undulating		
Slope Class 1:	2 to 3		
Landscape Model 2:	low relief - undulating		
Slope Class 2:	2		

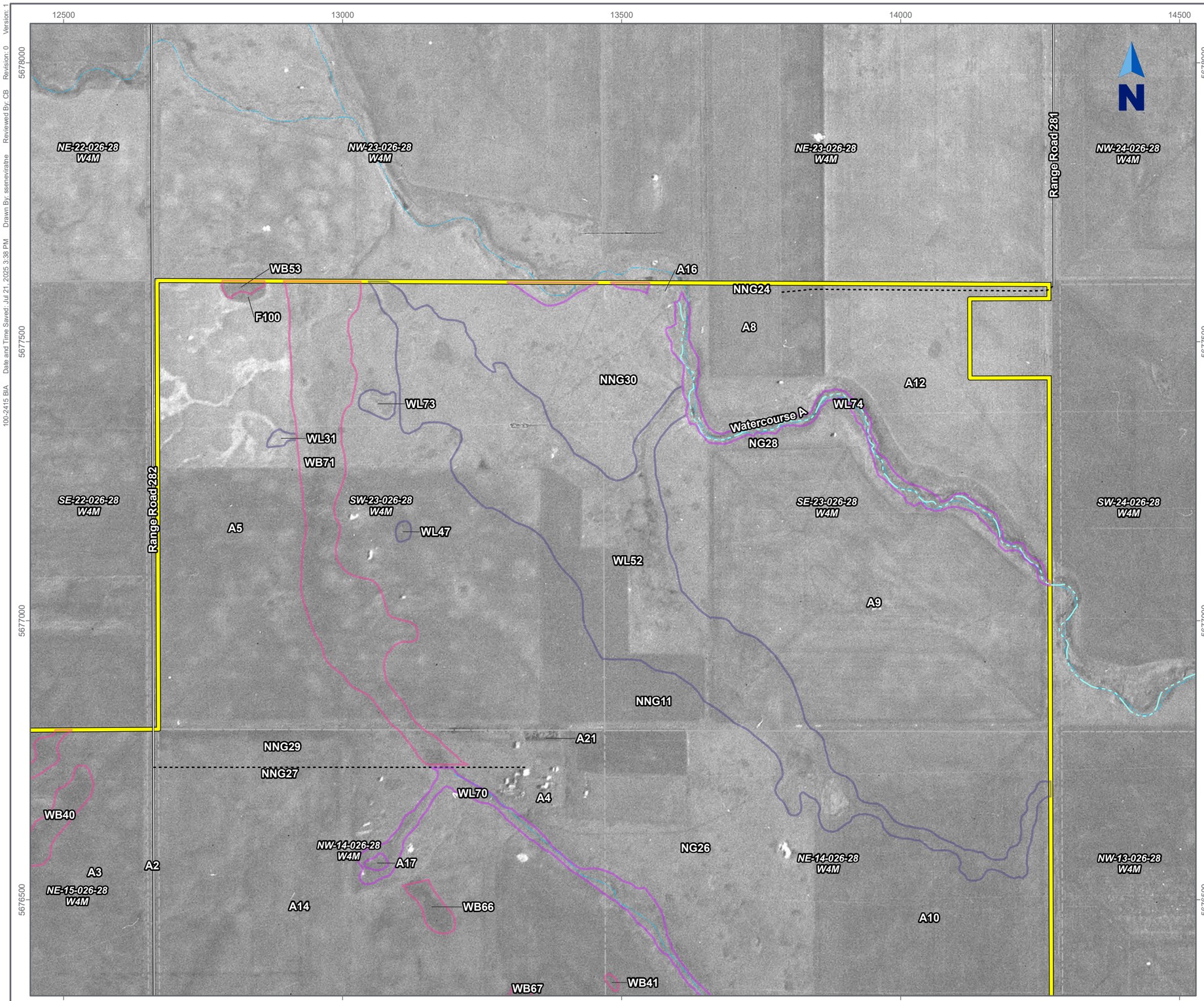
Appendix C

Historical Aerial
Photograph Review

July 17, 1950

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

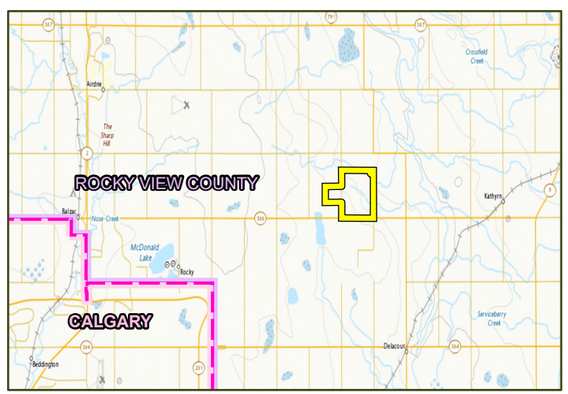
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0166_093-ps (July 17, 1950)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

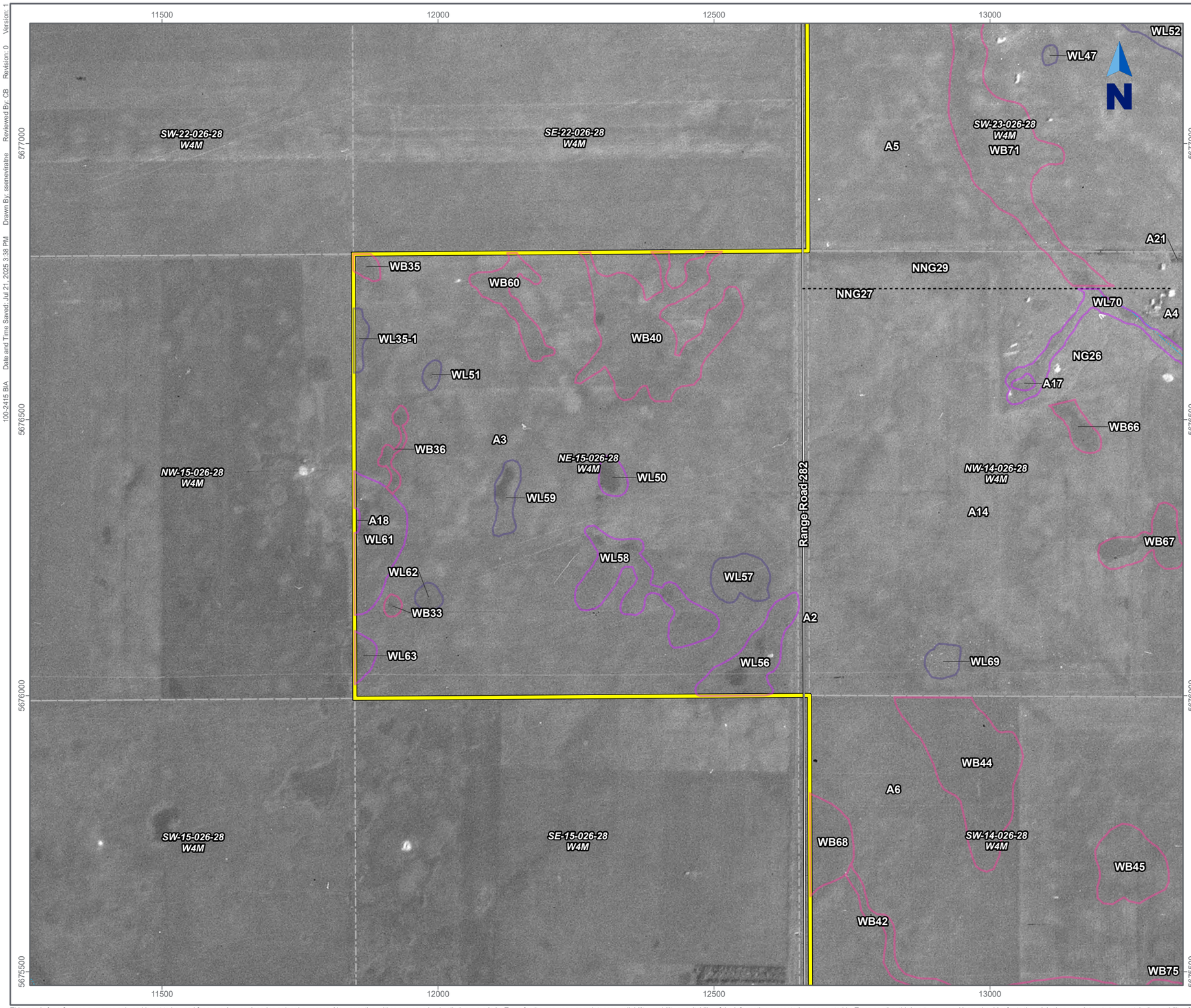
Figure No.
C.1A

Version: 1
Revision: 0
Reviewed By: CB
Drawn By: ssenevirathe
Date and Time Saved: Jul 21, 2025 3:38 PM
100-2415 BIA

July 17, 1950

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

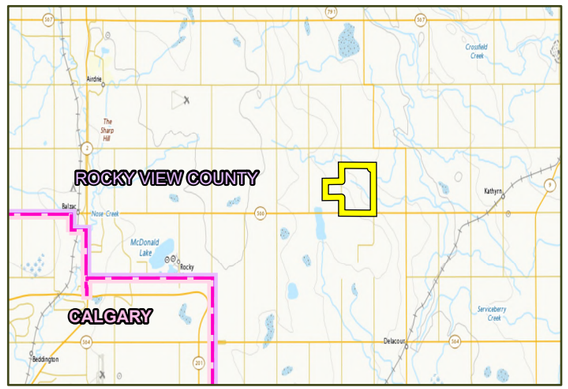
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

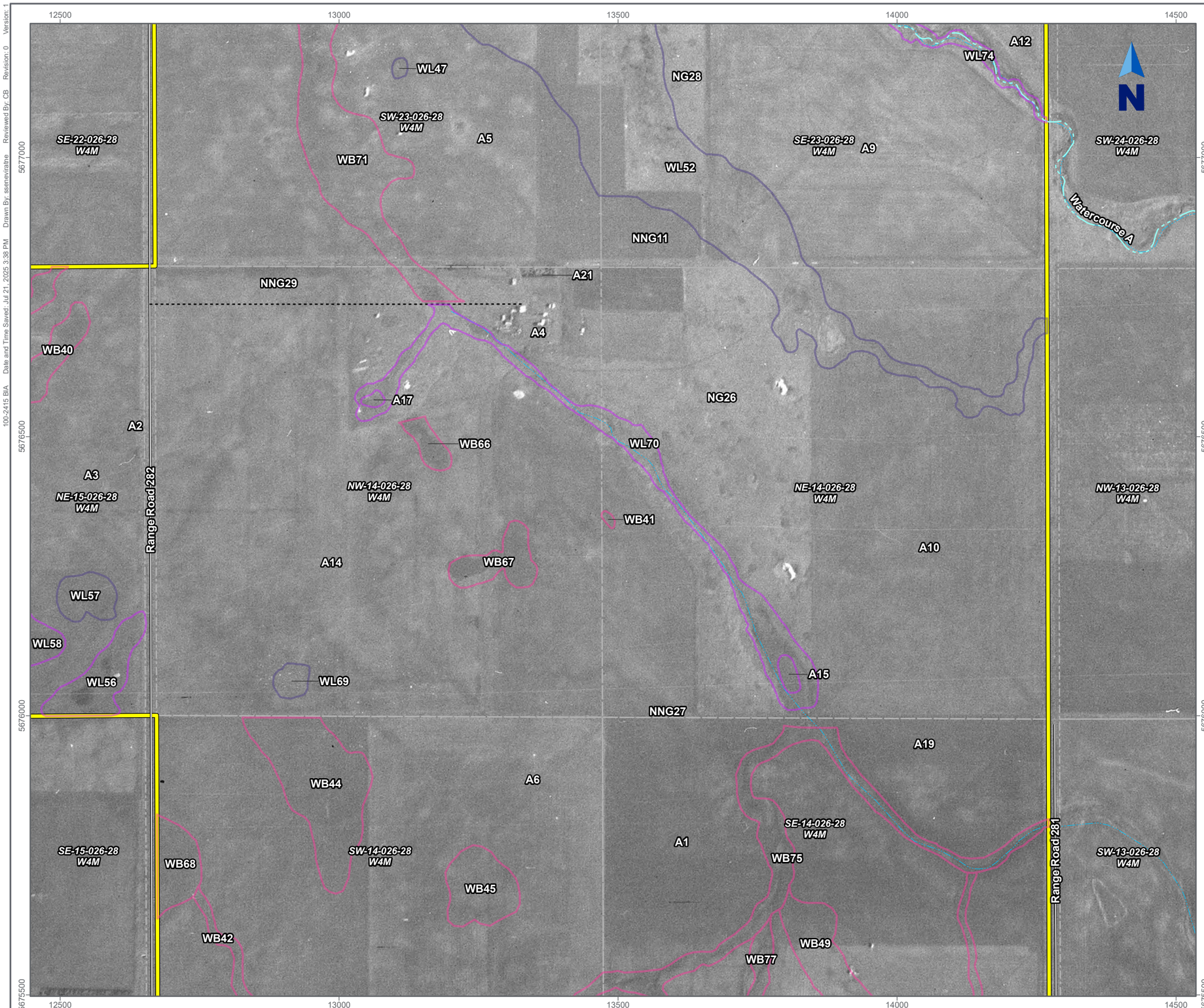
1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0166_093-ps (July 17, 1950)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.1B



Version: 1 | Revision: 0 | Reviewed By: CB | Drawn By: ssenevirathne | Date and Time Saved: Jul 21, 2025 3:38 PM | 100-2415 BIA

July 17, 1950

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

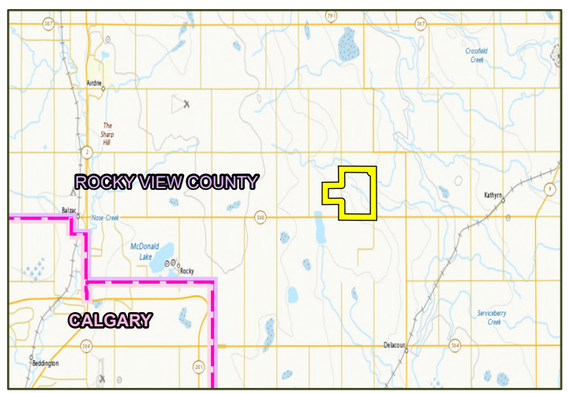
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0166_093-ps (July 17, 1950)
4. Inset Image: Canada Base Map - Transportation



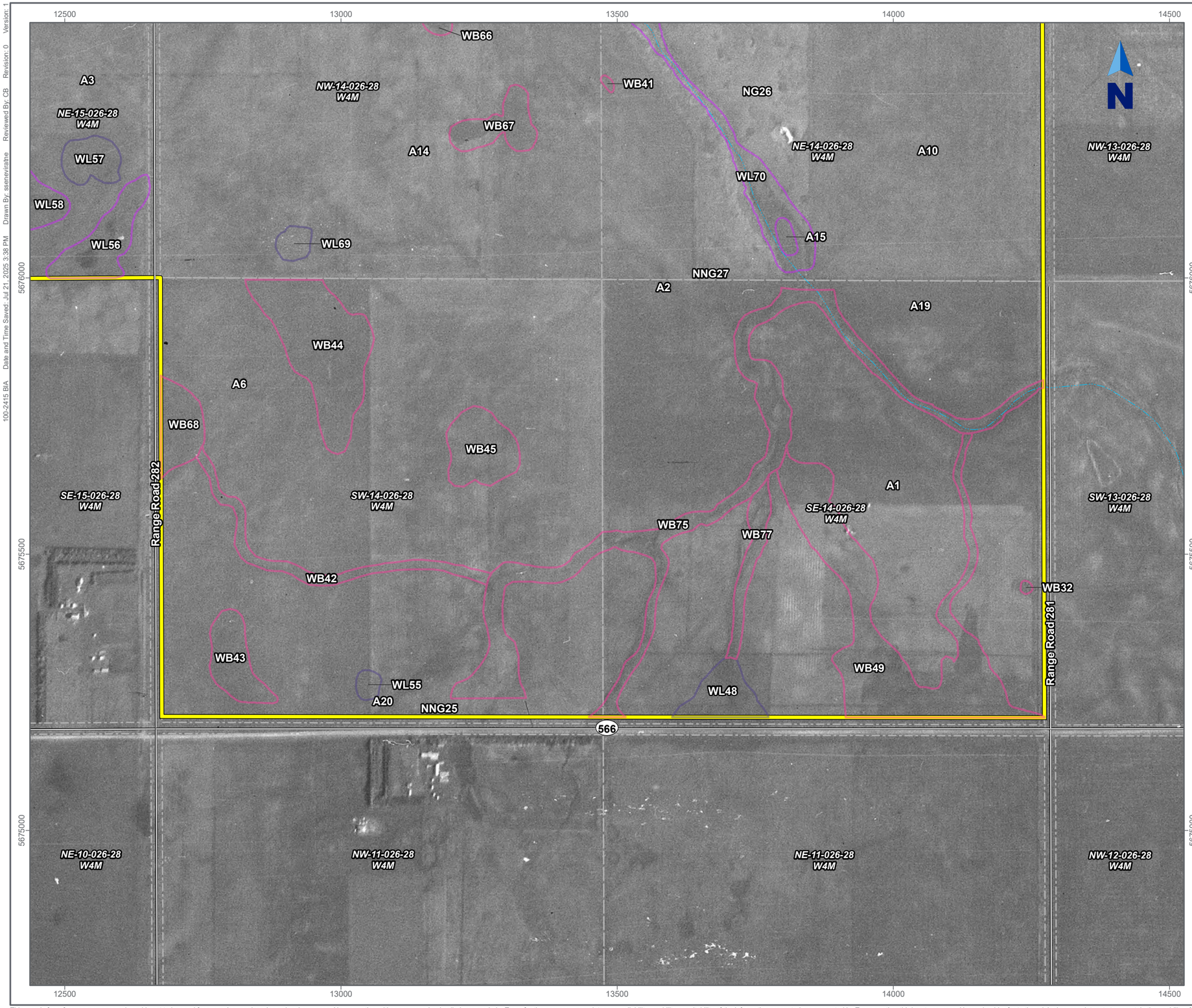
TRACE™ ASSOCIATES

Figure No. C.1C

July 17, 1950

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

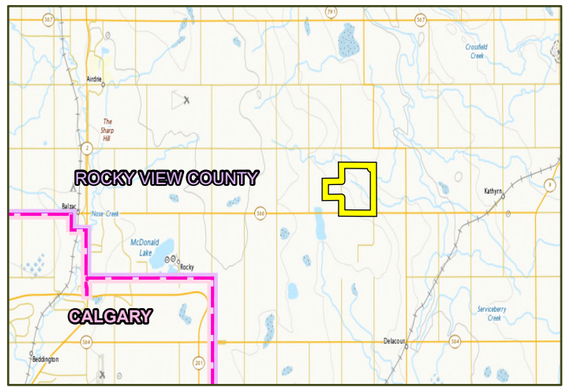
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

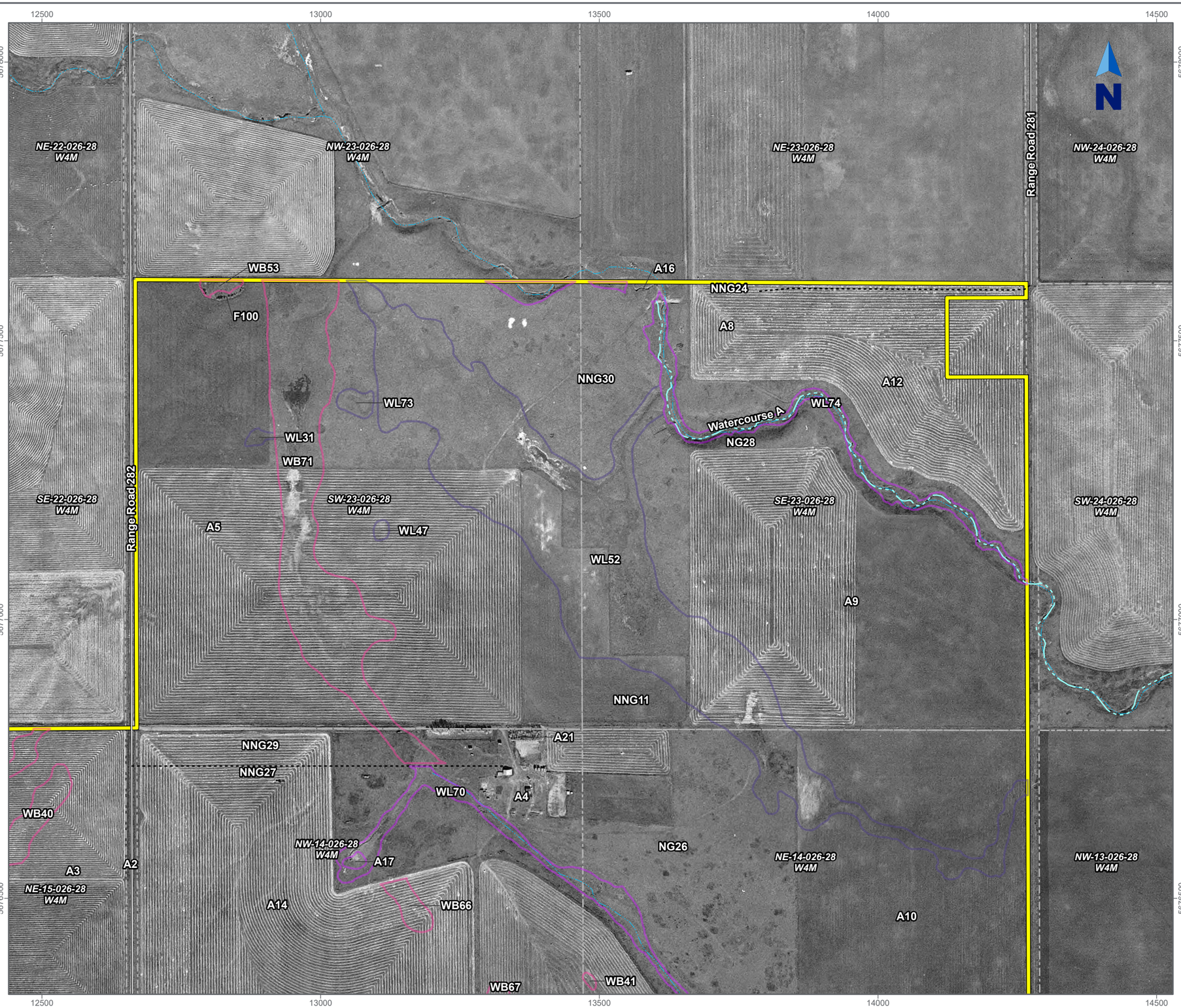
1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0166_093-ps (July 17, 1950)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.1D



September 19, 1962

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

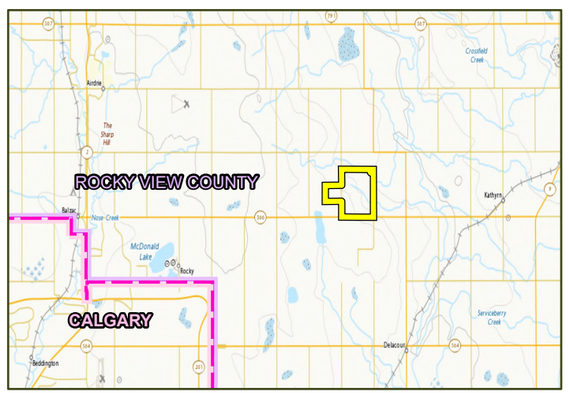
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

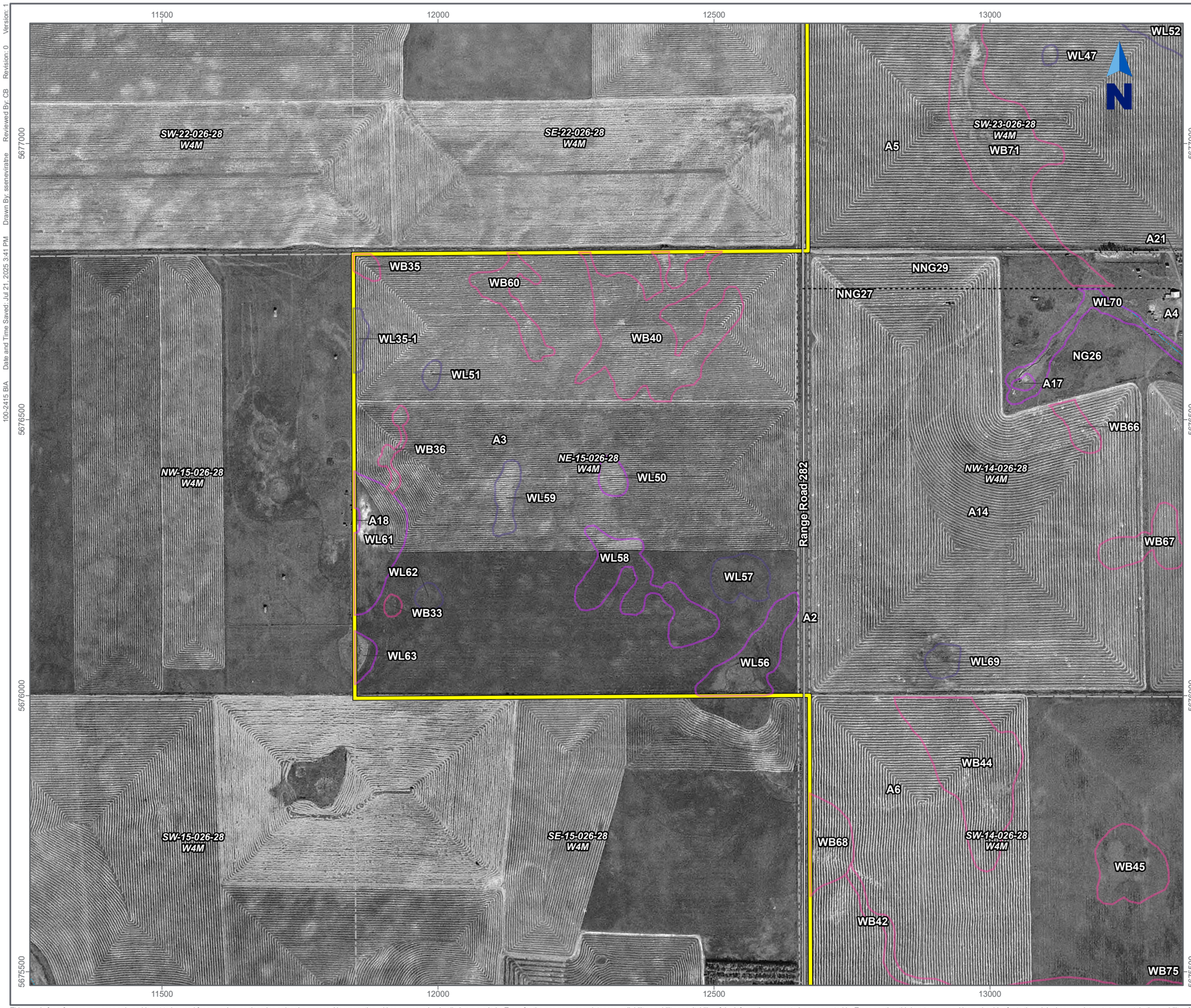
Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0829_101-ps (September 19, 1962)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. C.2A



Version: 1 | Revision: 0 | Reviewed By: CB | Drawn By: ssenevirathe | Date and Time Saved: Jul 21, 2025 3:41 PM | 100-2415 BIA

September 19, 1962

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

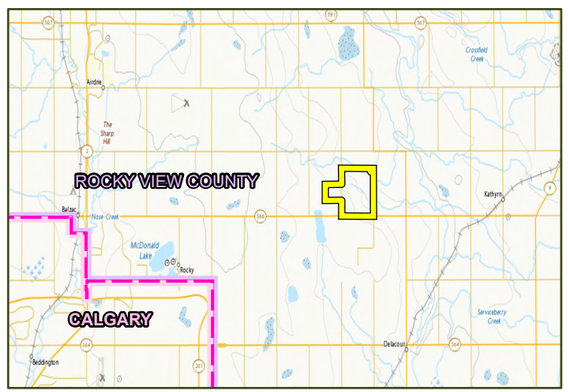
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0829_101-ps (September 19, 1962)
4. Inset Image: Canada Base Map - Transportation



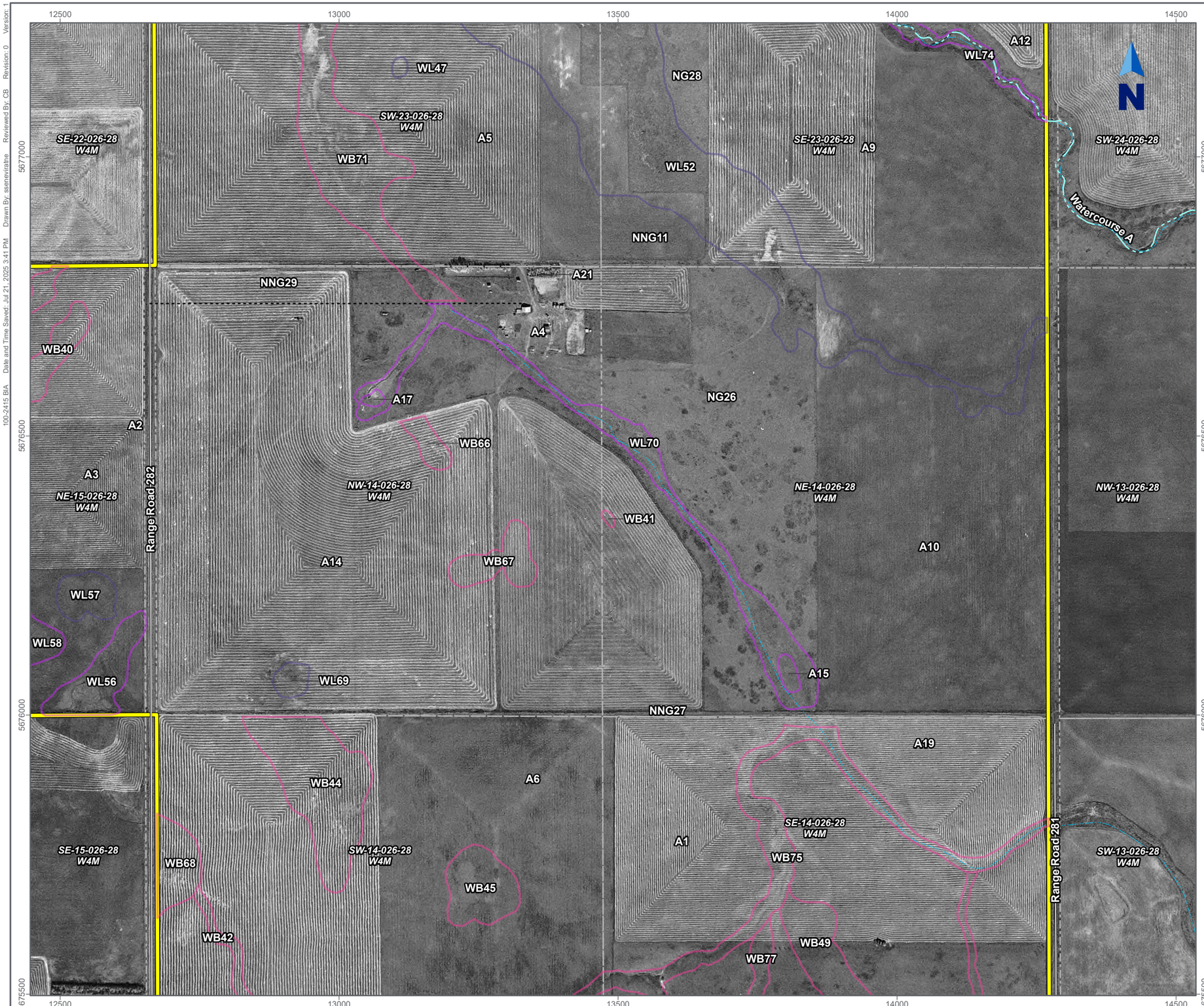
TRACE™ ASSOCIATES

Figure No. C.2B

September 19, 1962

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

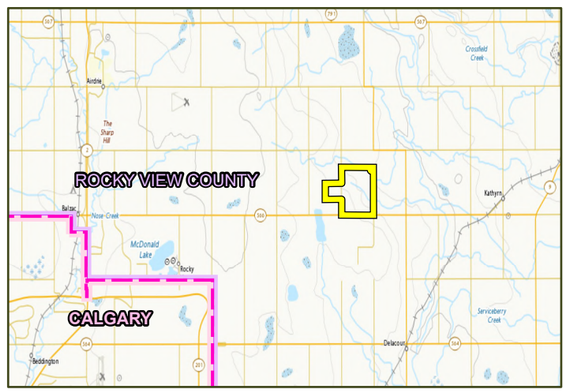
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0829_101-ps (September 19, 1962)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.2C

12500 13000 13500 14000 14500

5676000

5675500

5675000

WB66 WB41 NG26 WB67 A3 NW-14-026-28 W4M NE-15-026-28 W4M A14 NE-14-026-28 W4M A10 NW-13-026-28 W4M WL57 WL70 WL58 A15 WL56 WL69 NNG27 A2 A19 WB44 A6 WB68 WB45 A1 SE-15-026-28 W4M SW-14-026-28 W4M SE-14-026-28 W4M SW-13-026-28 W4M WB75 WB77 Range Road 282 WB42 WB32 Range Road 281 WB43 WL55 WB49 A20 WL48 NNG25 566 NE-10-026-28 W4M NW-11-026-28 W4M NE-11-026-28 W4M NW-12-026-28 W4M

N

September 19, 1962

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

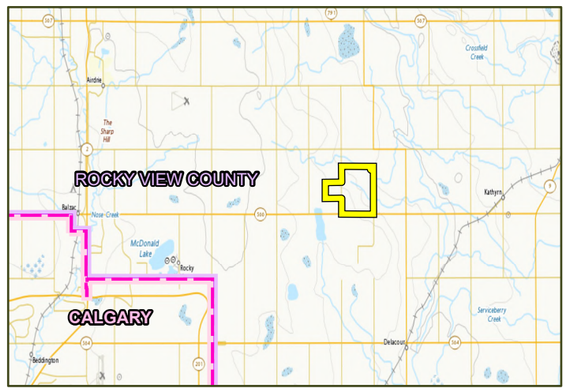
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 0829_101-ps (September 19, 1962)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.2D

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5678000 5677500 5677000 5676500

NE-22-026-28 W4M
NW-23-026-28 W4M
NE-23-026-28 W4M
NW-24-026-28 W4M
Range Road 281
WB53
A16
F100
NNG24
A8
NNG30
A12
WL73
WL74
Watercourse A
WL31
NG28
WB71
SE-22-026-28 W4M
SW-23-026-28 W4M
SE-23-026-28 W4M
SW-24-026-28 W4M
Range Road 282
A5
WL47
WL52
A9
NNG11
NNG29
A21
NNG27
WL70
A4
WB40
NW-14-026-28 W4M
NG26
NE-14-026-28 W4M
NW-13-026-28 W4M
A17
A2
A3
NE-15-026-28 W4M
A14
WB66
A10
WB67
WB41

June 12, 1974

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

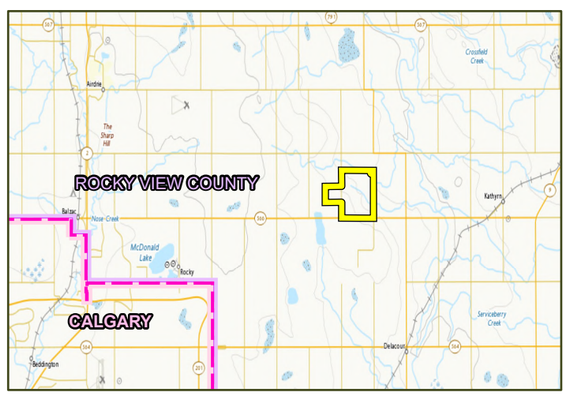
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 1316_242-ep (June 12, 1974)
4. Inset Image: Canada Base Map - Transportation



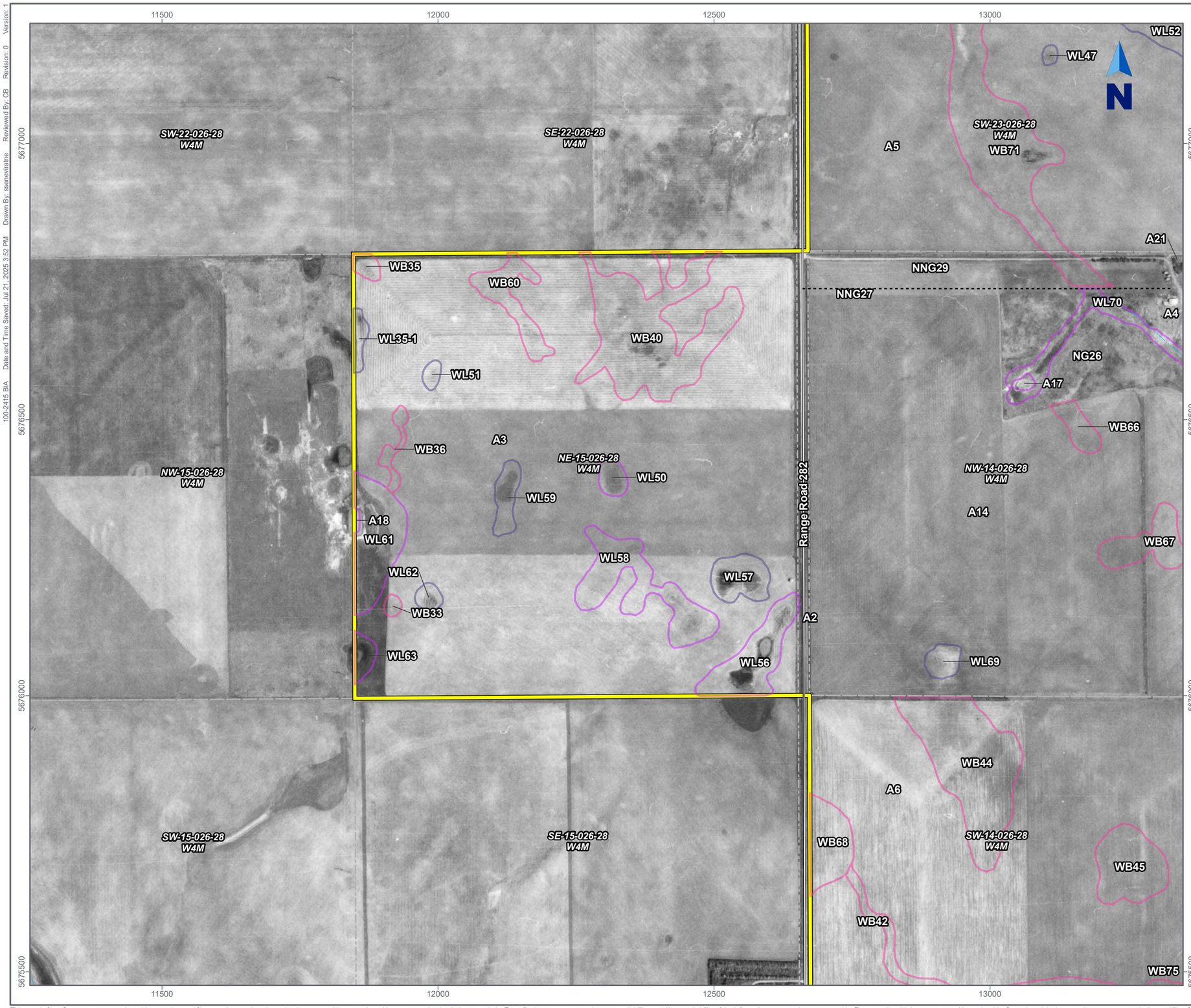
TRACE™ ASSOCIATES

Figure No.
C.3A

June 12, 1974

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415



Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

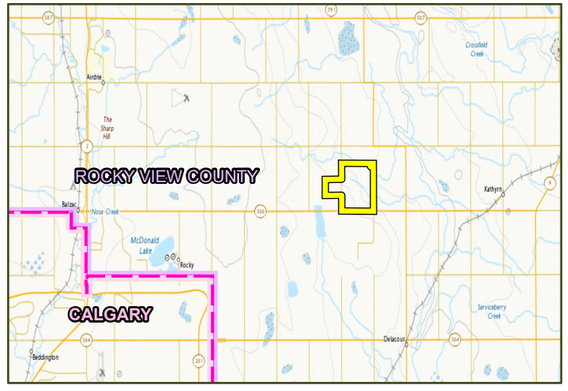
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

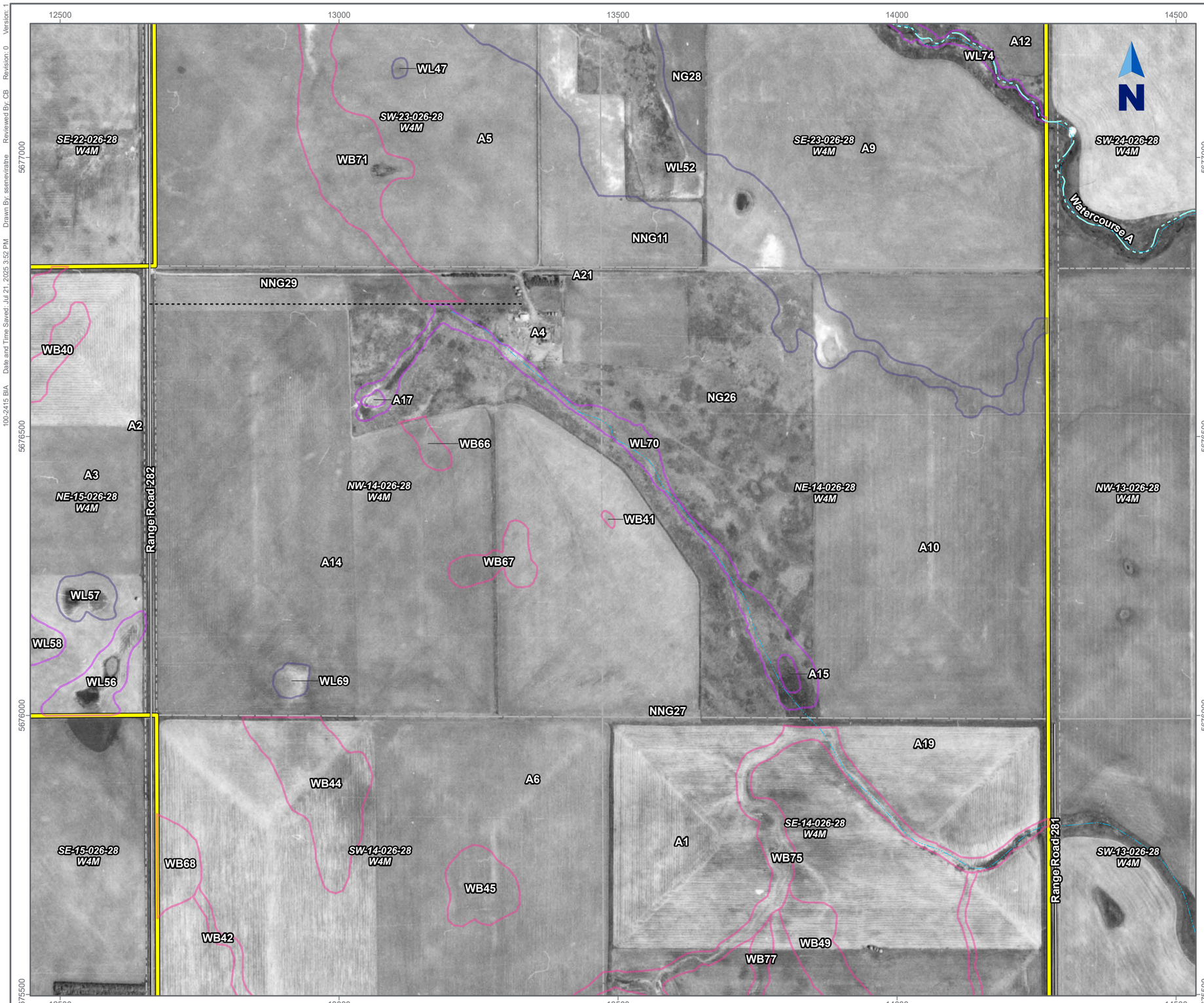
Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 1316_242-ep (June 12, 1974)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.3B



June 12, 1974

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

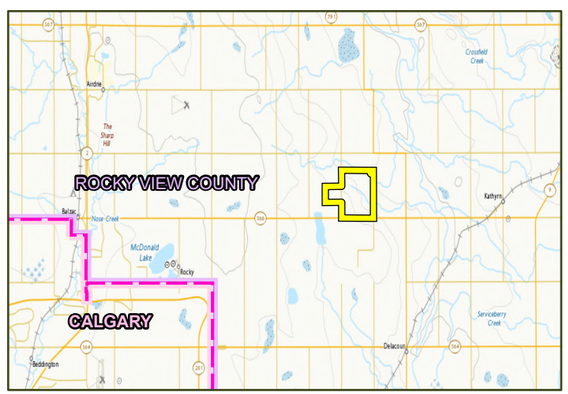
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 1316_242-ep (June 12, 1974)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. C.3C

June 12, 1974

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

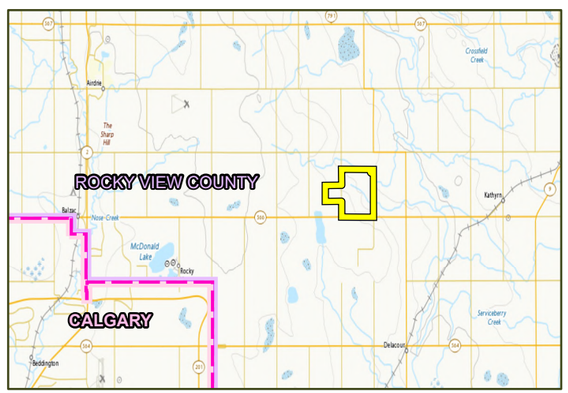
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 1316_242-ep (June 12, 1974)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. C.3D

12500 13000 13500 14000 14500

5678000 5677500 5677000 5676500

NE-22-026-28 W4M
NW-23-026-28 W4M
NE-23-026-28 W4M
NW-24-026-28 W4M
Range Road 281
Range Road 282
WB53
A16
NNG24
F100
A8
NNG30
A12
WL73
WL74
Watercourse A
NG28
WL31
WB71
SE-22-026-28 W4M
SW-23-026-28 W4M
SE-23-026-28 W4M
SW-24-026-28 W4M
A5
WL47
WL52
A9
NNG11
NNG29
A21
NNG27
WL70
A4
WB40
NW-14-026-28 W4M
NG26
NE-14-026-28 W4M
NW-13-026-28 W4M
A3
A2
A17
NE-15-026-28 W4M
A14
WB66
A10
WB67
WB41

May 6, 1985

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

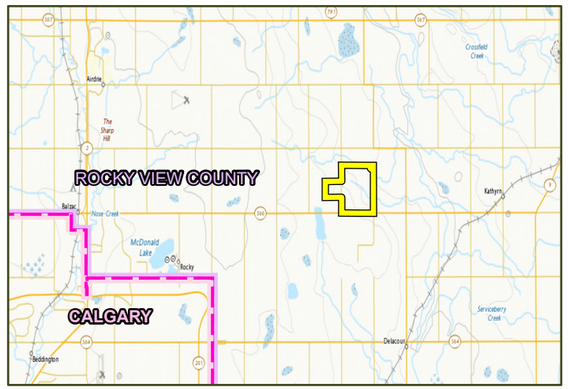
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 3151_087-ep (May 6, 1985)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.4A

Version: 1 | Revision: 0 | Reviewed By: CB | Drawn By: ssenevirathne | Date and Time Saved: Jul 21, 2025 4:04 PM | 100-2415 BIA

11500 | 12000 | 12500 | 13000

5677000 | 5676500 | 5676000 | 5675500

SW-22-026-28 W4M | SE-22-026-28 W4M | SW-23-026-28 W4M | NW-15-026-28 W4M | NE-15-026-28 W4M | NW-14-026-28 W4M | SW-15-026-28 W4M | SE-15-026-28 W4M | SW-14-026-28 W4M

Range Road 282

WL52 | WL47 | A5 | WB71 | A21 | NNG29 | NNG27 | WL70 | A4 | NG26 | A17 | WB66 | WB67 | A14 | WB35 | WB60 | WB40 | WL35-1 | WL51 | A3 | WB36 | WL50 | WL59 | A18 | WL61 | WL58 | WL62 | WL57 | WB33 | A2 | WL63 | WL56 | WL69 | WB44 | A6 | WB68 | WB45 | WB42 | WB75

May 6, 1985

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

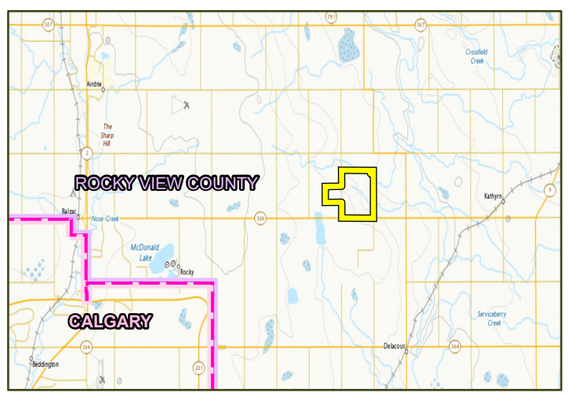
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

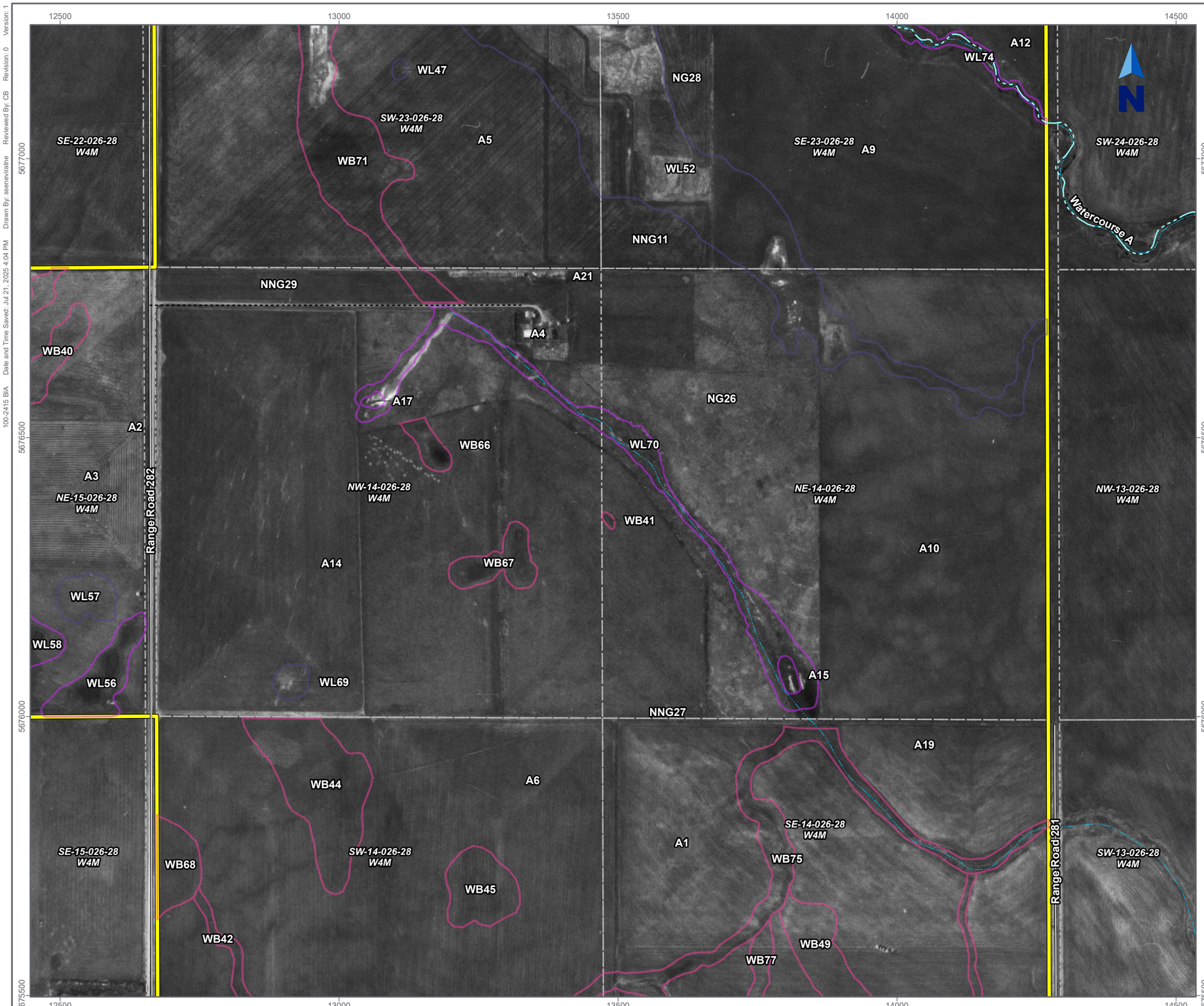
Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 3151_087-ep (May 6, 1985)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.4B



May 6, 1985

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

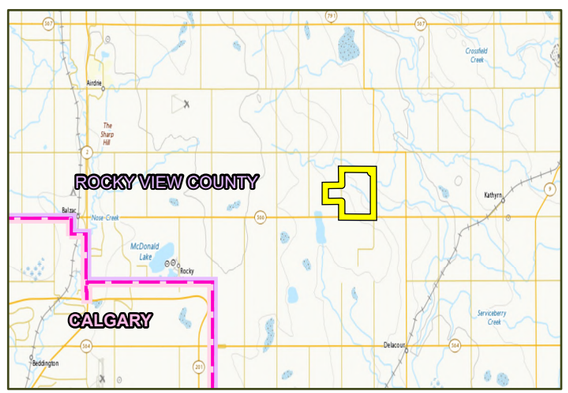
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 3151_087-ep (May 6, 1985)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No. C.4C

100-2415 BIA Date and Time Saved: Jul 21, 2025 4:04 PM Drawn By: ssenevirathe Reviewed By: CB Revision: 0 Version: 1

May 6, 1985

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

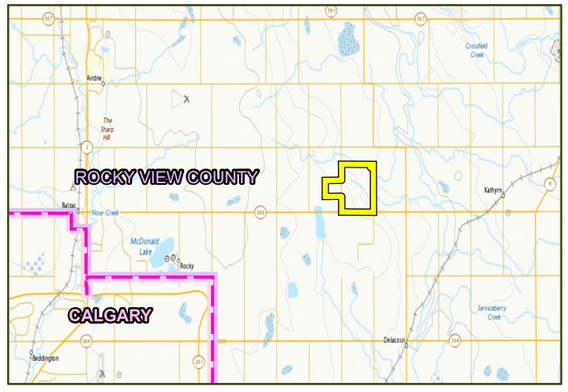
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

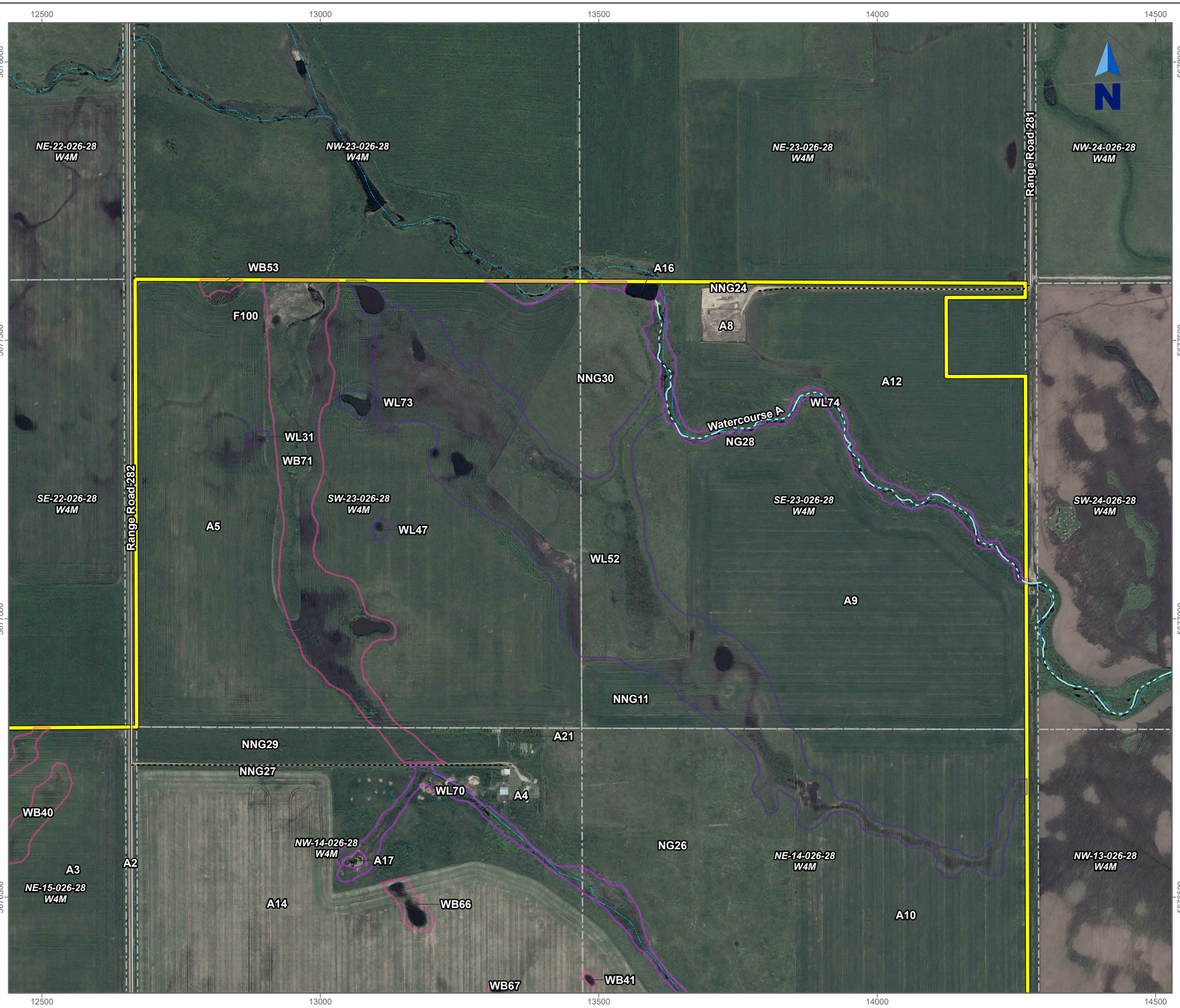
Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Alberta AEP 3151_087-ep (May 6, 1985)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.4D



June 25, 2013

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

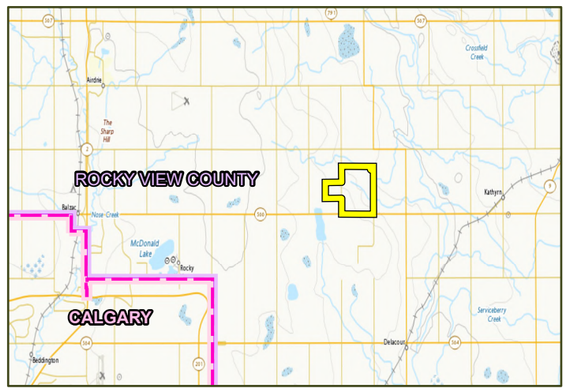
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Google Earth (June 25, 2013)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.5A

11500 12000 12500 13000

5677000 5676500 5676000 5675500

SW-22-026-28 W4M
SE-22-026-28 W4M
SW-23-026-28 W4M
NW-15-026-28 W4M
NE-15-026-28 W4M
NW-14-026-28 W4M
SW-15-026-28 W4M
SE-15-026-28 W4M
SW-14-026-28 W4M

WL52 WL47 A5 WB71 A21 NNG29 NNG27 WL70 A4 NG26 A17 WB66 WB35 WB60 WB40 WL35-1 WL51 WB36 A3 WL50 WL59 A18 WL61 WL58 WL62 WL57 WB33 WL63 WL56 A2 WL69 WB44 A6 WB68 WB45 WB42 WB67 WB75

Range Road 282

June 25, 2013

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

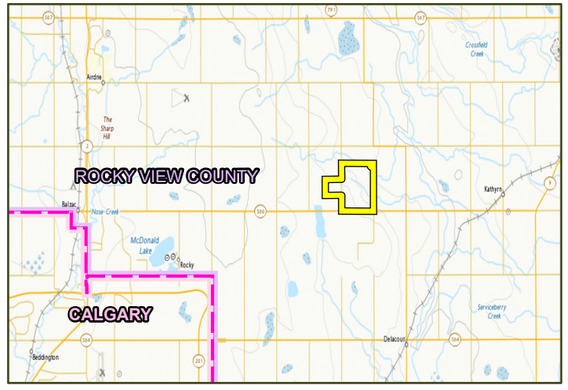
Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
1. Coordinate System: NAD 1983 3TM 114
2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Google Earth (June 25, 2013)
4. Inset Image: Canada Base Map - Transportation



TRACE™ ASSOCIATES

Figure No.
C.5B

Version: 1
Revision: 0
Reviewed By: CB
Drawn By: ssenevirathe
Date and Time Saved: Jul 21, 2025 4:15 PM
100-2415 BIA

12500 13000 13500 14000 14500

5677000 5676500 5676000 5675500

SE-22-026-28 W4M
SW-23-026-28 W4M
SE-23-026-28 W4M
SW-24-026-28 W4M
NE-15-026-28 W4M
NW-14-026-28 W4M
NE-14-026-28 W4M
NW-13-026-28 W4M
SE-15-026-28 W4M
SW-14-026-28 W4M
SW-13-026-28 W4M

WL47 WL74 NG28 A12 A5 WB71 WL52 A9 Watercourse A NNG11 NNG29 A21 A4 WB40 A17 NG26 A2 WB66 WL70 A3 WB41 A10 A14 WB67 WL57 WL58 WL56 WL69 A15 NNG27 A19 WB44 A6 A1 WB75 WB68 WB45 WB42 WB49 WB77

Range Road 282
Range Road 281

June 25, 2013

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Resource Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland
- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody
- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes
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2. Base Features: Altalis, Canvec, Kineticor, B&A
3. Base Image: Google Earth (June 25, 2013)
4. Inset Image: Canada Base Map - Transportation

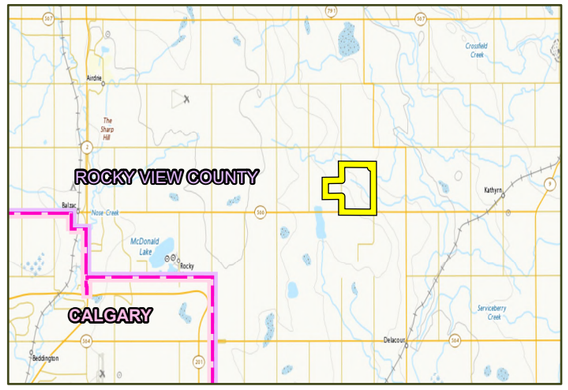

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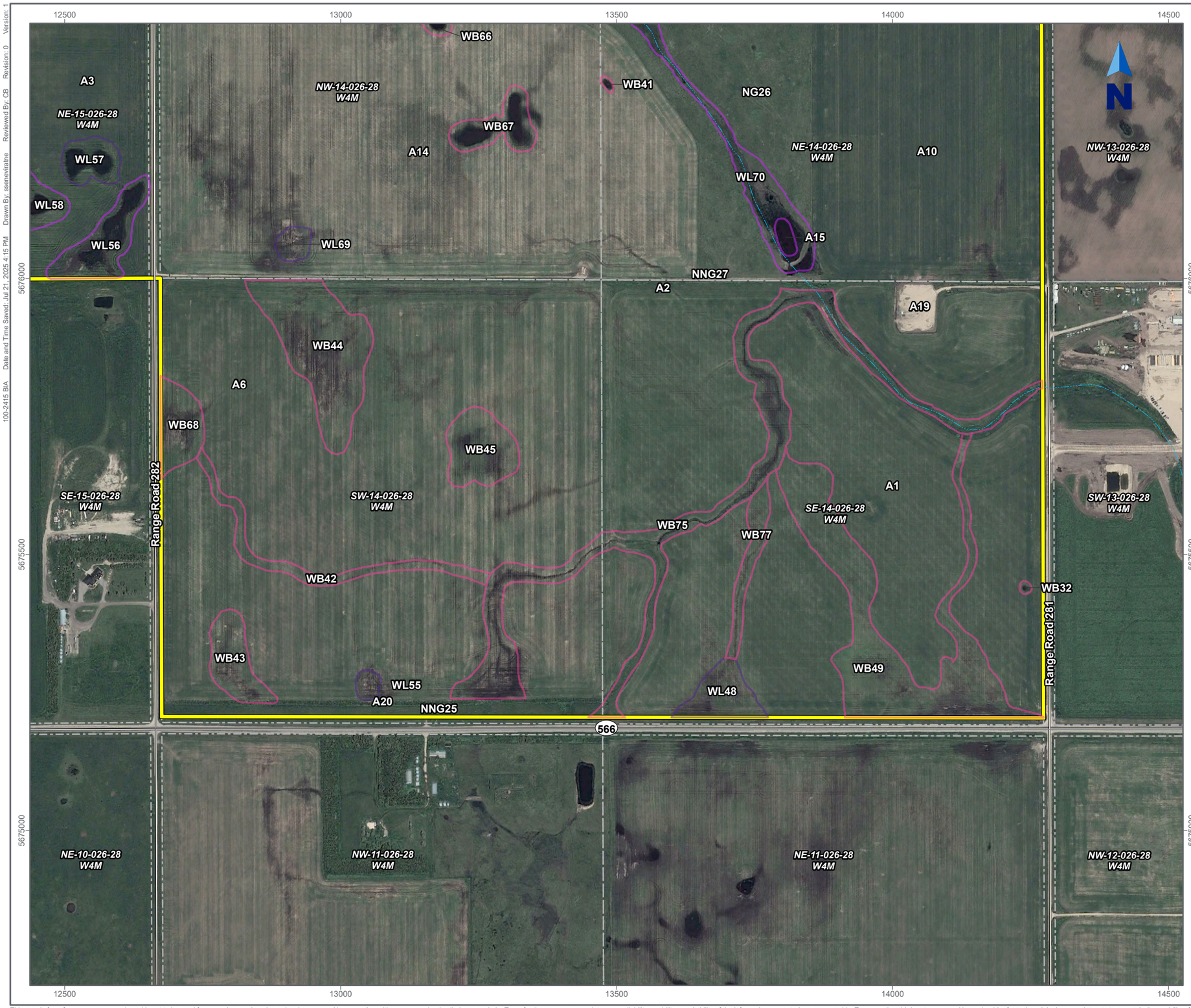
Figure No.
C.5C



June 25, 2013

Kineticor Holdings LP#3
c/o Cassa Development Services
Biophysical Impact Assessment

Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
Trace Project No. 100-2415

Legend

- Site Boundary
- Primary Road
- Stream Indefinite
- City of Calgary Boundary
- Rocky View County Municipal District
- Quarter Section

Trace-identified Features[a]

Wetland

- Temporary Graminoid Marsh
- Seasonal Graminoid Marsh

Waterbody

- Ephemeral Waterbody

0 50 100 200 300 m

1:7,000 (At original plot size of 11x17)

Notes

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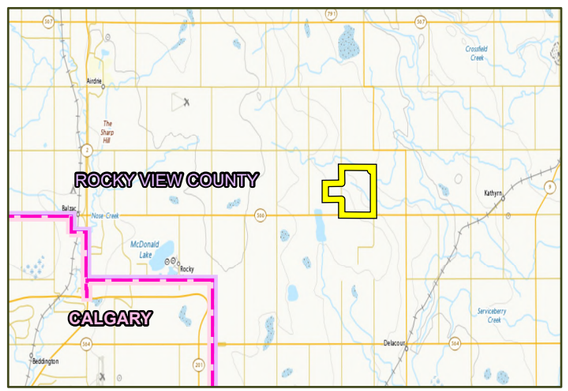

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Figure No.
C.5D

Version: 1 Revision: 0 Reviewed By: CB Drawn By: ssenevirathe Date and Time Saved: Jul 21, 2025 4:15 PM 100-2415 BIA

12500 13000 13500 14000 14500

5678000 5677500 5677000 5676500

NE-22-026-28 W4M
NW-23-026-28 W4M
NE-23-026-28 W4M
NW-24-026-28 W4M
Range Road 281
WB53
A16
NNG24
F100
A8
NNG30
A12
WL73
WL74
Watercourse A
WL31
NG28
WB71
SE-22-026-28 W4M
SW-23-026-28 W4M
SE-23-026-28 W4M
SW-24-026-28 W4M
Range Road 282
A5
WL47
WL52
A9
NNG11
NNG29
A21
NNG27
WL70
A4
WB40
NW-14-026-28 W4M
NG26
NE-14-026-28 W4M
NW-13-026-28 W4M
A3
A2
A17
NE-15-026-28 W4M
A14
WB66
A10
WB67
WB41

April 29, 2020

Kineticor Holdings LP#3
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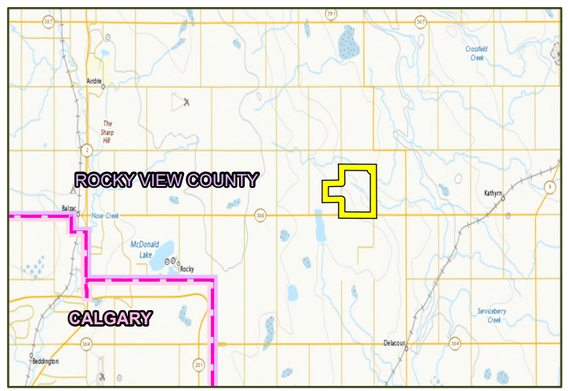

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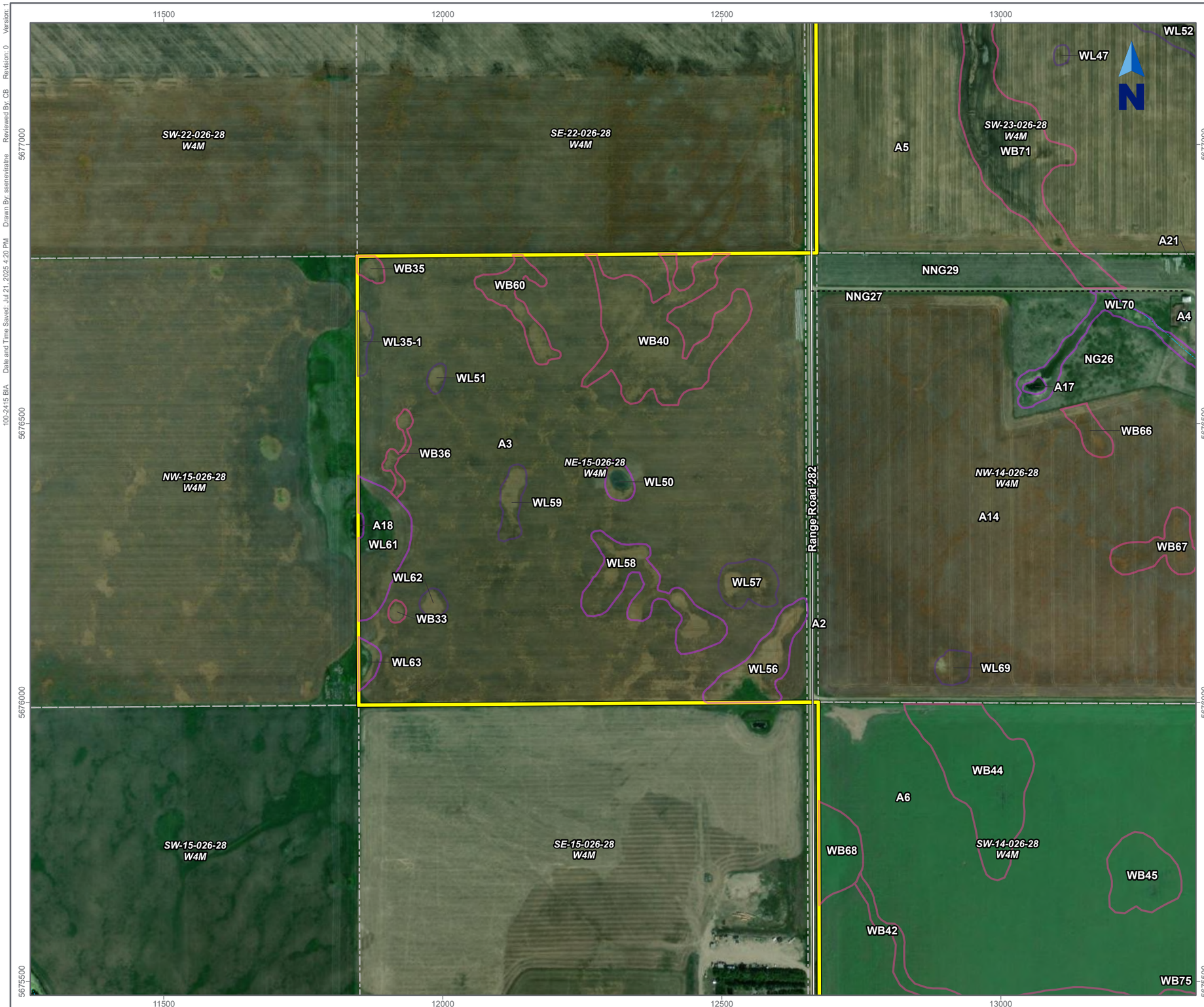
Figure No.
C.6A



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April 29, 2020

Kineticor Holdings LP#3
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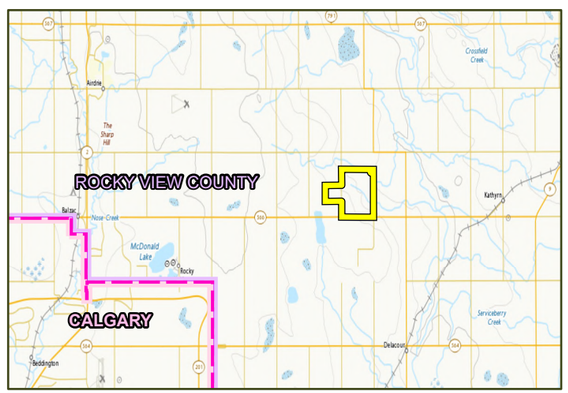
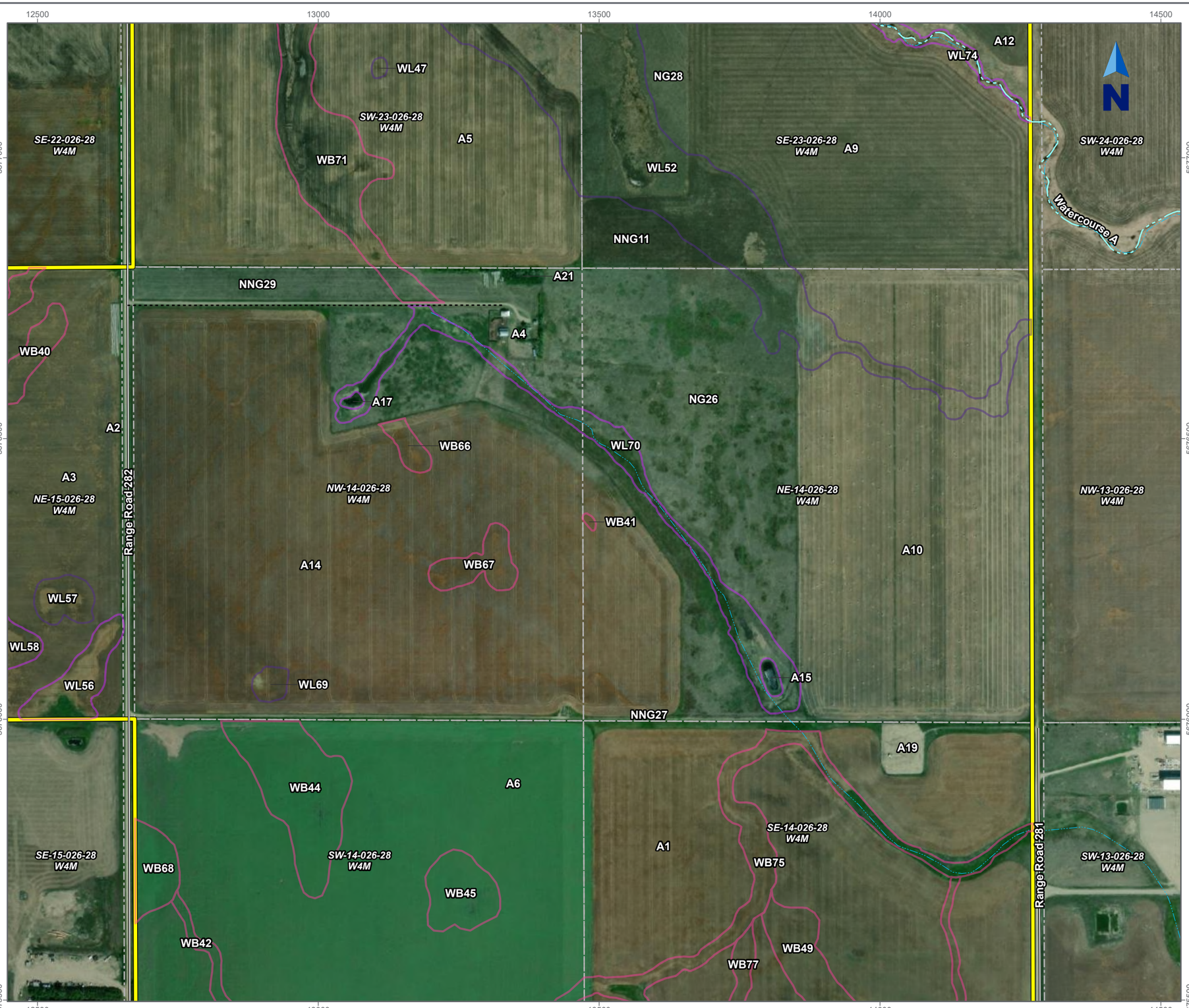


TRACE™ ASSOCIATES

Figure No.
C.6B



April 29, 2020

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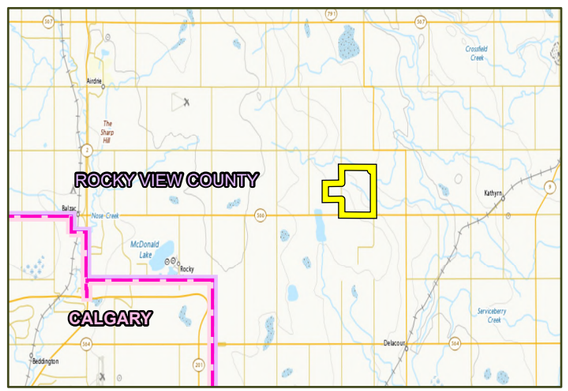
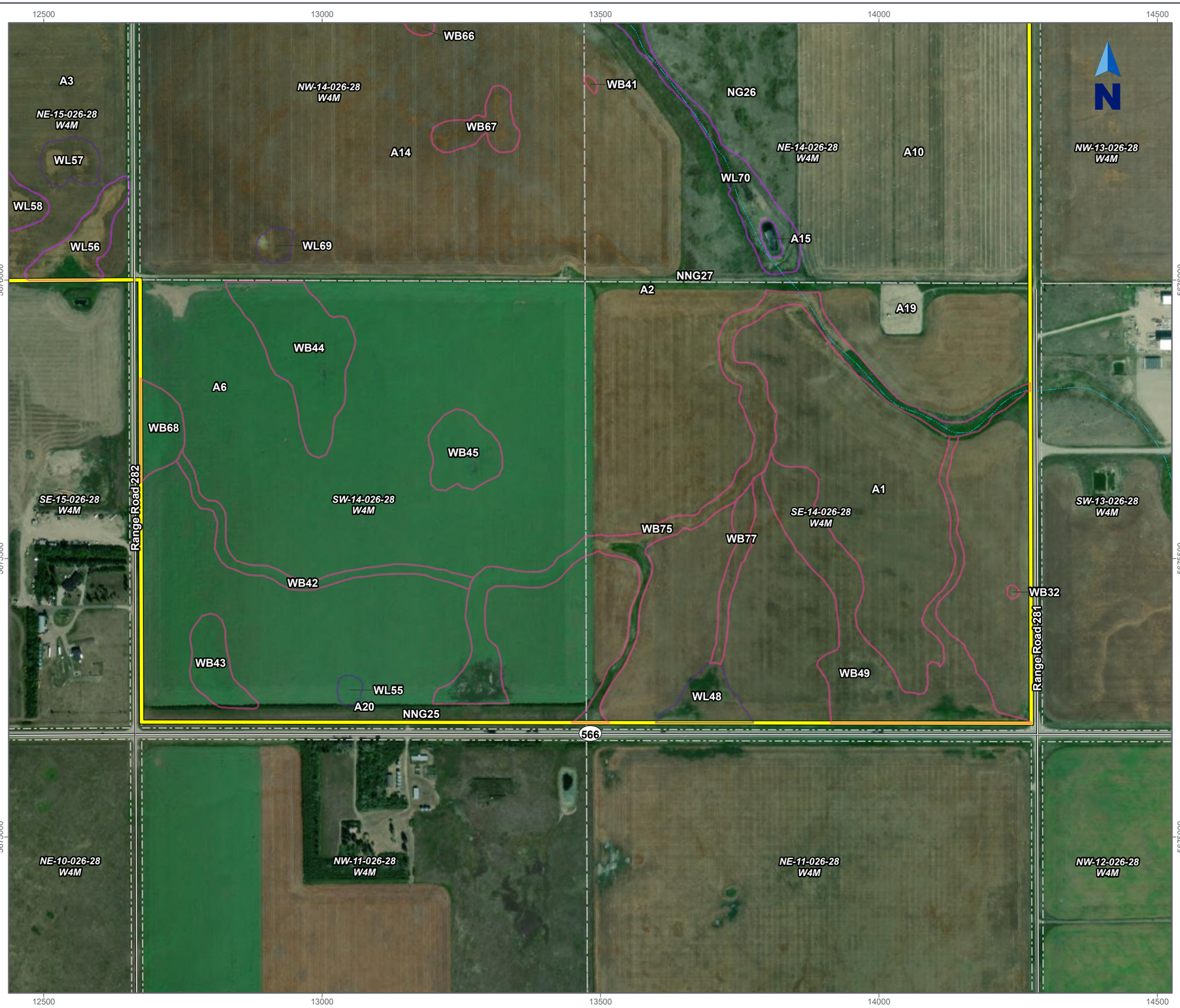


TRACE™ ASSOCIATES

Figure No.
C.6C



April 29, 2020

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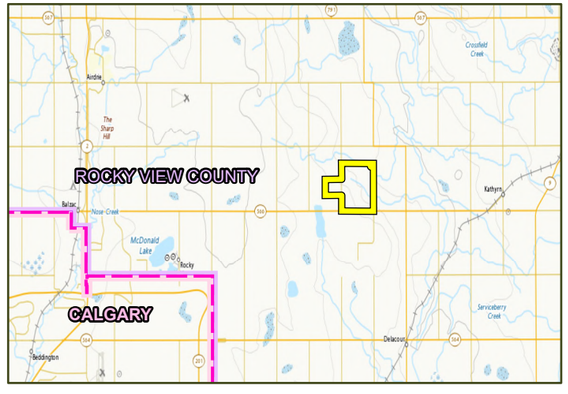

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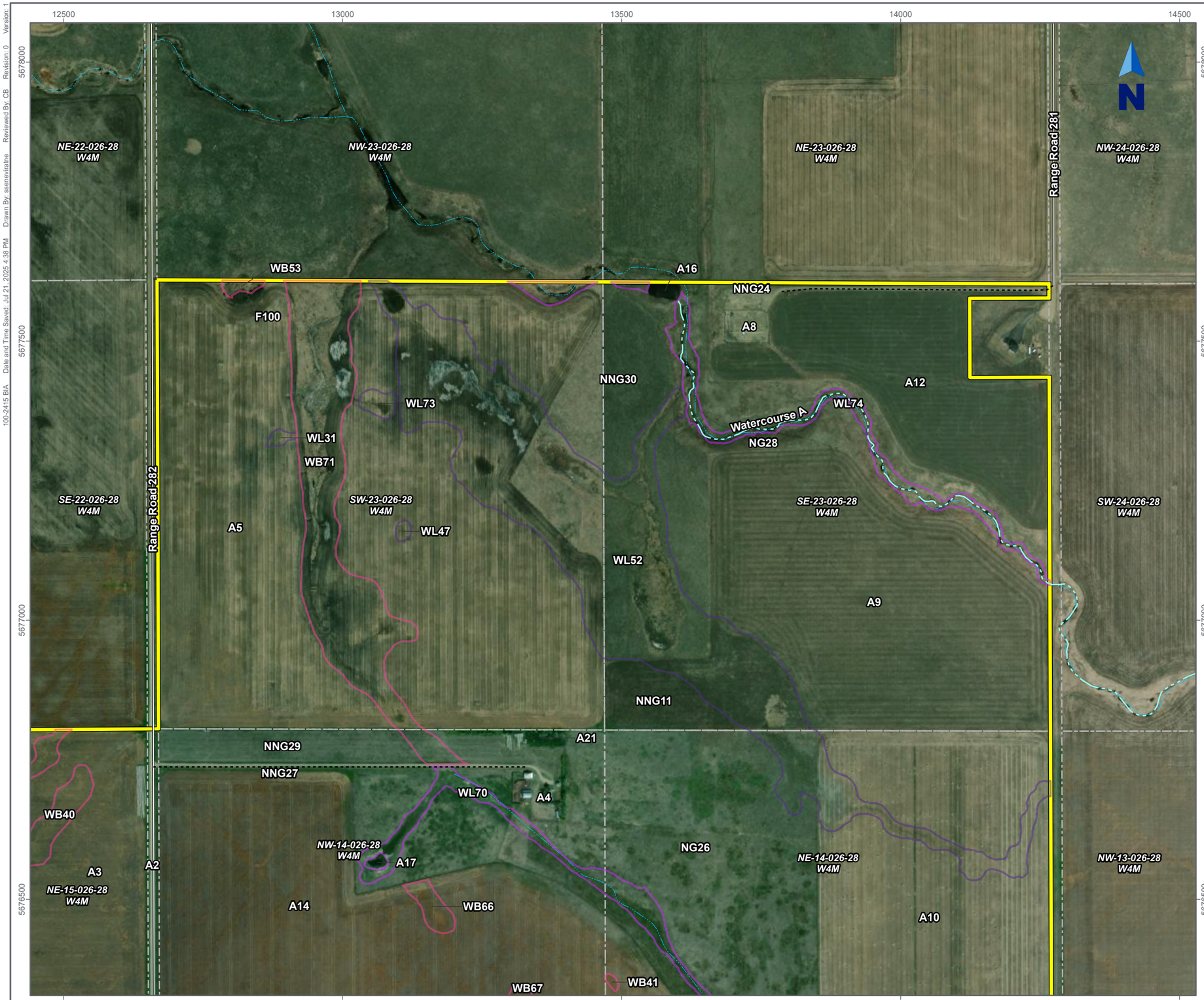
Figure No.
C.6D



Version: 1
Revision: 0
Reviewed By: CB
Drawn By: ssenevirathe
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April 26, 2023

Kineticor Holdings LP#3
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Kineticor Area Structure Plan
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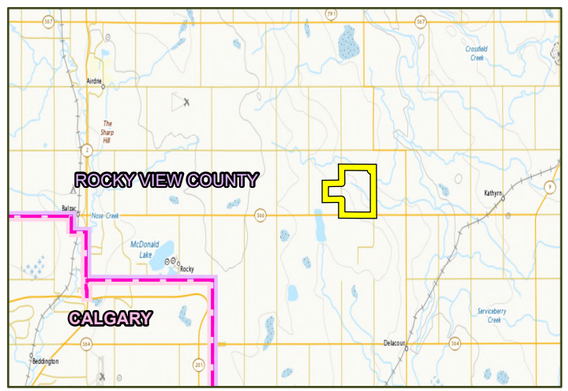

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Figure No.
C.7A

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Revision: 0
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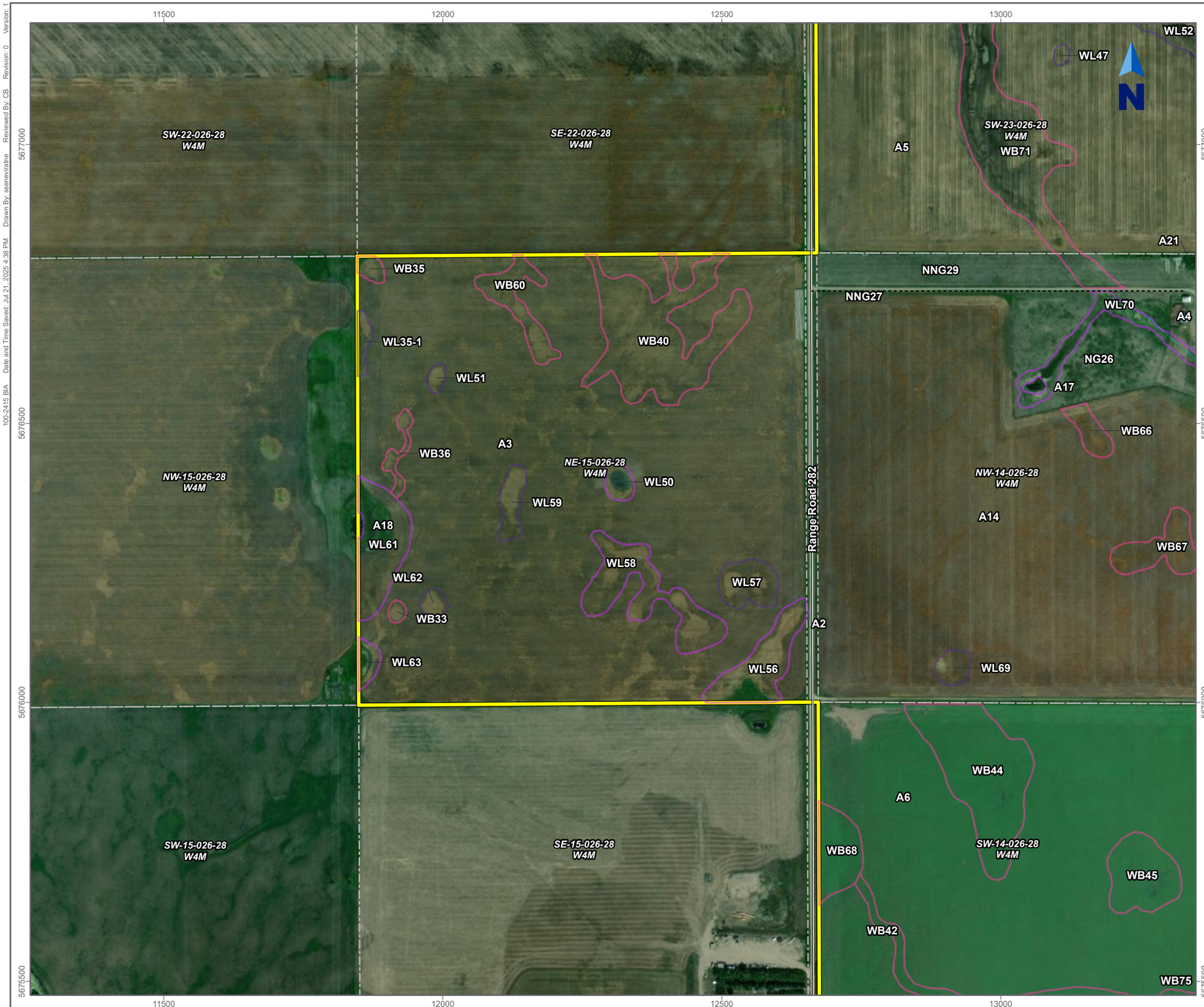

April 26, 2023

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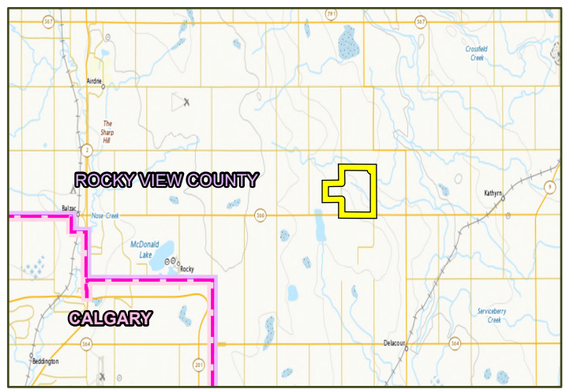

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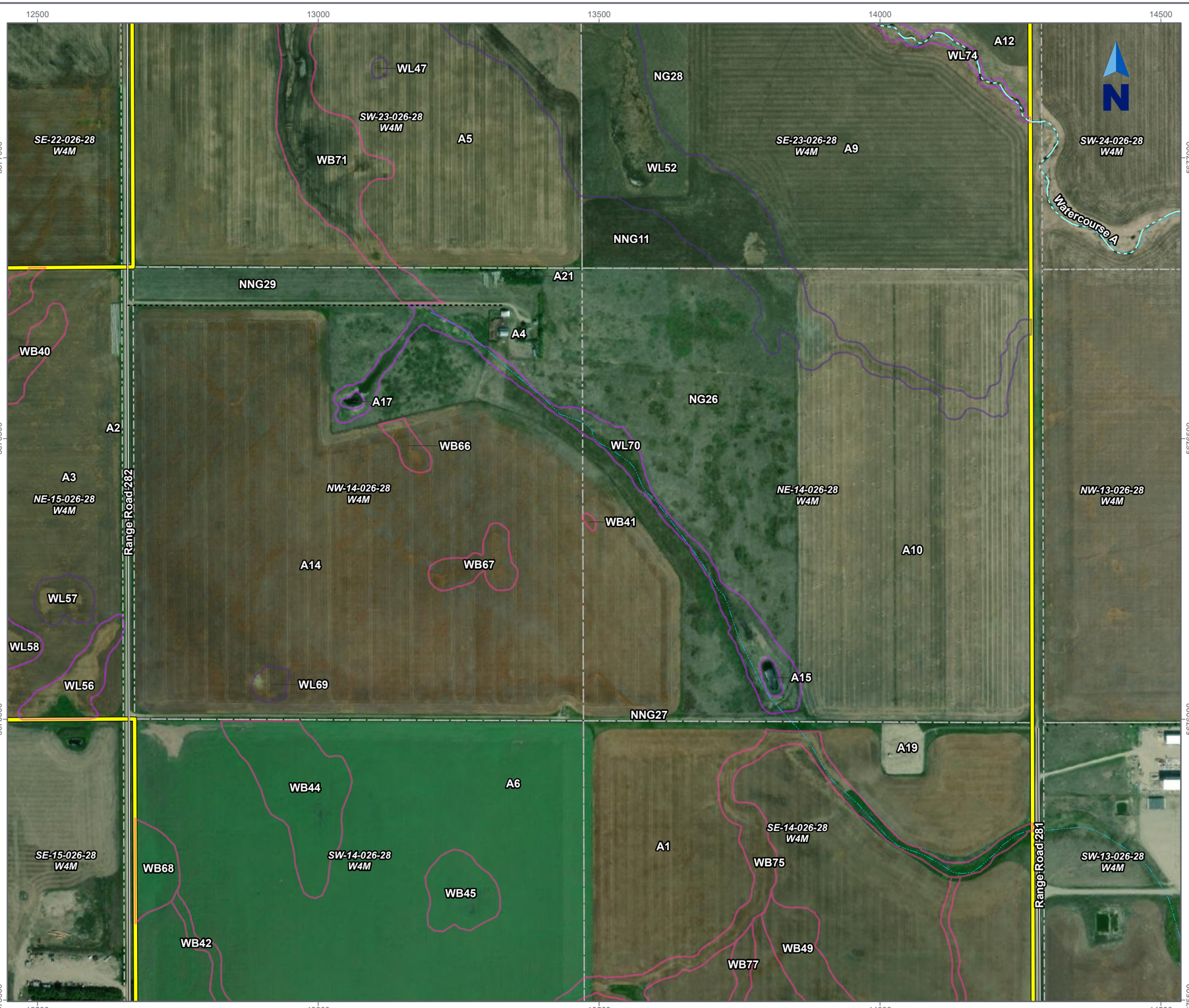
Figure No.
C.7B



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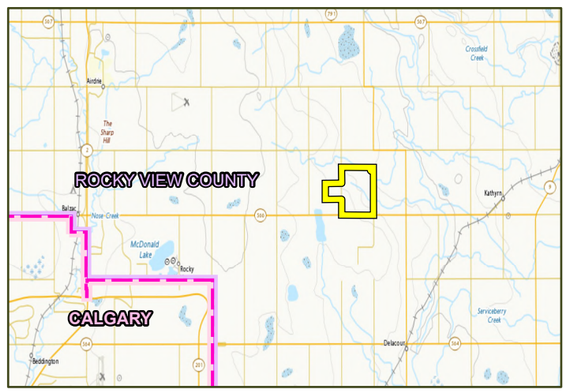

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Figure No.
C.7C

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Kineticor Holdings LP#3
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Kineticor Area Structure Plan
Portions of 14, 15, and 23-26-28-W4M
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Trace-identified Features[a]

Wetland

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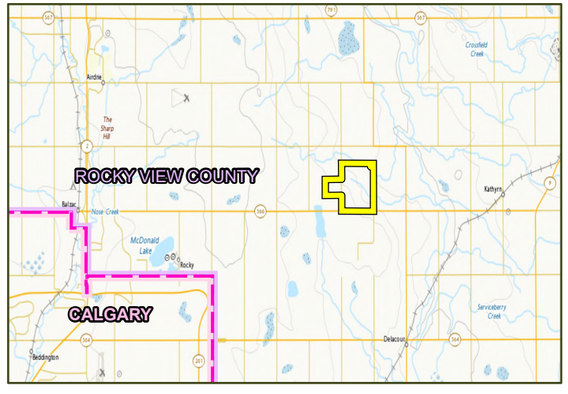

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Figure No.
C.7D

Appendix D

Wetland Datasheets

No wetland form was completed for A15.

A16

Looking N | Location: -113.805807, 51.23398

Survey Date: May 27, 2025
Class: Dugout
Disturbance Present: Heavily grazed

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Shallow Marsh	creeping spike-rush	*Eleocharis palustris*	60%	OBL

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for delineation					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

A17

Looking NW | Location: -113.812826, 51.22493

Survey Date: May 21, 2025
Class: Dugout – Slightly brackish
Disturbance Present: Heavy pugging present

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Other (e.g. swamp, bog or fen)	foxtail barley	*Hordeum jubatum*	5%	FACW
Other (e.g. swamp, bog or fen)	needle spike-rush	*Eleocharis acicularis*	30%	OBL
Other (e.g. swamp, bog or fen)	small bottle sedge	*Carex utriculata*	5%	OBL
Other (e.g. swamp, bog or fen)	wire rush	*Juncus balticus*	10%	FACW
Other (e.g. swamp, bog or fen)	sea milkwort	*Lysimachia maritima*	2%	OBL
Other (e.g. swamp, bog or fen)	seaside buttercup	*Ranunculus cymbalaria*	1%	OBL

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

A18

Looking NW | Location: -113.830117, 51.222593

Survey Date: May 28, 2025
Class: Dugout – Slightly brackish
Disturbance Present: Not Applicable (N/A)

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	smooth brome	*Bromus inermis*	50%	UPL
Low Prairie	common dandelion	*Taraxacum officinale*	5%	FACU
Shallow Marsh	reed canary grass	*Phalaris arundinacea*	90%	FACW
Shallow Marsh	creeping spike-rush	*Eleocharis palustris*	5%	OBL
Wet Meadow	reed canary grass	*Phalaris arundinacea*	25%	FACW
Wet Meadow	small bottle sedge	*Carex utriculata*	10%	OBL
Wet Meadow	perennial sow thistle	*Sonchus arvensis*	5%	FAC

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB32

Looking NE | Location: -113.796367, 51.214792

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB33

Looking NE | Location: -113.829501, 51.221308

Survey Date: May 28, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB35

Looking NW | Location: -113.82977, 51.226747

Survey Date: May 28, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	7.5YR3/1	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB36

Looking W | Location: -113.828973, 51.22445

Survey Date: May 28, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A
2	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
2	Ephemeral Waterbody (Centre)	B	7.5YR2.5/2	0%	N/A
3	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
3	Ephemeral Waterbody (Centre)	B	10YR3/2	8%	20, 25, and 27
4	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
4	Ephemeral Waterbody (Centre)	B	10YR3/1	3%	27

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB40

Looking NW | Location: -113.823058, 51.225864

Survey Date: May 28, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR4/3	5%	26

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB41

Looking E | Location: -113.807383, 51.22303

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB42

Looking SE | Location: -113.816023, 51.215274

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present:

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB43

Looking NW | Location: -113.816186, 51.213169

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A
2	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
2	Ephemeral Waterbody (Centre)	B	10YR2/2	2%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB44

Looking NE | Location: -113.81405, 51.218587

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/1	2%	20-25
2	Ephemeral Waterbody (Centre)	A	7.5YR2.5/2	0%	N/A
2	Ephemeral Waterbody (Centre)	B	7.5YR2.5/2	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB45

Looking NE | Location: -113.810063, 51.216789

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB49

Looking S | Location: -113.797787, 51.217081

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB53

Looking W | Location: -113.816269, 51.2343

Survey Date: May 22, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	smooth brome	*Bromus inermis*	40%	UPL
Low Prairie	creeping thistle	*Cirsium arvense*	1%	FACU

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB60

Looking NW | Location: -113.825869, 51.225898

Survey Date: May 28, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/1	15%	30
2	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
2	Ephemeral Waterbody (Centre)	B	7.5YR2.5/2	10%	25

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB66

Looking SW | Location: -113.811241, 51.224182

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	1%	29

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB67

Looking W | Location: -113.809618, 51.222329

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A
2	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
2	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB68

Looking SE | Location: -113.818552, 51.217732

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Upland (Centre)	A	10YR2/1	0%	N/A
1	Upland (Centre)	B	10YR2/1	1%	20

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB71

Looking N | Location: -113.811456, 51.226639

Survey Date: May 22, 2025

Class: Ephemeral Waterbody

Disturbance Present: Other

Comment: The wet meadow plot was associated with ditching and basin modification; there are no soil indicators to support temporary graminoid marsh classification.

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	smooth brome	*Bromus inermis*	30%	UPL
Low Prairie	Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	15%	FACU
Low Prairie	perennial sow thistle	*Sonchus arvensis*	1%	FAC
Wet Meadow	wire rush	*Juncus balticus*	20%	FACW
Wet Meadow	perennial sow thistle	*Sonchus arvensis*	10%	FAC
Wet Meadow	povertyweed	*Iva axillaris*	4%	FAC
Wet Meadow	saltgrass	*Distichlis spicata*	5%	FACW
Wet Meadow	Cusick's salt-meadow grass	*Puccinellia nuttalliana*	25%	OBL
Wet Meadow	tufted white prairie aster	*Symphyotrichum ericoides*	2%	FACU

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A
2	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
2	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A
3	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
3	Ephemeral Waterbody (Centre)	B	10YR4/3	2%	30
4	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A

WB71					
4	Ephemeral Waterbody (Centre)	B	10YR4/1	0%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WB75

Looking W | Location: -113.796042, 51.218086

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: N/A

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	smooth brome	*Bromus inermis*	50%	UPL
Low Prairie	common dandelion	*Taraxacum officinale*	1%	FACU

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Wetland (Boundary)	A	10YR2/1	0%	N/A
1	Wetland (Boundary)	B	10YR2/1	5%	23
2	Upland (Boundary)	A	10YR2/1	0%	N/A
2	Upland (Boundary)	B	10YR2/1	0%	N/A
3	Wetland (Boundary)	A	10YR2/1	0%	N/A
3	Wetland (Boundary)	B	10YR2/1	5%	30
4	Upland (Boundary)	A	10YR2/1	0%	N/A
4	Upland (Boundary)	B	10YR2/1	0%	N/A
5	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A
5	Ephemeral Waterbody (Centre)	B	10YR2/1	0%	N/A
7	Wetland (Boundary)	A	10YR2/1	0%	N/A
7	Wetland (Boundary)	B	2.5YR5/4	10%	30
8	Upland (Boundary)	A	10YR2/2	0%	N/A
8	Upland (Boundary)	B	10YR3/2	0%	N/A
9	Ephemeral Waterbody (Centre)	A	10YR2/1	0%	N/A

WB75					
9	Ephemeral Waterbody (Centre)	B	10YR2/2	5%	24

Vegetation Delineation Plots (1 m x 1 m, ground)						
Transect Number	**Plot Number**	**Plot Condition**	**Common Name**	**Scientific Name**	**Percent Cover**	**Wetland Indicator Status**
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)						
Transect Number	**Pit Number**	**Plot Condition**	**Horizon**	**Matrix Colour**	**Mottle Percent**	**Horizon Depth (cm)**
Soil not used for delineation						

WB77

Looking E | Location: -113.80364, 51.21468

Survey Date: May 21, 2025
Class: Ephemeral Waterbody
Disturbance Present: n/a

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A
2	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
2	Ephemeral Waterbody (Centre)	B	10YR2/2	2%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WL31

Looking NE | Location: -113.815466, 51.231706

Survey Date: May 22, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	A	10YR2/1	0%	12
1	1	Wetland (Boundary)	B	10YR3/4	10%	30
1	2	Upland (Boundary)	A	10YR2/2	0%	12
1	2	Upland (Boundary)	B	10YR3/4	0%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	14
2	3	Wetland (Boundary)	B	10YR2/1	10%	30
2	4	Upland (Boundary)	A	10YR2/2	0%	11
2	4	Upland (Boundary)	B	10YR2/2	0%	30

WL31						
3	5	Wetland (Boundary)	A	10YR2/1	0%	11
3	5	Wetland (Boundary)	B	10YR3/2	7%	30
3	6	Upland (Boundary)	A	10YR2/2	0%	12
3	6	Upland (Boundary)	B	10YR2/1	0%	30

WL35-1

Looking N | Location: -113.830316, 51.225427

Survey Date: May 28, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	2	Upland (Boundary)	A	10YR2/2	0%	12
1	2	Upland (Boundary)	B	10YR3/2	0%	30
1	1	Wetland (Boundary)	A	10YR2/1	0%	11
1	1	Wetland (Boundary)	B	10YR2/1	12%	30
2	3	Wetland (Boundary)	A	10YR2/1	0%	11
2	3	Wetland (Boundary)	B	10YR3/2	12%	30
2	4	Upland (Boundary)	A	10YR2/1	0%	11
2	4	Upland (Boundary)	B	10YR2/1	0%	30

WL35-1						
3	6	Upland (Boundary)	A	10YR2/1	0%	12
3	6	Upland (Boundary)	B	10YR2/1	0%	30
3	5	Wetland (Boundary)	A	10YR2/1	0%	12
3	5	Wetland (Boundary)	B	10YR2/1	5%	30

WL47

Looking SW | Location: -113.812084, 51.230389

Survey Date: May 22, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Upland (Boundary)	A	10YR2/2	0%	12
1	1	Upland (Boundary)	B	10YR3/4	0%	30
1	2	Wetland (Boundary)	A	10YR2/2	0%	12
1	2	Wetland (Boundary)	B	10YR2/1	8%	30
2	3	Upland (Boundary)	A	10YR2/2	0%	12
2	3	Upland (Boundary)	B	10YR2/2	0%	30
2	4	Wetland (Boundary)	A	10YR2/2	0%	14
2	4	Wetland (Boundary)	B	10YR2/1	8%	30

WL47						
3	5	Upland (Boundary)	A	10YR2/2	0%	12
3	5	Upland (Boundary)	B	7.5YR3/3	0%	30
3	6	Wetland (Boundary)	A	10YR2/1	0%	12
3	6	Wetland (Boundary)	B	7.5YR3/3	15%	30

WL48

Looking NW | Location: -113.80308, 51.215977

Survey Date: May 21, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Wetland (Boundary)	A	10YR2/2	0%	N/A
1	Wetland (Boundary)	B	10YR2/1	10%	N/A
2	Upland (Boundary)	A	10YR2/2	0%	N/A
2	Upland (Boundary)	B	10YR2/2	0%	N/A
3	Upland (Boundary)	A	10YR2/2	0%	N/A
3	Upland (Boundary)	B	10YR2/2	0%	N/A
4	Wetland (Boundary)	A	10YR2/2	0%	N/A
4	Wetland (Boundary)	B	10YR3/1	8%	N/A

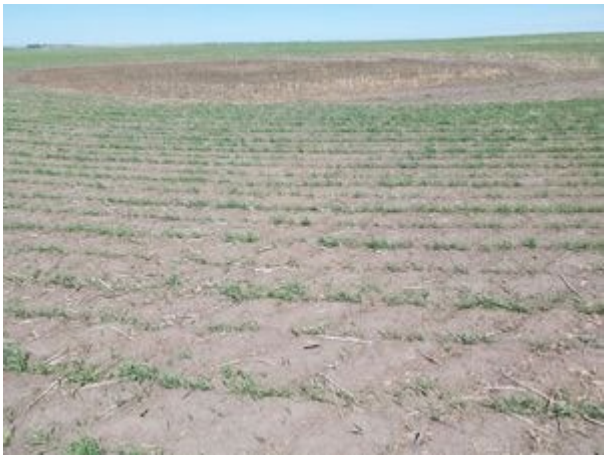
Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

WL50



Looking NE | Location: -113.823924, 51.223252

Survey Date: May 28, 2025

Class: Seasonal graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Shallow Marsh	unidentified grass	N/A	5%	N/A
Shallow Marsh	unidentified forb	N/A	2%	N/A

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	A	10YR2/2	0%	11
1	1	Wetland (Boundary)	B	10YR2/2	10%	30
1	2	Upland (Boundary)	B	10YR3/3	0%	30
1	2	Upland (Boundary)	A	10YR2/2	0%	11
2	3	Wetland (Boundary)	B	10YR3/1	20%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	11
2	4	Upland (Boundary)	A	10YR2/2	0%	10

WL50						
2	4	Upland (Boundary)	B	10YR2/1	0%	30
3	5	Upland (Boundary)	A	10YR2/2	0%	11
3	5	Upland (Boundary)	B	10YR2/2	0%	30
3	6	Wetland (Boundary)	A	10YR2/2	0%	12
3	6	Wetland (Boundary)	B	10YR2/1	15%	30

WL51

Looking W | Location: -113.828095, 51.225171

Survey Date: May 28, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	2	Upland (Boundary)	A	10YR2/2	0%	10
1	2	Upland (Boundary)	B	10YR2/3	0%	30
1	1	Wetland (Boundary)	A	10YR2/1	0%	11
1	1	Wetland (Boundary)	B	10YR4/3	5%	30
1	4	Upland (Boundary)	A	10YR2/1	0%	12
1	4	Upland (Boundary)	B	10YR3/3	0%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	9
2	3	Wetland (Boundary)	B	10YR3/3	5%	30

WL51						
6	3	Upland (Boundary)	A	10YR2/1	0%	11
6	3	Upland (Boundary)	B	10YR2/2	0%	30
1	5	Wetland (Boundary)	A	10YR2/1	0%	12
1	5	Wetland (Boundary)	B	10YR2/1	15%	30

WL52

Looking W | Location: -113.812171, 51.234126

Survey Date: May 22, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Comment: A spring is associated within this wetland

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	smooth brome	*Bromus inermis*	20%	UPL
Low Prairie	Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	30%	FACU
Low Prairie	povertyweed	*Iva axillaris*	2%	FAC
Low Prairie	tufted white prairie aster	*Symphyotrichum ericoides*	1%	FACU
Wet Meadow	wire rush	*Juncus balticus*	10%	FACW
Wet Meadow	seaside arrow-grass	*Triglochin maritima*	5%	OBL
Wet Meadow	seaside buttercup	*Ranunculus cymbalaria*	5%	OBL
Wet Meadow	foxtail barley	*Hordeum jubatum*	10%	FACW
Wet Meadow	moss sp.	N/A	50%	N/A

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Wetland (Boundary)	A	10YR2/1	0%	N/A
1	Wetland (Boundary)	B	10YR4/4	15%	21
2	Upland (Boundary)	A	10YR2/1	0%	N/A
2	Upland (Boundary)	B	10YR2/2	0%	N/A
3	Wetland (Boundary)	A	10YR2/1	0%	N/A
3	Wetland (Boundary)	B	10YR3/3	8%	N/A
4	Upland (Boundary)	A	10YR2/1	0%	N/A
4	Upland (Boundary)	B	10YR3/4	0%	N/A

WL52					
5	Upland (Boundary)	A	10YR2/1	0%	N/A
5	Upland (Boundary)	B	10YR2/1	0%	N/A
6	Wetland (Boundary)	A	10YR2/1	0%	N/A
6	Wetland (Boundary)	B	10YR3/3	10%	N/A
7	Wetland (Boundary)	A	10YR2/1	0%	N/A
7	Wetland (Boundary)	B	10YR4/2	10%	14
8	Upland (Boundary)	A	10YR2/1	0%	N/A
8	Upland (Boundary)	B	10YR3/2	0%	N/A
9	Wetland (Boundary)	A	10YR2/1	0%	N/A
9	Wetland (Boundary)	B	10YR4/3	5%	28
10	Upland (Boundary)	A	10YR2/1	0%	N/A
10	Upland (Boundary)	B	10YR4/3	0%	N/A
11	Wetland (Boundary)	A	10YR2/1	0%	N/A
11	Wetland (Boundary)	B	10YR5/2	20%	13
12	Upland (Boundary)	A	10YR2/1	0%	N/A
12	Upland (Boundary)	B	10YR4/1	0%	N/A
13	Wetland (Boundary)	A	10YR2/1	0%	N/A
13	Wetland (Boundary)	B	10YR2/2	5%	25
14	Upland (Boundary)	A	10YR2/1	0%	N/A
14	Upland (Boundary)	B	10YR2/1	0%	N/A
15	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
15	Ephemeral Waterbody (Centre)	B	10YR2/2	2%	N/A
16	Wetland (Boundary)	A	10YR2/2	0%	N/A
16	Wetland (Boundary)	B	10YR5/3	0%	N/A
17	Upland (Boundary)	A	10YR3/2	0%	N/A
17	Upland (Boundary)	B	10YR3/2	0%	N/A
18	Wetland (Boundary)	A	10YR3/3	0%	N/A
18	Wetland (Boundary)	B	10YR5/2	1%	N/A
19	Upland (Boundary)	A	10YR3/3	0%	N/A
19	Upland (Boundary)	B	10YR3/4	0%	N/A
20	Wetland (Boundary)	A	10YR4/2	0%	N/A
20	Wetland (Boundary)	B	10YR3/2	3%	N/A
21	Upland (Boundary)	A	10YR3/2	0%	N/A
21	Upland (Boundary)	B	10YR5/2	0%	N/A

WL52						
Vegetation Delineation Plots (1 m x 1 m, ground)						
Transect Number	**Plot Number**	**Plot Condition**	**Common Name**	**Scientific Name**	**Percent Cover**	**Wetland Indicator Status**
Vegetation not used for delineation						
Soil Delineation Pits (30 cm soil pit)						
Transect Number	**Pit Number**	**Plot Condition**	**Horizon**	**Matrix Colour**	**Mottle Percent**	**Horizon Depth (cm)**
Soil not used for delineation						

WL55

Looking W | Location: -113.812991, 51.213203

Survey Date: May 21, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Upland (Boundary)	A	10YR2/2	0%	13
1	1	Upland (Boundary)	B	10YR3/1	1%	30
1	2	Wetland (Boundary)	A	10YR2/2	0%	12
1	2	Wetland (Boundary)	B	10YR2/2	10%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	12
2	3	Wetland (Boundary)	B	10YR2/2	7%	30
2	4	Upland (Boundary)	A	10YR2/2	0%	13
2	4	Upland (Boundary)	B	10YR2/2	0%	30

WL55						
3	5	Wetland (Boundary)	A	10YR2/2	0%	12
3	5	Wetland (Boundary)	B	10YR2/2	15%	30
3	6	Upland (Boundary)	A	10YR2/2	0%	12
3	6	Upland (Boundary)	B	10YR2/2	0%	30

WL56

Looking S | Location: -113.819312, 51.221481

Survey Date: May 28, 2025

Class: Seasonal graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Shallow Marsh	common wheat	*Triticum aestivum*	60%	N/A
Shallow Marsh	creeping thistle	*Cirsium arvense*	10%	FACU
Shallow Marsh	perennial sow thistle	*Sonchus arvensis*	5%	FAC

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Wetland (Boundary)	A	10YR2/1	0%	N/A
1	Wetland (Boundary)	B	10YR2/1	15%	N/A
2	Upland (Boundary)	A	10YR2/2	0%	N/A
2	Upland (Boundary)	B	10YR2/2	0%	N/A
3	Wetland (Boundary)	A	10YR2/2	0%	N/A
3	Wetland (Boundary)	B	10YR2/1	15%	N/A
4	Upland (Boundary)	A	10YR2/2	0%	N/A
4	Upland (Boundary)	B	10YR2/2	0%	N/A
5	Upland (Centre)	A	10YR2/2	0%	N/A
5	Upland (Centre)	B	10YR2/2	0%	N/A
6	Wetland (Boundary)	A	10YR2/2	0%	N/A
6	Wetland (Boundary)	B	10YR2/1	8%	N/A

WL56						
Vegetation Delineation Plots (1 m x 1 m, ground)						
Transect Number	**Plot Number**	**Plot Condition**	**Common Name**	**Scientific Name**	**Percent Cover**	**Wetland Indicator Status**
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)						
Transect Number	**Pit Number**	**Plot Condition**	**Horizon**	**Matrix Colour**	**Mottle Percent**	**Horizon Depth (cm)**
1	1	Wetland (Boundary)	A	10YR2/1	0%	12
1	1	Wetland (Boundary)	B	10YR2/1	15%	30
1	2	Upland (Boundary)	A	10YR2/2	0%	12
1	2	Upland (Boundary)	B	10YR2/2	0%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	12
2	3	Wetland (Boundary)	B	10YR2/1	15%	30
2	4	Upland (Boundary)	A	10YR2/2	0%	12
2	4	Upland (Boundary)	B	10YR2/2	0%	30
3	6	Wetland (Boundary)	A	10YR2/2	0%	12
3	6	Wetland (Boundary)	B	10YR2/1	8%	30

WL57

Looking S | Location: -113.820896, 51.222145

Survey Date: May 28, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	A	10YR2/2	0%	12
1	1	Wetland (Boundary)	B	10YR2/2	8%	30
1	2	Upland (Boundary)	A	10YR2/2	0%	11
1	2	Upland (Boundary)	B	10YR2/2	0%	30
2	3	Upland (Boundary)	A	10YR2/2	0%	12
2	3	Upland (Boundary)	B	10YR3/4	0%	30
2	4	Wetland (Boundary)	A	10YR2/2	0%	12
2	4	Wetland (Boundary)	B	10YR2/1	10%	30

WL57						
3	5	Upland (Boundary)	A	10YR2/2	0%	11
3	5	Upland (Boundary)	B	10YR2/2	0%	30
3	6	Wetland (Boundary)	A	10YR2/2	0%	11
3	6	Wetland (Boundary)	B	10YR2/1	20%	30

WL58

Looking NW | Location: -113.821265, 51.221267

Survey Date: May 28, 2025

Class: Seasonal graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	B	10YR3/1	15%	30
1	1	Wetland (Boundary)	A	10YR2/2	0%	10
1	2	Upland (Boundary)	A	10YR2/2	0%	10
1	2	Upland (Boundary)	B	10YR2/1	0%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	10
2	3	Wetland (Boundary)	B	10YR2/1	15%	30
2	4	Upland (Boundary)	A	10YR2/2	0%	10
2	4	Upland (Boundary)	B	10YR2/1	0%	30

WL58						
3	5	Upland (Boundary)	A	10YR2/2	0%	11
3	5	Upland (Boundary)	B	10YR2/2	0%	30
3	6	Wetland (Boundary)	A	10YR2/2	0%	12
3	6	Wetland (Boundary)	B	10YR2/1	20%	30
Soil Delineation Pits (30 cm soil pit) *originally captured as a separate wetland (WL64) then merged with WL58						
Transect Number	**Pit Number**	**Plot Condition**	**Horizon**	**Matrix Colour**	**Mottle Percent**	**Horizon Depth (cm)**
64-1	1	Upland (Boundary)	A	10YR2/2	0%	11
64-1	1	Upland (Boundary)	B	10YR2/2	0%	30
64-1	2	Wetland (Boundary)	A	10YR2/2	0%	13
64-1	2	Wetland (Boundary)	B	10YR2/2	10%	30
64-2	3	Upland (Boundary)	A	10YR2/2	0%	12
64-2	3	Upland (Boundary)	B	10YR2/2	0%	30
64-2	4	Wetland (Boundary)	A	10YR2/2	0%	12
64-2	4	Wetland (Boundary)	B	10YR2/2	12%	30
64-3	5	Upland (Boundary)	A	10YR2/2	0%	12
64-3	5	Upland (Boundary)	B	10YR2/2	0%	30
64-3	6	Wetland (Boundary)	B	10YR2/2	10%	30
64-3	6	Wetland (Boundary)	A	10YR2/2	0%	11
64-4	7	Upland (Boundary)	A	10YR2/2	0%	12
64-4	7	Upland (Boundary)	B	10YR2/2	0%	30
64-4	8	Wetland (Boundary)	A	10YR2/2	0%	12
64-4	8	Wetland (Boundary)	B	10YR2/1	20%	30
64-5	9	Wetland (Boundary)	A	10YR2/2	0%	12
64-5	9	Wetland (Boundary)	B	10YR2/2	10%	30
64-5	10	Upland (Boundary)	A	10YR2/2	0%	12
64-5	10	Upland (Boundary)	B	10YR2/2	0%	30
64-2	4	Wetland (Boundary)	A	10YR2/2	0%	11
64-2	4	Wetland (Boundary)	B	10YR2/2	8%	30
64-2	3	Upland (Boundary)	A	10YR2/2	0%	11
64-2	3	Upland (Boundary)	B	10YR2/2	0%	30

WL59

Looking NE | Location: -113.826305, 51.222568

Survey Date: May 30, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	A	10YR2/1	0%	11
1	1	Wetland (Boundary)	B	10YR2/1	10%	30
1	2	Upland (Boundary)	A	10YR2/1	0%	14
1	2	Upland (Boundary)	B	10YR2/1	0%	30
2	3	Upland (Boundary)	A	10YR2/2	0%	13
2	3	Upland (Boundary)	B	10YR2/2	0%	30
2	4	Wetland (Boundary)	A	10YR2/2	0%	15
2	4	Wetland (Boundary)	B	10YR4/1	20%	30

WL59						
3	5	Wetland (Boundary)	A	10YR2/2	0%	11
3	5	Wetland (Boundary)	B	10YR3/2	10%	30
3	6	Upland (Boundary)	A	10YR2/2	0%	12
3	6	Upland (Boundary)	B	10YR2/1	0%	30

WL61

Looking SE | Location: -113.829709, 51.223425

Survey Date: May 28, 2025

Class: Seasonal graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	smooth brome	*Bromus inermis*	40%	UPL
Low Prairie	Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	5%	FACU
Low Prairie	common yarrow	*Achillea millefolium*	5%	FACU
Low Prairie	common dandelion	*Taraxacum officinale*	10%	FACU
Low Prairie	quackgrass	*Elymus repens*	5%	FACU

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	2	Upland (Boundary)	A	10YR2/2	0%	10
1	2	Upland (Boundary)	B	10YR5/3	0%	30
1	1	Wetland (Boundary)	A	10YR2/2	0%	11
1	1	Wetland (Boundary)	B	10YR4/3	10%	30

WL61						
2	4	Upland (Boundary)	A	10YR2/2	0%	11
2	4	Upland (Boundary)	B	10YR2/1	0%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	12
2	3	Wetland (Boundary)	B	10YR4/3	5%	30
3	6	Upland (Boundary)	A	10YR2/1	0%	12
3	6	Upland (Boundary)	B	10YR3/4	0%	30
3	5	Wetland (Boundary)	A	10YR2/1	0%	10
3	5	Wetland (Boundary)	B	10YR3/4	6%	30

WL62

Looking SW | Location: -113.828326, 51.221497

Survey Date: May 30, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: N/A

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Upland (Boundary)	A	10YR2/2	0%	11
1	1	Upland (Boundary)	B	10YR3/3	0%	30
1	2	Wetland (Boundary)	A	10YR2/1	0%	10
1	2	Wetland (Boundary)	B	10YR2/1	10%	30
2	3	Wetland (Boundary)	A	10YR2/1	0%	10
2	3	Wetland (Boundary)	B	10YR2/1	10%	30
2	4	Upland (Boundary)	A	10YR2/1	0%	12
2	4	Upland (Boundary)	B	10YR2/1	0%	30

WL62						
3	5	Upland (Boundary)	A	10YR2/2	0%	10
3	5	Upland (Boundary)	B	10YR2/2	0%	30
6	3	Wetland (Boundary)	A	10YR2/2	0%	14
6	3	Wetland (Boundary)	B	10YR3/1	15%	30

WL63

Looking S | Location: -113.830195, 51.22088

Survey Date: May 28, 2025

Class: Seasonal graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	common wheat	*Triticum aestivum*	50%	N/A
Shallow Marsh	reed canary grass	*Phalaris arundinacea*	50%	FACW
Wet Meadow	common horsetail	*Equisetum arvense*	10%	FAC
Wet Meadow	perennial sow thistle	*Sonchus arvensis*	2%	FAC
Wet Meadow	common wheat	*Triticum aestivum*	5%	N/A

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	A	10YR2/2	0%	11
1	1	Wetland (Boundary)	B	10YR3/3	10%	30
1	2	Upland (Boundary)	A	10YR2/1	0%	10
1	2	Upland (Boundary)	B	10YR2/1	0%	30

WL63						
2	4	Upland (Boundary)	A	10YR2/1	0%	11
2	4	Upland (Boundary)	B	10YR3/3	0%	30
2	3	Wetland (Boundary)	A	10YR2/1	0%	12
2	3	Wetland (Boundary)	B	10YR3/3	10%	30
3	5	Wetland (Boundary)	A	10YR2/2	0%	12
3	5	Wetland (Boundary)	B	10YR3/2	10%	30
3	6	Upland (Boundary)	A	10YR2/1	0%	12
3	6	Upland (Boundary)	B	10YR2/1	0%	30

WL69

Looking NE | Location: -113.815684, 51.220166

Survey Date: May 21, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Wetland (Boundary)	A	10YR2/1	0%	11
1	1	Wetland (Boundary)	B	10YR3/3	5%	30
1	2	Upland (Boundary)	A	10YR2/1	0%	12
1	2	Upland (Boundary)	B	10YR3/3	0%	30
2	3	Wetland (Boundary)	A	10YR2/1	0%	15
2	3	Wetland (Boundary)	B	10YR3/2	5%	30
2	4	Upland (Boundary)	A	10YR2/1	0%	12
2	4	Upland (Boundary)	B	10YR2/1	0%	30

WL69						
3	5	Wetland (Boundary)	A	10YR2/1	0%	10
3	5	Wetland (Boundary)	B	10YR5/3	5%	30
3	6	Upland (Boundary)	B	10YR2/1	0%	14
3	6	Upland (Boundary)	B	10YR5/3	0%	30
4	7	Wetland (Boundary)	A	10YR2/1	0%	11
4	7	Wetland (Boundary)	B	10YR5/3	5%	30
4	8	Upland (Boundary)	A	10YR2/1	0%	11
4	8	Upland (Boundary)	B	10YR5/3	0%	30

WL70

Looking N | Location: -113.801788, 51.22006

Survey Date: May 20, 2025

Class: Seasonal graminoid marsh – Moderately brackish

Disturbance Present: Recreation impacts (trails, etc.)

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	foxtail barley	*Hordeum jubatum*	30%	FACW
Low Prairie	Cusick's salt-meadow grass	*Puccinellia nuttalliana*	30%	OBL
Shallow Marsh	needle spike-rush	*Eleocharis acicularis*	15%	OBL
Shallow Marsh	foxtail barley	*Hordeum jubatum*	15%	FACW
Shallow Marsh	meadow foxtail	*Alopecurus pratensis*	2%	FACW
Shallow Marsh	buttercup sp.	*Ranunculus* sp.	1%	N/A
Wet Meadow	Cusick's salt-meadow grass	*Puccinellia nuttalliana*	10%	OBL
Wet Meadow	foxtail barley	*Hordeum jubatum*	50%	FACW
Wet Meadow	flixweed	*Descurainia sophia*	2%	N/A

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

WL70						
Soil Delineation Pits (30 cm soil pit)						
Transect Number	**Pit Number**	**Plot Condition**	**Horizon**	**Matrix Colour**	**Mottle Percent**	**Horizon Depth (cm)**
1	1	Wetland (Boundary)	A	10YR2/1	0%	12
1	1	Wetland (Boundary)	B	10YR2/1	5%	30
1	2	Upland (Boundary)	A	10YR2/2	0%	12
1	2	Upland (Boundary)	B	10YR2/1	0%	30
2	3	Wetland (Boundary)	A	10YR2/2	0%	12
2	3	Wetland (Boundary)	B	10YR2/2	10%	30
2	4	Upland (Boundary)	A	10YR2/2	0%	11
2	4	Upland (Boundary)	B	10YR2/1	0%	30
3	5	Wetland (Boundary)	A	10YR2/1	0%	11
3	5	Wetland (Boundary)	B	10YR2/2	0%	30
3	6	Upland (Boundary)	A	10YR2/2	0%	13
3	6	Upland (Boundary)	B	10YR2/2	0%	30
4	7	Upland (Boundary)	A	10YR2/1	0%	10
4	7	Upland (Boundary)	B	10YR2/1	0%	30
4	8	Wetland (Boundary)	A	10YR2/2	0%	12
4	8	Wetland (Boundary)	B	7.5YR4/1	8%	30

WL73

Looking SW | Location: -113.812516, 51.232474

Survey Date: May 22, 2025

Class: Temporary graminoid marsh – Slightly brackish

Disturbance Present: Other

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
N/A – row crop only present				

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
Soil not used for classification					

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
1	1	Upland (Boundary)	A	10YR2/2	0%	12
1	1	Upland (Boundary)	B	10YR2/2	0%	30
1	2	Wetland (Boundary)	A	10YR2/2	0%	12
1	2	Wetland (Boundary)	B	10YR3/1	15%	30
2	3	Upland (Boundary)	A	10YR2/2	0%	12
2	3	Upland (Boundary)	B	10YR2/2	0%	30
2	4	Wetland (Boundary)	A	10YR2/2	0%	11
2	4	Wetland (Boundary)	B	10YR2/2	20%	30

WL73						
3	5	Upland (Boundary)	A	10YR2/2	0%	11
3	5	Upland (Boundary)	B	10YR2/1	0%	30
3	6	Wetland (Boundary)	A	10YR2/2	0%	11
3	6	Wetland (Boundary)	B	10YR3/3	15%	30

WL74

Looking E | Location: 113.807799, 51.234293

Survey Date: May 30, 2025

Class: Seasonal graminoid marsh – Slightly brackish

Disturbance Present: N/A

Comment: No shallow marsh vegetation plot was completed, see vegetation datasheet for applicable species.

Classification Vegetation Plot (1 m x 1 m, ground)

Representative Zone	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Low Prairie	saltgrass	*Distichlis spicata*	20%	FACW
Low Prairie	Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	15%	FACU
Low Prairie	western wheat grass	*Pascopyrum smithii*	10%	FACU
Low Prairie	common dandelion	*Taraxacum officinale*	5%	FACU
Wet Meadow	meadow foxtail	*Alopecurus pratensis*	45%	FACW
Wet Meadow	common dandelion	*Taraxacum officinale*	5%	FACU

Classification Soil Pit (30 cm soil pit; ephemeral waterbody and temporary marsh [where needed] only)

Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Mottle Depth (cm)
1	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
1	Ephemeral Waterbody (Centre)	B	10YR2/2	2%	N/A
2	Ephemeral Waterbody (Centre)	A	10YR2/2	0%	N/A
2	Ephemeral Waterbody (Centre)	B	10YR2/2	0%	N/A
3	Upland (Boundary)	A	10YR2/2	0%	N/A
3	Upland (Boundary)	B	10YR2/1	0%	N/A
4	Wetland (Boundary)	A	10YR2/2	0%	N/A
4	Wetland (Boundary)	B	10YR2/1	15%	N/A
5	Upland (Boundary)	A	10YR2/2	0%	N/A
5	Upland (Boundary)	B	10YR2/1	0%	N/A
6	Wetland (Boundary)	A	10YR2/2	0%	N/A

WL74					
6	Wetland (Boundary)	B	10YR4/2	5%	N/A
7	Upland (Boundary)	A	10YR2/1	0%	N/A
7	Upland (Boundary)	B	10YR2/1	0%	N/A
8	Wetland (Boundary)	A	10YR2/1	0%	N/A
8	Wetland (Boundary)	B	10YR2/1	10%	N/A

Vegetation Delineation Plots (1 m x 1 m, ground)

Transect Number	Plot Number	Plot Condition	Common Name	Scientific Name	Percent Cover	Wetland Indicator Status
Vegetation not used for delineation						

Soil Delineation Pits (30 cm soil pit)

Transect Number	Pit Number	Plot Condition	Horizon	Matrix Colour	Mottle Percent	Horizon Depth (cm)
Soil not used for delineation						

Appendix E

Alberta Wetland
Rapid Evaluation
Tool Results

Function (ABWRET-A Raw Score)	WL50	WL51	WL55	WL56
Surface Water Storage (WS)	6.39	3.40	6.59	5.92
Stream Flow Support (SFS)	0.00	2.85	0.00	0.00
Streamwater Cooling (WC)	0.00	2.56	0.00	0.00
Sediment & Toxicant Retention & Stabilization (SR)	10.00	3.55	10.00	10.00
Phosphorus Retention (PR)	10.00	3.88	10.00	10.00
Nitrate Removal & Retention (NR)	10.00	4.31	10.00	10.00
Organic Nutrient Export (OE)	0.00	3.45	0.00	0.00
Fish Habitat (FH)	0.00	0.00	0.00	0.00
Aquatic Invertebrate Habitat (INV)	5.00	4.68	5.04	5.62
Amphibian Habitat (AM)	2.76	2.52	2.74	2.97
Waterbird Habitat (WB)	5.60	5.27	5.58	5.58
Songbird, Raptor, & Mammal Habitat (SBM)	3.01	2.84	2.91	3.30
Pollinator & Native Plant Habitat (PH)	3.10	2.24	2.36	3.41
Human Use & Recognition (HU)	1.21	1.20	1.40	1.31
Function (ABWRET-A Normalized Score)	WL50	WL51	WL55	WL56
Surface Water Storage (WS)	0.89	0.36	0.92	0.81
Stream Flow Support (SFS)	0.00	0.46	0.00	0.00
Streamwater Cooling (WC)	0.00	0.37	0.00	0.00
Sediment & Toxicant Retention & Stabilization (SR)	1.00	0.17	1.00	1.00
Phosphorus Retention (PR)	1.00	0.26	1.00	1.00
Nitrate Removal & Retention (NR)	1.00	0.12	1.00	1.00
Organic Nutrient Export (OE)	0.00	0.53	0.00	0.00
Fish Habitat (FH)	0.00	0.00	0.00	0.00
Aquatic Invertebrate Habitat (INV)	0.50	0.45	0.50	0.58
Amphibian Habitat (AM)	0.35	0.32	0.35	0.39
Waterbird Habitat (WB)	0.46	0.41	0.45	0.45
Songbird, Raptor, & Mammal Habitat (SBM)	0.27	0.24	0.25	0.32
Pollinator & Native Plant Habitat (PH)	0.24	0.09	0.11	0.30
Human Use & Recognition (HU)	0.03	0.03	0.07	0.05
Normalized Score (ABWRET_A) Based on Wetlands in RWVAU	WL50	WL51	WL55	WL56
Normalized Hydrological Health (HH)	0.89	0.46	0.92	0.81
Normalized Water Quality (WQ)	1.00	0.53	1.00	1.00
Normalized Ecological Health (EH)	0.50	0.45	0.50	0.58
Normalized Human Use (HU)	0.03	0.03	0.07	0.05
RWVAU #	16	16	16	16
Normalized Value Score (ABWRET_a)	0.72	0.44	0.73	0.72
Value Category (a, b, c, d)	c	d	c	c
Abundance Factor	0	0	0	0
Final Score(A, B, C, D)	C	D	C	C

HUC 4	WL50	WL51	WL55	WL56
HUC4Name	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER
HUC4Code	802	802	802	802

WL57	WL58	WL59	WL61	WL62	WL63	WL47	WL70	WL48	WL73
6.43	6.39	6.40	3.73	6.40	4.06	6.53	3.79	5.71	6.35
0.00	0.00	0.00	2.62	0.00	2.61	0.00	3.44	0.00	0.00
0.00	0.00	0.00	1.31	0.00	0.81	0.00	3.08	0.00	0.00
10.00	10.00	10.00	3.60	10.00	3.83	10.00	3.70	10.00	10.00
10.00	10.00	10.00	3.93	10.00	3.95	10.00	4.04	10.00	10.00
10.00	10.00	10.00	4.49	10.00	5.03	10.00	4.82	10.00	10.00
0.00	0.00	0.00	2.74	0.00	3.22	0.00	4.11	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.27	5.65	5.16	5.97	4.71	4.73	4.62	6.08	5.62	4.82
2.88	3.09	2.84	3.23	2.64	2.68	2.57	2.94	2.95	2.69
5.71	5.88	5.68	6.17	5.50	5.77	5.45	5.49	5.53	5.56
3.12	3.41	3.12	3.77	2.94	2.99	2.79	3.77	3.24	3.00
3.20	3.38	3.17	2.82	3.03	2.68	2.22	3.11	2.68	3.08
1.30	1.21	1.20	1.21	1.21	1.22	1.20	1.72	1.40	1.20
WL57	WL58	WL59	WL61	WL62	WL63	WL47	WL70	WL48	WL73
0.90	0.89	0.89	0.42	0.89	0.48	0.91	0.43	0.77	0.88
0.00	0.00	0.00	0.43	0.00	0.42	0.00	0.56	0.00	0.00
0.00	0.00	0.00	0.19	0.00	0.12	0.00	0.45	0.00	0.00
1.00	1.00	1.00	0.18	1.00	0.21	1.00	0.19	1.00	1.00
1.00	1.00	1.00	0.27	1.00	0.27	1.00	0.28	1.00	1.00
1.00	1.00	1.00	0.15	1.00	0.23	1.00	0.20	1.00	1.00
0.00	0.00	0.00	0.42	0.00	0.50	0.00	0.63	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.53	0.58	0.52	0.62	0.46	0.46	0.45	0.64	0.58	0.47
0.37	0.41	0.37	0.43	0.33	0.34	0.32	0.38	0.39	0.34
0.47	0.49	0.47	0.53	0.44	0.48	0.44	0.44	0.45	0.45
0.29	0.34	0.29	0.41	0.25	0.26	0.23	0.41	0.31	0.26
0.26	0.29	0.25	0.19	0.23	0.17	0.09	0.24	0.17	0.24
0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.13	0.07	0.03
WL57	WL58	WL59	WL61	WL62	WL63	WL47	WL70	WL48	WL73
0.90	0.89	0.89	0.43	0.89	0.48	0.91	0.56	0.77	0.88
1.00	1.00	1.00	0.42	1.00	0.50	1.00	0.63	1.00	1.00
0.53	0.58	0.52	0.62	0.46	0.48	0.45	0.64	0.58	0.47
0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.13	0.07	0.03
16	16	16	16	16	16	16	16	16	16
0.73	0.74	0.73	0.44	0.71	0.44	0.71	0.56	0.71	0.71
c	c	c	d	d	d	c	d	c	d
0	0	0	0	0	0	0	0	0	0
C	C	C	D	D	D	C	D	C	D

WL57	WL58	WL59	WL61	WL62	WL63	WL47	WL70	WL48	WL73
MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER
802	802	802	802	802	802	802	802	802	802

WL69	WL31	WL74
5.90	6.36	3.31
0.00	0.00	4.76
0.00	0.00	4.92
10.00	10.00	3.38
10.00	10.00	3.98
10.00	10.00	4.68
0.00	0.00	5.37
0.00	0.00	0.00
5.20	4.62	7.47
2.58	2.57	3.93
4.83	5.48	6.42
2.62	2.81	5.97
3.25	2.97	5.16
1.48	1.28	1.61
WL69	WL31	WL74
0.80	0.88	0.35
0.00	0.00	0.78
0.00	0.00	0.72
1.00	1.00	0.15
1.00	1.00	0.27
1.00	1.00	0.18
0.00	0.00	0.83
0.00	0.00	0.00
0.52	0.45	0.82
0.33	0.32	0.55
0.36	0.44	0.56
0.19	0.23	0.82
0.27	0.22	0.60
0.09	0.05	0.11
WL69	WL31	WL74
0.80	0.88	0.78
1.00	1.00	0.83
0.52	0.45	0.82
0.09	0.05	0.11
16	16	16
0.71	0.70	0.74
d	d	c
0	0	0
D	D	C

WL69	WL31	WL74
MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER	MIDDLE RED DEER RIVER
802	802	802

Appendix F

Alberta Conservation
Information Management
System Search Results

Date: 18/3/2025
Requestor: Consultant
Reason for Request: Environmental Reporting
SEC: 14 **TWP:** 026 **RGE:** 28 **MER:** 4

Alberta Parks

Non-sensitive EOs (updated: June 2022)

M_RR_TTT_SS	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D

No Non-sensitive EOs Found: Next Steps - See FAQ (https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/faqs.aspx#2 - Process)

Sensitive EOs (updated: June 2022)

M-RR-TTT	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D

No Sensitive EOs Found: Next Steps - See FAQ (https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/faqs.aspx#2 - Process)

Updated: Aug 31, 2022

Date: 18/3/2025
Requestor: Consultant
Reason for Request: Environmental Reporting
SEC: 15 **TWP:** 026 **RGE:** 28 **MER:** 4

Non-sensitive EOs (updated: June 2022)

M_RR_TTT_SS	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D

No Non-sensitive EOs Found: Next Steps - See FAQ (https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/faqs.aspx#2 - Process)

Sensitive EOs (updated: June 2022)

M-RR-TTT	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D

No Sensitive EOs Found: Next Steps - See FAQ (https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/faqs.aspx#2 - Process)

Updated: Aug 31, 2022

Date: 18/3/2025
Requestor: Consultant
Reason for Request: Environmental Reporting
SEC: 23 **TWP:** 026 **RGE:** 28 **MER:** 4

Non-sensitive EOs (updated: June 2022)

M_RR_TTT_SS	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D

No Non-sensitive EOs Found: Next Steps - See FAQ (https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/faqs.aspx#2 - Process)

Sensitive EOs (updated: June 2022)

M-RR-TTT	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D

No Sensitive EOs Found: Next Steps - See FAQ (https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/faqs.aspx#2 - Process)

Updated: Aug 31, 2022

Appendix G

Vegetation Datasheets

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A1

Looking N | Location: -113.800431, 51.216122

Vegetation Community: N/A	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common wheat	*Triticum aestivum*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A2

Looking W | Location: -113.801394, 51.219899

Vegetation Community: Kentucky bluegrass - Quackgrass	Survey Date: May 20, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments: Vegetated two track trail

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
alfalfa	*Medicago sativa*	Frequent (16-30%)	7 - A few patches	Do not track	SNA
quackgrass	*Elymus repens*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
crested wheatgrass	*Agropyron cristatum*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A3

Looking S | Location: -113.819462, 51.226939

Vegetation Community: N/A	Survey Date: May 28, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
common wheat	*Triticum aestivum*	15	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common wheat	*Triticum aestivum*		10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

A4 is a residence, and no vegetation community of plant species observations were made.

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A5

Looking NE | Location: -113.814021, 51.227995

Vegetation Community: N/A	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
Common wheat	*Triticum aestivum*		10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A6

Looking N | Location: -113.811337, 51.21316

Vegetation Community: N/A	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common wheat	*Triticum aestivum*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A8

Looking SW | Location: -113.803103, 51.233978

Vegetation Community: N/A	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments: Wellsite and road

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common dandelion	*Taraxacum officinale*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A9

Looking E | Location: -113.804444, 51.229789

Vegetation Community: Smooth brome-Kentucky bluegrass	Survey Date: May 27, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
pasture sagewort	*Artemisia frigida*	Rare (1-5%)		Do not track	S5
alfalfa	*Medicago sativa*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
common dandelion	*Taraxacum officinale*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
smooth brome	*Bromus inermis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A10

Looking E | Location: -113.801356, 51.220009

Vegetation Community: N/A	Survey Date: May 20, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments: Just seeded

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
flixweed	*Descurainia sophia*	5	Do not track	SNA
quackgrass	*Elymus repens*	1	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
quackgrass	*Elymus repens*	Occasional (6-15%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A12

Looking E | Location: -113.802705, 51.233323

Vegetation Community: Crested wheatgrass-alfalfa	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
crested wheatgrass	*Agropyron cristatum*	35	Do not track	SNA
alfalfa	*Medicago sativa*	25	Do not track	SNA
smooth brome	*Bromus inermis*	10	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A14

Looking NE | Location: -113.817984, 51.220105

Vegetation Community: N/A	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common wheat	*Triticum aestivum*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A15

Looking NE | Location: -113.801992, 51.220247

Vegetation Community: Foxtail barley	Survey Date: May 20, 2025
Habitat Quality: High = <25% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
foxtail barley	*Hordeum jubatum*	3	Do not track	S5

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A16

Looking E | Location: -113.806021, 51.23416

Vegetation Community: Creeping spike-rush	Survey Date: May 27, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
meadow foxtail	*Alopecurus pratensis*	Rare (1-5%)		Do not track	SNA
common dandelion	*Taraxacum officinale*	Rare (1-5%)	5 - Several sporadically occurring plants	Do not track	SNA
quackgrass	*Elymus repens*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
common plantain	*Plantago major*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
creeping spike-rush	*Eleocharis palustris*	Frequent (16-30%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A17

Looking W | Location: -113.812743, 51.225036

Vegetation Community: Wire rush	Survey Date: May 20, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Naturalized dugout

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
foxtail barley	*Hordeum jubatum*	2	Do not track	S5
seaside arrow-grass	*Triglochin maritima*	2	Do not track	S5
seaside buttercup	*Ranunculus cymbalaria*	1	Do not track	S5

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
rough cinquefoil	*Potentilla norvegica*	Rare (1-5%)		Do not track	S5
curly-cup gumweed	*Grindelia squarrosa*	Rare (1-5%)		Do not track	S4S5
small bottle sedge	*Carex utriculata*	Occasional (6-15%)		Do not track	S5
saltgrass	*Distichlis spicata*	Occasional (6-15%)		Do not track	S4
alkali bulrush	*Bolboschoenus maritimus*	Occasional (6-15%)		Do not track	S4

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A17					
sea milkwort	*Lysimachia maritima*	Occasional (6-15%)		Do not track	S4
Cusick's salt-meadow grass	*Puccinellia nuttalliana*	Occasional (6-15%)		Do not track	S5
wire rush	*Juncus balticus*	Frequent (16-30%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A18

Looking N | Location: -113.830227, 51.222687

Vegetation Community: Reed canary grass	Survey Date: May 28, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
silverweed	*Potentilla anserina*	Rare (1-5%)			
stinkweed	*Thlaspi arvense*	Rare (1-5%)	6 - Single patch plus several sporadically occurring plants	Do not track	SNA
field mouse-ear chickweed	*Cerastium arvense*	Rare (1-5%)		Do not track	S5
white sweet-clover	*Melilotus albus*	Rare (1-5%)	4 - Single patch plus a few sporadically occurring plants	Do not track	SNA
wire rush	*Juncus balticus*	Occasional (6-15%)		Do not track	S5
small bottle sedge	*Carex utriculata*	Frequent (16-30%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A18					
perennial sow thistle	*Sonchus arvensis*	Frequent (16-30%)	7 - A few patches	Do not track	SNA
reed canary grass	*Phalaris arundinacea*	Dominant (51-100%)		Do not track	S5
great bulrush	*Schoenoplectus acutus*	Abundant (31-50%)		Do not track	S5?
common cattail	*Typha latifolia*	Abundant (31-50%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A19

Looking S | Location: -113.799549, 51.219868

Vegetation Community: N/A	Survey Date: May 20, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
No vegetation plot completed				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common dandelion	*Taraxacum officinale*	Abundant (31-50%)	8 - A few patches plus several sporadically occurring plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A20

Looking SW | Location: -113.807025, 51.213124

Vegetation Community: Caragana/Smooth brome	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
common caragana	*Caragana arborescens*	60	Do not track	SNA
smooth brome	*Bromus inermis*	30	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common caragana	*Caragana arborescens*	Dominant (51-100%)	13 - Continuous occurrence of plants with a distinct linear edge of the polygon	Do not track	SNA
smooth brome	*Bromus inermis*	Abundant (31-50%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

A21

Looking S | Location: -113.808304, 51.22757

Vegetation Community: Balsam poplar/Caragana/Smooth brome	Survey Date: May 22, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Windrow not native stand, Swainson's hawk on nest

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
common caragana	*Caragana arborescens*	70	Do not track	SNA
smooth brome	*Bromus inermis*	60	Do not track	SNA
balsam poplar	*Populus balsamifera*	20	Do not track	S5

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common caragana	*Caragana arborescens*	Dominant (51-100%)	13 - Continuous occurrence of plants with a distinct linear edge of the polygon	Do not track	SNA
smooth brome	*Bromus inermis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA
balsam poplar	*Populus balsamifera*	Abundant (31-50%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

F100

Looking W | Location: -113.816215, 51.234063

Vegetation Community: Aspen/Smooth brome	Survey Date: May 22, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Aspen/brome

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
smooth brome	*Bromus inermis*	40	Do not track	SNA
common dandelion	*Taraxacum officinale*	2	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	2	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
star-flowered Solomon's-seal	*Maianthemum stellatum*	Rare (1-5%)		Do not track	S5
common dandelion	*Taraxacum officinale*	Rare (1-5%)	4 - Single patch plus a few sporadically occurring plants	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Rare (1-5%)	5 - Several sporadically occurring plants	Do not track	SNA
Peking cotoneaster	*Cotoneaster lucidus*	Rare (1-5%)	1 - Rare	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

F100					
aspen	*Populus tremuloides*	Dominant (51-100%)		Do not track	S5
smooth brome	*Bromus inermis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NG26

Looking E | Location: -113.813312, 51.224839

Vegetation Community: Western wheat grass / thread-leaved sedge / Kentucky bluegrass	Survey Date: May 20, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
thread-leaved sedge	*Carex filifolia*	40	Do not track	S5
western wheat grass	*Pascopyrum smithii*	20	Do not track	S5
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	10	Do not track	SNA
common yarrow	*Achillea millefolium*	4	Do not track	SNA
golden aster	*Heterotheca villosa*	4	Do not track	S5
woodland draba	*Draba nemorosa*	1	Do not track	S5

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
crested wheatgrass	*Agropyron cristatum*	Rare (1-5%)	3 - Single patch	Do not track	SNA
common wild rose	*Rosa woodsii*	Rare (1-5%)		Do not track	S5
blue grama	*Bouteloua gracilis*	Rare (1-5%)		Do not track	S5
Sandberg bluegrass	*Poa secunda*	Rare (1-5%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NG26					
small-leaved everlasting	*Antennaria parvifolia*	Rare (1-5%)		Do not track	S5
creeping thistle	*Cirsium arvense*	Rare (1-5%)	7 - A few patches	Do not track	SNA
star-flowered Solomon's-seal	*Maianthemum stellatum*	Rare (1-5%)		Do not track	S5
death camas	*Zigadenus venenosus*	Rare (1-5%)			
prairie crocus	*Pulsatilla nuttalliana*	Rare (1-5%)		Do not track	S5
nodding onion	*Allium cernuum*	Rare (1-5%)		Do not track	S5
alpine hedysarum	*Hedysarum americanum*	Occasional (6-15%)		Do not track	S5
common yarrow	*Achillea millefolium*	Occasional (6-15%)		Do not track	SNA
field mouse-ear chickweed	*Cerastium arvense*	Occasional (6-15%)		Do not track	S5
pasture sagewort	*Artemisia frigida*	Occasional (6-15%)		Do not track	S5
flixweed	*Descurainia sophia*	Occasional (6-15%)		Do not track	SNA
northern bedstraw	*Galium boreale*	Occasional (6-15%)		Do not track	S5
northern fairy candelabra	*Androsace septentrionalis*	Occasional (6-15%)		Do not track	S5
low goldenrod	*Solidago missouriensis*	Occasional (6-15%)		Do not track	S5
alpine bluegrass	*Poa alpina*	Occasional (6-15%)		Do not track	S5
northern bastard toadflax	*Geocaulon lividum*	Occasional (6-15%)		Do not track	S5
veiny meadow rue	*Thalictrum venulosum*	Occasional (6-15%)		Do not track	S5
wild strawberry	*Fragaria virginiana*	Occasional (6-15%)		Do not track	S5
three-flowered avens	*Geum triflorum*	Occasional (6-15%)		Do not track	S5
Sandberg bluegrass	*Poa secunda*	Occasional (6-15%)		Do not track	S5
prairie sagewort	*Artemisia ludoviciana*	Frequent (16-30%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NG26					
golden bean	*Thermopsis rhombifolia*	Frequent (16-30%)		Do not track	S5
cut-leaved anemone	*Anemone multifida*	Frequent (16-30%)		Do not track	S5
heart-leaved buttercup	*Ranunculus cardiophyllus*	Frequent (16-30%)		Do not track	S4
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA
quackgrass	*Elymus repens*	Abundant (31-50%)	7 - A few patches	Do not track	SNA
smooth brome	*Bromus inermis*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
common dandelion	*Taraxacum officinale*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
western wheat grass	*Pascopyrum smithii*	Abundant (31-50%)		Do not track	S5
buckbrush	*Symphoricarpos occidentalis*	Abundant (31-50%)		Do not track	S5
golden aster	*Heterotheca villosa*	Abundant (31-50%)		Do not track	S5
yellow prairie violet	*Viola nuttallii*			Do not track	S3

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NG28

Looking E | Location: -113.803855, 51.232409

Vegetation Community: Buckbrush/Sedge species-Sandberg bluegrass	Survey Date: May 22, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Predominately Smooth brome / Kentucky bluegrass/Crested wheatgrss closer to the north fenceline and more native vegetation (Buckbrush/ Sedge species/Sandberg bluegrass/ pasture sage) closer to break in slope.

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
low sedge	*Carex duriuscula*	20	Do not track	S5
thread-leaved sedge	*Carex filifolia*	15	Do not track	S5
western wheat grass	*Pascopyrum smithii*	10	Do not track	S5
buckbrush	*Symphoricarpos occidentalis*	10	Do not track	S5
pasture sagewort	*Artemisia frigida*	8	Do not track	S5
Sandberg bluegrass	*Poa secunda*	8	Do not track	S5
crested wheatgrass	*Agropyron cristatum*	5	Do not track	SNA
thread-leaved sedge	*Carex filifolia*	5	Do not track	S5
flixweed	*Descurainia sophia*	2	Do not track	SNA
common dandelion	*Taraxacum officinale*	2	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NG28					
Species Observations					
Common Name	**Scientific Name**	**Abundance**	**Non-native Species Density / Distribution**	**Track Status**	**S Rank**
low goldenrod	*Solidago missouriensis*	Rare (1-5%)		Do not track	S5
prickly rose	*Rosa acicularis*	Rare (1-5%)		Do not track	S5
nodding onion	*Allium cernuum*	Rare (1-5%)		Do not track	S5
common goat's-beard	*Tragopogon dubius*	Rare (1-5%)		Do not track	SNA
golden aster	*Heterotheca villosa*	Rare (1-5%)		Do not track	S5
small-leaved everlasting	*Antennaria parvifolia*	Rare (1-5%)		Do not track	S5
three-flowered avens	*Geum triflorum*	Rare (1-5%)		Do not track	S5
wild strawberry	*Fragaria virginiana*	Rare (1-5%)		Do not track	S5
prairie sagewort	*Artemisia ludoviciana*	Rare (1-5%)		Do not track	S5
long-fruited anemone	*Anemone cylindrica*	Rare (1-5%)		Do not track	S5
cut-leaved anemone	*Anemone multifida*	Rare (1-5%)		Do not track	S5
prairie crocus	*Pulsatilla nuttalliana*	Rare (1-5%)		Do not track	S5
false Solomon's-seal	*Maianthemum amplexicaule*	Rare (1-5%)		Do not track	S5
graceful cinquefoil	*Potentilla gracilis*	Rare (1-5%)		Do not track	S5
Canada anemone	*Anemonastrum canadense*	Rare (1-5%)		Do not track	S5
veiny meadow rue	*Thalictrum venulosum*	Rare (1-5%)		Do not track	S5
Richardson's alumroot	*Heuchera richardsonii*	Rare (1-5%)		Do not track	S5
smooth aster	*Symphyotrichum laeve*	Rare (1-5%)		Do not track	S5
wild vetch	*Vicia americana*	Rare (1-5%)		Do not track	S5
golden bean	*Thermopsis rhombifolia*	Occasional (6-15%)		Do not track	S5
common yarrow	*Achillea millefolium*	Occasional (6-15%)		Do not track	SNA
curly-cup gumweed	*Grindelia squarrosa*	Occasional (6-15%)		Do not track	S4S5
quackgrass	*Elymus repens*	Occasional (6-15%)		Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NG28					
smooth brome	*Bromus inermis*	Abundant (31-50%)		Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG11

Looking S | Location: -113.805306, 51.227899

Vegetation Community: Smooth brome-dandelion	Survey Date: May 27, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments: Former crop left fallow

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
common dandelion	*Taraxacum officinale*	35	Do not track	SNA
smooth brome	*Bromus inermis*	15	Do not track	SNA
alfalfa	*Medicago sativa*	5	Do not track	SNA
common wheat	*Triticum aestivum*	2	Do not track	SNA
perennial sow thistle	*Sonchus arvensis*	1	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common wheat	*Triticum aestivum*	Rare (1-5%)	1 - Rare	Do not track	SNA
perennial sow thistle	*Sonchus arvensis*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
smooth brome	*Bromus inermis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG11					
common dandelion	*Taraxacum officinale*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
alfalfa	*Medicago sativa*		5 - Several sporadically occurring plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG24

Looking N | Location: -113.80431, 51.233397

Vegetation Community: Kentucky bluegrass-Quackgrass	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments: Dominant quack grass/ Kentucky

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	35	Do not track	SNA
quackgrass	*Elymus repens*	30	Do not track	SNA
creeping thistle	*Cirsium arvense*	2	Do not track	SNA
common dandelion	*Taraxacum officinale*	2	Do not track	SNA
common yarrow	*Achillea millefolium*	1	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
buckbrush	*Symphoricarpos occidentalis*	Occasional (6-15%)		Do not track	S5
smooth brome	*Bromus inermis*	Frequent (16-30%)	7 - A few patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG25

Looking W | Location: -113.807726, 51.212897

Vegetation Community: Kentucky bluegrass-Quackgrass	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
quackgrass	*Elymus repens*	35	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	30	Do not track	SNA
alfalfa	*Medicago sativa*	8	Do not track	SNA
common dandelion	*Taraxacum officinale*	5	Do not track	SNA
creeping thistle	*Cirsium arvense*	2	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common caragana	*Caragana arborescens*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG27

Looking E | Location: -113.817981, 51.219999

Vegetation Community: Quackgrass	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
quackgrass	*Elymus repens*	70	Do not track	SNA
common dandelion	*Taraxacum officinale*	4	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG29

Looking W | Location: -113.810391, 51.226865

Vegetation Community: Smooth brome-Kentucky bluegrass	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
smooth brome	*Bromus inermis*	20	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	20	Do not track	SNA
common yarrow	*Achillea millefolium*	5	Do not track	SNA
alfalfa	*Medicago sativa*	3	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
common yarrow	*Achillea millefolium*	Rare (1-5%)		Do not track	SNA
field mouse-ear chickweed	*Cerastium arvense*	Rare (1-5%)		Do not track	S5
alfalfa	*Medicago sativa*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
common dandelion	*Taraxacum officinale*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG29					
smooth brome	*Bromus inermis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Abundant (31-50%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG30

Looking NE | Location: -113.808277, 51.232523

Vegetation Community: Kentucky bluegrass-Smooth brome-Alfalfa	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	25	Do not track	SNA
smooth brome	*Bromus inermis*	20	Do not track	SNA
alfalfa	*Medicago sativa*	15	Do not track	SNA
common dandelion	*Taraxacum officinale*	10	Do not track	SNA
quackgrass	*Elymus repens*	5	Do not track	SNA
common yarrow	*Achillea millefolium*	3	Do not track	SNA

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
field mouse-ear chickweed	*Cerastium arvense*	Rare (1-5%)		Do not track	S5
golden bean	*Thermopsis rhombifolia*	Rare (1-5%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

NNG30					
pasture sagewort	*Artemisia frigida*	Occasional (6-15%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WB53

Looking W | Location: -113.816059, 51.234356

Vegetation Community: Smooth brome	Survey Date: May 22, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
creeping thistle	*Cirsium arvense*	Rare (1-5%)	5 - Several sporadically occurring plants	Do not track	SNA
common dandelion	*Taraxacum officinale*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
smooth brome	*Bromus inermis*	Dominant (51-100%)	12 - Continuous dense occurrence of plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WB75

Looking S | Location: -113.800017, 51.21832

Vegetation Community: Smooth brome	Survey Date: May 21, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
wild vetch	*Vicia americana*	Rare (1-5%)		Do not track	S5
curled dock	*Rumex crispus*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
perennial sow thistle	*Sonchus arvensis*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
cleavers	*Galium aparine*	Rare (1-5%)	1 - Rare	Do not track	SNA
slender wheat grass	*Elymus trachycaulus* ssp. *trachycaulus*	Occasional (6-15%)		Do not track	S5
Kentucky bluegrass	*Poa pratensis*	Occasional (6-15%)	5 - Several sporadically occurring plants	Track selected	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WB75					
				extant EOs (i.e., partial tracking)	
creeping thistle	*Cirsium arvense*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
common dandelion	*Taraxacum officinale*	Frequent (16-30%)	9 - Several well-spaced patches	Do not track	SNA
smooth brome	*Bromus inermis*	Dominant (51-100%)	12 - Continuous dense occurrence of plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL52

Looking E | Location: -113.808321, 51.231533

Vegetation Community: Wire rush-Foxtail barley	Survey Date: May 22, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Heterogeneous communities across the wetland

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
great bulrush	*Schoenoplectus acutus*	Rare (1-5%)		Do not track	S5?
seaside arrow-grass	*Triglochin maritima*	Rare (1-5%)		Do not track	S5
tufted hair grass	*Deschampsia cespitosa*	Rare (1-5%)		Do not track	S5
seaside buttercup	*Ranunculus cymbalaria*	Rare (1-5%)		Do not track	S5
wire rush	*Juncus balticus*	Rare (1-5%)		Do not track	S5
meadow foxtail	*Alopecurus pratensis*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
moss sp.		Rare (1-5%)			

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL52					
tufted white prairie aster	*Symphyotrichum ericoides*	Rare (1-5%)		Do not track	S5
sedge sp.	*Carex sp.*	Rare (1-5%)			
Cusick's salt-meadow grass	*Puccinellia nuttalliana*	Rare (1-5%)		Do not track	S5
saltgrass	*Distichlis spicata*	Rare (1-5%)		Do not track	S4
graceful sedge	*Carex praegracilis*	Rare (1-5%)		Do not track	S5
western sea-blite	*Suaeda calceoliformis*	Rare (1-5%)		Do not track	S5
silverweed	*Potentilla anserina*	Occasional (6-15%)			
povertyweed	*Iva axillaris*	Occasional (6-15%)		Do not track	S4
smooth brome	*Bromus inermis*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
foxtail barley	*Hordeum jubatum*	Occasional (6-15%)		Do not track	S5
common dandelion	*Taraxacum officinale*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
common yarrow	*Achillea millefolium*	Occasional (6-15%)		Do not track	SNA
perennial sow thistle	*Sonchus arvensis*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
summer-cypress	*Bassia scoparia*	Frequent (16-30%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL61

Looking W | Location: -113.829671, 51.222522

Vegetation Community: Smooth brome-Dandelion	Survey Date: May 28, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
field mouse-ear chickweed	*Cerastium arvense*	Rare (1-5%)	12 - Continuous dense occurrence of plants	Do not track	S5
common yarrow	*Achillea millefolium*	Occasional (6-15%)		Do not track	SNA
quackgrass	*Elymus repens*	Frequent (16-30%)	7 - A few patches	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Frequent (16-30%)	9 - Several well-spaced patches	Do not track	SNA
smooth brome	*Bromus inermis*	Dominant (51-100%)	10 - Continuous uniform occurrences of well-spaced plants	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL61					
common dandelion	*Taraxacum officinale*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL63

Looking W | Location: -113.830015, 51.220567

Vegetation Community: Reed canary grass	Survey Date: May 28, 2025
Habitat Quality: Low = >75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
creeping thistle	*Cirsium arvense*	Rare (1-5%)	5 - Several sporadically occurring plants	Do not track	SNA
perennial sow thistle	*Sonchus arvensis*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
reed canary grass	*Phalaris arundinacea*	Frequent (16-30%)		Do not track	S5
common horsetail	*Equisetum arvense*	Frequent (16-30%)		Do not track	S5
common wheat	*Triticum aestivum*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL70

Looking NE | Location: -113.802078, 51.220758

Vegetation Community: Needle spike-rush-foxtail barley	Survey Date: May 20, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments:

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
flixweed	*Descurainia sophia*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
creeping thistle	*Cirsium arvense*	Rare (1-5%)	3 - Single patch	Do not track	SNA
perennial sow thistle	*Sonchus arvensis*	Rare (1-5%)	3 - Single patch	Do not track	SNA
western dock	*Rumex occidentalis*	Rare (1-5%)		Do not track	S5
sweet grass	*Anthoxanthum hirtum*	Rare (1-5%)		Do not track	S5
sedge sp.	*Carex sp.*	Rare (1-5%)			
curly-cup gumweed	*Grindelia squarrosa*	Occasional (6-15%)		Do not track	S4S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL70					
slender wheatgrass	*Elymus trachycaulus* ssp. *subsecundus*	Occasional (6-15%)		Do not track	S4S5
western wheat grass	*Pascopyrum smithii*	Frequent (16-30%)		Do not track	S5
wire rush	*Juncus balticus*	Frequent (16-30%)		Do not track	S5
common dandelion	*Taraxacum officinale*	Frequent (16-30%)	7 - A few patches	Do not track	SNA
Cusick's salt-meadow grass	*Puccinellia nuttalliana*	Abundant (31-50%)		Do not track	S5
foxtail barley	*Hordeum jubatum*	Abundant (31-50%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL71

Looking SW | Location: -113.814255, 51.232786

Vegetation Community: Smooth brome-Kentucky bluegrass	Survey Date: May 22, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Cusick's salt-meadow grass-Wire rush vegetation community observed along uncultivated and modified (e.g., ditched/swaled) portions. Large portion of polygon cultivated.

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
curled dock	*Rumex crispus*	Rare (1-5%)	2 - Few sporadically occurring individual plants	Do not track	SNA
buckbrush	*Symphoricarpos occidentalis*	Rare (1-5%)		Do not track	S5
sedge sp.	*Carex sp.*	Rare (1-5%)			
tufted white prairie aster	*Symphyotrichum ericoides*	Occasional (6-15%)		Do not track	S5
Cusick's salt-meadow grass	*Puccinellia nuttalliana*	Occasional (6-15%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL71					
curly-cup gumweed	*Grindelia squarrosa*	Occasional (6-15%)		Do not track	S4S5
perennial sow thistle	*Sonchus arvensis*	Occasional (6-15%)	9 - Several well-spaced patches	Do not track	SNA
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
meadow foxtail	*Alopecurus pratensis*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
quackgrass	*Elymus repens*	Occasional (6-15%)	7 - A few patches	Do not track	SNA
povertyweed	*Iva axillaris*	Frequent (16-30%)		Do not track	S4
saltgrass	*Distichlis spicata*	Frequent (16-30%)		Do not track	S4
wire rush	*Juncus balticus*	Frequent (16-30%)		Do not track	S5
common dandelion	*Taraxacum officinale*	Frequent (16-30%)	9 - Several well-spaced patches	Do not track	SNA
smooth brome	*Bromus inermis*	Frequent (16-30%)	9 - Several well-spaced patches	Do not track	SNA

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL74

Looking N | Location: -113.804588, 51.231667

Vegetation Community: Meadow foxtail	Survey Date: May 27, 2025
Habitat Quality: Medium = >25% and <75% cover invasive/exotic plants	Comments: Heterogeneous vegetation communities across the polygon.

Vegetation Plot Data

Common Name	Scientific Name	Percent Cover	Track Status	S Rank
Plot data presented in wetland datasheet				

Species Observations

Common Name	Scientific Name	Abundance	Non-native Species Density / Distribution	Track Status	S Rank
scentless chamomile	*Tripleurospermum inodorum*	Rare (1-5%)	1 - Rare	Do not track	SNA
saltgrass	*Distichlis spicata*	Rare (1-5%)		Do not track	S4
curly-cup gumweed	*Grindelia squarrosa*	Rare (1-5%)		Do not track	S4S5
water-hemlock	*Cicuta maculata*	Rare (1-5%)		Do not track	S5
yellow beardtongue	*Penstemon confertus*	Rare (1-5%)		Do not track	S5
tall goldenrod	*Solidago altissima*	Rare (1-5%)		Do not track	S5
saline shooting star	*Primula pauciflora*	Rare (1-5%)		Do not track	S5
star-flowered Solomon's-seal	*Maianthemum stellatum*	Rare (1-5%)		Do not track	S5

Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL74					
Canada anemone	*Anemonastrum canadense*	Rare (1-5%)		Do not track	S5
red clover	*Trifolium pratense*	Rare (1-5%)		Do not track	SNA
veiny meadow rue	*Thalictrum venulosum*	Rare (1-5%)		Do not track	S5
prairie sagewort	*Artemisia ludoviciana*	Rare (1-5%)		Do not track	S5
golden bean	*Thermopsis rhombifolia*	Rare (1-5%)		Do not track	S5
flixweed	*Descurainia sophia*	Rare (1-5%)	5 - Several sporadically occurring plants	Do not track	SNA
stinkweed	*Thlaspi arvense*	Rare (1-5%)	3 - Single patch	Do not track	SNA
creeping thistle	*Cirsium arvense*	Rare (1-5%)	5 - Several sporadically occurring plants	Do not track	SNA
common wild rose	*Rosa woodsii*	Rare (1-5%)		Do not track	S5
slender wheatgrass	*Elymus trachycaulus ssp. subsecundus*	Rare (1-5%)		Do not track	S4S5
western wheat grass	*Pascopyrum smithii*	Rare (1-5%)		Do not track	S5
graceful sedge	*Carex praegracilis*	Rare (1-5%)		Do not track	S5
tufted hair grass	*Deschampsia cespitosa*	Rare (1-5%)		Do not track	S5
silverweed	*Potentilla anserina*	Occasional (6-15%)			
narrow reed grass	*Calamagrostis stricta*	Occasional (6-15%)		Do not track	S5
curled dock	*Rumex crispus*	Occasional (6-15%)	5 - Several sporadically occurring plants	Do not track	SNA
wire rush	*Juncus balticus*	Occasional (6-15%)	7 - A few patches	Do not track	S5
common plantain	*Plantago major*	Occasional (6-15%)		Do not track	SNA
creeping spike-rush	*Eleocharis palustris*	Occasional (6-15%)		Do not track	S5
Cusick's salt-meadow grass	*Puccinellia nuttalliana*	Occasional (6-15%)		Do not track	S5
seaside buttercup	*Ranunculus cymbalaria*	Frequent (16-30%)		Do not track	S5
meadow foxtail	*Alopecurus pratensis*	Frequent (16-30%)	7 - A few patches	Do not track	SNA

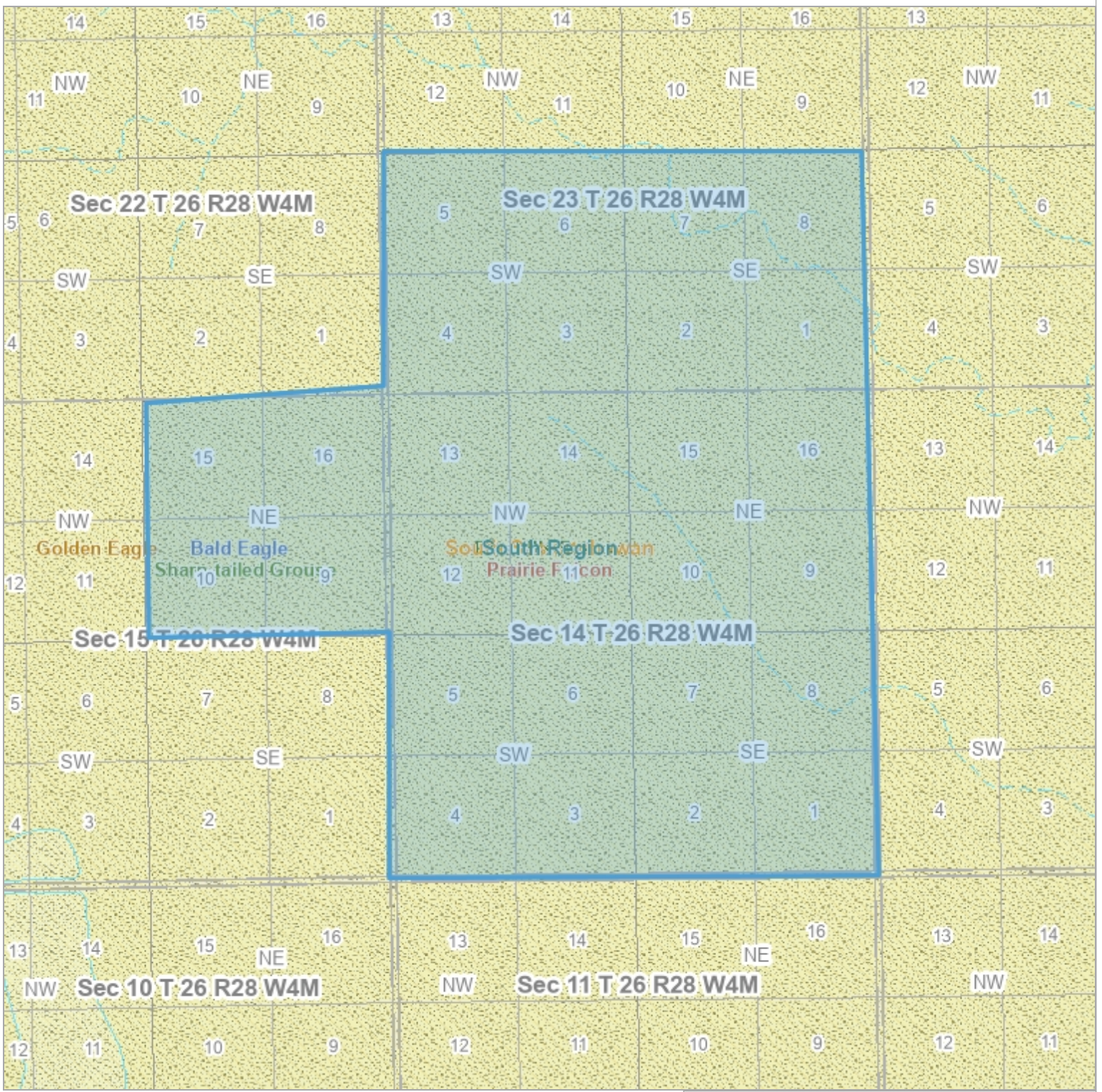
Vegetation datasheets are not provided for ephemeral waterbodies unless uncultivated and with incidental species observations other than those in the wetland representative plot.

WL74					
Kentucky bluegrass	*Poa pratensis* ssp. *pratensis*	Frequent (16-30%)	9 - Several well-spaced patches	Do not track	SNA
foxtail barley	*Hordeum jubatum*	Frequent (16-30%)		Do not track	S5
sedge sp.	*Carex* sp.	Frequent (16-30%)			
common dandelion	*Taraxacum officinale*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
quackgrass	*Elymus repens*	Abundant (31-50%)	9 - Several well-spaced patches	Do not track	SNA
perennial sow thistle	*Sonchus arvensis*		5 - Several sporadically occurring plants	Do not track	SNA

Appendix H

Landscape Analysis
Tool Search Results

Landscape Analysis Tool (LAT)



0.3 0 0.14 0.3 Kilometers

Projection: NAD_1983_10TM_AEP_Forest
Map Scale: 18,056

Printed on: March 30, 2025 9:57:06 -06:00

Legend

AER Dispositions
- LOC
- MLL
- MSL
- PIL
- PLA
- RME
- RML
- RSC
- RVC

Provisional Disposition (AER)
- LOC
- MLL
- MSL
- PIL
- PLA
- RME
- RML
- RSC
- RVC

Livingstone Planning Zones
- Livingstone Planning Zone 2
- Livingstone Planning Zone 3

Porcupine Hills Planning Zones
- Porcupine Hills Planning Zone 2
- Porcupine Hills Planning Zone 3

Livingstone Analysis Units
- Livingstone Analysis Unit - Crowsnest Watershed
- Livingstone Analysis Unit - Dutch Creek
- Livingstone Analysis Unit - Livingstone Range
- Livingstone Analysis Unit - Livingstone River
- Livingstone Analysis Unit - Racehorse Creek
- Livingstone Analysis Unit - Upper Oldman River
- Livingstone Analysis Unit - Upper Willow Creek

Porcupine Hills Analysis Units
- Porcupine Hills Analysis Unit - East
- Porcupine Hills Analysis Unit - South
- Porcupine Hills Analysis Unit - West

Agriculture
- Active
- Pending
- All Other Values

Commercial
- Active
- Pending
- All Other Values

Industrial
- Active
- Pending
- All Other Values

Reservation
- Active
- Pending
- All Other Values

ATS Section with Road Allowance Label Above Hydro

ATS Quarter Section with Road Allowance Label Below Hydro

ATS Legal SubDivision with Road Allowance Label Below Hydro

ATS Township Index Outline 7

ATS Section with Road Allowance Outline 3

ATS Quarter Section with Road Allowance Outline

ATS Legal Subdivision with Road Allowance Outline

CUP - Cultivation Permit

FDL - Farm Development Lease

FDS - Farm Development Sale

FGA - Forest Grazing Allotments

FGL - Forest Grazing License

GRL - Grazing Lease

GRP - Grazing Permit

GRR - Provincial Grazing Reserve

PGL- Parks Grazing Lease (TPR)

PGP - Parks Grazing Permit (TPR)

PHP - Parks Haying Permit (TPR)

PLS - Public/Private Land Sale

DML - Department Miscellaneous Lease (AESRD)

DPI - Pipeline Installation Lease

KRS - Kananaskis RCMP Staff Housing

MLL - Miscellaneous Lease (AER)

MLP - Miscellaneous Permit

MTS - Miscellaneous Townsite Lease

PML - Parks Miscellaneous Lease (TPR)

PMP - Parks Miscellaneous Permit (TPR)

PSM - Parks Surface Material License (TPR)

PRL - Parks Recreation Lease (TPR)

REC - Recreation Lease

SMC - Surface Material License

SME - Surface Material Exploration License

SML - Surface Material Lease

RME - Regulator Material Exploration (AER)

RML - Regulator Material Lease (AER)

RSC - Regulator Material License (AER)

TCL - Tourism and Commercial Recreation Lease

DLO - Department License Of Occupation (AESRD)

DMS - Department Mineral Surface Lease (AESRD)

DPL - Department Pipeline Agreement (AESRD)

EAS - Easement in Special Areas

EZE - Easement

LOC - License Of Occupation (AER)

MSL - Mineral Surface Lease (AER)

PEZ - Parks Easement (TPR)

PIL - Pipeline Installation Lease (AER)

PLC - Parks License Of Occupation (AEP - Parks Division)

PMS - Parks Mineral Surface Lease (AEP - Parks Division)

PLA - Pipeline Agreementt (AER)

PPA - Parks Pipeline Agreement (AEP - Parks Division)

PPI - Parks Pipeline Installation Lease (AEP - Parks Division)

PRA - Parks Rural Electric Association Easement (AEP - Parks Di

PRE - Parks Right-Of-Entry Agreement (AEP - Parks Division)

PSL - Parks Surface Mineral Exploration (AEP - Parks Division)

REA - Rural Electric Association Easement

ROE - Right-Of-Entry Agreement

ROW - Right Of Way Lease

RVC - Regulator Vegetation Control Easement (AER)

VCE - Vegetation Control Easement (AESRD)

Reservation - Application

Reservation - Active

DRS - Dispos

FRD - Forestr

RDS - Provisi

RRD - Registe

PSH - Parks S

PRD - Parks F

PRS - Parks F

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Alberta Energ

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Environment a

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River Label (2

Lake/River (2(

Lake or

Reservo

Icefield

Major Ca

Oxbow

Quarry

Dugout

Intermittent La

Intermitt

Intermitt

Sandbar / We

Sandbar

Wetland

Lagoon

Stream Label

Stream (20K)

Stream

Canal

Oxbow

Ditch

Intermittent St

Recurrin

Indefinite

Arbitrary

Recurrin

Aqueduc

Spillway

Municipal Dist

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Landscape Analysis Tool (LAT) Report

LAT Number:	0000063CCC	**LAT Date:** 2025-03-18	11:20:05
Project Name:	100-2415 Kineticor		
Project Description:			
Disposition Type:	REC	Recreational Development	
Purpose Type:	RDMN	Recreational Development (M/NP)	
Activity Type:	RDMN01RECP	Adventure / Youth Camp	

Responsibility of Applicants:

It is the applicant's responsibility to conduct a full review of the generated LAT Report, ensuring that you are aware and have a full understanding of the identified standards and conditions, and any additional limitations that may also be imposed by an approved higher level plan, reservation or notation or any other law or Order of the Province or the Government of Canada that may impact the placement, construction or operation of the proposed disposition, purpose and activity.

The applicant must assess if the proposed disposition, purpose and activity can meet the applicable standards, conditions and any limitations which will subsequently determine if the application can be submitted to the regulatory body. Applicants should complete a thorough review of regulatory and application processes including supporting procedural documents and the generated LAT Reports prior to making this determination.

Where the applicant chooses not to meet, or is not able to meet, one or more Approval Standards or higher level plans within the generated LAT Report as submitted as part of the application, or any affected reservations as identified within the land status report, the applicant is required to complete the appropriate mitigation as part of their supplement submission that addresses individually each of the items not being met.

The information provided within the LAT Tool is a spatial representation of features provided to the applicant for activity and land use planning. The accuracy of these layers varies depending on the resource value being represented. The regulatory body insists that site visits, wildlife surveys and groundtruthing efforts are completed to ensure that you, the applicant can meet the procedures detailed within the *Pre-Application Requirements for Formal Dispositions*, the identified approval standards, operating conditions and *Best Management Practices* as represented within the *Master Schedule of Standards and Conditions*.

Proximity to Watercourse/Waterbodies:

Applicants will ensure that standards or conditions for Watercourse/Waterbody features as identified within the generated LAT Report are followed. It is the responsibility of the applicant to ensure the identified setbacks and buffers are properly established through a pre-site assessment and maintained.

NOTE: Be aware that the submission of a LAT Report as part of an application submission does not imply approval of the activity. The standards and conditions identified within the LAT Report may be subject to change based on regulatory review.

Base Features

Green/White Area	White Area
Municipality	Rocky View County
FMA	
FMU	
Provincial Grazing Reserve	
Rocky Mountain Forest Reserve	
PLUZ Areas	
Protected Areas	

Provincial Sanctuaries

Wildlife Corridors	
Restricted Area	
Game Bird	Zone 6
Seasonal	

Higher Level Plans

Integrated Resource Plan (Local)	
Integrated Resource Plan (Subregional)	
Access Management Plan	
Landscape Management Plan	

Reservation Listing

Reservation #	Holder Name	Purpose	Reason	Contact Information

Note:
* Information displayed in these tables is only a summary of Crown Land Reservation (CLR) information as intersected within the "Reservation - Active" data layer.
* For more detailed information regarding reservation intent, an applicant can reference this information as contained within the "Reservation - Active" data layer

For more information, please review the Land Use Reservation Program Procedures Guide for guidance on how Crown land Reservations are addressed when applying for an activity on Alberta's Crown lands.

Reservation ToDos

Action	Reservation #	Application Requirement

Additional Application Requirements

Wildlife Survey	Yes	DND Area	

Historical Resources

HRV Rating	Category

Historic Resources Application Required: No

While no specific historic resource concerns have been identified within the proposed activity area, Section 31 of the *Historical Resources Act* states that "a person who discovers a historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the Minister of the discovery." Should a historic resource be encountered with the construction or operation of this disposition, information on who to contact can be found on the Ministry of Culture and Tourism's website in; Standard Requirements under the Historical Resources Act: Reporting the Discovery of Historic Resources.

Sensitive Features

Wildlife and Other Sensitive Species

	Intersected
Burrowing Owl Range	
Caribou Range	
Caribou Range - Zone A	
Caribou Range - Zone B	
Colonial Nesting Birds	
Critical Habitat of Aquatic Species at Risk	
Endangered and Threatened Plants Ranges	
Greater Short-horned Lizard Habitat	
Greater Short-horned Lizard Range	
Greater Sage Grouse Core Area	
Greater Sage Grouse Recovery Area	
Greater Sage Grouse Leks and Buffer	
Grizzly Bear Core Access Management Area	
Grizzly Bear Habitat Linkage	
Grizzly Bear Secondary Access Management Area	
Grizzly Bear Support Zone	
High Risk Watersheds	

	Intersected
Key Wildlife and Biodiversity Areas	
Mountain Goat and Sheep Areas Disease Buffer	
Mountain Goat and Sheep Zone	
Ord's Kangaroo Rat Range	
Ord's Kangaroo Rat Key Habitat Area	
Piping Plover Waterbodies	
Provincial Hibernacula Buffer	
Sensitive Amphibian Ranges	
Sensitive Raptor Range	Yes
Sensitive Snake Habitat	
Sensitive Snake Hibernacula Range	
Sharp-tailed Grouse Leks and Buffer	
Sharp-tailed Grouse Survey	Yes
Special Access Area	
Swift Fox Range	
Trumpeter Swan Waterbodies/Watercourse	
Trumpeter Swan Watercourse Buffer	

Federal Orders:

	Intersected
Greater Sage Grouse	

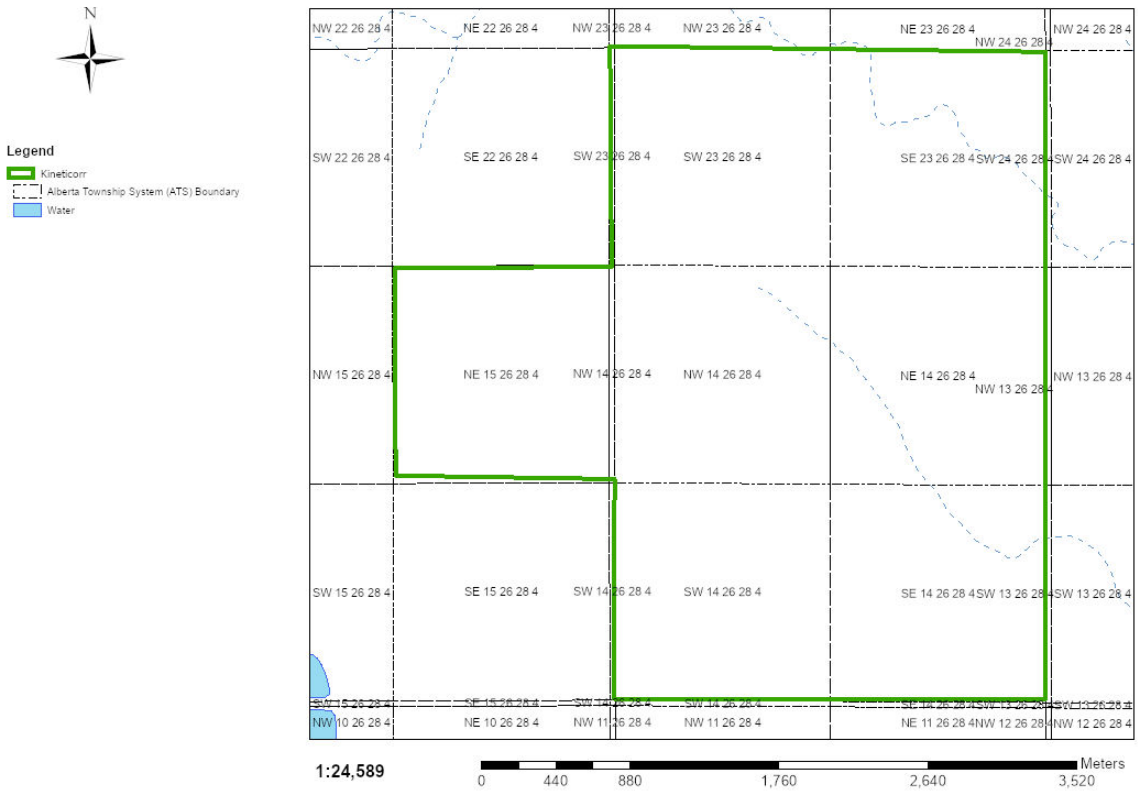
Grassland and Natural Regions:

	Intersected
Central Parkland	
Central Parkland and Northern Fescue	
Chinook Grasslands	Yes
Dry Mixed Grass	
Foothills Fescue	Yes
Foothills Parkland Grasslands	
Grassland and Parkland Natural Region	Yes

	Intersected
Mixed Grass Sub-region layer	
Montane	
Northern Fescue	
Peace River Parkland	
Permafrost	
Rough Fescue PNT	
Subalpine or Alpine	

Alberta Township System (ATS) Land List

Quarter	Section	Township	Range	Meridian	Road Allow.	Sensitive Features Identified
SE	14	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NE	23	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NW	23	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
SE	23	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
SW	23	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
SW	23	26	28	4	RW	Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
SW	14	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NW	14	26	28	4	RW	Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NE	14	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NW	14	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
SW	24	26	28	4	RW	Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NE	15	26	28	4		Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
NW	23	26	28	4	RW	Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area
SW	14	26	28	4	RW	Grassland and Parkland Natural Region,Sensitive Raptor Range,Sharp-tailed Grouse Survey,Chinook Grasslands,Foothills Fescue,Green / White Area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Alberta Township System (ATS) Boundary
Water
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0
440
880
1,760
2,640
3,520
Meters

Land Management

Report ID	Approval	Condition
1	1030-AS	Where a higher level plan* or reservation identifies a greater set back, the greater set back will prevail.
2	1031-AS	Where a Higher Level Plan* exists, the Disposition Holder must follow any direction provided within that plan.
3	1033-AS	With the exception of pipelines, for activities that fall within any reservation with a purpose code of Fish and Wildlife Resources and encompassing a section of land (259 hectares) or less, located in the Provincial White Area, the Disposition Holder must construct all activities within lands previously disturbed or cleared. Where no previous disturbance exists, activities must occur within 100 metres of the reservation perimeter.
4	1040	The Disposition Holder must repair or replace any improvements immediately that were damaged as a result of the Activity on the Lands to pre-existing dispositions to the pre-existing condition. Damages to tame pastures must be repaired within one growing season.
5	1041	The Disposition Holder must maintain proper drainage of surface water.
6	1044-AS	The Disposition Holder must not locate activities within 45 metres from the top of any coulees* with the exception of activities such as; access, pipelines and linear easements crossing those features.
7	1049	The Disposition Holder must remove all garbage and waste material from this site.
8	1050	The Disposition Holder must ensure any wildlife attractant* remaining on site overnight is placed in secure bear resistant containers and ensure that these containers are emptied on a regular basis to avoid excess garbage being present on the land or when the Disposition Holder will be off the land for more than two days.
9	1051	The Disposition Holder must ensure public accessibility to the Disposition and the associated facilities.
10	1053	The Disposition Holder must not enter the boundaries of any research or sample plot unless consent is received from the reservation holder.
11	1061	Where FireSmart activities are considered, the Disposition Holder must follow Information Letter- “Authorization of FireSmart Activities on Public Land” as amended from time to time.

Vegetation

Report ID	Approval	Condition
12	1300	The disposition holder must manage all regulated weeds to the satisfaction of the regulatory body.

13	1302	The Disposition Holder must remove all deciduous or coniferous merchantable timber from the Activity as per the following utilization standards; - Deciduous Timber: 15 cm Base/10 cm Top - Coniferous Timber: 15 cm Base/11cm Top and haul said timber to the location of end use.
14	1304	For fire control purposes on forested lands, the Disposition Holder must dispose of excess coarse woody debris* not utilized for rollback* or stockpiled for reclamation*.
15	1305	Within FireSmart Community Zones*, the Disposition Holder must dispose of coarse woody debris* by burning unless a Debris Management Plan has been approved under the Forest and Prairie Protection Act.

Soil

Report ID	Approval	Condition
16	1356	The Disposition Holder must not conduct the Activity during adverse ground conditions*.
17	1357	The Disposition Holder must prevent erosion* and sedimentation on to adjacent* Lands or Water bodies * that results from the activity.
18	1359-AS	The Disposition Holder must not remove from the Lands topsoil* or subsoil* unless approved in writing by the Regulatory Body.
19	1360	Where activities have occurred on the Lands that do not involve minimal disturbance* construction, the Disposition Holder must salvage topsoil* for land reclamation as follows: a. Salvage all topsoil* from: i. Mineral soils ii. Shallow organic soils* iii. Reclaimed soils b. Where the depth of the topsoil* is less than 15 cm, the topsoil* and part of the subsoil* to a total depth of 15 centimetres must be salvaged, unless the upper subsoil* is considered chemically unsuitable*.
20	1363	All reclamation material* must be considered suitable as defined in the May 2001 Salt Contamination Assessment Guidelines and meet the February 2016 Alberta Tier 1 Soil and Groundwater Remediation Guidelines, as amended or replaced from time to time.
21	1365	The Disposition Holder must store reclamation material* in accordance with all of the following: a. reclamation material* must not be placed beneath the ground surface or buried in any way; b. coarse woody debris* stored for reclamation purposes for greater than 12 months must be mixed with topsoil*; and c. topsoil* and subsoil* must be stored separately.
22	1367	The Disposition Holder must not mix wood chips with any reclamation material*.
23	1368	The Disposition Holder must not apply wood chips to the lands at a depth greater than five (5) centimeters.

24	1369	The Disposition Holder must manage wood chips in accordance with the directive ID 2009-01 Management of Wood Chips on Public Land as amended from time to time.
25	1370	The Disposition Holder must not store piles or windrows of reclamation material* within standing timber.
26	1371	The Disposition Holder must not use soil sterilant on the Lands.

Watercourse / Waterbody

Report ID	Approval	Condition
27	1402-AS	The Disposition Holder must not conduct the Activity* within the following water body* setbacks. a) intermittent watercourses* including springs must have a setback of at least 45 metres from the top of the breaks. b) Small permanent watercourses* must have a setback of at least 45 metres from the top of the breaks. c) large permanent watercourses* must have a setback of at least 100 metres from the top of the breaks. d) semi-permanent and permanent ponds, shallow open water ponds and lakes must have setback of 100 metres from the bed and shore*.
28	1412	The Disposition Holder must acquire an authorization for access (off-disposition) for water withdrawal activities.
29	1419	For use of equipment within the bed of a water body*, the Disposition Holder must prior to operations follow the “Decontamination Protocol for Work in or Near Water”, as amended from time to time.
30	1420	The Disposition Holder must provide a completed Record of Decontamination form as proof of decontamination to the Regulatory Body upon request.

Reclamation

Report ID	Approval	Condition
31	1453	The Disposition Holder must complete temporary reclamation* on the Lands within 1 growing season of construction phase* for all topsoil* and subsoil* stockpiles required for final reclamation*.

32	1454	The Disposition Holder must prior to seeding herbaceous seed in forested* or peatlands* submit a Request for Seeding in writing to the Regulatory Body that contains all of the following: a. rationale for conducting seeding of herbaceous species*; b. a description of the proposed site for seeding including information with respect to the following: i. whether the Lands are subject to high erosion* and; ii. whether the Lands are prone to invasion from agronomic or weed species. c. a proposed seed mix composition for re-vegetation of the Lands in accordance with the Native Plant Revegetation Guidelines for Alberta, 2001 as amended or replaced from time to time or a rationale for alternate species; d. provide a seed certificate in accordance with the Seed Act for the seed mixed mix to be used for re-vegetation* and; any other information requested by the Regulatory Body.
33	1455	The Disposition Holder must only conduct seeding in accordance with the written authorization of the Regulatory Body.
34	1456	The Disposition Holder must when seeding cultivated lands*; a. use agronomic or forage seed that meets or exceeds Certified #1 as outlined in the Seeds Act and Seeds Regulations; b. use seed mixes that are free of species listed in the Weed Control Act and; c. provide a seed certificate to the Regulatory Body within 30 days of request.
35	1457	Within the Green Area* of the Province, the Disposition Holder must re-vegetate the Lands with trees or shrubs that meet the requirements of the December 2016 Alberta Forest Genetic Resource Management and Conservation Standards document, as amended or replaced from time to time.
36	1459	The Disposition Holder must not have slash and rollback* accumulations within five (5) metres of the perimeter of the disposition boundary, greater than the percent ground cover on the surrounding undisturbed forest floor.
37	1463	For final reclamation*, the Disposition Holder must complete all of the following: a. contour the disturbed land to the pre-disturbance landform or to the landform approved by the Regulatory body; b. replace all stockpiled subsoil*, then replace all stockpiled topsoil*; c. spread all coarse woody debris* on forested lands* and; d. reclamation materials* must be replaced over the entire area from which they were removed unless otherwise approved in writing by the Regulatory Body.
38	1464	The Disposition Holder must reclaim the Lands to the pre-disturbance land use type* unless otherwise authorized in writing by the Regulatory Body.

Wildlife

Report ID	Approval	Condition
39	1600	The Disposition Holder must conduct a complete and immediate Wildlife Sweep* of the Lands subject to the disposition prior to any activity, as per the “Wildlife Sweep Protocol”.
40	1601	The Disposition Holder must submit observations from a Wildlife Sweep* to the Fisheries and Wildlife Management Information System (FWMIS) and notify the issuing Regulatory Body in writing upon request that the Wildlife Sweep* was completed.
41	1602-AS	The Disposition Holder must incorporate a buffer* zone of a minimum width of 100m undisturbed vegetation, where an established buffer* does not already exist for any and all key habitat features including, but not limited to leks*, nests, dens and houses identified in the Wildlife Sweep*.
42	1603	When Wildlife Surveys* are required, the Disposition Holder must submit results as defined by the sensitive species inventory guidelines from Wildlife Survey* to the Fisheries and Wildlife Management Information System (FWMIS).
43	1608	The Disposition Holder must incorporate buffers*, setbacks and activity timing restrictions for any and all key habitat features including, but not limited to leks*, nests, dens and houses identified in the wildlife survey*.
44	1611-AS	The Disposition Holder must conduct appropriate pre-application wildlife* surveys as per the direction of the Sensitive Species inventory Guidelines as amended from time to time where you intersect any of the following sensitive species; • Sensitive Raptor Range • Burrowing Owl Range • Sensitive Snake Hibernacula Range • Sharp-tailed Grouse Survey • Swift Fox Range • Ords Kangaroo rat Range • Piping Plover Waterbodies • Endangered and Threatened plant Ranges • Grassland and Parkland Natural Regions (Grassland Bird Surveys)

Sensitive Raptor Range

Report ID	Approval	Condition
45	1651-AS	The Disposition Holder must not construct any activities within 1000 metres of a sensitive raptor active nest* with the following exception: • When construction and operational activities occurs between July 16th and March 14th, the Disposition Holder must not conduct the activity within 100 metres from a sensitive raptor active nest*.

Sharp-Tailed Grouse Survey / Leks and Buffers

Report ID	Approval	Condition
46	1743-AS	The Disposition Holder must ensure that noise resulting from the activity does not exceed 49 decibels within 500 metres of a sharp-tailed grouse lek* when the level of noise is measured 10 metres from the source of the noise.

47	1744-AS	The Disposition Holder must not construct any activities* within 500 metres from the perimeter of an active or known sharp-tailed grouse lek* from March 15 to June 15 of any given year.
48	1745-AS	The Disposition Holder must not construct any activities* within 100 metres from the perimeter of an active or known sharp-tailed grouse lek from June 16 to March 14 of any given year.
49	1746-AS	Between March 15 and June 15, the Disposition Holder must only conduct operational maintenance* between 10:00 a.m. and 4:00 p.m for sites located 100 metres to 500 metres from a sharp- tailed grouse lek*.

Other Sensitive and Endangered Species

Report ID	Approval	Condition
50	1880-AS	Between April 15 and August 15, the Disposition Holder must not conduct any activities* within 100 metres of an active nest site for Federally listed species.

Grassland and Parkland Natural Region

Report ID	Approval	Condition
51	2051-AS	From December 16th to July 31st, the Disposition Holder must not conduct activities on Fescue Grasslands* in the Montane, Foothills Parkland and Foothills Fescue Natural subregions.
52	2054	On native grasslands*, the Disposition Holder must not crimp straw* subject to the following exceptions: a) The straw* used for crimping must be sourced from a native species* from the same ecological range site* as the Lands; b) The weed analysis for the straw* used for crimping must comply with the Weed Control Act, as amended or replaced from time to time.

53	2056	In native grasslands* as identified by the Foothills Fescue Subregion Layer that requires Assisted Natural Recovery*, the Disposition Holder must submit a request for Assisted Natural Recovery in writing to the Regulatory Body that contains all of the following: 1. Rationale for conducting Assisted Natural Recovery*; 2. A description of the proposed site for Assisted Natural Recovery* including information with respect to the following: a) Whether the Lands are subject to high erosion*; b) Whether the soil on the Lands has been disturbed to an area greater than 50m2; c) Whether the Lands are prone to invasion from agronomic or weed species; 3. A proposed seed mix composition for re-vegetation of the Lands: a) That is consistent with native plant communities that are adjacent* to and in the immediate vicinity of the Lands as determined by the Range Plant Communities and Range Health Assessment Guideline for the Foothills Fescue Grass Natural Subregion of Alberta, as amended or replaced from time to time; b) That is consistent with the seed mix composition for the ecological range site* of the Lands as provided in the Recovery Strategies For Industrial Development in Native Grassland* for the Foothills Fescue, Foothills Parkland and Montane Natural Subregions of Alberta, as amended or replaced from time to time 4. Provide a seed certificate in accordance with the Seed Act for the seed mix to be used for Assisted Natural Recovery*; and 5. Any other information requested by the Regulatory Body.
54	2068	The Disposition Holder must not construct activities on native grassland* within the Grassland and Parkland Natural Region between April 15th and August 15th, unless grassland bird surveys are completed as per the Sensitive Species Inventory Guidelines Protocol as amended.
55	2069	The Disposition Holder must not conduct any activities within 100 metres of an active nest site between April 15th and August 15th for the following species: • short-eared owl • mountain plover • long-billed curlew • upland sandpiper • Sprague’s pipit • Chestnut-collared longspur • Loggerhead Shrike • Bank Swallow

Appendix I

Fisheries and Wildlife
Management Information
System Search Results

Fish and Wildlife Internet Mapping Tool (FWIMT)

(source database: Fish and Wildlife Management Information System (FWMIS))

Species Summary Report

Report Date: 18-Mar-2025 10:38

Species present within the current extent

Fish Inventory	Wildlife Inventory	Stocked Inventory
No Species Found in Search Extent	AMERICAN KESTREL BLACK TERN BLACK-NECKED STILT HORNED GREBE PILEATED WOODPECKER SHARP-TAILED GROUSE	No Species Found in Search Extent

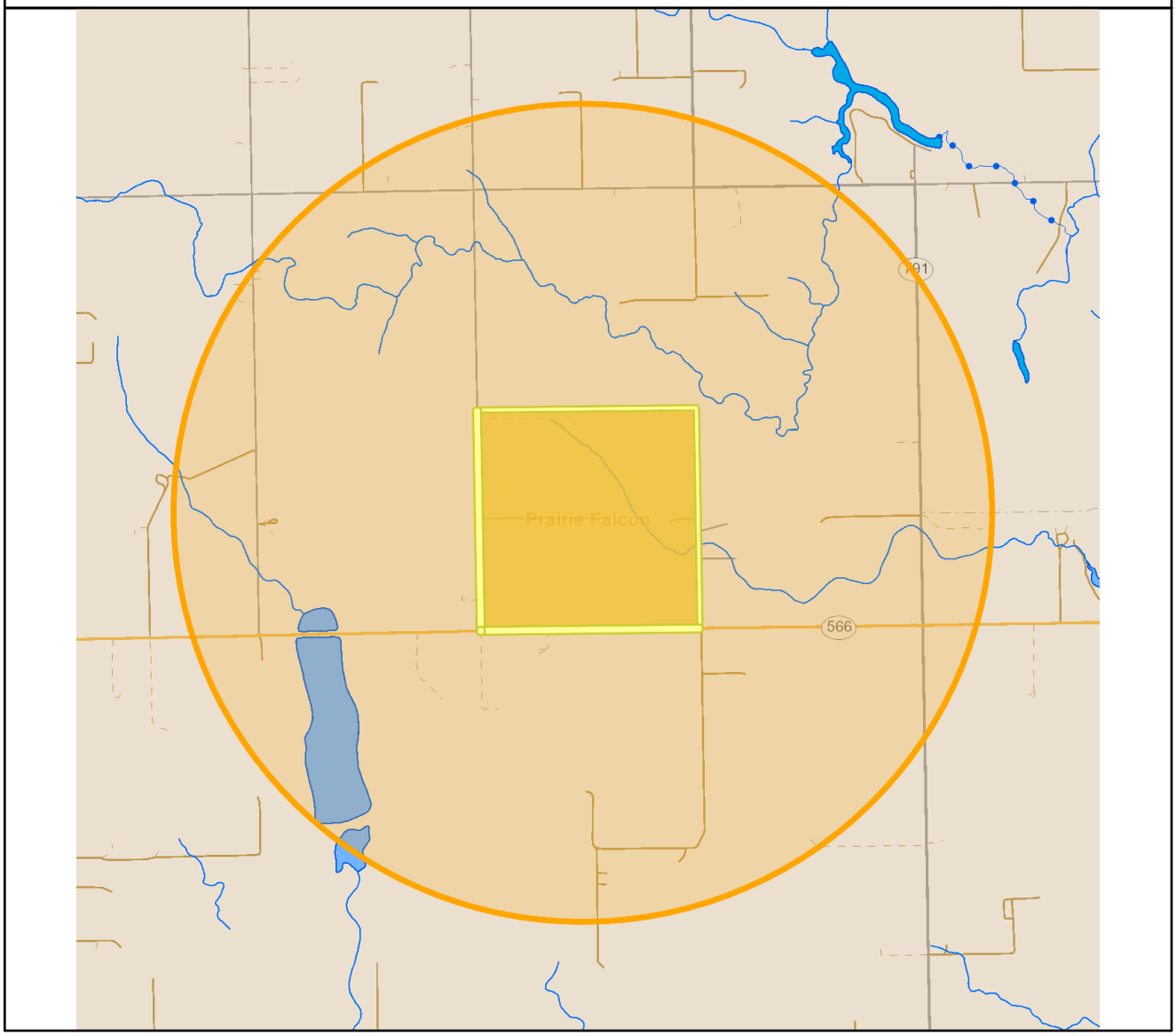
Buffer Extent

Centroid (X,Y)	Projection	Centroid (Qtr Sec Twp Rng Mer)	Radius or Dimensions
583224, 5672725	10-TM AEP Forest	NW 14 26 28 4	3 kilometers

Contact Information

For contact information, please visit:
https://www.alberta.ca/fisheries-and-wildlife-management-contacts.aspx

18-Mar-2025 10:38 **Map Results**



Fish and Wildlife Internet Mapping Tool (FWIMT)

(source database: Fish and Wildlife Management Information System (FWMIS))

Species Summary Report

Report Date: 18-Mar-2025 10:38

Species present within the current extent

Fish Inventory	Wildlife Inventory	Stocked Inventory
No Species Found in Search Extent	AMERICAN KESTREL BALD EAGLE BLACK TERN BLACK-NECKED STILT HORNED GREBE SHARP-TAILED GROUSE TRUMPETER SWAN	No Species Found in Search Extent

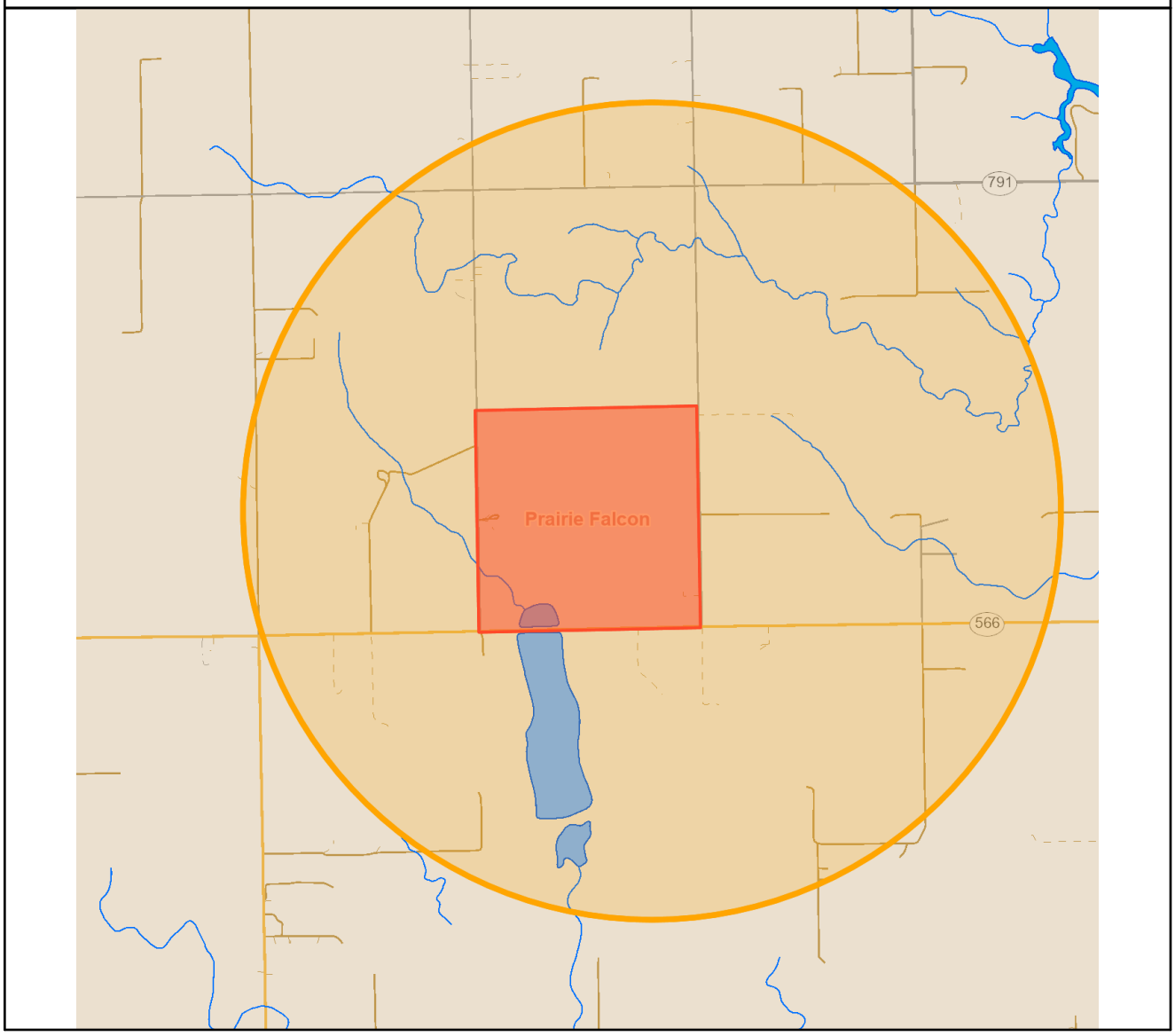
Buffer Extent

Centroid (X,Y)	Projection	Centroid (Qtr Sec Twp Rng Mer)	Radius or Dimensions
582111, 5672706	10-TM AEP Forest	NE 15 26 28 4	3 kilometers

Contact Information

For contact information, please visit:
https://www.alberta.ca/fisheries-and-wildlife-management-contacts.aspx

18-Mar-2025 10:38 **Map Results**



Fish and Wildlife Internet Mapping Tool (FWIMT)

(source database: Fish and Wildlife Management Information System (FWMIS))

Species Summary Report

Report Date: 18-Mar-2025 10:33

Species present within the current extent

Fish Inventory	Wildlife Inventory	Stocked Inventory
No Species Found in Search Extent	AMERICAN KESTREL BLACK TERN BLACK-NECKED STILT HORNED GREBE LONG-BILLED CURLEW PILEATED WOODPECKER SHARP-TAILED GROUSE TRUMPETER SWAN	No Species Found in Search Extent

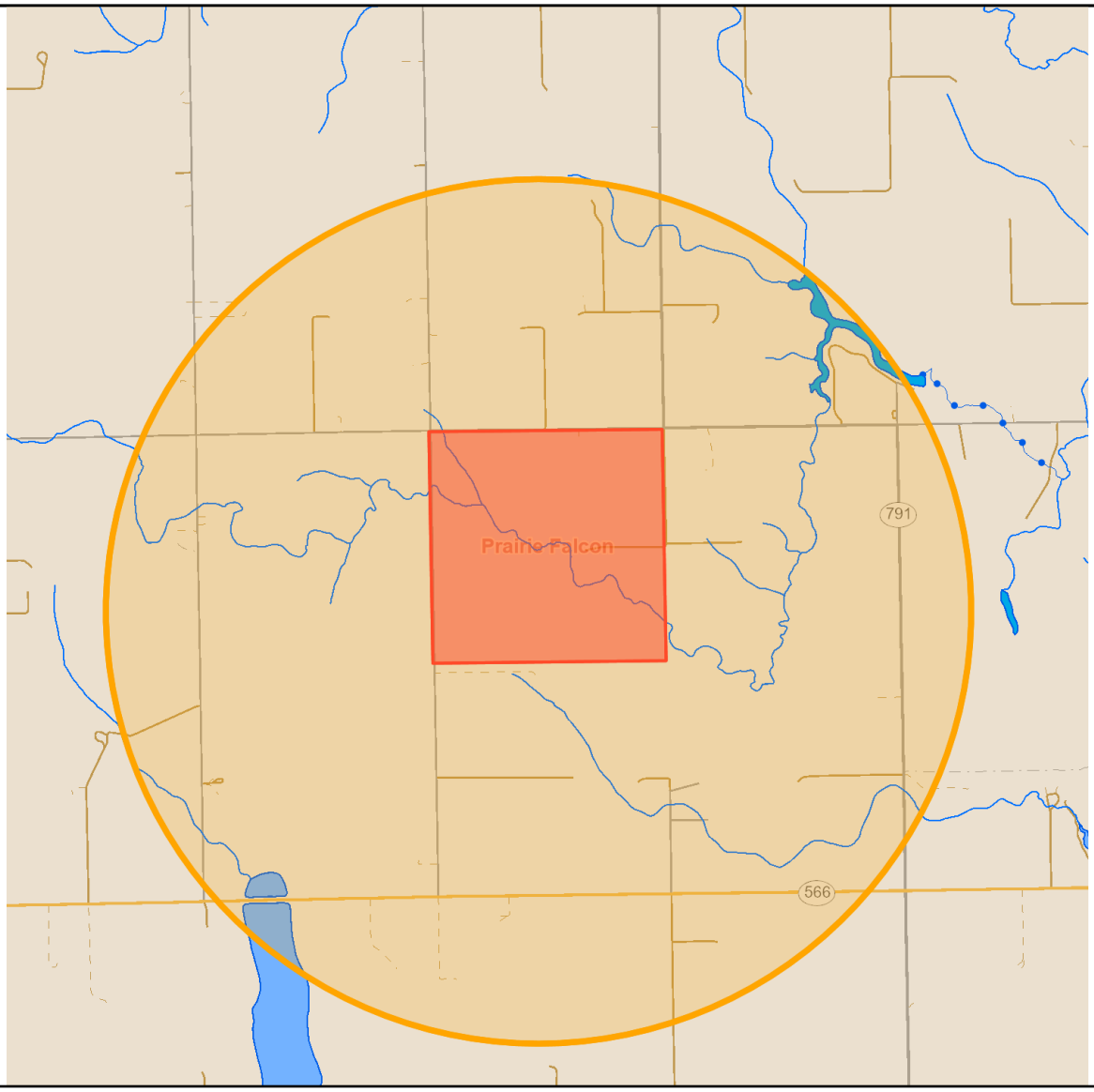
Buffer Extent

Centroid (X,Y)	Projection	Centroid (Qtr Sec Twp Rng Mer)	Radius or Dimensions
583171, 5673838	10-TM AEP Forest	SW 23 26 28 4	3 kilometers

Contact Information

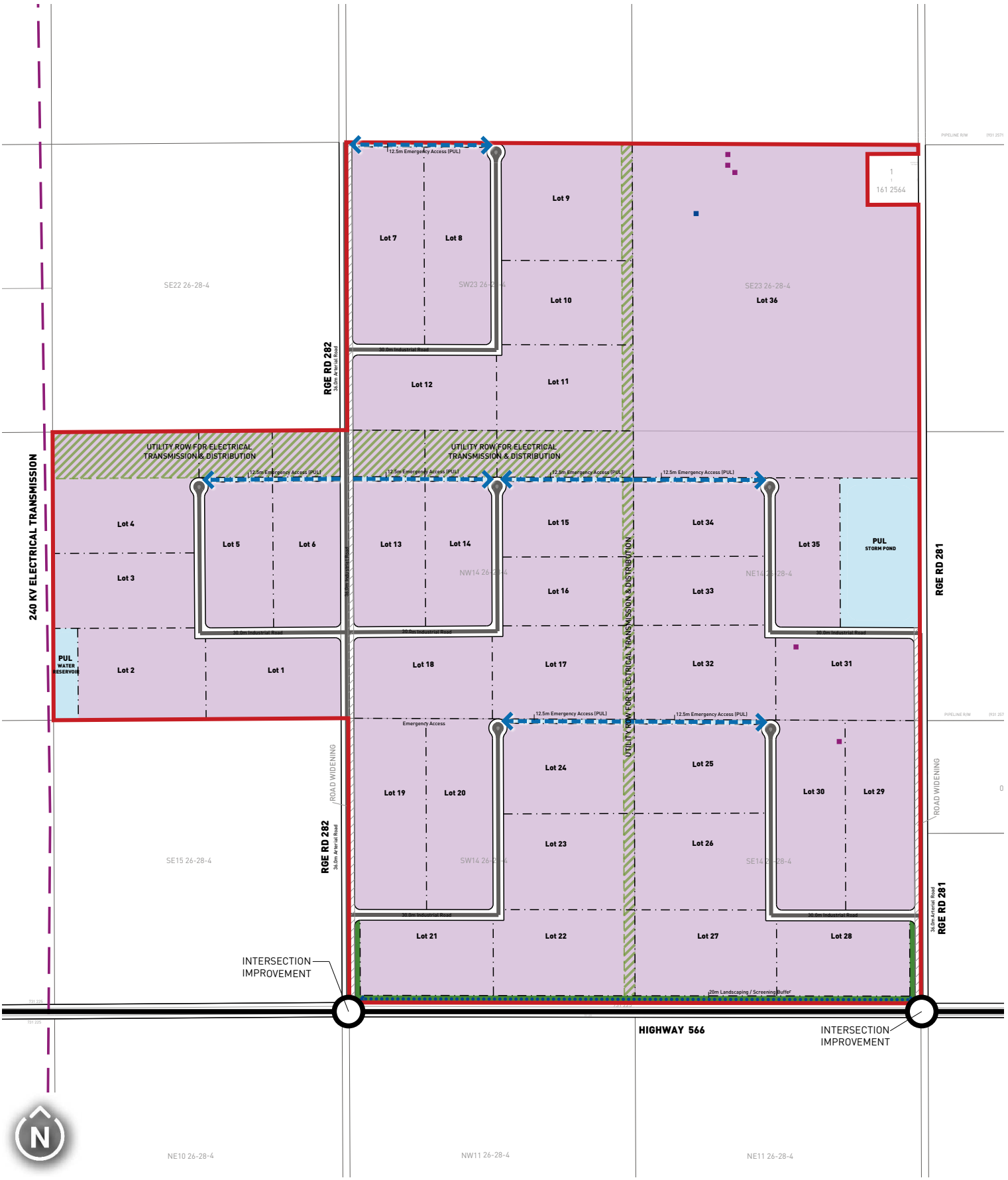
For contact information, please visit:
https://www.alberta.ca/fisheries-and-wildlife-management-contacts.aspx

18-Mar-2025 10:33 **Map Results**



Appendix J

Proposed Development Concept



- Subject Lands
- Compressor Station (Abandoned)
- Oil & Gas Well Site
- Existing Transmission Line (AltaLink)
- Proposed Regional Pathway
- Municipal Road ROW Widening (16m)
- Highway
- Internal Road Row (30m)
- Emergency Access (12.5m)
- Utility ROW Area
- Data Centre (S-DAT)
- Municipal Reserve Area
- Public Utility - Storm Pond (S-PUB)

1:14,000 0 100 200 300 Metres

Figures 10: Development Concept

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