

**Wavetech Energy, Inc.**

**Harker Family 14-26**

**Wildlife Mitigation Plan**

*Prepared for:*  
State of Colorado  
Energy and Carbon Management Commission

*On Behalf of:*  
Wavetech Energy, Inc.



*Prepared by:*  
**UPSTREAM**  
Petroleum Management, Inc.

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## **1.0 INTRODUCTION**

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This Wildlife Mitigation Plan (WMP) is prepared for the Wavetech Energy, Inc (Wavetech) Harker Family 14-26 Location. This WMP is intended to adhere to the Energy and Carbon Management Commission (ECMC), formerly the Colorado Oil and Gas Conservation Commission (COGCC) Rules 304.c.(17) and 1201.b, for an Oil and Gas Location that is within High Priority Habitat (HPH), and describes the implementation of operating requirements pursuant to Rules 1202.a, 1202.b, and 1202.c; as well as any mitigation requirements pursuant to Rules 1202.d and 1203.

## **2.0 PROJECT DESCRIPTION**

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The proposed Location is in Township 12 South, Range 43 West, Section 26 in Cheyenne County, Colorado. Wavetech plans to drill and test this conventional well, which will produce helium containing natural gas, water, and possibly oil. The proposed project includes construction of a pad, access road, and collection pipeline. All gas production will go directly to the existing Ladder Creek pipeline gathering system, via an existing connection. The Ladder Creek Pipeline is operated by Tumbleweed Midstream. The gas processing facility will be on lands outside those addressed in the Oil and Gas Development Plan. This well will be drilled, perforated, and tested. The proposed Location is fee surface and fee minerals with a total pad disturbance of approximately 3.5 acres. The graded site elevation is expected to be approximately 4,086 feet. No federal surface or minerals are involved in this project. All operations would be completed in compliance with applicable federal, state, and local laws, rules, and regulations.

## **3.0 SITE DESCRIPTION**

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The proposed Location is in the High Plains ecoregion, which is typical for eastern Colorado. Typical native vegetative cover in the region is dominated by grassland and herbaceous cover types. Publically-available aerial imagery indicates the vegetation cover type at the proposed Location is grassland. A site visit completed in August of 2022 confirmed livestock-grazed grasslands exist at the proposed Location.

The proposed Location is within Colorado Parks and Wildlife (CPW)-mapped lesser prairie-chicken (LEPC) High Priority Habitat (HPH) (LEPC estimated occupied range; Rule 309.e.1 – Other Consultation Habitats). No other HPHs are associated with the proposed Location.

## **4.0 BIOLOGICAL EVALUATION**

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The biological evaluation of the proposed Location includes a desktop review and an onsite field evaluation. The desktop review included use of the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) website, Colorado Parks and Wildlife's Colorado's Conservation Data Explorer (CODEX) website; and examination of several publically available datasets including USFWS National Wetland Inventory (NWI), Southwest Regional Gap Analysis Project (SWReGAP), and others.

A report was generated using the USFWS IPaC website that describes the federally-listed species with the potential to occur at the proposed Location (USFWS 2022). Federally-listed species with the potential to occur at the Location include the Gray Wolf (*Canis lupus*; endangered) and

the Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*; threatened; LEPC). Based on the known distribution of wolves in Colorado, the Gray Wolf is not expected to occur at the proposed Location. The proposed Location is within mapped LEPC Estimated Occupied Range. No other LEPC ranges overlap with any of the proposed project facilities. The CPW CODEX report identified the LEPC and burrowing owl (*Athene cunicularia*) as state-listed species with the potential to occur within two miles of the proposed Location (CPW 2022). No burrowing owl nesting habitats were identified at the proposed location. This species is not expected to occur at the proposed Location. Based on the proposed Location occurring in LEPC Estimated Occupied Range HPH, an analysis of potential impacts on the LEPC is provided. Implementation of the proposed project would not impact any other special status species.

A biological survey of the proposed Location was completed in August 2022. During this survey, the vegetative cover at the Location was confirmed to be grazed grassland. No wetlands or Waters of the U.S. (WOUS) were identified in areas proposed for disturbance. As is typical for this region of Colorado, there are no large trees that may support raptor nesting at the proposed Location or nearby.

## **5.0 IMPACT ANALYSIS**

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### **5.1 DIRECT AND INDIRECT IMPACTS TO WILDLIFE**

Implementation of the proposed project could result in direct and indirect impacts to wildlife. Direct impacts are those that result in mortality, injury, and behavioral changes to wildlife. Direct impacts to wildlife typically occur during construction when individuals are unable to avoid operating construction equipment and other project-related vehicles. Wildlife may be injured or killed during surface disturbing activities. Surface disturbing activities, including increases in human presence and associated noise, have the potential to displace wildlife. Such displacement is expected to have minimal impact on individuals based on the availability and suitability of other unaffected habitats in the area. During the construction of the project, new light sources may be created. New light sources have the potential to attract insects which in turn may attract foraging bat and bird species. There is a potential for injury or mortality to birds and bats through collision with project-related infrastructure. Because the area proposed for disturbance is not expected to offer high quality habitat for wildlife species, direct impacts are expected to be negligible. Indirect impacts to wildlife include the alteration of habitats that potentially provide forage and cover; changes to local habitats based on the potential for introduction of noxious weeds; and project-related increases in predator densities or concentrations. Indirect impacts to wildlife species are expected to be minimal; based on the low diversity and relative low quality of the impacted habitats and the availability of other undisturbed and suitable habitats in the vicinity. Implementation of the proposed project would have negligible impacts on locally occurring wildlife species.

### **5.2 DIRECT AND INDIRECT IMPACTS TO THE LESSER PRAIRIE-CHICKEN**

Following USFWS guidance, *Framework for the Review of Lesser Prairie-Chicken Voluntary Conservation Programs* (2021), implementation of the proposed project was evaluated for the potential to result in impacts to the LEPC. As described previously, grazed grassland is the vegetative cover type at the proposed Location. Grasslands have the potential to be suitable LEPC habitat. The grassland habitat at this proposed Location is expected to have low suitability for LEPC and unlikely to be used by the species based on isolation of the grassland patch from a

larger, less fragmented suitable grassland habitat, relatively small size of the grassland patch, the active practice of livestock grazing, and the proximity to active wind turbines and other existing indirect impacts. As such, LEPC are not expected to occur in habitats associated with the proposed Location. Furthermore, USFWS published a table in their 2021 USFWS guidance, *Framework for the Review of Lesser Prairie-Chicken Voluntary Conservation Programs* that summarizes indirect impact radii for a variety of infrastructure features including power plants, electrical transmission and distribution lines, wind turbines, roads, railroad tracks, buildings, pipelines, and other vertical structures. Each impact radius indicates the distance from a particular infrastructure feature for which indirect impacts to LEPC, particularly displacement, are expected to occur. Several features identified in the USFWS guidance exist near the proposed Location, including three wind turbines within 1,800 meters. The nearest turbine is approximately 575 meters to the northwest.

Implementation of the proposed project is not expected to result in consequential direct or indirect impacts to LEPC. This determination is based on several factors:

- Implementation would alter approximately 3.5 acres of grasslands that are characterized as having low suitability and disturbance represents a small fraction of the existing grasslands in the vicinity of the Location. Therefore, modification of the habitat is not characterized as significant.
- There are no known leks or suitable nesting habitats in areas proposed for disturbance or within the 300-meter impact radius assigned to oil or gas wells. Therefore, modification of the habitat does not significantly impair essential behavior patterns.
- Implementation of the proposed project is not expected to kill or injure LEPC.

## 6.0 PRE-APPLICATION CONSULTATION

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Several agency consultations/coordination have occurred for this location, including:

- September 7, 2022 – CPW Energy Liaison and Land Use Specialist (K. Voltura)
- January 13, 2023 – CPW (K. Voltura)
- January 17, 2023 – USFWS (C. O’Meille); CPW (K. Voltura, L. Rossi, T. Marriott)
- February 22, 2023 – USFWS (C. O’Meille)
- April 11, 2023 – CPW (K. Voltura); COGCC (M. Housey, E. Waldron)
- July 18, 2023 – Site visit attended by CPW (J. Reitz, Biologist) and S. Faulk (Pioneer)
- July 21, 2023 – CPW (K. Voltura)

During each of these consultations, agency representatives and the representatives of the project proponent discussed methods for avoiding, minimizing, and mitigating impacts to the LEPC. The agreed-upon mitigation measures are presented below.

## 7.0 OPERATING REQUIREMENTS

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The following are operating requirements as identified in Rule 1202. Also presented are Wavetech’s plans to adhere to those that are applicable to the proposed Location.

- a. The operating requirements identified in Rule 1202.a apply to Oil and Gas Operations statewide unless the Operator obtains a signed waiver from Colorado Parks and Wildlife (CPW) and the Director or Commission approves a Form 4, Sundry Notice or Form 2A documenting the relief.

- (1) In black bear habitat, Operators will install and utilize bear-proof dumpsters and trash receptacles for food-related trash at all facilities that generate trash.

***The Location is not within black bear habitat.***

- (2) Operators will disinfect water suction hoses and water transportation Tanks withdrawing from or discharging into surface waters (other than contained Pits) used previously in another river, intermittent or perennial stream, lake, pond, or wetland and discard rinse water in an approved disposal facility. Disinfection practices will be repeated prior to completing work and before moving to the next water body. Disinfection will be performed by scrubbing and pre-rinsing equipment away from water bodies to remove all mud, plants, and organic materials and then by implementing one of the following practices:

- A. Spray/soak equipment with a CPW-approved disinfectant solution capable of killing whirling disease spores and other aquatic nuisance species defined by CPW; or
- B. Spray/soak equipment with water greater than 140° Fahrenheit for at least 10 minutes. All equipment and any compartments they contain will be completely drained and dried between each use.

***No operations will withdraw from or discharge into surface waters.***

- (3) At new and existing Oil and Gas Locations, Operators will not situate new staging, refueling, or Chemical storage areas within 500 feet of the Ordinary High Water Mark (“OHWM”) of any river, perennial or intermittent stream, lake, pond, or wetland.

***Staging, refueling or chemical storage will not be within 500’ of any river, perennial, or intermittent stream, lake, pond or wetland.***

- (4) To prevent access by wildlife, including birds and bats, Operators will fence and net or install other CPW-approved exclusion devices on new Drilling Pits, Production Pits, and other Pits associated with Oil and Gas Operations that are intended to contain Fluids.
- A. Such fencing and netting or other CPW-approved exclusion device will be installed within 5 days after the cessation of active drilling and completion activities and maintained until the Pit is removed from service and dried or closed pursuant to the Commission’s 900 Series Rules.
  - B. The Director may require an operator to fence and net or install other CPW-approved exclusion devices on an existing Pit if the Director determines that the installation is necessary and reasonable to protect Wildlife Resources based on the analysis required by Rule 909.j, or other information that demonstrates additional protections for Wildlife Resources are appropriate.

- C. Operators will properly maintain and repair all fences, nets, and CPW-approved exclusion devices required by this Rule 1202.a.(4).

***The operator will fence the location and install nets or other CPW-approved exclusion devices on cuttings pit as deemed necessary by COGCC.***

- (5) For trenches that are left open for more than 5 consecutive days during construction of Pipelines regulated pursuant to the Commission's 1100 Series Rules, Operators will install wildlife escape ramps at a minimum of one ramp per 1/4 mile of trench.

***Operator will comply.***

- (6) When conducting interim and final Reclamation pursuant to Rules 1003 and 1004, Operators will use CPW-recommended seed mixes for Reclamation when consistent with the Surface Owner's approval and any local soil conservation district requirements.

***Operator will use a CPW-approved seed mix for reclamation, when consistent with the Surface Owner's approval..***

- (7) Operators will use CPW-recommended fence designs when consistent with the Surface Owner's approval and any Relevant Local Government requirements.

***Operator will install a fence consistent with CPW and surface owner, if requested.***

- (8) Operators will conduct all vegetation removal necessary for Oil and Gas Operations outside of the nesting season for migratory birds (April 1 to August 31). For any vegetation removal that must be scheduled between April 1 to August 31, Operators may implement appropriate hazing or other exclusion measures prior to April 1 to avoid take of migratory birds. If hazing or other exclusion measures are not implemented, Operators will conduct pre-construction nesting migratory bird surveys within the approved disturbance area prior to any vegetation removal during the nesting season. If active nests are located, Operators will provide work zone buffers around active nests.

***Operator will comply. There are currently no known nests within the vicinity of the Location.***

- (9) Operators will treat Drilling Pits, Production Pits, and any other Pit associated with Oil and Gas Operations containing water that provides a medium for breeding mosquitoes with Bti (*Bacillus thuringiensis v. israelensis*) or take other effective action to control mosquito larvae that may spread West Nile virus to Wildlife Resources. Such treatment will be conducted in a manner which will not adversely affect aquatic Wildlife Resources.

***No pits will be on Location.***

- (10) Operators will employ the following minimum Best Management Practices on new Oil and Gas Locations with a Working Pad Surface located between 500 feet and 1000 feet hydraulically upgradient from a High Priority Habitat identified in Rule 1202.c.(1).Q-S:

A. Contain Flowback and Stimulation Fluids in Tanks that are placed on a Working Pad Surface in an area with downgradient perimeter berming;

- B. Construct lined berms or other lined containment devices pursuant to Rule 603.o around any new crude oil, condensate, and produced water storage tanks that are installed after January 15, 2021;
- C. Inspect the Oil and Location on a daily basis, unless the approved Form 2A provides for different inspection frequency or alternative method of compliance;
- D. Maintain adequate Spill response equipment at the Oil and Gas Location during drilling and completion operations; and
- E. Not construct or utilize any Pits, except that Operators may continue to utilize existing Pits that were properly permitted, constructed, operated, and maintained in compliance prior to January 15, 2021.

***This Location is not 1,000' upgradient of a Rule 1202.c NSO High Priority Habitat.***

- 11. Operators will bore, rather than trench, Flowline and utility crossings of perennial streams identified as aquatic High Priority Habitat unless the Operator obtains a signed waiver from CPW and the Director or Commission approves a Form 4 or Form 2A documenting the relief. When installing culverts or bridges, such structures will not impact or prevent the passage of fish unless otherwise directed by CPW.

***No flowline or other underground utility associated with the Project will cross either a perennial stream or an aquatic HPH.***

- b. Operators will bore, rather than trench, flowline and utility crossings of perennial streams identified as aquatic High Priority Habitat unless the Operator obtains a signed waiver from CPW and the Director or Commission approves a Form 4 or Form 2A documenting the relief. When installing culverts or bridges, such structures will not impact or prevent the passage of fish unless otherwise directed by the CPW.

***Operator will comply.***

- c. Except as specified pursuant to Rule 1202.c.(2), Operators will conduct any new ground disturbance and well work, including access road and pad construction, drill and completion activities, and flowline/utility corridor cleaning and installation activities in the High Priority Habitats listed in Rule 1202.c.(1). [...] Lesser prairie chicken (within 1.25 miles of the lek site).

***Location is an estimated 1.14 miles of a CPW-mapped LEPC Production Area (lek). CPW is not requiring any timing stipulations for the location due to the proximity to existing wind turbines.***

- d. All Oil and Gas Development Plans submitted after January 15, 2021, including amendments to previously-approved Form 2As, that cause the density of Oil and Gas Locations to exceed 1 per square mile in the High Priority Habitats listed in Rule 1202.d require a CPW-approved Wildlife Mitigation Plan pursuant to 1201.b or other CPW-approved conservation plan and compensatory mitigation for Wildlife Resources pursuant to Rule 1203. This Rule 1202.d applies to the following habitat types:...lesser prairie chicken focal areas.

***Implementation of the proposed Location will not cause the density of Oil and Gas Locations to exceed one per square mile in Rule 1202.d Density HPHs.***



## 8.0 BEST MANAGEMENT PRACTICES

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The Operator commits to implementing the following Best Management Practices in the operations area:

- The operator agrees to establish company guidelines to minimize wildlife mortality from vehicle collisions on roadways. Slow speeds and increased awareness among employees and contractors is expected to reduce impacts to wildlife.
- All open-vent exhaust stacks on production equipment shall be designed to prevent entry by birds and bats and to discourage nesting or perching. All tanks and above ground facilities shall be equipped with structures or devices that discourage nesting of raptors and corvids.
- The Location will be fenced, if requested by the surface owner, with wildlife friendly barb wire to keep ungulates out of the Location.
- The land will be reclaimed back to cropland in consultation with the surface owner.

## 9.0 MITIGATION

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The proposed Location is within LEPC Estimated Occupied Range HPH (Rule 309.e.1 Other Consultation Habitats). No other LEPC HPHs overlap with the proposed Location. The following is a description of the mitigation commitments to offset unavoidable direct and indirect impacts to LEPC.

### 9.1 DIRECT IMPACTS

Rule 1202.d does not include LEPC Estimated Occupied Range HPH. No compensatory mitigation is required for unavoidable direct impacts.

### 9.2 INDIRECT IMPACTS

Rule 1202.d does not include LEPC Estimated Occupied Range HPH. No compensatory mitigation is required for unavoidable indirect impacts.

## 10.0 BIBLIOGRAPHY

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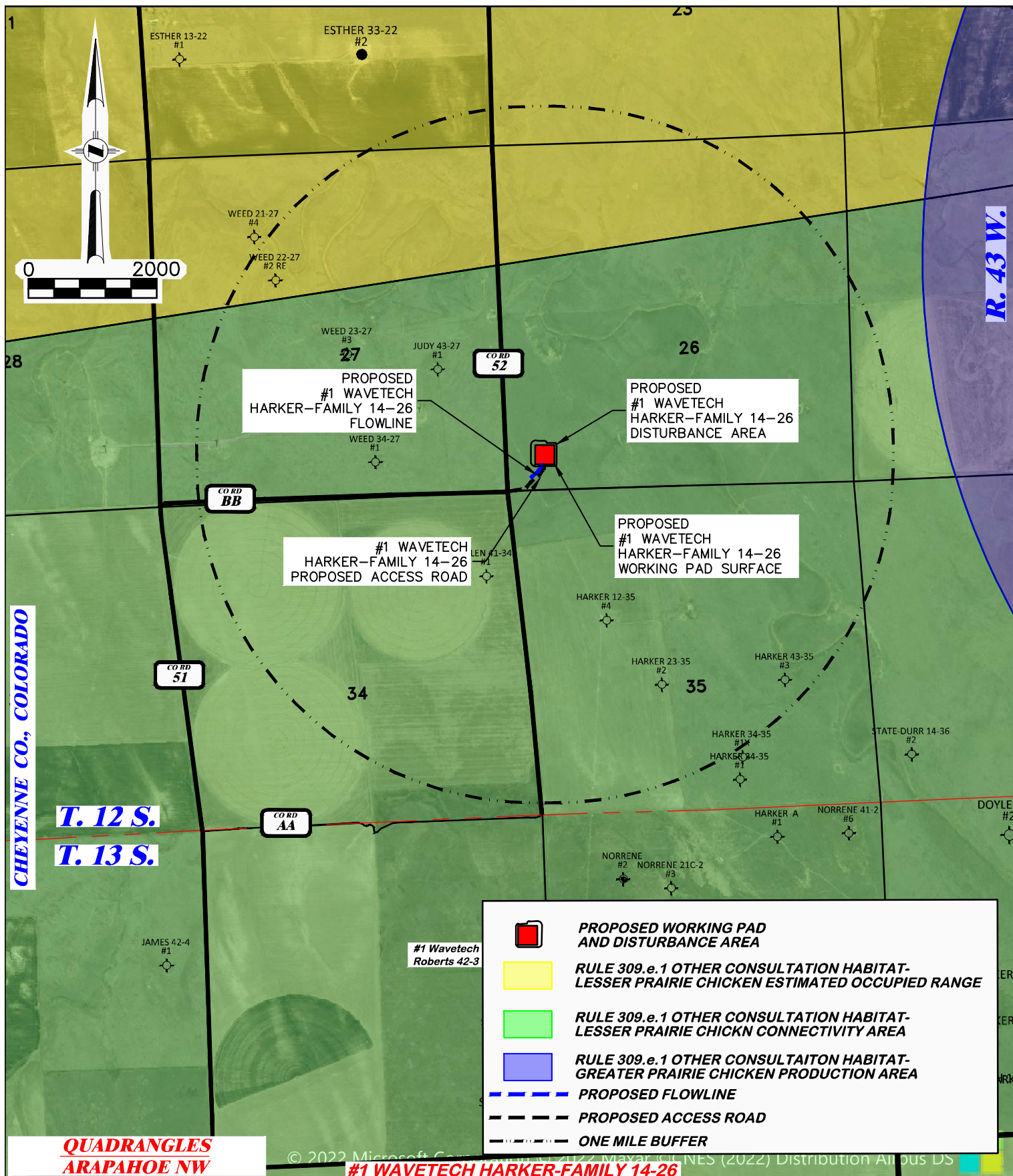
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<b>DRG RIFFIN &amp; ASSOCIATES, INC.</b> (307) 362-5028 1414 ELK ST., ROCK SPRINGS, WY 82901		<b>WILDLIFE HABITAT DRAWING</b>	
<b>DRAWN: 8/15/22 - JMB</b>		<b>WAVETECH HELIUM, INC.</b>	
<b>REVISD: 12/8/22-DWB</b>		<b>#1 WAVETECH HARKER-FAMILY 14-26</b>	
<b>WELL NAME CHANGE</b>		<b>SWSW, SECTION 26, T. 12 S., R. 43 W., 6th P.M.,</b>	
<b>SCALE: 1" = 2000'</b>		<b>CHEYENNE COUNTY, COLORADO</b>	
<b>DRG JOB No. 22271</b>			
<b>304b(7)C WILDLIFE</b>			