EA Form R 1/2007

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: White Rock Oil & Gas LLC
   5810 Tennyson Pkwy
   Suite 500
   Plano, TX 75024-3523

2. Type of action: Application for Beneficial Water Use Permit No 42M 30163352

3. Water source name: Yellowstone River

4. Location affected by project: Section 36, T18N, R56E, Roosevelt County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

   The Applicant proposes to divert water from the Yellowstone River, by means of a diversion dam, from May 1 through September 30 at 4.1 CFS up to 235.6 AF, from a point in the NENWNW, Section 36, T18N, R56E, near Intake, Dawson County, for industrial use from January 1 through December 31. From the diversion dam, water will be transported via the United States Bureau of Reclamation (BOR) Lower Yellowstone Canal, to three secondary points of diversion, which are in the SWSESW Section 16, T23N, R59E, Richland County, SENWSW Section 6, T22, R59E, Richland County, and NENENE Section 13, T22N, R58E, Richland County. The Lower Yellowstone Canal is operated by the Lower Yellowstone Irrigation Project. The Applicant also proposes to construct a lined storage pond with 34.4 AF capacity to enable year-round operation. The storage pond will be located in NESE, Section 16, T23N, R58E. This is a temporary permit, the appropriations will cease by December 31, 2034.

6. Agencies consulted during preparation of the Environmental Assessment:
   (include agencies with overlapping jurisdiction)

   - US Fish & Wildlife Service
   - Montana Natural Heritage Program
   - Montana Department of Fish, Wildlife, & Parks
   - Montana Department of Environmental Quality
   - USDA Web Soil Survey
   - National Wetlands Inventory

- United States Environmental Protection Agency

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **-** *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

This reach of the Yellowstone River has not been identified by the Department of Fish, Wildlife & Parks (FWP) as chronically or periodically dewatered. The FWP has a water reservation on this portion of the Yellowstone River that ranges from 2,670 CFS in August to 25,140 CFS in June to maintain instream flows.

Determination: No significant impact.

Water quality **-** *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The lower Yellowstone River is listed on the 2020 Montana 303(d) list as fully supporting agriculture, drinking water, and primary contact recreation, and not fully supporting aquatic life. Causes of impairment for aquatic life are alterations in stream-side or littoral vegetative covers, fish passage barriers, and chemical and mineral levels. Probable sources of the impairment are the impacts from irrigation crop productions, rangeland grazing, streambank modification/destabilization, hydro-structure flow regulation/modification, and natural or unknown sources of chemical or mineral properties. The proposed project will not have any significant effect on water quality.

Determination: No significant impact.

Groundwater **-** *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The surface water appropriation should have no significant impact on ground water in the area.

Determination: *No significant impact.*

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The Applicant proposes to divert water from the Yellowstone River, by means of a diversion dam, from May 1 through September 30 at 4.1 CFS up to 235.6 AF, from a point in the NENWNW, Section 36, T18N, R56E, Dawson County, for industrial use from January 1 through December 31. From the diversion dam, water will be transported via the United States Bureau of Reclamation's Lower Yellowstone Canal for approximately 40 miles, to three secondary points of diversion, which are in the SWSESW Section 16, T23N, R59E, Richland County, SENWSW Section 6, T22, R59E, Richland County, and NENENE Section 13, T22N, R58E, Richland County. The Lower Yellowstone Canal is operated by the Lower Yellowstone Irrigation Project.

The Applicant also proposes to construct a lined storage pond with 34.4 AF capacity to enable year-round operation. The pond will be approximately 3.44 acres and 20 feet deep, to be located in NESE, Section 16, T23N, R58E. Approximately 5.6 AF of water will be lost to evaporation from the storage pond (1.63 ft net evaporation/acre * 3.44 acres = 5.6 AF).

According to James Brower (Project Manager, Lower Yellowstone Irrigation Project), the Lower Yellowstone Canal has a capacity of over 1,430 CFS with an estimated conveyance loss of 15%, and the current canal capacity exceeds existing use by 50-100 CFS. Special Use Permit 24-LM-60-5374 was obtained by the Applicant from the Bureau of Reclamation. This permit specifies the conditions the Applicant must comply with when withdrawing water from the canal, including installation of a check valve to prevent back flow into canal.

Each secondary diversion point from the canal will consist of a floating river screen, 10" suction line, and a Redi-Prime 10"x8" 325-HP, or two Godwin 200s, water transfer pumps. The pump types can be used interchangeably. Both pumps are powered by diesel engines that meet tier 3/Stage III EPA emissions regulations. Pump curves supplied in the application materials show that the pumps are capable of supplying the requested flow rate. Additional pumps can be added to the distribution system to deliver the desired flow rate at each place of use. The secondary diversions can be run concurrently, or separately as operational demands require but will not exceed the maximum proposed flow rate.

Filters are placed at each intake to protect wildlife and the pumps from solids. Water will then be conveyed by temporary 10" or 12" lay-flat hose to the lined storage pond and then to each place of use. The lined storage pond can be bypassed by the temporary lay-flat hose when not in use. At each place of use are ten temporary 500-BBL frac storage tanks with a total capacity of 5,000 BBLs of water, which ensure a steady supply of water for each frac stage.

The length and configuration of the lay-flat hose depends on the site-specific details of each place of use. Multiple segments of standard size 660' lay-flat hose can be connected as needed. As conditioned in the BOR Special Use Permit, the Applicant is to work with landowners to secure easements for the conveyance system and protect road crossings by various sizes of temporary drive-overs.

In the winter months, White Rock plans to utilize preventative measures such as flushing lines and pumps with hot water as necessary. This can be done without changing the proposed conveyance system. Hot water will be purchased from third party vendors and is common practice in oilfield operations. All equipment will be sourced from Montana/North Dakota and is designed for winter operations. Diversion of water is limited to the period from May 1 to September 30 when the irrigation districts operate the BOR canal, In the event of inclement

weather (freezing or ice flows), operations can be postponed until conditions improve. In this instance, the equipment would be removed to avoid damage.

A Water Specialties Propeller Meter by McCrometer will be installed after the pump trailer and before the filter pod trailer to measure the amount of water diverted. They will also be utilized at all places of use.

The proposed diversion does not involve well construction and should have no significant impact on stream channels, flow modifications, barriers, riparian areas, or dams.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species **-** *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Because the primary diversion point in Section 36, T18N, R56E is a well-established project that will not require any new disturbances, the secondary diversions were evaluated for endangered and threatened species. The Montana Natural Heritage Program identified a list of 4 species of concern within Section 16, T23N, R59E, Section 6, T22N, R59E, and Section 13, T22N, R58E, Richland County (see figures 1-3). Of this list, the Whooping Crane is listed as endangered by the United States Fish, and Wildlife Service (USWS) and Bureau of Land Management (BLM).

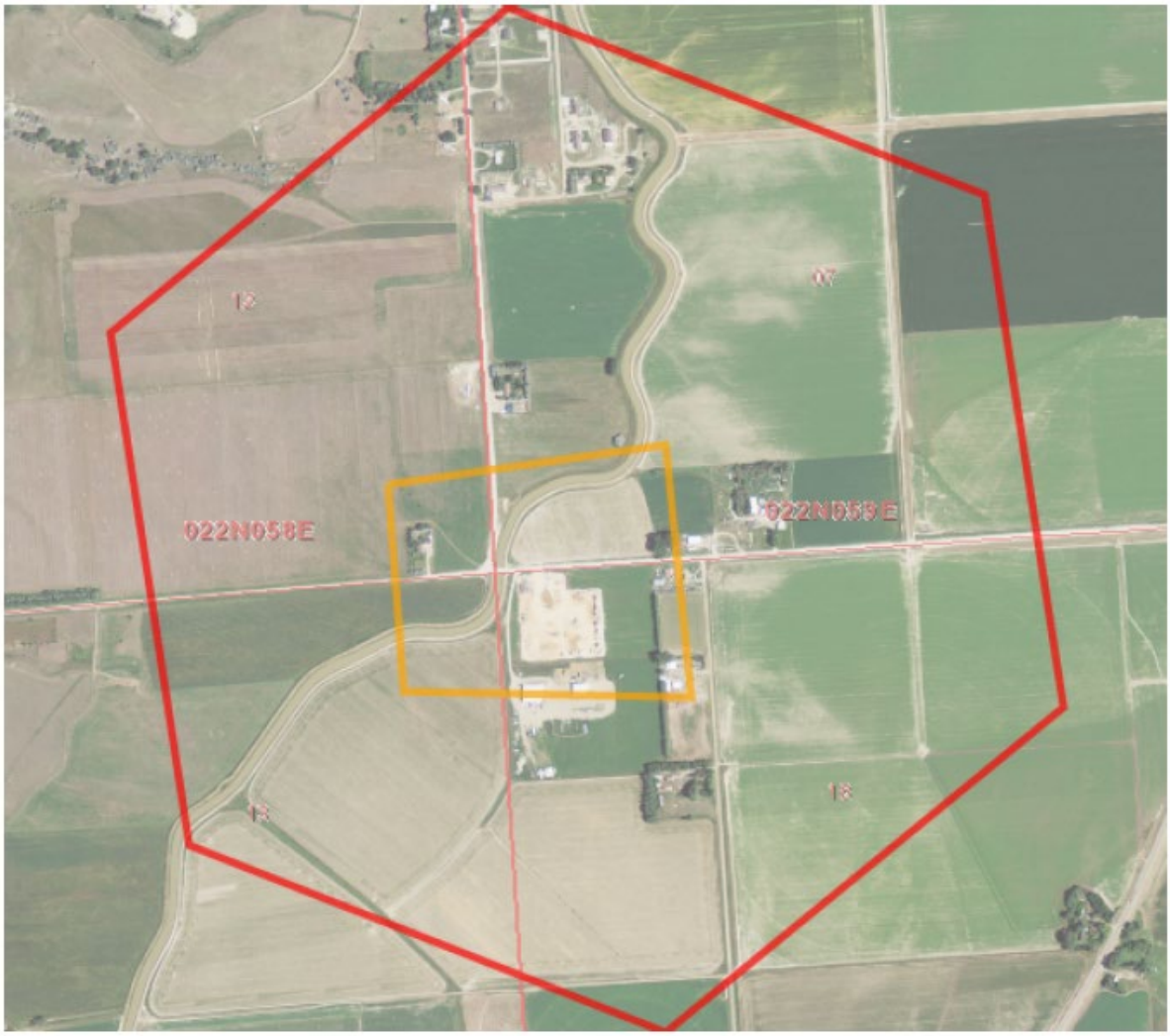
Species Group	Common Name	Scientific name
Vascular Plants	Pale-spiked Lobelia	Lobelia spicata
Birds*	Whooping Crane	Grus americana
Birds	Great Blue Heron	Ardea herodias
Invertebrates	Gray Comma	Polygonia progne

*Listed Endangered by the USFWS and BLM

Latitude	Longitude
47.66683	-104.19103
47.68354	-104.21739

Summarized by:

(Custom Area of Interest)



Suggested Citation

Montana Natural Heritage Program. Environmental Summary Report.
for Latitude 47.66683 to 47.68354 and Longitude -104.19103 to -104.21739. Retrieved on 2/10/2025.

Figure 1: Species of Concern Area of Interest

Latitude	Longitude
47.68102	-104.18134
47.69773	-104.20771

Summarized by:

(Custom Area of Interest)

Suggested Citation
Montana Natural Heritage Program. Environmental Summary Report.
for Latitude 47.68102 to 47.69773 and Longitude -104.18134 to -104.20771. Retrieved on 2/10/2025.

Figure 2: Species of Concern Area of Interest

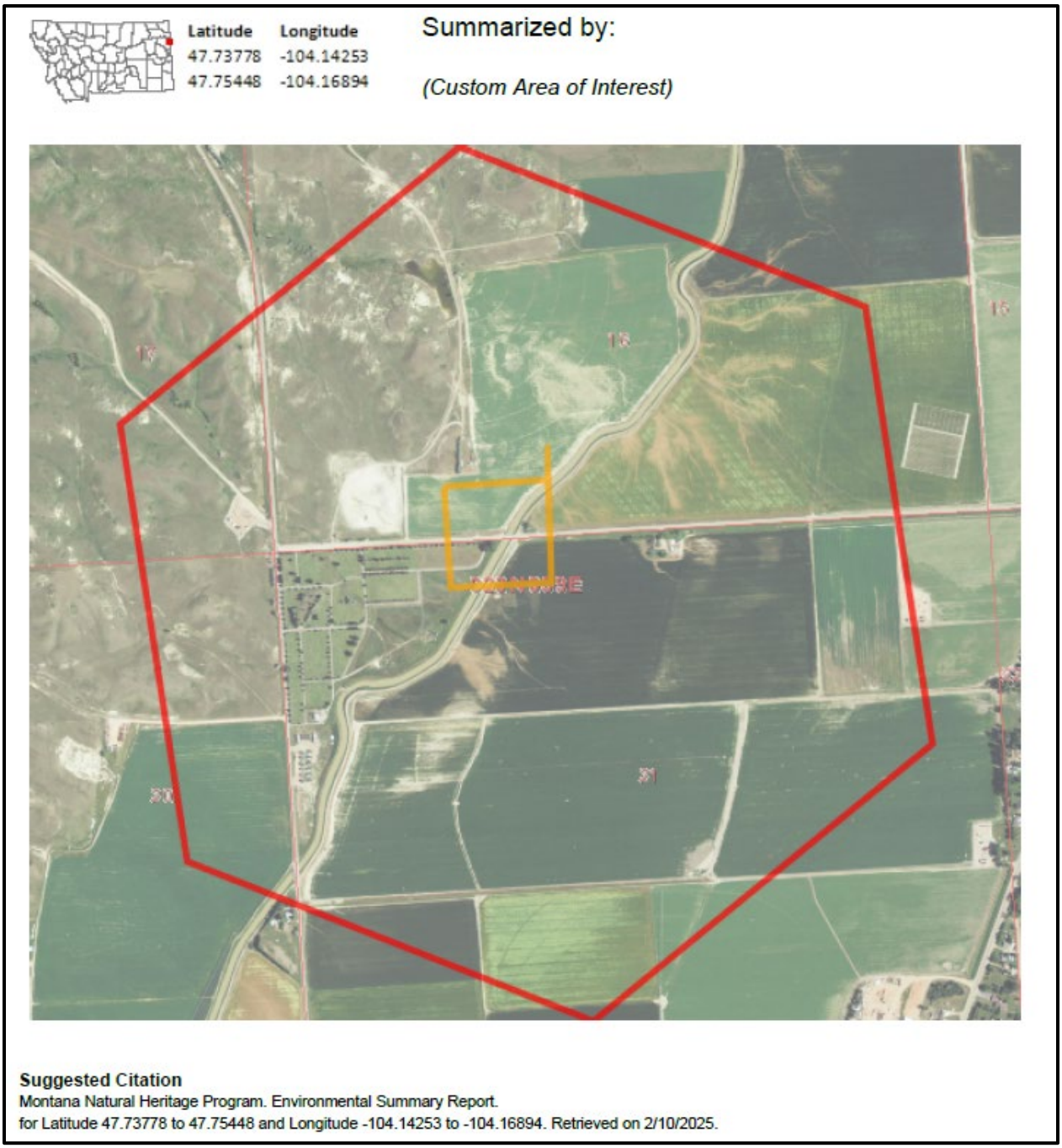


Figure 3: Species of Concern Area of Interest

The Whooping Crane has been observed in the marsh habitat present at Medicine Lake National Wildlife Refuge and the Red Rock Lakes National Wildlife Refuge. Birds have been observed in other areas of the state, which include grain and stubble fields as well as wet meadows, wet prairie habitat, and freshwater marshes that are usually shallow and broad with safe roosting sites and nearby foraging opportunities. The pump location selected for this diversion would not likely provide suitable habitat for Whooping crane.

The diversion points are adjacent to land used for agricultural purposes and are diverted a from a well-established manmade canal. The equipment needed for the proposed use, such as pump

trailers and lay-flat hoses, are temporary and mobile, and will be removed after the project expires in 2034.

Determination: No significant impact.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Because the primary diversion point in Section 36, T18N, R56E is a well-established project that will not require any new disturbances, the secondary diversions were evaluated for wetlands. The wetlands identified within and around section 16, T23N, R59E, section 6, T22N, R59E, and section 13, T22N, R58E, Richland County are Riverine habitat.

The Freshwater Emergent Wetland is classified as a R2UBFx.

- System **Riverine (R)**: The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.
- Subsystem **Lower Perennial (2)**: This Subsystem is characterized by a low gradient. There is no tidal influence, and some water flows all year, except during years of extreme drought. The substrate consists mainly of sand and mud. Oxygen deficits may sometimes occur. The fauna is composed mostly of species that reach their maximum abundance in still water, and true planktonic organisms are common. The gradient is lower than that of the Upper Perennial Subsystem and the floodplain is well developed.
- Class **Unconsolidated Bottom (UB)**: Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.
- Water Regime **Semi Permanently Flooded (F)**: Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.
- Special Modifier **Excavated (x)**: This Modifier is used to identify wetland basins or channels that were excavated by humans.

The diversion point is adjacent to land used for agricultural purposes and has already experienced human activity. The equipment needed for the proposed use is temporary and its placement is not expected to cause substantial land disturbance.

Determination: No significant impact.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

There are no ponds identified.

Determination: No significant impact.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Because the primary diversion point in Section 36, T18N, R56E is a well-established project that will not require any new disturbances, the secondary diversions were evaluated for soil stability and moisture. The soil profile was identified within and around section 16, T23N, R59E, section 6, T22N, R59E, and section 13, T22N, R58E, Richland County.

The soil type at the secondary point of diversion in 16, T23N, R59E (see figure 4) is mainly Cherry silty clay loam. Twenty-seven percent is identified as prime farmland if irrigated, has a 0-2 % slope, is well drained and is non-saline to very slightly saline to moderately saline (0.0 to 3.0 mmhos/cm). The remaining seventy-three percent has the same features, but a 2-4 % slope.

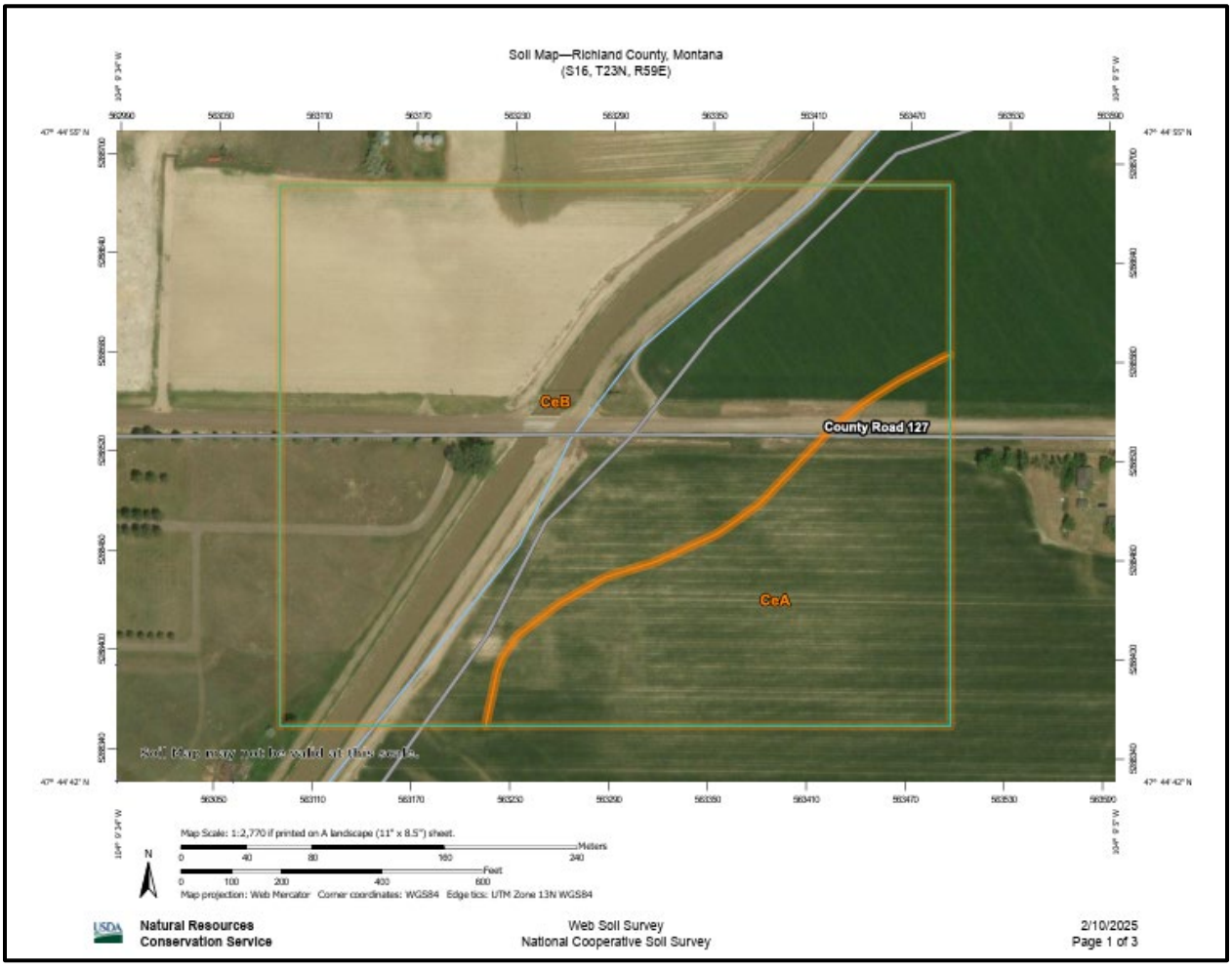


Figure 4: USDA Web Soil Survey for Section 16, T23N, R59E

The soil type at the secondary point of diversion in section 6, T22N, R59E (see figure 5) is Cherry silty clay loam and Trembles fine sandy loam. Eighty-Five percent is identified as Cherry silty clay loam, which is prime farmland if irrigated, is well drained, is non-saline to very slightly saline to moderately saline (0.0 to 3.0 mmhos/cm), 48% has a slope of 0-2%, and 37% has a slope of 2-4%. The remaining 15% of Trembles fine sandy loam is also prime irrigation

land, is well drained, is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm), and has a slope of 0-2%.

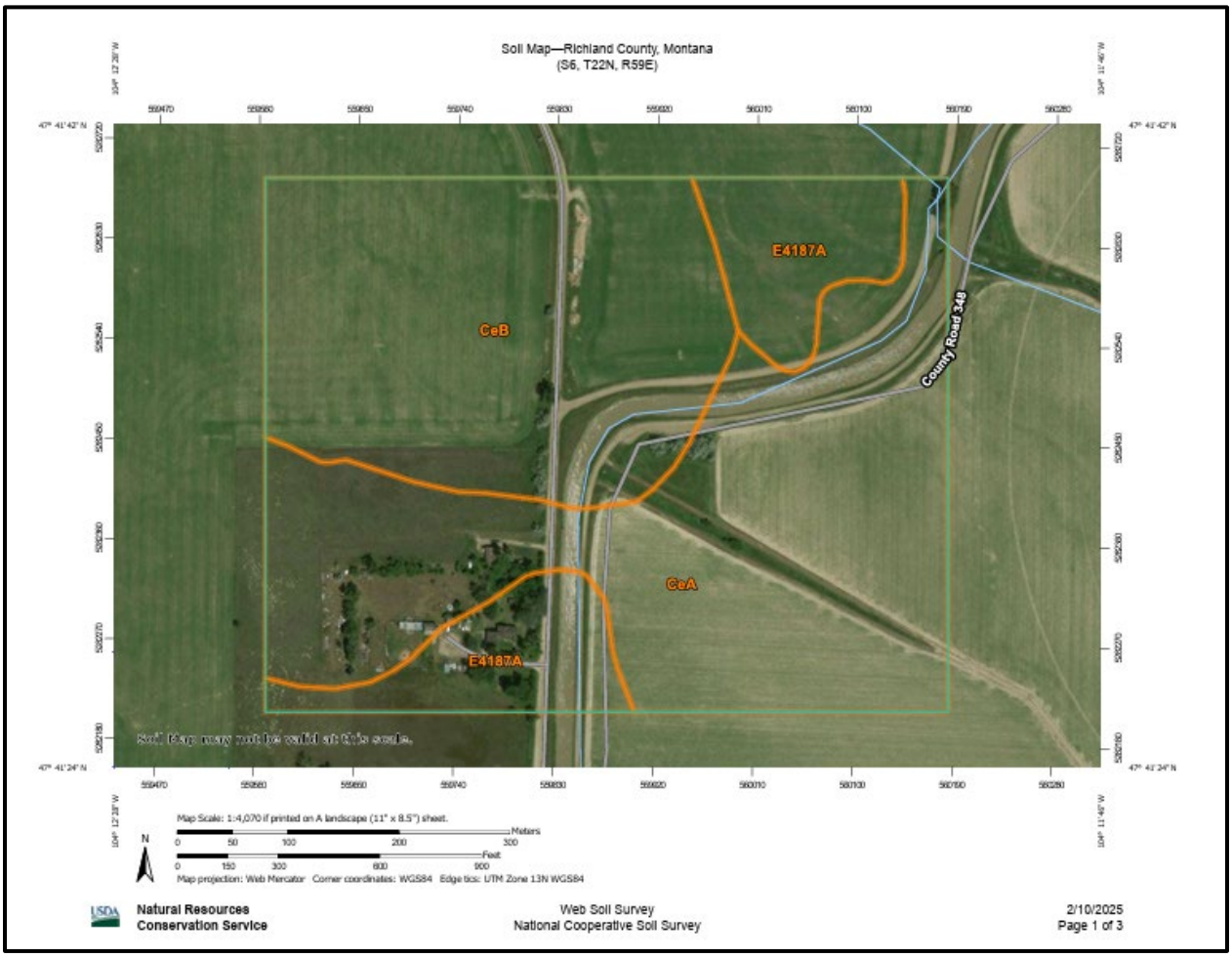


Figure 5:USDA Web Soil Survey for Section 6, T22N, R59E

The soil type at the secondary point of diversion in section 13, T22N, R58E (see figure 6) is Tally fine sandy loam, Wyola silty clay loam, Farnuf loam, and Trembles fine sandy loam. Seventy percent is identified as Tally fine sandy loam, which is farmland of statewide importance, is well drained, is non-saline to very slightly saline to moderately saline (0.0 to 2.0 mmhos/cm) and has a slope of 0-2%. Twenty-four percent is identified as Wyola silty clay loam, which is prime farmland if irrigated, is well drained, is non-saline to very slightly saline (0.0 to 3.0 mmhos/cm), and has a slope of 0-2%.

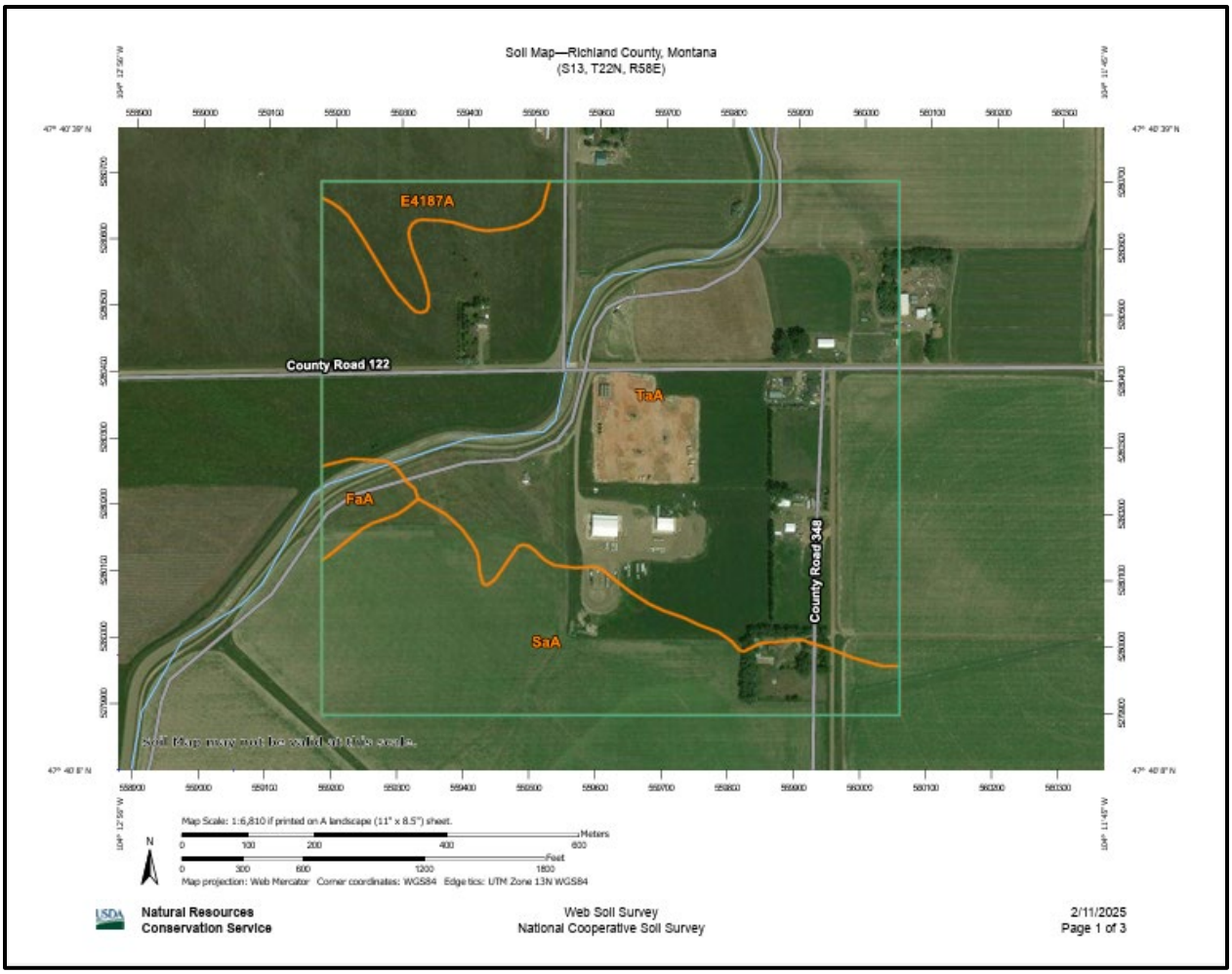


Figure 6:USDA Web Soil Survey for Section 13, T22N, R58E

With equipment such as lay-flat hoses, pump trailer, and above ground storage tanks, degradation to soil or development of a saline seep is not anticipated.

Determination: No significant impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

No vegetation was listed as endangered or threatened by the USFWS or BLM in the project area. The control of noxious weeds is the responsibility of the landowner.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

The water transfer pumps contain a diesel engine that meet Tier 3/Stage III A emissions regulations. This project consists of mobile pumps, lay flat hose, and above ground storage tanks, which is not expected to produce heavy ground disturbance or dust levels.

Determination: No significant impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: Not applicable, project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No other potential impacts have been identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: No known environmental plans or goals will be significantly impacted by this project.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: The local land use is mainly agricultural. No access or recreational activities will be significantly impacted by this project.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: This project will have no significant impact on human health.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
Yes___ No __X__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No significant impact.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? No significant impacts identified.

(*b) Local and state tax base and tax revenues?* No significant impacts identified.

(c) Existing land uses? No significant impacts identified.

(*d) Quantity and distribution of employment?* No significant impacts identified.

(e) Distribution and density of population and housing? No significant impacts identified.

(f) Demands for government services? No significant impacts identified.

(g) Industrial and commercial activity? No significant impacts identified.

(h) Utilities? No significant impacts identified.

(i) Transportation? No significant impacts identified.

(j) Safety? No significant impacts identified.

(k) Other appropriate social and economic circumstances?

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts No significant impacts.

Cumulative Impacts No significant impacts.

3. *Describe any mitigation/stipulation measures:* None

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

The only other viable alternative would be the no action alternative in which the Department would not authorize a water right permit for industrial use. Under the no action alternative, the Applicant would not be able to withdraw water for oil field development.

PART III. Conclusion

1. Preferred Alternative: Issue a water use permit if the applicant proves the criteria in §85-2-311, MCA are met.

2 Comments and Responses

3. *Finding:*
Yes___ No __X__ Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified. Therefore, an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Ashley Kemmis
Title: Water Resource Specialist
Date: February 14, 2025