

# **WILDLIFE MITIGATION PLAN**

## **- NORTH PARK -**

### **D90 Energy, LLC & Gondola Resources, LLC**

*FINAL AUGUST, 2021*

D90 Energy, LLC (D90 Energy), Gondola Resources, LLC (Gondola), Modiin Energy NPB, LLC (Modiin), and Colorado Parks and Wildlife (CPW) agree to the Wildlife Mitigation Plan (WMP) attached hereto as Annex 1 for D90 Energy & Gondola's proposed oil and gas exploration, production, development and operations activities (O&G Activities) within the North Park Wildlife Mitigation Plan (NPWMP) boundary in Jackson County, Colorado. This NPWMP boundary contains the following federal oil and gas units: Beaver Creek Unit (COC78187X), Peterson Ridge Unit (COC75018X), and Surprise Unit (COC75017X). Additionally, several private surface use agreements are in place with adjacent private landowners. The purposes of this WMP agreement are to: 1) Identify best management practices (Appendix C) to avoid, minimize, and mitigate impacts to wildlife and the environment during O&G Activities, 2) Document that consultation between D90 Energy and CPW has occurred for environmental and wildlife-related issues/matters pursuant to COGCC Rule 309.e, and 3) Comply with COGCC Rules 304.c.(17) and 1201.b for Oil and Gas Locations within High Priority Habitat (HPH) and outline the implementation of operating requirements pursuant to Rules 1202.a, 1202.b, & 1202.c, as well as any compensatory mitigation requirements pursuant to Rule 1203. D90 Energy agrees to implement and otherwise conform its operations to the terms and conditions of this WMP as modified by agreement with the parties. This WMP does not apply to the operations of other oil and gas companies within the NPWMP boundary; however, certain of these companies may be required to adhere to D90 Energy's environmental stewardship standards. D90 Energy will provide this WMP to contracted companies engaged in operations within the NPWMP boundary.

CPW acknowledges that it has consulted with D90 Energy regarding proposed O&G Activities in areas of High Priority Habitat mapped by CPW and meeting the legislative intent of Colorado Senate Bill 19-181, and agrees that best management practices and mitigation measures are incorporated into this WMP. Accordingly, CPW shall inform the Colorado Oil and Gas Conservation Commission (COGCC) in writing that CPW has pre-approved consultation of any D90 Energy Form 2A permit application within 7 calendar days of electronic notice for locations within the WMP boundary. If this notification is not provided to the COGCC via CPW's eForms submission within seven (7) days of the electronic notification, CPW shall be deemed to have waived consultation for that particular Form 2A permit.

The COGCC has authority over D90 Energy's operations within Jackson County, Colorado. If, after CPW has delivered written notice of non-compliance with this WMP and D90 Energy has not responded within 30 days, then Form 2As and other required permits filed by D90 Energy will be subject to the full consultation requirements of COGCC Rule 309.e. in accordance with such rule.

The parties agree that the terms and conditions of this WMP shall inure to the benefit of and be binding upon the parties hereto and the parties' respective successors and assigns. No party may assign its rights or obligations under this WMP without the express written consent of the other party and such consent may not be unreasonably withheld.

This WMP may be modified by agreement of CPW, D90 Energy, and Gondola Resources. Any such modifications of this WMP shall not be effective unless agreed to in writing by the parties in an approved Record of Modification (*see* Appendix A). In addition, this WMP is subject to such modifications as may

be required by changes in Federal or State law, or their implementation of new regulations. Any such required modification shall to the extent applicable/necessary automatically be incorporated into and be part of this WMP on the effective date of such change as if fully set forth herein and the parties agree to take all actions necessary to comply with the changes to Federal or State law, or their implementation of new regulations.

The term of this WMP agreement is five (5) years and expires on the date indicated below. The parties may agree to extend this agreement prior to its expiration. If this agreement has not otherwise been terminated, the agreement shall terminate on the date indicated below (*5 years after approval by both parties*), unless extended by written agreement of both parties. Either party may terminate its agreement to this WMP upon thirty (30) days written notice to the other party. Upon expiration of the WMP agreement, all future obligations of the parties under this WMP are terminated. However, and notwithstanding such termination, the parties remain obligated and are required to continue to comply with the terms and conditions of this WMP for operations conducted pursuant to an approved Form 2A or associated permit that was approved during the effective period of this WMP.

It is expressly understood and agreed by all parties that, except for rights of enforcement by the COGCC set forth above, nothing in this WMP shall give or allow any claim or right of action by any other third party. The waiver of any breach of a term or condition of this WMP by a party shall not be construed or deemed a waiver of any subsequent breach of a term or condition, nor shall it impact in any way the rights of enforcement by the COGCC.

This WMP is the complete integration of all understandings between the parties. No prior or contemporaneous addition, deletion, or any other amendment thereto shall have any force or effect unless embodied herein in writing.

The signatories hereto warrant that they possess the legal authority to enter into this WMP and that they have taken all actions required by the respective parties' procedures, by-laws or applicable law to exercise that authority, and to lawfully authorize the undersigned signatory to execute this WMP and bind the party to its terms and conditions. The persons executing this WMP on behalf of the parties warrant that such persons have full authorization to execute this WMP.

**D90 Energy, LLC:**

By: \_\_\_\_\_

*Daniel H. Silverman, President*

Date: \_\_\_\_\_

*8/31/21*

**Colorado Parks and Wildlife:**

By: \_\_\_\_\_

*J.T. Romatzke, NW Regional Manager*

Date: \_\_\_\_\_

*8-26-2021*

**Gondola Resources, LLC:**

By: \_\_\_\_\_

*Brad Morse, President*

Date: \_\_\_\_\_

*8/30/21*

**Modlin Energy NPB, LLC:**

By: \_\_\_\_\_

*Yaniv Friedman, CEO*

Date: \_\_\_\_\_

*8/31/2021*

Effective Date: (date of approval by all parties)

Expiration Date: 8-31-2026

# WILDLIFE MITIGATION PLAN

## - NORTH PARK -

### D90 Energy, LLC & Gondola Resources, LLC

#### I. Table of Contents

<b>North Park Wildlife Mitigation Plan</b>	<b>1</b>
I. Table of Contents	3
II. Introduction	4
III. Development Planning to Protect Wildlife Resources	6
IV. Compensatory Mitigation for Unavoidable Adverse Impacts	9
V. Surface Ownership & Agreements for Implementation	14
VI. Definitions & Literature Cited	15
<b>Appendices</b>	<b>19</b>
A. <b>Appendix A – Record of Modifications</b>	19
B. <b>Appendix B – Maps</b>	20
- Map 1 – WMP Boundary & Federal Units	21
- Map 2 – Aerial Imagery & Boundaries	22
- Map 3 – Land Ownership Status	23
- Map 4 – Rule 1202.c.(1) NSO Areas & Case Flats Avoidance Area	24
- Map 5 – Rule 1202.d. HPH (Direct & Indirect Impact Mitigation Areas	25
- Map 6 – GrSG Priority Habitat Management Areas	26
- Map 7 – Timing Stipulation Exclusion Areas	27
- Map 8 – Big-game Winter Stipulation Areas	28
- Map 9 – GrSG Winter Stipulation Areas	29
- Map 10 – Existing Pads & Roads	30
C. <b>Appendix C – Best Management Practices (BMP) Lists</b>	31
- Field-Wide BMP List	32
- Greater Sage-grouse PHMA & GHMA Stipulation Areas	34
- Greater Sage-grouse Winter Range Stipulation Areas	35
- Stipulation Exclusion Areas	36
- Big-game Winter Range Stipulation Areas	37
- Big-game & Greater Sage-grouse Winter Range Stipulation Areas	38
D. <b>Appendix D – Compensatory Mitigation Tracking Spreadsheets</b>	39
E. <b>Appendix E – Facility Density Analyses</b>	41
F. <b>Appendix F – CPW Fencing with Wildlife in Mind Document</b>	43
G. <b>Appendix G – Stormwater Management &amp; Emergency Spill Response Plans</b>	44

## II. Introduction

This Wildlife Mitigation Plan (“WMP”) was developed in consultation with Colorado Parks and Wildlife (“CPW”) for D90 Energy, LLC’s (“D90 Energy”) and Gondola Resources, LLC’s (“Gondola”) oil and gas holdings within North Park, Jackson County, Colorado. On April 16, 2019, Senate Bill 19-181 “Protect Public Welfare Oil and Gas Operations” was signed into law by Governor Jared Polis. This legislation resulted in a mission change and massive rewrite of the Colorado Oil and Gas Conservation Commission’s (“COGCC”) existing oil and gas regulations to meet the legislative intent of Senate Bill 181. Specific to wildlife, COGCC’s new 300 series (*Permitting Process & Consultations*) and 1200 series (*Protection of Wildlife Resources*) were both approved in November of 2020 and became effective on January 15, 2021.

This WMP agreement satisfies the CPW consultation requirements of COGCC Rule 309.e., and the WMP requirements of Rule 1201.b. for proposed Oil and Gas Operations on new or amended Oil and Gas Locations within CPW-mapped High Priority Habitats (“HPH”). The general operating requirements under COGCC Rule 1202, and compensatory mitigation requirements under COGCC Rule 1203, are also addressed and incorporated by reference into this WMP document.

D90 Energy and CPW shall meet to review this WMP agreement annually, between January 1st and March 31st each year. However, discussions of development activity or changes in species’ distributions and habitats considered in this WMP analysis may occur prior to the annual review process. D90 Energy shall provide updates, either verbal or informal summaries, as they relate to current wildlife and natural resource actions, including reclamation, weed monitoring and control, on-site biological reports, and any biological pre-construction survey results for review by CPW during the annual WMP meeting. The Bureau of Land Management (“BLM”) may also request to review any applicable information. However, D90 and/or Gondola may choose to not relinquish any data to CPW, BLM, or the COGCC that is considered proprietary in nature.

D90 Energy, and/or any subcontractor or agent of D90 Energy, shall apply to CPW for a scientific collection permit if wildlife sampling is sought on lands and waters contained within the NPWMP boundary. D90 Energy shall work with CPW and private landowners to assist with gaining access for CPW wildlife monitoring and survey efforts on private lands, if necessary.

### **Development Background and Context**

D90 Energy and Gondola acquired approximately 95,000 acres of oil and gas lease holdings, associated oil and gas well sites, central tank batteries (“CTBs”), and other infrastructure in North Park, Colorado on February 5, 2021 from SandRidge Exploration and Production, LLC (“SandRidge”). CPW staff has been working with multiple operators since the initial development of this field to develop best management practices and compensatory mitigation to effectively avoid, minimize, and mitigate impacts to wildlife resources. The goal of this WMP is to elevate the conversation beyond site-specific individual permit consultations and transition to a

landscape-scale mitigation strategy to more effectively protect the wildlife resources of North Park.

CPW understands that oil and gas development typically progresses through several different stages of activity; generally recognized as exploratory, development and production, infill or full field development, and reclamation and abandonment. Each phase of development has distinctive operational needs and constraints; also, each phase of development has differing levels of human activity and impacts to wildlife resources, with cumulative impacts occurring throughout the life of the development. The development timeline for each stage is variable and dependent upon many factors, with the production phase of operations potentially lasting for decades.

Currently, D90 Energy is working on plans for drilling, completing, and producing exploratory wells within North Park. It is expected that this phase will last through the next five (5) years with a gradual transition to infill and full field development activities. Amendments and/or extensions to this plan are expected to include revisions as activities evolve from one phase to another. This plan is not intended to be static in nature, but instead a living document that can be revised to best suit the needs of D90 Energy and CPW as conditions warrant.

The target play for D90 Energy in the North Park Basin are multiple benches within the Niobrara and Frontier formations. CPW understands that exploration and development strategies for this resource play will cause wildlife and habitat disturbance, but also provide opportunities for avoiding, minimizing, and mitigating such disturbances. D90 Energy commits to working with CPW to continually refine development techniques to reduce their overall disturbance footprint. This may include measures such as: centralized tank batteries to reduce trucking traffic across the basin, reutilization of existing well pads, clustering development near Colorado State Highway 14 ("HWY 14"), seasonal timing restrictions for sensitive wildlife seasons and life stages, specific operating hours, daily traffic restrictions, etc.

### **Geographic Area of Development**

D90 Energy's mineral assets occur on approximately 160 square miles located entirely within Jackson County, Colorado. This area of North-central Colorado consists primarily of high-elevation (approximately 8,000 to 8,500 ft.) sagebrush dominated uplands, stream-fed wetland and riparian areas, and agricultural operations including livestock pastures and hay fields (see Map 2). The primary water drainage within the NPWMP is Grizzly Creek and its many tributaries. The Grizzly Creek watershed terminates at its confluence with the North Platte River near the northern end of the NPWMP boundary. The NPWMP encompasses 100,074 acres, with approximately 37,700 acres (37.7%) of BLM surface ownership, 6,500 acres (6.5%) of National Wildlife Refuge, 2,300 acres (2.3%) of CO State Land Board ("SLB") State Trust Lands, and 53,600 acres (54%) of private ownership (see Map 3). HWY 14 runs north-south through the center of the WMP boundary, with numerous Jackson County and BLM-managed roads providing additional access throughout the area. D90 Energy maintains three Federal exploratory units within North Park: the Peterson Ridge Unit, Beaver Creek Unit, and Surprise Unit (see Map 1).

Additionally, D90 Energy has multiple surface-use agreements that have been negotiated with private landowners in the basin.

North Park contains highly productive wildlife habitats, which support robust populations of big game, greater sage-grouse (“GrSG”), native and introduced sport-fish species, mid to large carnivores, small mammals, waterfowl, and other migratory birds including numerous birds of prey. Hunting, angling, and wildlife watching are extremely popular in this area and contribute significantly to the local economy each year. Hunting, fishing and agriculture are the largest industries in Jackson County, supporting 30% of the population (Data USA, 2018). Additionally, North Park contains the second largest population of GrSG in Colorado, a Tier 1 species of conservation concern for CPW (2015 Colorado State Wildlife Action Plan), and previously (2015) petitioned for listing under the Endangered Species Act, but found to be not warranted by the U.S. Fish and Wildlife Service.

### III. Development Planning to Protect Wildlife Resources

#### **Development Activity**

Projections for D90 Energy’s future development scenarios in North Park are difficult to determine due to current regulatory and resource uncertainties. Historically, during the development and analysis of a wildlife mitigation plan, CPW has required an operator to provide locations of their planned well pads, CTBs, access roads, pipelines, electrical lines, and other infrastructure up front to ascertain what the expected wildlife impacts would be. D90 Energy has provided CPW with its best approximation of planned well pads and CTBs for the next five (5) years of development. Additionally, D90 Energy agrees to continually share information regarding new Oil and Gas Locations informally with CPW staff, as it becomes available. CPW agrees to not share this information with any other parties or individuals, unless approved by D90 Energy to do so.

CPW and D90 Energy have developed a strategy to avoid, minimize, and mitigate wildlife impacts based on geospatial features and known wildlife habitats within the WMP boundary. It is important to note that D90 Energy does not expect a substantial amount of development to occur in the next several years. Approximately eight wells per year is the expected level of activity through 2023. Approximately eight to sixteen wells per year is expected thereafter. For the purpose of this plan, the scope of expected oil and gas activities and infrastructure includes: new well pads and lease roads, new wells from existing pads, associated water, oil, and gas pipelines, centralized tank batteries, loading and unloading stations, compressor stations, gas-to-liquid skids, mobile refrigeration units, equipment storage locations, produced water disposal wells, and other infrastructure resulting in a surface disturbance (collectively “Oil and Gas Locations”). D90 Energy will place necessary production equipment on the pad sites; the typical equipment placed on a well pad includes pump jacks, jet pumps or electric submersible pumps, injection wells, separators, meter houses, water/oil/condensate tanks (*if centralized tank battery is not available*), flare mitigation, data centers, and gas generator(s), when necessary (collectively “Oil and Gas Facilities”).

D90 Energy utilizes existing water rights for surface water to conduct its drilling and completions activities. This water is accessed from agricultural diversions, Grizzly Creek, Little Grizzly Creek, or Pole Mountain Reservoir, and generally pumped via surface lines to the necessary pad locations. D90 Energy contributes monetarily to the [South Platte Water Related Activities Program](#) (SPWRAP) to offset water usage in its oil and gas activities.

### **General Development Practices**

When analyzing the effects of oil and gas development on wildlife resources, CPW considers both direct impacts and indirect impacts that can occur from a proposed activity. Potential impacts to wildlife resources can occur from the direct conversion of habitat into roads and well pads, or from decreases in habitat functionality and permeability due to increased noise, light, traffic, and infrastructure on the landscape, resulting in indirect disturbances. When developing strategies for oil and gas operators to protect and conserve wildlife resources, CPW follows the mitigation hierarchy of avoid, minimize, and mitigate. It is often the least expensive alternative for industry and most beneficial to wildlife resources to first avoid potential impacts from the start. Per COGCC Rule 1202.c.(1) D90 Energy will not conduct any new ground disturbance and well work, including access road and pad construction, drilling and completion activities, and flowline/utility corridor clearing and installation activities in the No Surface Occupancy (“NSO”) High Priority Habitats listed under this Rule (see Map 4). These habitats are considered by CPW to be irreplaceable (i.e. cannot mitigate for the loss) and therefore, best avoided to allow for the continued persistence of the species.

CPW acknowledges that not all wildlife habitats can be fully avoided; therefore, measures to minimize and mitigate unavoidable adverse impacts to the remaining high priority habitats mapped by CPW must be considered. Minimization techniques come in the form of best management practices and include measures such as alternative site analyses and selection in coordination with CPW, minimizing the density of oil and gas locations and access roads, seasonal timing restrictions, noise and light minimization, traffic reduction, etc. Finally, where adverse direct and indirect impacts exist and cannot be fully avoided or minimized, compensatory mitigation pursuant to COGCC Rule 1203 shall be implemented to create a “no net loss” scenario for the wildlife resources affected. The following sections describe the agreements between CPW and D90 Energy to comply with COGCC Rules 309.e. and the 1200 series, to follow the mitigation hierarchy for oil and gas operations within this NPWMP, and to meet the legislative intent of Colorado’s Senate Bill 19-181.

### **Avoidance**

**Greater Sage-Grouse:** Based on CPW’s wildlife habitat mapping, annual wildlife surveys, and consistent with COGCC Rule 1202.c.(1), the highest priority habitats have been identified as full avoidance areas within the NPWMP boundary. These habitats include GrSG Lek Sites and the Case Flats GrSG congregation area (see Map 4). No surface occupancy (NSO) restrictions extend one mile from the specific lek location. A GrSG lek site is generally an open area where males congregate in the spring to display and breed with females. For the purpose of Rule 1202.c. NSO



areas, lek sites that have recorded lekking activity within the last 10 years are included. Older lek sites are considered “historic” and not included within the NSO habitat category. Utilizing a one-mile avoidance buffer around active lek locations is also consistent with the management direction of the BLM’s 2015 Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendments. This one-mile buffer distance around GrSG lek sites is intended to protect the functionality of the strutting ground and the immediate high-value nesting and brood-rearing habitat surrounding the lek site.

The Case Flats GrSG congregation area was discovered by CPW staff while conducting GrSG research in the North Park basin. For unknown reasons, GrSG from the entire basin congregate in large numbers at this location each year during late winter/early spring. Due to the apparent importance of the site for grouse, it is being considered a full avoidance area within the NPWMP. D90 Energy agrees to prohibit construction of all new Oil and Gas Locations within these delineated areas, unless a Variance pursuant to Rule 502 has been granted by the COGCC with concurrence from CPW. Avoiding these areas will maintain their effectiveness for wildlife and is the most important step of the mitigation hierarchy.

**Aquatic Habitats:** COGCC Rule 1202.c.(1).Q-S contain the following CPW-mapped aquatic habitats: gold medal designated fisheries, cutthroat trout designated crucial habitat, native fish and other native aquatic species conservation waters (“native fish”), and sportfish management waters not otherwise designated as gold medal (“sportfish”). Under rule 1202.c.(1), these CPW-designated waters are buffered 500 feet from the ordinary high water mark (“OHWM”), and the resulting polygons are regulated as No Surface Occupancy for any new ground disturbance and well work. Unique to these aquatic NSO designations is an exemption (*per Rule 1202.c.(2).C.*) for new access roads and utility corridors following consultation with CPW to avoid and minimize potential adverse impacts. CPW also maintains discretion for sportfish management waters to provide written waivers to the NSO restriction for ephemeral and intermittent waterways, and the areas between 300-500 feet of the OHWM of perennial sportfish waterways.

**Active Raptor Nests:** There are currently no active raptor nests for the species listed under Rule 1202.c.(1) within the NPWMP boundary. CPW may recommend that D90 Energy conduct, or hire certified wildlife biologists to conduct, raptor nest surveys prior to construction where it is determined that adequate nesting habitat is within 0.5 miles of the proposed area of development. D90 Energy agrees to share any nest survey results with CPW for inclusion into the Colorado raptor nest database. Furthermore, COGCC’s future annual wildlife mapping updates may result in additional NSO areas within the NPWMP boundary for active raptor nest sites.

### Minimization

Following the avoidance measures outlined above, the next step in protecting wildlife resources is to minimize unavoidable adverse impacts to the maximum extent practicable. CPW and D90 Energy have negotiated best management practices that will be applied to all oil and gas locations and operations to minimize unavoidable adverse impacts resulting from traffic, noise, artificial light, noxious weeds, etc. A list of field-wide best management practices (“BMPs”) (see Appendix



C) will be implemented by D90 Energy for its operations within all areas of the NPWMP. These field-wide BMPs will also include, unless waived by CPW, all of the statewide operating requirements outlined under COGCC Rule 1202.a. D90 Energy will request a CPW waiver for any statewide operating requirements that may not be applicable or necessary at a given location. In addition to the field-wide requirements, species-specific BMPs are also outlined to address concerns within certain habitat areas (*see* Maps). These may include measures such as seasonal timing restrictions for construction, drilling, and completions, daily timing limitations for well site visits, noise and lighting minimization techniques, wildlife-friendly reclamation practices, reduced traffic speeds, etc. The application of these species-specific BMPs is determined by spatial factors including the presence of specific wildlife habitats and proximity of the proposed development to HWY 14. The areas where these BMPs are to be applied have been delineated on Maps 7-9 of Appendix B. D90 Energy agrees to include the relevant BMPs with each newly submitted Form 2A permit application to COGCC. To further simplify this process, CPW and D90 Energy have agreed to the specific BMP lists found in Appendix C for each spatial area defined and mapped by this plan.

In addition to best management practices to minimize impacts, D90 Energy has agreed to track the density of oil and gas locations and the average surface disturbance (*production phase*) per square mile (pursuant to COGCC Rules 1202.d. and 1203.d.). Research has indicated that habitat effectiveness for species such as GrSG, mule deer, elk, and pronghorn antelope decreases when active oil and gas locations exceed one per square mile (Holloran, 2005; Hebblewhite, 2008; Sawyer et al., 2017; Kirol et al. 2020; Green et al. 2016). Well pad densities will be calculated as the number of existing well pads and CTBs per square mile, averaged across the entire NPWMP boundary (*see* Appendix E). Additionally, the total surface disturbance from well pads (drilling locations and CTBs) and new access roads will be tracked and averaged across the NPWMP as acres of disturbance per square mile. This method will help identify and track the cumulative impacts of oil and gas activities within the operating area. Additionally, the location density threshold of one active location per square mile is consistent with COGCC Rule 1202.d. and with the BLM's 2015 and 2019 Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendments for GrSG Priority Habitat Management Areas ("PHMA").

D90 Energy will provide the number of new locations constructed and their associated disturbance footprints (including access roads), as well as any final reclamation activities that have occurred throughout the year, to CPW staff during the annual WMP meeting. Each year Appendix E will be updated with any newly constructed locations or reclamation activities to reflect the most current levels of surface disturbance and average facility densities within the NPWMP boundary.

#### IV. Compensatory Mitigation for Unavoidable Adverse Impacts

After all measures have been taken to avoid and minimize impacts to wildlife and their habitats, there may still be residual impacts from oil and gas activities that cannot be fully avoided or minimized. These impacts to wildlife and their habitats can eventually result in population-level

effects on a species' abundance and distribution. To offset these residual impacts, it is recommended that oil and gas operators either fund or conduct compensatory mitigation projects commensurate to the level of impact resulting from their operational activities (i.e. no net loss).

On December 19, 2018, former Governor of Colorado, John Hickenlooper, signed Executive Order D 2018-036. This document directs the Colorado Department of Natural Resources and its divisions (including CPW and COGCC) to *"use their full authority to apply the mitigation hierarchy (avoid, minimize, and mitigate), including requiring compensatory mitigation when residual adverse impacts to wildlife resources, including greater sage-grouse or its habitat, occur."* Additionally, as described earlier, CO Senate Bill 19-181 resulted in sweeping regulation changes for oil and gas development in Colorado. One result of these regulation changes is Rule 1203 that requires compensatory mitigation (*for direct and/or indirect impacts*) within the subset of CPW-mapped high priority habitats listed under COGCC Rule 1202.d. (*see Map 5*).

Through the negotiation process of this NPWMP, CPW has worked with D90 Energy to develop the following system for calculating and applying compensatory mitigation for the construction of new locations, expansions of existing locations resulting in greater than one acre of disturbance, and for granting exceptions and waivers to seasonal timing restrictions associated with previously permitted locations.

### **Compensatory Mitigation for Direct Impacts (*Rule 1203.a.*)**

Pursuant to COGCC's Rule 1203, oil and gas operators are required to offset their unavoidable adverse impacts resulting from the direct loss of wildlife habitats listed under Rule 1202.d. (*see Map 5*) through on or off-site compensatory mitigation projects. Operators may elect to offset their direct impacts by completing mitigation projects themselves, in consultation with CPW; or they may elect to pay the direct impact mitigation fee of \$13,750 (*Rule 1203.c.*) for each new oil and gas location resulting in  $\leq 11$  acres of total disturbance. For locations exceeding 11 acres of disturbance, the fee will be calculated on a case-by-case basis using the same methodology that was used to determine the fee noted above<sup>1</sup>.

For the sake of this WMP agreement, D90 Energy has elected to pay the direct impacts mitigation fee for all newly permitted oil and gas locations within Rule 1202.d. habitats. These fees will be paid into the North Park Compensatory Mitigation Account, and used by CPW to complete habitat enhancement work as described in further detail below.

### **Compensatory Mitigation for Unavoidable Adverse Indirect Impacts (*Rule 1203.d.*)**

To fully offset the potentially remaining adverse indirect impacts of oil and gas development to wildlife, there must be an acceptable way of calculating what those impacts are. In 2017, the [Colorado Habitat Exchange, Inc.](#) released the Greater Sage-grouse [Habitat Quantification Tool](#)

---

<sup>1</sup> The direct impact mitigation fee outlined under COGCC Rule 1203 may be subject to change based on future rulemaking revisions and updates.

("HQT"). This tool was developed over the course of several years by a scientific advisory group consisting of leading GrSG biologists, wildlife habitat scientists, and oil and gas industry representatives. It provides a scientifically defensible multi-scale approach for assessing impacts and benefits to greater sage-grouse habitats resulting from anthropogenic activities. This tool represents the best available science for calculating indirect impacts to GrSG habitats from oil and gas development. Accordingly, CPW and D90 Energy have agreed to utilize this tool for calculating the overall unavoidable adverse indirect impacts for each newly constructed facility within Rule 1202.d. high priority habitats mapped by CPW within the NPWMP boundary (*see* Map 5). Additionally, expansions of existing locations that result in more than one acre of new surface disturbance will be analyzed with the HQT to determine the necessity for additional compensatory mitigation. This tool does not account for impacts to other species such as mule deer, elk and pronghorn; however, at this time, the primary species of concern in the NPWMP boundary is GrSG, and habitat enhancement efforts for GrSG will generally benefit most other sagebrush-dependent species as well.

The HQT takes into account several factors including a location's proximity to existing disturbances, distance to the nearest GrSG lek locations, quality of existing seasonal habitats, and the status and size of the access road and proposed facility. Using a geospatial modeling analysis, the tool quantifies the impact to wildlife habitat in functional acres based on the proposed development's footprint and location on the landscape.<sup>2</sup> The number of functional acres impacted will then be used to calculate a total monetary value for indirect impact compensatory mitigation at a rate of \$300 per functional acre (*see below*). The maximum amount of indirect impact compensatory mitigation per oil and gas location would be \$50,000 for locations within the HWY 14 no stipulation buffer zone (*see* Map 7) and \$150,000 for locations outside of this buffer zone. These indirect impact mitigation fees will be paid in addition to the direct impact fee explained above.

HQT Functional Acre Impact x \$300 = Indirect Impact Mitigation Payment Due to CPW

As new Oil and Gas Locations are permitted and constructed each year, the required amounts will be contributed to the CPW compensatory mitigation account<sup>3</sup>. Mitigation requirements and payments will be tracked using the mitigation tracking spreadsheet (*see* Appendix D). Yearly mitigation contributions and requirements will be discussed and finalized during the annual WMP meetings.

CPW staff will be responsible for identifying habitat enhancement projects and coordinating with land managers (e.g. private, State, and Federal) in North Park to effectively offset oil and gas impacts to GrSG and other impacted species. Mitigation funds received under this agreement will be utilized within Jackson County, unless formally agreed upon by both parties. Compensatory

---

<sup>2</sup> CPW acknowledges that the calculation of indirect adverse impacts from oil and gas development is not an exact science. In situations where the HQT results in functional acre calculations that do not appear realistic for the proposed development, CPW will work with D90 Energy to negotiate an amount that is reasonable and necessary to offset the indirect impacts of the proposed oil and gas location.

<sup>3</sup> Mitigation payments are due no less than 30 days prior to submitting a Form 42, Field Operations Notice – Notice of Construction or Major Change pursuant to Rule 405.b. (Rule 1203.c.).

mitigation projects may include, but are not limited to: permanent conservation of existing habitats, mechanical vegetation treatments, noxious weed control, reclamation of previously disturbed habitats, fencing removal and/or replacement, highway crossing/mitigation projects, research needs, and equipment for field personnel. All mitigation funds will be utilized within the North Park Basin, but not necessarily within the NPWMP boundary. CPW staff will provide updates annually during the scheduled WMP meetings regarding the amount of mitigation funds in the account and projects that have been completed, are underway, or being planned for compensatory mitigation. Annual reporting of mitigation monies received and spent will also be provided to the COGCC Commission and made available to the public pursuant to agreements made between COGCC and CPW during the 1200 Series rulemaking hearings process.

### **Compensatory Mitigation for Exceptions and Waivers to Seasonal Timing Limitations**

Most of the existing oil and gas locations in North Park contain seasonal and/or daily wildlife timing restrictions on their State-issued permits. Additionally, many new locations within the NPWMP will also contain the same restrictions as a result of the negotiated best management practices. CPW understands that there are situations that may arise where it would be difficult for D90 Energy to adhere to the timing restrictions associated with a given location. Numerous factors including, but not limited to: adverse weather conditions, equipment malfunctions, and permitting delays can contribute to scheduling conflicts. Emergency situations that could have human safety and/or environmental consequences are always excluded from these stipulations. In instances where D90 Energy needs to ask for an exception or waiver to an existing wildlife stipulation, the following process outlines the procedure for how these exception or waiver requests will be assessed.

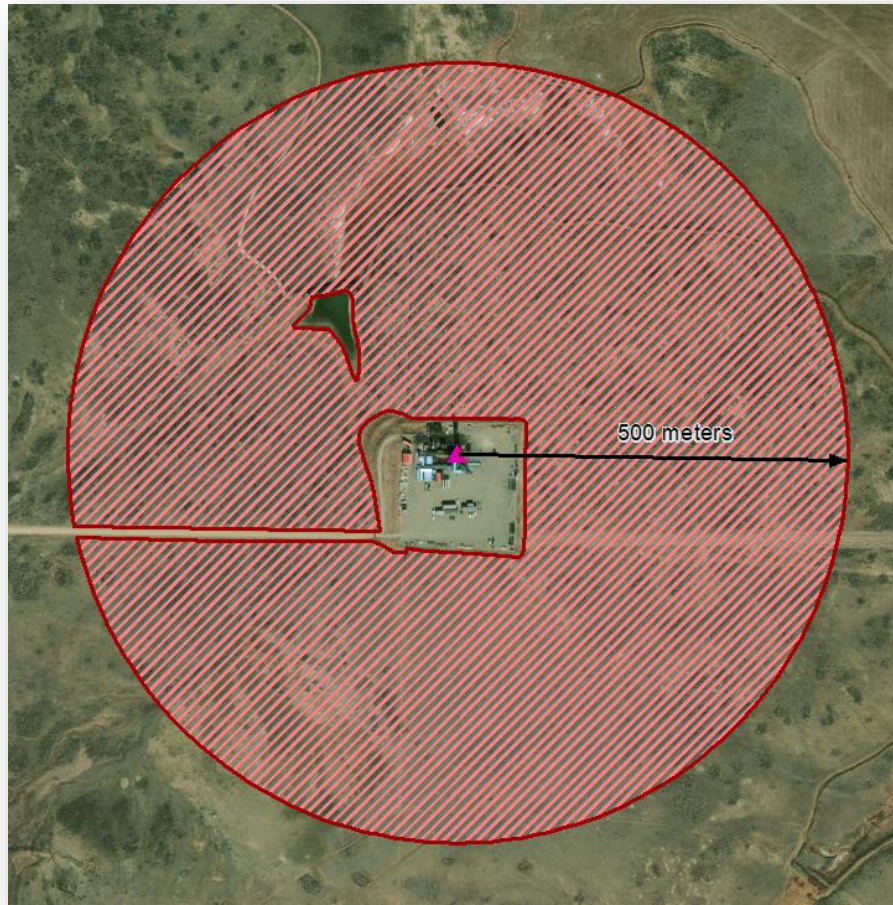
D90 Energy agrees to contact CPW at least 30 days in advance of needing an exception or waiver to an existing State wildlife stipulation. CPW maintains the right to deny the request if severe adverse impacts to wildlife resources are anticipated. If CPW is amenable to allowing the exception or waiver request, compensatory mitigation will be calculated to ensure that the resulting impacts to wildlife resources are fully mitigated. Additionally, it is D90 Energy's responsibility to submit the necessary sundry request forms to COGCC and avoid violating any BMPs and/or COAs associated with their existing permits. Upon approval of the exception or waiver request, CPW agrees to provide written concurrence to COGCC at the time of the sundry application.

The following process will be implemented using GIS computer software to calculate compensatory mitigation for an exception or waiver request to a wildlife timing stipulation:

1. Buffer the existing location (*from well heads*) by 500 meters (*based on the Colorado Habitat Exchange's disturbance distance for active oil and gas locations developed and utilized by the Habitat Quantification Tool*)
2. Manually remove non-habitat areas from within the 500-meter buffer area (*i.e. water bodies, existing oil and gas location footprints, agricultural stack yards, etc.*)

3. Calculate the resulting acreage within the modified buffer polygon
4. Multiply this acreage by \$200 to obtain the final mitigation requirement (see Figure 1)

*Figure 1:*



This example demonstrates a 500 meter buffer of an existing location with non-habitat areas clipped out of the buffered polygon. The resulting area is 183 acres. This would be multiplied by \$200 for a total mitigation requirement of \$36,600 to allow a waiver to the timing stipulation.

The methods in this section of the document for calculating, implementing, and tracking compensatory mitigation are meant to off-set the unavoidable adverse impacts from oil and gas operations within the NPWMP boundary to the maximum extent possible. As described earlier, every effort will be made to first avoid and minimize adverse impacts to wildlife resources and lastly, utilize compensatory mitigation as the final step to remedy any remaining impacts.

## **Wildlife Stipulation Exclusion Areas**

HWY 14 runs north-south approximately through the middle of the WMP boundary area. According to the best available science, major roads have a significant indirect impact on surrounding GrSG habitats out to approximately 1 mile (1.5 km) in either direction, with residual indirect impacts occurring up to 2.6 miles (4.2km) from the roadway (Colorado Habitat Exchange, 2017). These are in addition to the direct habitat loss from the roadway itself. One of the best ways to minimize indirect impacts from new projects is to incentivize those projects to be collocated or “clustered” with existing disturbances. This creates overlapping areas of indirect impacts and reduces new indirect impacts in currently undisturbed habitats.

In order to incentivize new oil and gas development in close proximity to HWY 14, CPW and D90 Energy agree to a “No Wildlife Timing Stipulation Zone” around HWY 14. This zone was achieved by applying a customized (approximately 1-mile) buffer to HWY 14 and removing both seasonal and daily production-phase habitat timing stipulations (i.e. GrSG production and big game winter range) from oil and gas locations within the buffered area found on Map 7.

New Oil and Gas Locations permitted within this buffer will not be subject to GrSG breeding and big game winter timing stipulations (i.e. daily production-phase limitations or seasonal construction and drilling restrictions) and will have an indirect impact compensatory mitigation cap of \$50,000 per location.

## **V. Surface Ownership & Agreements for Implementation**

Permitting of Oil and Gas Locations within Colorado varies depending on land ownership. For locations on private property accessing private minerals, the COGCC and local governments have jurisdiction to approve permits including the Form 2A location assessment for newly constructed locations. Under COGCC Rule 1201.b., this wildlife mitigation plan shall replace the need for individual CPW wildlife consultations for newly proposed Oil and Gas Locations. If future changes to COGCC rules and regulations directly affect portions of this plan, an amendment may be necessary to address those changes and conform to future rules and permitting processes.

For Oil and Gas Locations on federally owned surface or directional/horizontal well bores accessing federally-owned subsurface minerals, the BLM and COGCC both have jurisdiction over permitting. The agreements made in this NPWMP attempt to achieve consistency with BLM wildlife stipulations, including the 2015 and 2019 GrSG ARMPA and Kremmling Field Office’s 2015 Resource Management Plan. CPW and D90 Energy will continue working with the BLM to develop an agreement on how this NPWMP may be used during the federal oil and gas permitting process. If an agreement is made with BLM, that agreement shall be included as an appendix to this document, and described herein.

## VI. Definitions & Literature Cited

### Definitions:

The following list contains terms used (underlined within the plan) and their intended definitions in the context of this document to provide clarity and continuity within the North Park Wildlife Mitigation Plan and in regard to COGCC oil and gas regulations.

**Best Management Practices (BMPs)** – Operational measures that are designed to prevent or reduce impacts caused by oil and gas operations to air, water, soil, or biological resources, and to minimize adverse impacts to public health, safety, and welfare, including the environment and wildlife resources.

**Direct Impacts** – The direct loss of habitat that occurs from the construction of oil and gas locations and facilities (*i.e. the resulting disturbance “footprint” of constructed locations*). Per COGCC Rule 1203.a., direct impacts to wildlife are unavoidable and occur from direct mortality or displacement during construction activities and habitat conversion to industrial facilities.

**Exception Request** – For the sake of this WMP, an exception shall mean the one-time exemption of an existing wildlife stipulation for an already permitted oil and gas location. The stipulation would still remain for the life of the location following approval of the one-time exception.

**Greater Sage-Grouse Lek Site** - An open area usually located in low sagebrush where sage grouse traditionally display and breed. Leks may be classified in one of five ways according to Autenrieth et al. 1982: active, inactive, primary, complex, and satellite. Active leks are defined as those leks in which strutting male grouse have been observed in two of the previous five years. For the purpose of Rule 1202.c. NSO areas, lek sites that have recorded lekking activity within the last 10 years are included. Older lek sites are considered “historic” and not included within the NSO habitat category.

**Greater Sage-Grouse Priority Habitat Management Areas (PHMA)** - Areas that have been identified as having the highest conservation value to maintaining sustainable GrSG populations. They include breeding, late brood-rearing, and winter concentration areas.

**High Priority Habitats (HPH)** - Habitat areas identified by Colorado Parks and Wildlife where measures to avoid, minimize, and mitigate adverse impacts to wildlife have been identified to protect breeding, nesting, foraging, migrating, or other uses by wildlife. Maps showing, and spatial data identifying, the individual and combined extents of the High Priority Habitats are produced and maintained by CPW, and can be accessed through [COGCC’s online geospatial mapping tool](#). Current HPH layers with corresponding recommendations to avoid, minimize, and mitigate impacts can be found on CPW’s website [HERE](#).

**Indirect Impacts** – A measurement of the decrease in habitat effectiveness that results from nearby oil and gas activities. Often a result of increased noise levels, artificial lighting, traffic, human presence, or tall structures near wildlife habitats. Additionally, fragmentation of habitat by roads and pipelines decreases permeability for wildlife and leads to indirect impacts for species utilizing these areas. Per COGCC Rule 1203.a., indirect impacts to wildlife occur over time from the cumulative functional habitat



loss from fragmentation and modified habitat use as development density increases. Indirect Impacts may be Avoided or Minimized through the application of alternative siting and Rule 1202 operating requirements.

**No Surface Occupancy (NSO) Habitats in Rule 1202.c.(1)** - The following subset of CPW-mapped high priority habitats are designated as no surface occupancy areas (*this list only contains habitats potentially present within Jackson County, Colorado*):

- (1) Greater sage-grouse (within 1.0 miles of the lek site);
- (2) Bald eagle (within 0.25 miles of an active nest);
- (3) Ferruginous hawk (within 0.5 miles of an active nest);
- (4) Golden eagle (within 0.25 miles of an active nest);
- (5) Northern goshawk (within 0.5 miles of an active nest);
- (6) Peregrine falcon (within 0.5 miles of an active nest);
- (7) Prairie falcon (within 0.5 miles of an active nest);
- (8) Townsend's big-eared bat, Mexican free-tailed bat, and myotis (within 350 feet of winter hibernacula);
- (9) Bighorn sheep production area;
- (10) Waters identified by CPW as "Gold Medal" (within 500 feet of OHWM);
- (11) Cutthroat trout designated crucial habitat and native fish and other native aquatic species conservation waters (within 500 feet of OHWM); and
- (12) Sportfish management waters not identified by CPW as "Gold Medal" (within 500 feet of OHWM)

Maps showing and spatial data identifying the individual and combined extents of the above habitat areas shall be maintained by CPW and made publicly available on the COGCC website at: <http://cogcc.state.co.us/>

**Oil and Gas Facility** – Shall mean equipment or improvements used or installed at an oil and gas location for the exploration, production, withdrawal, treatment, or processing of crude oil, condensate, E&P waste, or gas.

**Oil and Gas Location** - shall mean a definable area where an operator has disturbed or intends to disturb the land surface in order to locate an oil and gas facility.

**Oil and Gas Operations** - means exploring for oil and gas, including conducting seismic operations and the drilling of test bores; siting, drilling, deepening, recompleting, reworking, or abandoning a well; producing operations related to any well, including installing flowlines; the generating, transporting, storing, treating, or disposing exploration and production wastes; and any constructing, site preparing, or reclaiming activities associated with such operations.

**Rule 1202.d. High Priority Habitats** - The following subset of CPW-mapped High Priority Habitats trigger the need for a wildlife mitigation plan, direct impact compensatory mitigation, and possible indirect impact compensatory mitigation depending on the density of oil and gas locations (*this list only contains habitats potentially present within Jackson County, Colorado*):

- (1) Bighorn sheep migration corridors and winter range;
- (2) Elk migration corridors, production areas, severe winter range, and winter concentration areas;
- (3) Mule deer migration corridors, severe winter range, and winter concentration areas;
- (4) Pronghorn migration corridors and winter concentration areas;
- (5) Greater sage-grouse priority habitat management areas;

Maps showing GIS spatial data identifying the individual and combined extents of the above habitat areas shall be maintained by CPW and made publicly available on the COGCC website at: <http://cogcc.state.co.us/>

**Variance** - A formal request from an oil and gas operator to the COGCC Commission to grant an exemption, per Rule 502, when a proposed oil and gas development will not meet the requirements of a specific rule or order of the Commission. Variances are granted by the COGCC following a public hearing process. Written CPW concurrence for a specific wildlife-related variance request may be provided upon request and subsequent review of the site-specific conditions.

**Waiver** – For the sake of this WMP, a waiver shall mean the permanent removal of a wildlife stipulation from an oil and gas location. Different from an exception, which is a request for a one-time removal of the existing wildlife stipulation.

**Well Pad** – The area that has been cleared of vegetation and leveled for a drilling rig to work on. Typically, after drilling and completions activities have been completed, much of the disturbed area is reclaimed for the production phase of the well(s). Final reclamation of the pad is conducted after production has ceased.

## Literature Cited:

- Autenrieth, R., W. Molini, and C. Braun. 1982. Sage grouse management practices. Western States Sage Grouse Committee Technical Bulletin 1. Twin Falls, Idaho, USA.
- BBC Research & Consulting. 2008. The Economic Impacts of Hunting, Fishing and Wildlife Watching in Colorado. Report prepared for Colorado Division of Wildlife, Denver, CO.
- Bureau of Land Management (BLM). 2015. Northwest Colorado Greater Sage-grouse Approved Resource Management Plan Amendment. Denver, CO
- Colorado Habitat Exchange (CHE). 2017. Greater Sage-Grouse Habitat Quantification Tool Scientific Methods Document, Version 7.
- Colorado Parks & Wildlife (CPW). 2015. Colorado's 2015 State Wildlife Action Plan. Denver, CO
- [DATA USA. 2018. https://datausa.io/profile/geo/jackson-county-co#economy](https://datausa.io/profile/geo/jackson-county-co#economy)
- Green, A.W., Aldridge, C.L. and O'donnell, M.S. 2017. Investigating impacts of oil and gas development on greater sage-grouse. *Journal Wild. Mgmt.*, 81: 46-57. <https://doi.org/10.1002/jwmg.21179>
- Hebblewhite, M. 2008. A literature review of the effects of energy development on ungulates: Implications for central and eastern Montana. Report prepared for Montana Fish, Wildlife and Parks, Miles City, MT.
- Holloran, M.J. 2005. Greater Sage-grouse (*Centrocercus urophasianus*) Population Response to Natural Gas Field Development in Western Wyoming. PhD, Department of Zoology and Physiology - University of Wyoming. Laramie, WY.
- Kirol, C.P., Smith, K.T., Graf, N.E., Dinkins, J.B., Lebeau, C.W., Maechtle, T.L., Sutphin, A.L. and Beck, J.L. 2020. Greater Sage-Grouse Response to the Physical Footprint of Energy Development. *Journal Wild. Mgmt.*, 84: 989-1001. <https://doi.org/10.1002/jwmg.21854>
- Sawyer H., N.M. Korfanta, R.M. Nielson, K.L. Monteith, and D. Strickland. 2017. Mule deer and energy development—Long-term trends of habituation and abundance. *Global Change Biology* 23:4521-4529.

## APPENDIX A

### Record of Modifications

#### D90 Energy, LLC & Gondola Resources, LLC - North Park - Wildlife Mitigation Plan

Attached to this Appendix is a history of the modifications to the D90 Energy, LLC North Park Wildlife Mitigation Plan. Below is a sample modification form to be used by CPW and D90 Energy, LLC. The effective date is the date by which both parties have signed the modification form.

#### Sample Modification Form

D90 Energy, LLC, Gondola Resources, LLC and Colorado Parks and Wildlife agree upon the following modification(s) to the North Park Wildlife Mitigation Plan:

*[INSERT REVISION PAGES AS NECESSARY]*

\_\_\_\_\_  
D90 Energy, LLC

\_\_\_\_\_  
Date

\_\_\_\_\_  
Gondola Resources, LLC

\_\_\_\_\_  
Date

\_\_\_\_\_  
Modiin Energy NPB, LLC

\_\_\_\_\_  
Date

\_\_\_\_\_  
Colorado Parks and Wildlife

\_\_\_\_\_  
Date

## **APPENDIX B**

### **Spatial Mapping**

**D90 Energy, LLC & Gondola Resources, LLC**

**- North Park -**

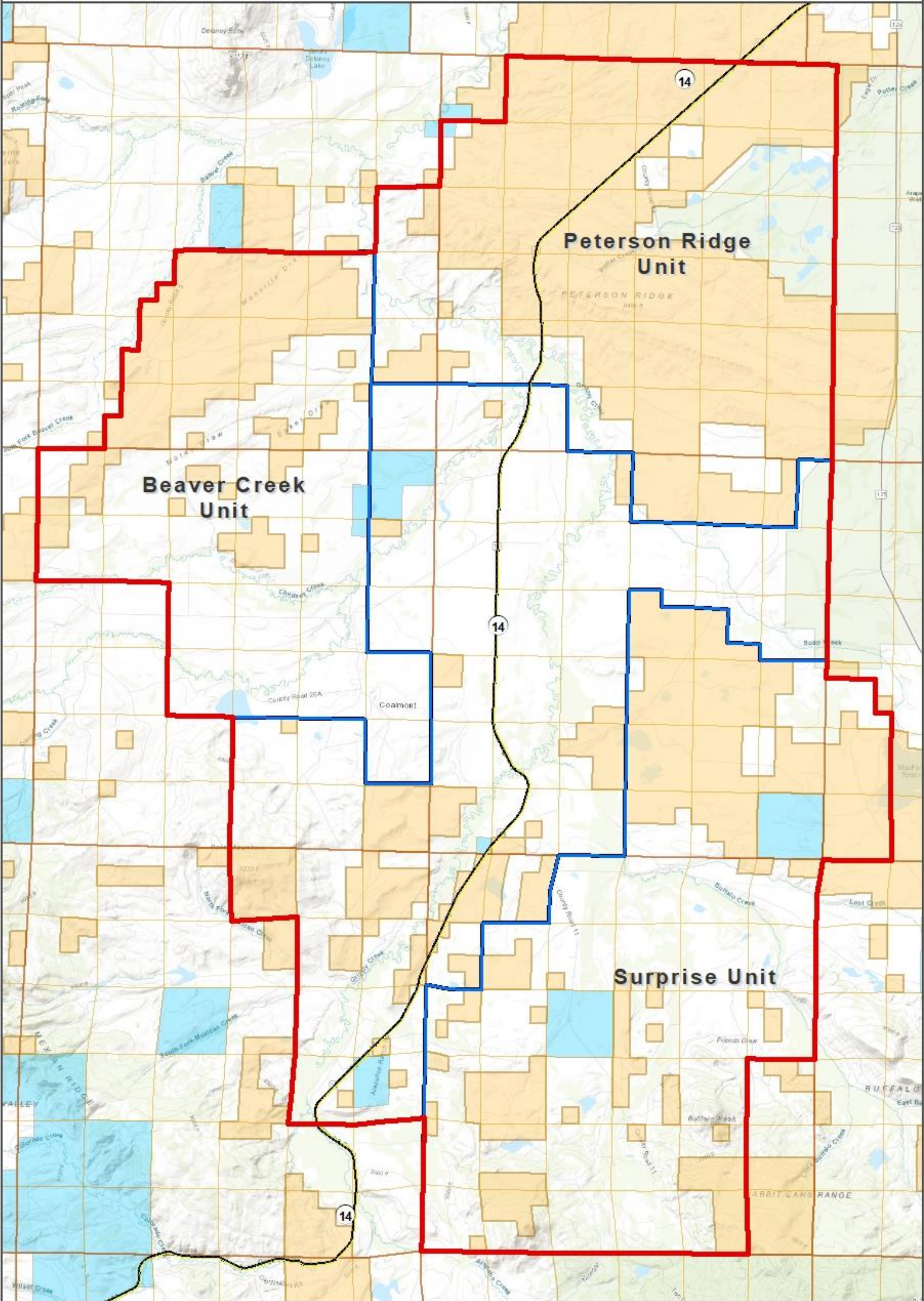
**Wildlife Mitigation Plan**

The following figures were developed using GIS spatial data from D90 Energy, LLC and Colorado Parks and Wildlife. Maps one through eight depict the geographic area of the plan, surface ownership information, No Surface Occupancy areas, areas for determination of species-specific BMPs and stipulations, and the extent of existing Oil and Gas Locations and access roads.



# D90 Energy, LLC - North Park Wildlife Mitigation Plan

Map 1: WMP Boundary and Federal Units



Wildlife Mitigation Plan Boundary  
SandRidge Unit Boundaries



Bureau of Land Management  
CO State Land Board



0 1.5 3 Miles

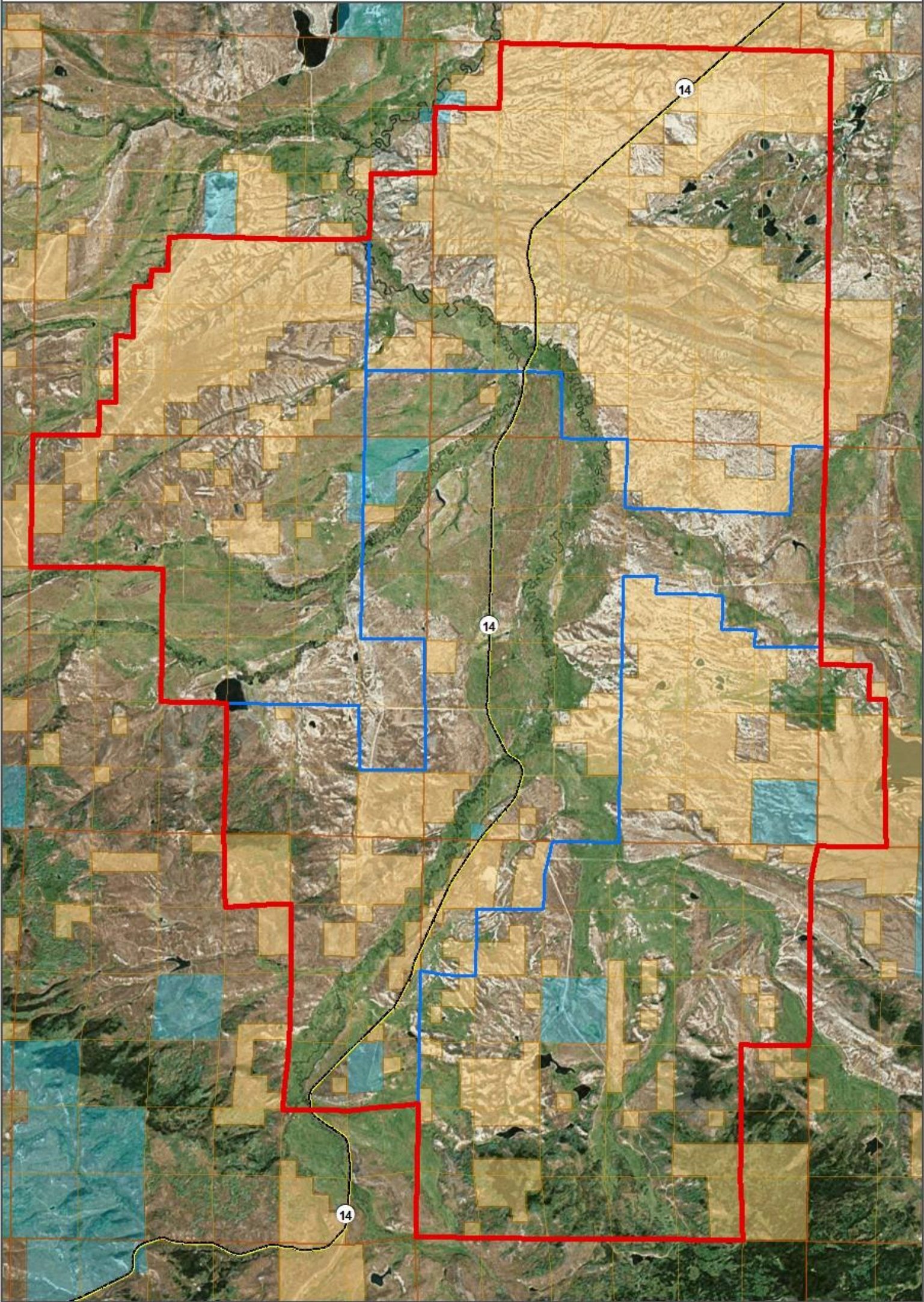
Mapping by CPW and Gondola Resources, LLC - 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

Map 2: Aerial Imagery with WMP Boundaries



Wildlife Mitigation Plan Boundary



SandRidge Unit Boundaries



Bureau of Land Management



CO State Land Board



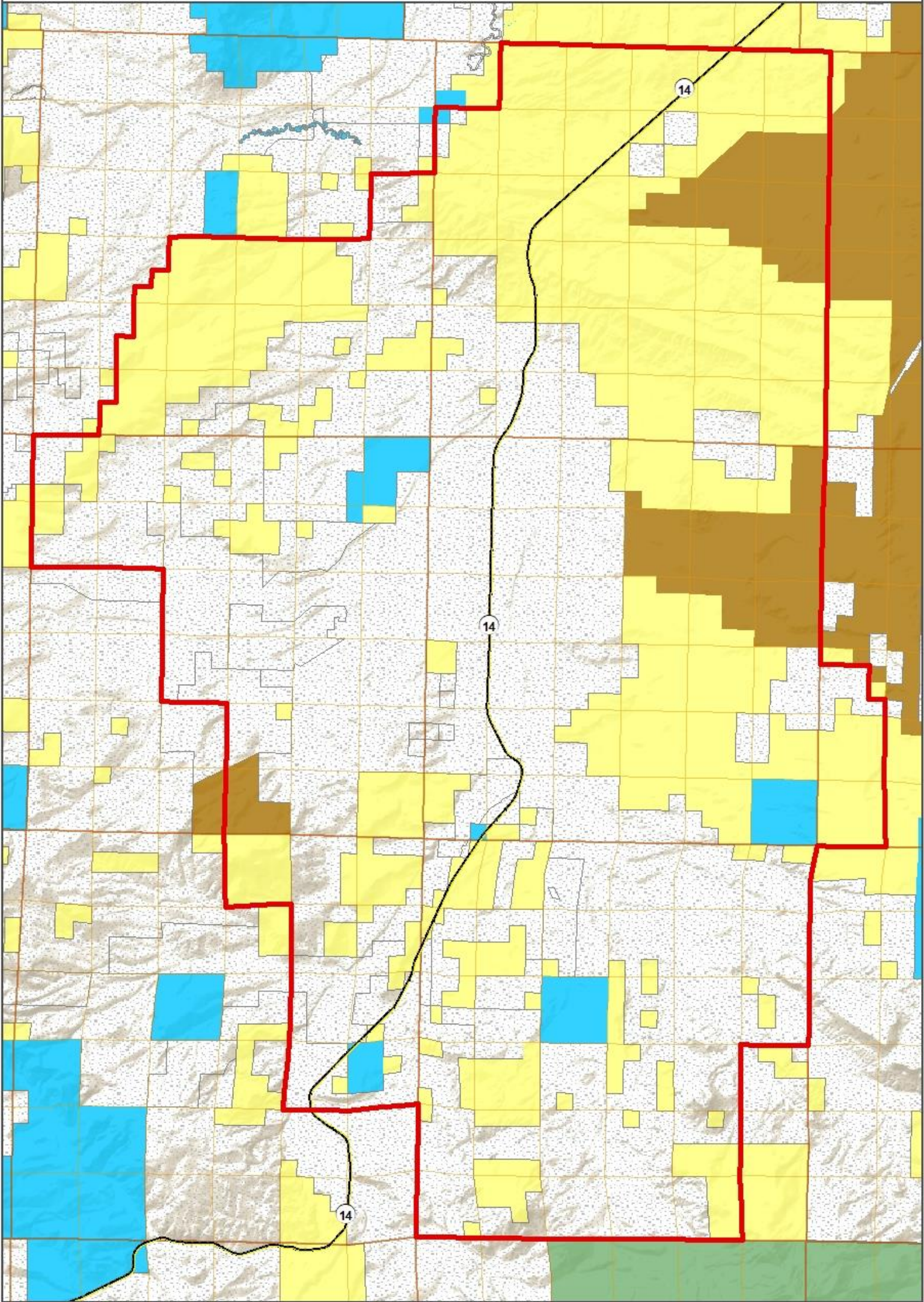
Mapping by CPW and Gondola Resources, LLC - 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

Map 3: Land Ownership Status



**COMaP Property Ownership**

PRIVATE

US Forest Service

State

Bureau of Land Management

Fish and Wildlife Service

D90 ENERGY LLC

0 1.5 3 Miles

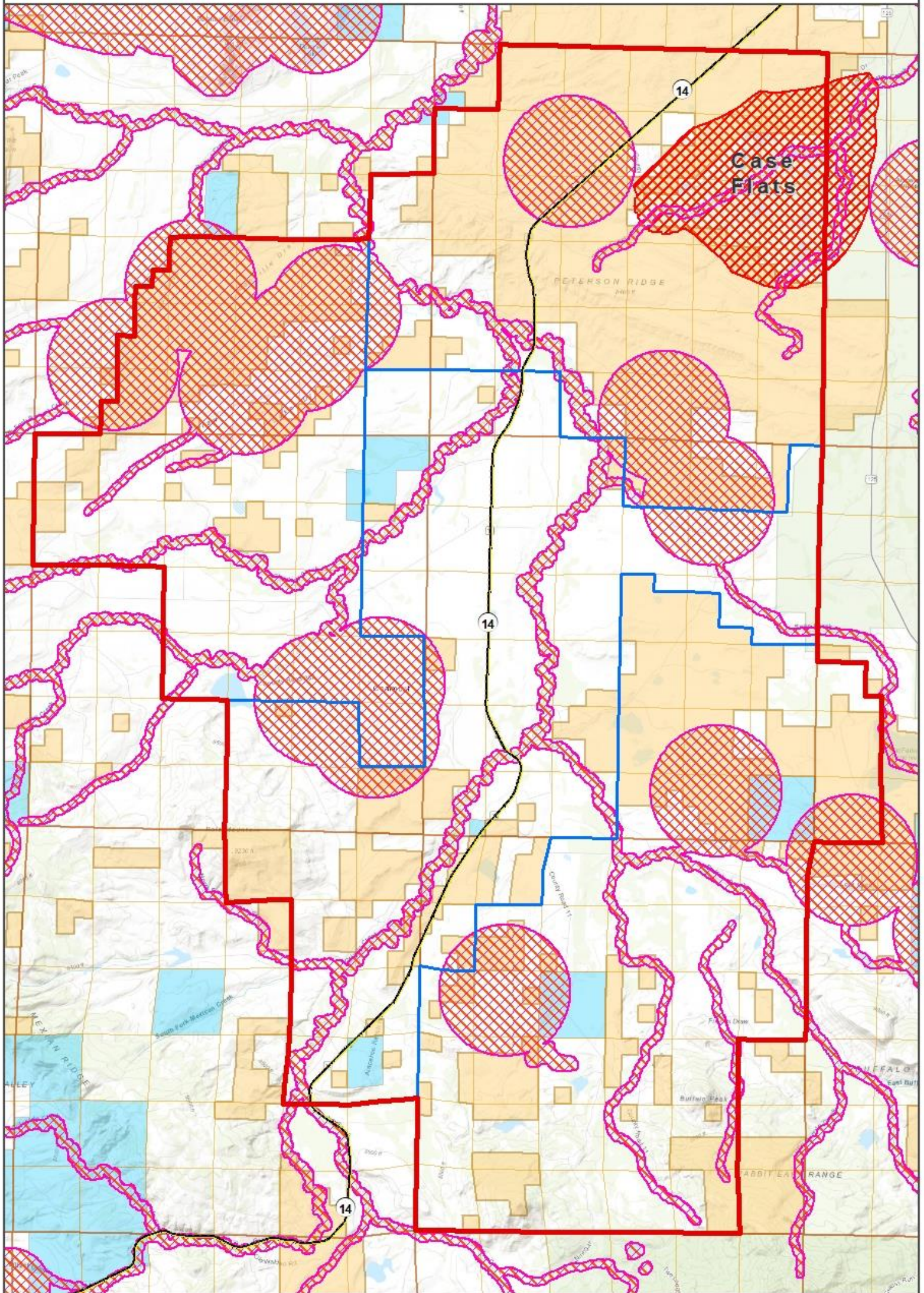
Mapping by CPW and Gondola Resources, LLC - 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

## Map 4: Rule 1202.c.(1) NSO Areas & Case Flats Avoidance Area



Wildlife Mitigation Plan Boundary



SandRidge Unit Boundaries



Rule 1202.c.(1) NSO Areas



Case Flats Avoidance



Bureau of Land Management



CO State Land Board



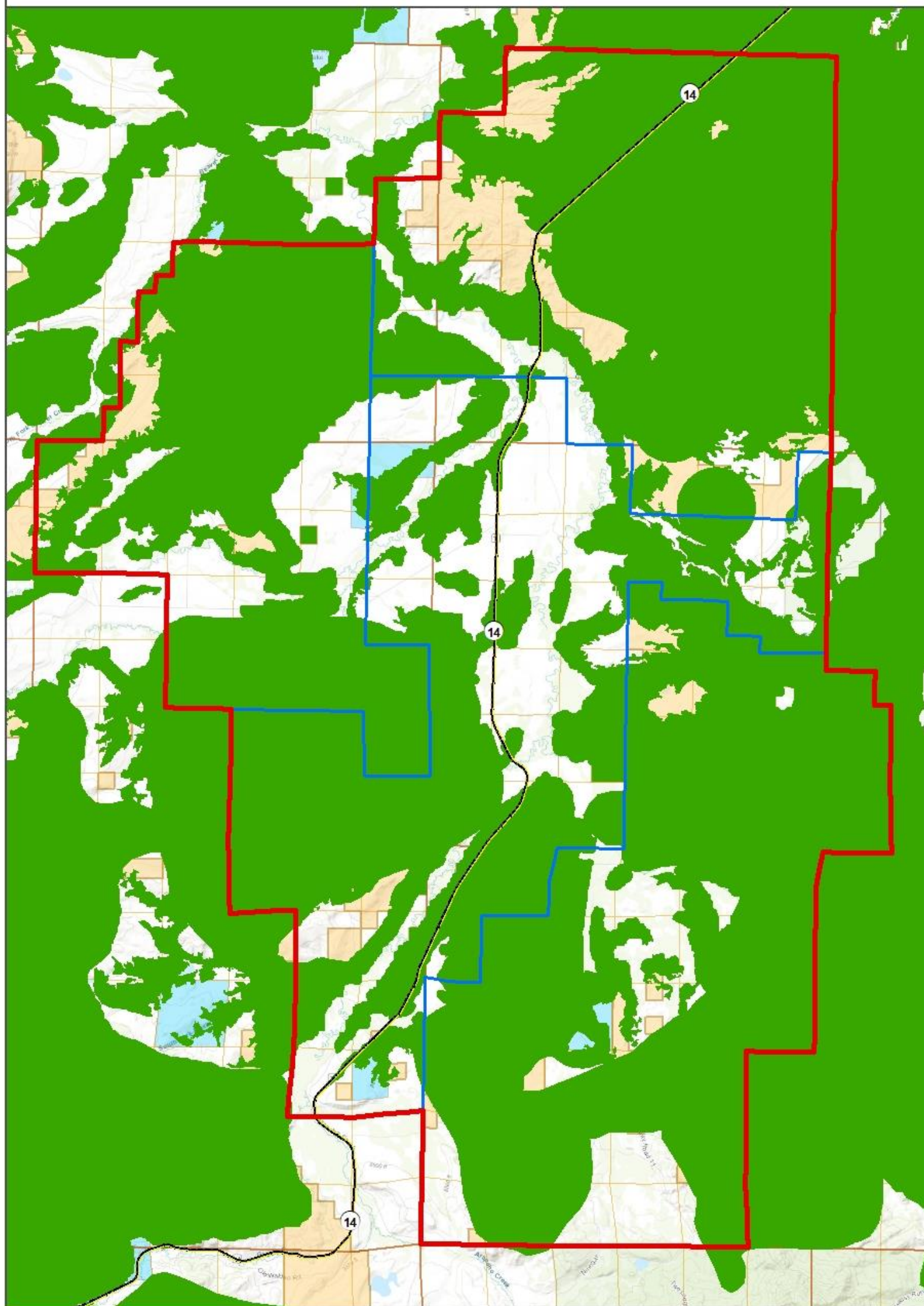
0 1.5 3 Miles  
Mapping by CPW & Gondola Resources, LLC - Feb. 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

Map 5: Rule 1202.d. Direct Impact Compensatory Mitigation Areas



Wildlife Mitigation Plan Boundary  
SandRidge Unit Boundaries

Rule 1202.d. Direct Impact Fee Areas

Bureau of Land Management  
CO State Land Board



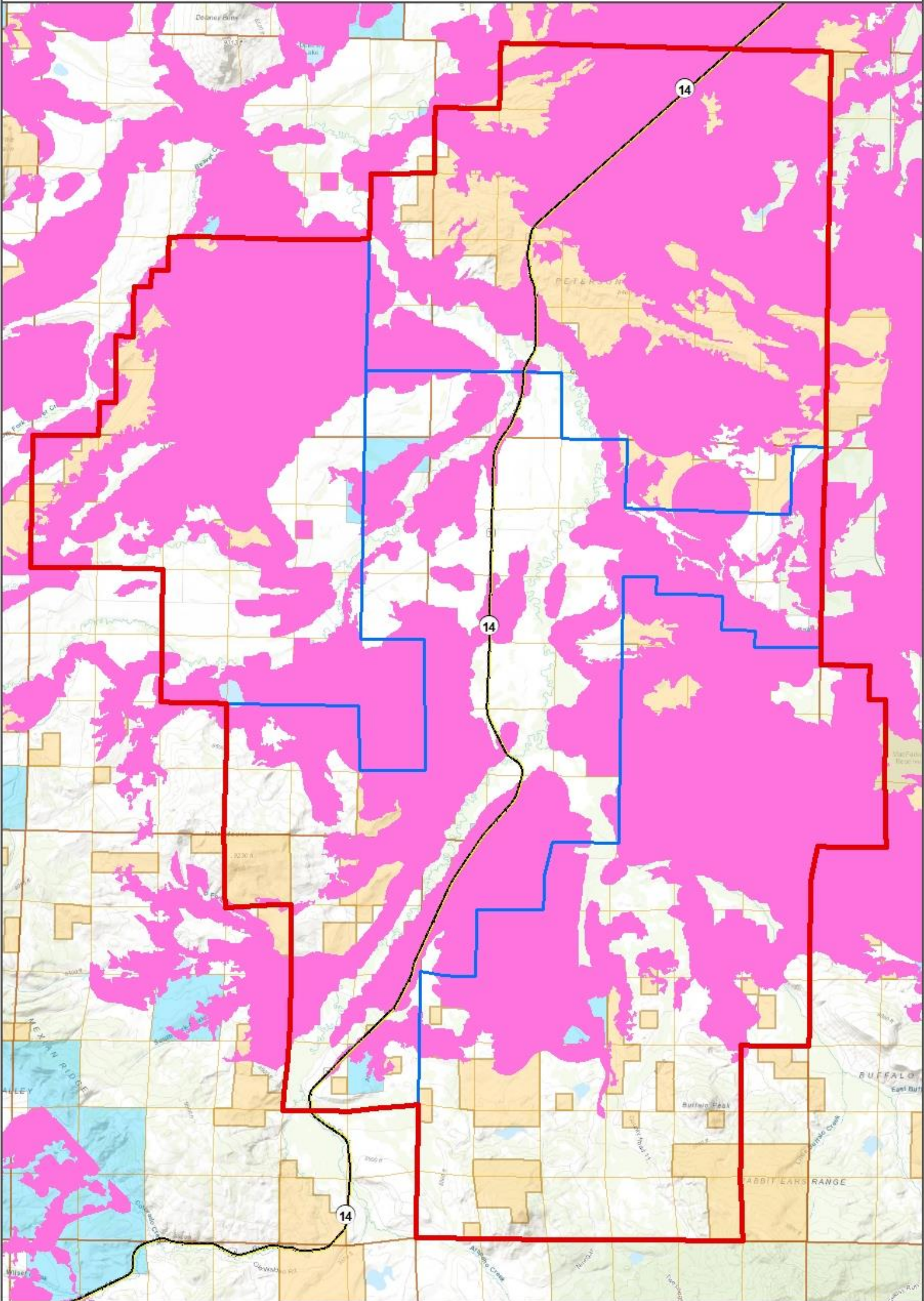
0 1.5 3 Miles  
Mapping by CPW & Gondola Resources, LLC - 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

## Map 6: GrSG PHMA - Indirect Impact Mitigation Areas



Wildlife Mitigation Plan Boundary



SandRidge Unit Boundaries



GrSG Priority Habitat Mgmt Area



Bureau of Land Management



CO State Land Board



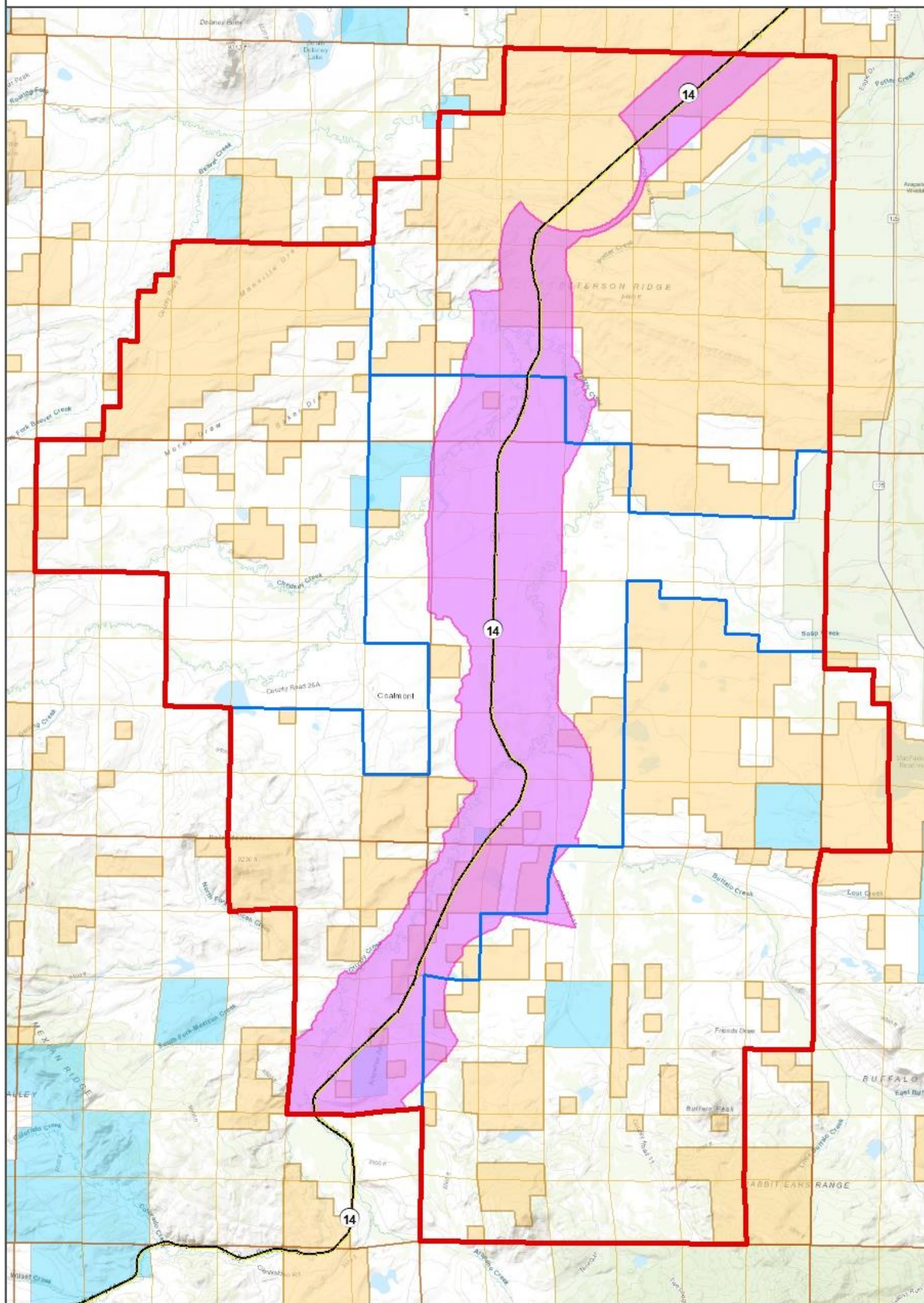
0 1.5 3 Miles  
Mapping by CPW & Gondola Resources, LLC - Feb. 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

## Map 7: Timing Stipulation Exclusion Areas



Wildlife Mitigation Plan Boundary

SandRidge Unit Boundaries

Timing Stip. Exclusion Area



Bureau of Land Management

CO State Land Board

D90 ENERGY LLC

0 1.5 3 Miles

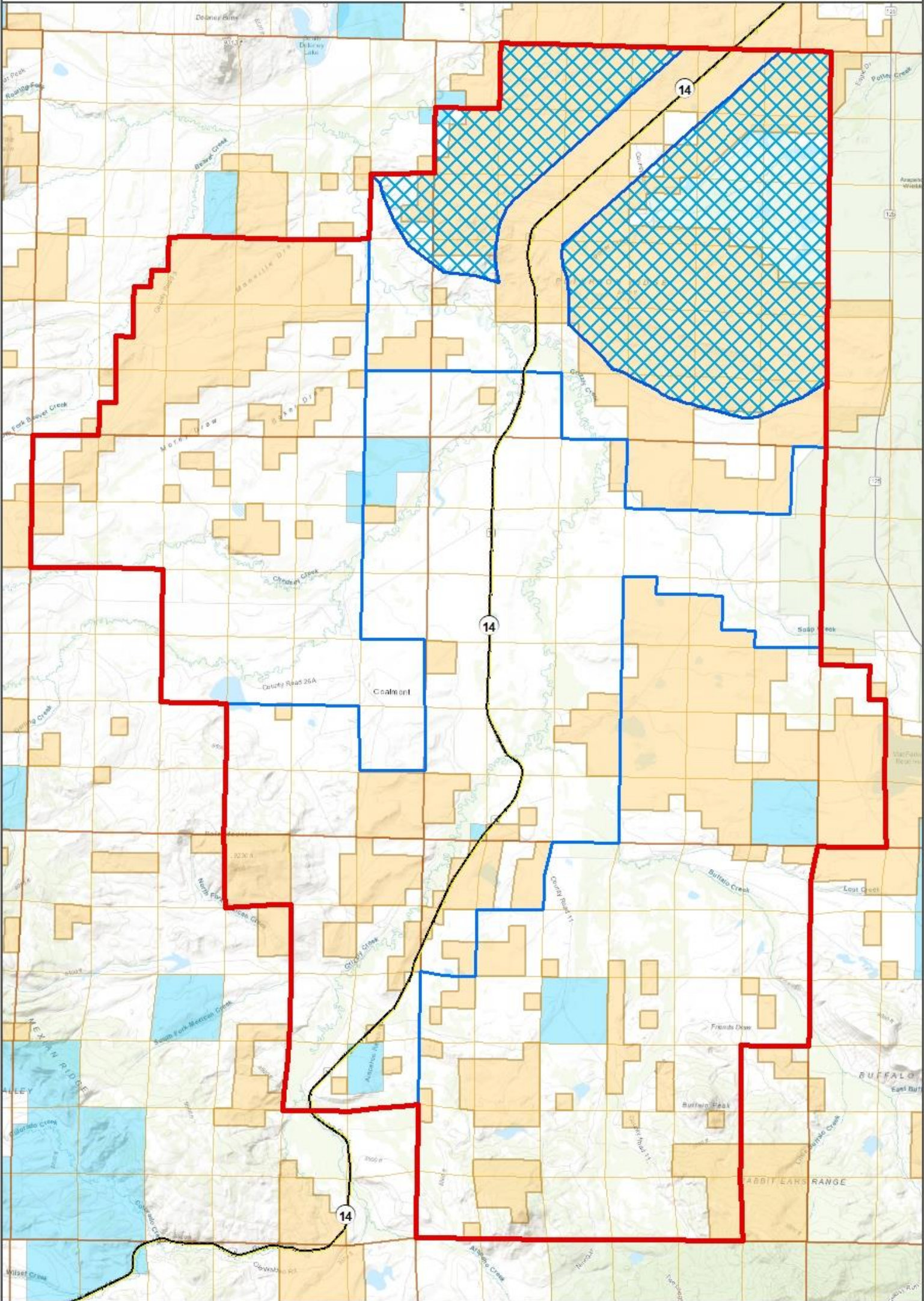
Mapping by CPW and Gondola Resources, LLC - 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

## Map 8: Big-game Winter Range Stipulation Areas



Wildlife Mitigation Plan Boundary



SandRidge Unit Boundaries



Big-game Winter Stip Areas



Bureau of Land Management



CO State Land Board

D90 ENERGY LLC

0 1.5 3 Miles

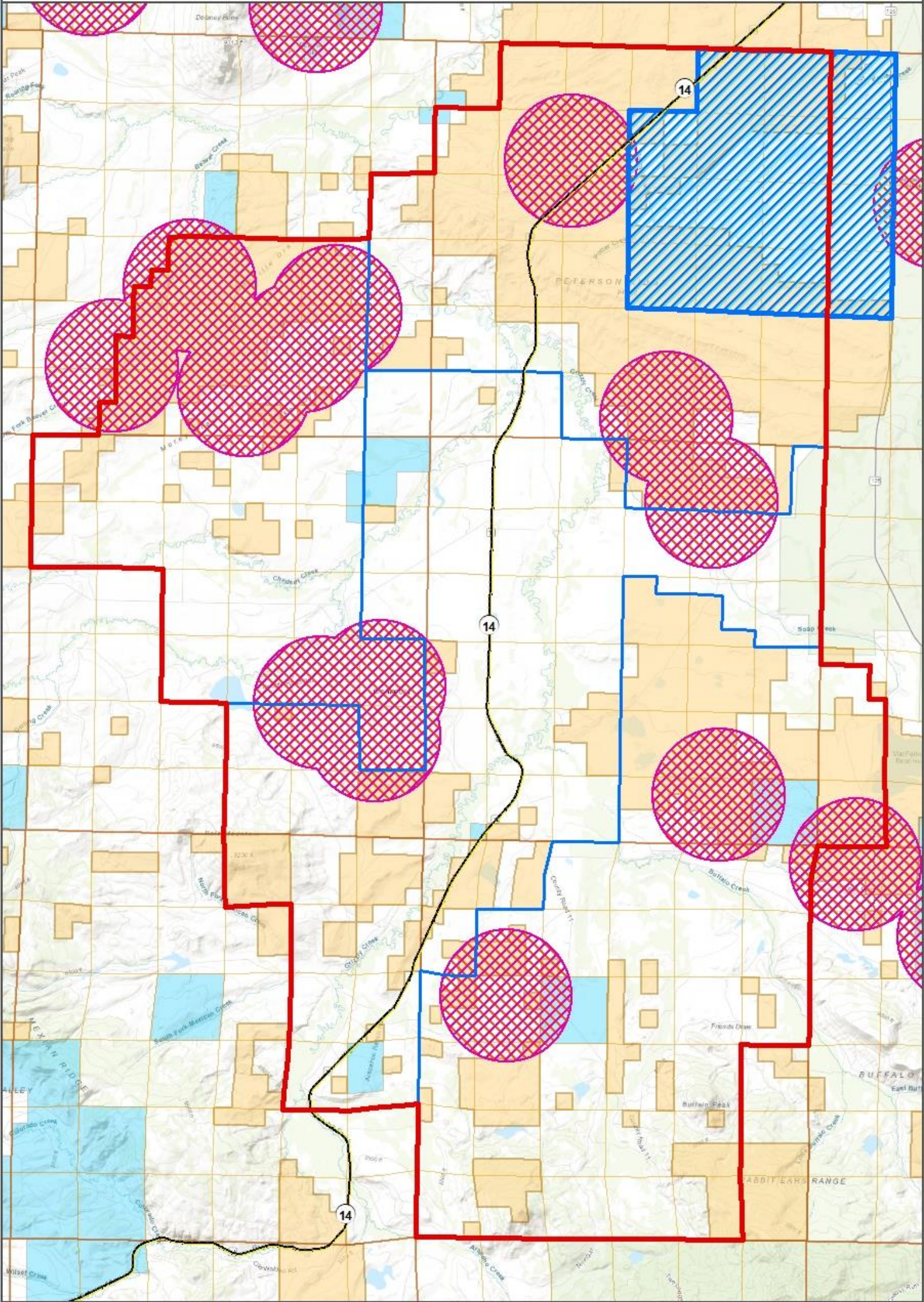
Mapping by CPW and Gondola Resources, LLC - 2021





D90 Energy, LLC - North Park Wildlife Mitigation Plan

Map 9: GrSG Winter Stipulation Areas



Wildlife Mitigation Plan Boundary



SandRidge Unit Boundaries



GrSG Winter Stipulations Area



GrSG Lek Site



Bureau of Land Management



CO State Land Board

D90 ENERGY LLC

0 1.5 3 Miles

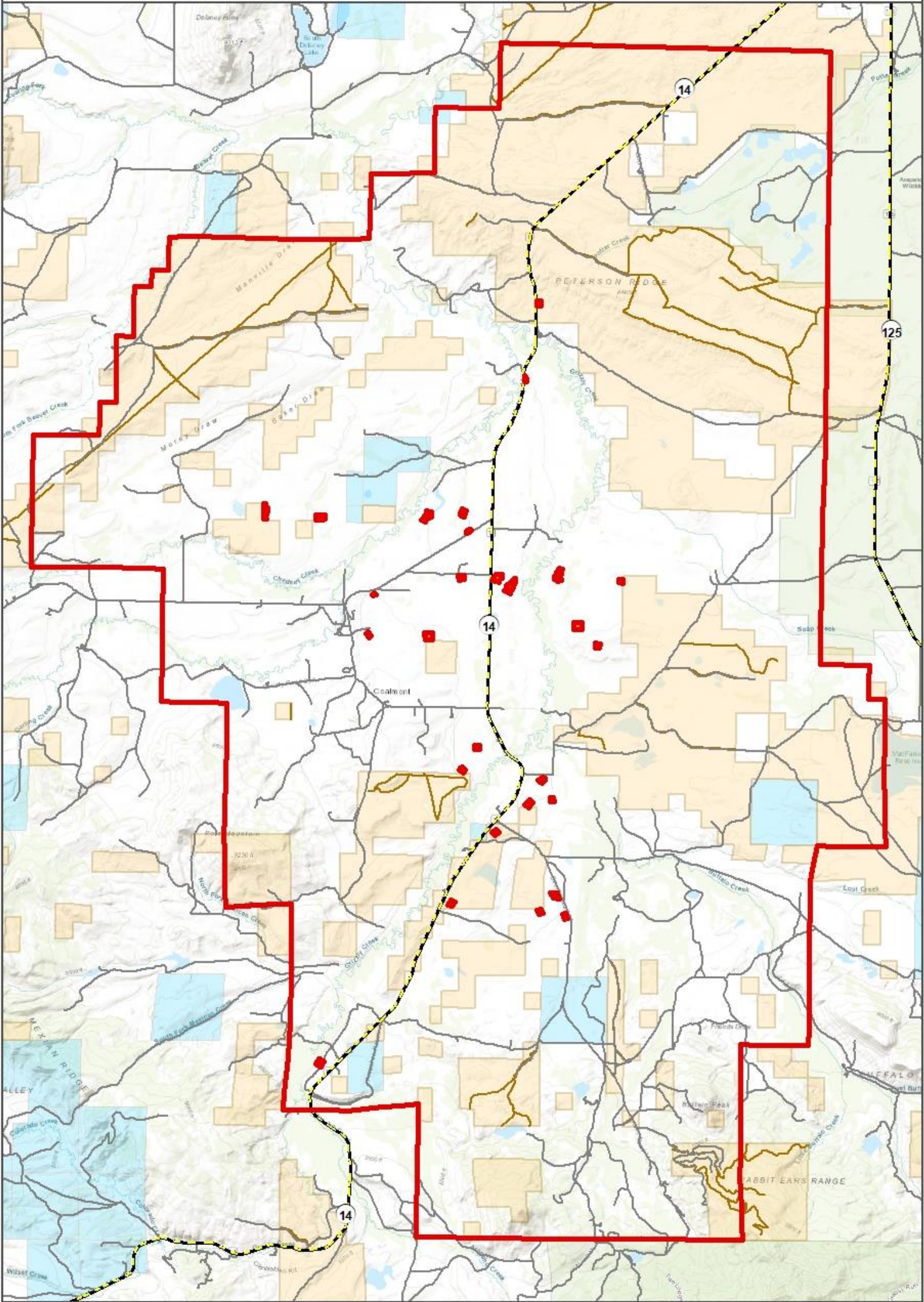
Mapping by CPW and Gondola Resources - 2021





# D90 Energy, LLC - North Park Wildlife Mitigation Plan

## Map 10: Existing Pad Locations & Roads



- Wildlife Mitigation Plan Boundary
- Jackson County Roads
- BLM Roads
- State Highways
- Pad Locations
- Existing Pads



0 1.5 3 Miles  
Mapping by CPW and Gondola Resources - 2021



## APPENDIX C

### Best Management Practices & Stipulations

D90 Energy, LLC & Gondola Resources, LLC

- North Park -

### Wildlife Mitigation Plan

The following pages contain best management practices (BMPs) for the D90 Energy, LLC North Park Wildlife Mitigation Plan. These BMPs were negotiated between Colorado Parks and Wildlife and D90 Energy with the intent to avoid and minimize adverse impacts to wildlife resources from oil and gas operations. Standard field-wide BMPs will be implemented throughout the WMP boundary (Map 1) for all operations. The application of species-specific BMPs (*2 through 6 below*) is dependent on the geographic location of the proposed facility in regards to mapped wildlife habitats (*see* Appendix B). Therefore, a combination of the following lists of BMPs contained herein will be provided to COGCC by D90 Energy with each Form 2A application depending on the location of the proposed facility. Additionally, the field-wide BMPs contain all of the Rule 1202.a. and 1202.b. statewide operating requirements for wildlife resources. If any waivers are granted by CPW to the statewide operating requirements, D90 Energy will submit those written waivers with their permit application.

- 1. Field-wide BMP List (including 1202 statewide operating requirements)**
2. Greater Sage-grouse PHMA & GHMA Stipulation Areas
3. Greater Sage-grouse Winter Range Stipulation Areas
4. Wildlife Stipulation Exclusion Areas
5. Big-game Winter Range Stipulation Areas
6. Big-game Winter Range & GrSG Winter Range Stipulation Areas



## D90 Energy, LLC & Gondola Resources, LLC

- North Park -

### Wildlife Mitigation Plan

#### *Field-Wide BMP List*

#### Standard Field-Wide Best Management Practices:

● *These BMPs will be applied throughout the Wildlife Mitigation Plan boundary, regardless of wildlife habitats present. This BMP list will be submitted with all new Form 2A applications within the NPWMP boundary. These BMPs are intended to satisfy the Rule 1202.a-b. statewide operating requirements for wildlife resources. Species-specific BMP lists will be submitted in addition to the field-wide BMPs, depending on the mapped habitats at the proposed oil and gas location.*

- ❖ Where not explicitly included below, D90 Energy agrees to implement all [statewide operating requirements](#) outlined under Rule 1202.a. and 1202.b., unless a waiver has been granted in writing by CPW to exempt one or more of these operating requirements based on site-specific conditions. D90 Energy will submit the written waiver agreement from CPW with their permit application.
- ❖ Preclude open flaring during the production phase of oil and gas operations (except in emergencies or rare circumstances where it might be necessary for short-term operations).
- ❖ Utilize central tank batteries (CTB) to consolidate truck hauling traffic to locations as near as practicable to HWY 14.
- ❖ Limit the overall density of active oil and gas locations to one active location per square mile (averaged across the entire NPWMP boundary area).
- ❖ Implement remote monitoring technologies (e.g. SCADA) to reduce well-site visitations to the minimum amount practicable.
- ❖ Utilize electric submersible pumps (ESP) to the maximum extent practicable to reduce overall noise impacts within the NPWMP boundary.
- ❖ To the maximum extent practicable, co-locate roads, pipelines, and power lines within the same disturbance corridor to reduce overall surface disturbance.
- ❖ Where the surface owner agrees, construct any new necessary fencing to the wildlife friendly fencing design criteria found in CPW's Fencing with Wildlife in Mind Document (*see* Appendix F).
- ❖ Continue annual contributions to Jackson County's noxious weed control program for the life of the NPWMP.
- ❖ At facilities where continuous artificial lighting is necessary, shield lighting and direct downward or away from sensitive wildlife habitats (e.g. GrSG lek locations).
- ❖ Implement wildlife-specific training programs for employees and contractors as necessary.
- ❖ Implement 25 mph speed limits on [D90 Energy] lease roads (fee and federal lands) within the NPWMP boundary.
- ❖ Follow COGCC Rule 1202.a.(1) for bear-proof trash receptacles and routine trash disposal at all permanent and temporary facilities.
- ❖ Where the surface owner agrees, work with CPW to adaptively manage reclamation seed mixes to best suit the specific habitats present and wildlife species in those specific areas.

- ❖ Consult with CPW district wildlife managers and local biologists to avoid and minimize impacts to known raptor nest locations within the NPWMP boundary. Pre-construction surveys may be required where suitable nesting habitat exists within 0.5 miles of the proposed disturbance.
- ❖ Reclaim locations to what is reasonably needed for O&M within 12 months of cessation of drilling/after well completion (*Unless a variance is agreed upon with CPW and COGCC*).

#### Aquatic Habitats Best Management Practices:

- ❖ Avoid new surface disturbances within 500 feet of any perennial waterway (naturally occurring) within the NPWMP boundary.
- ❖ Avoid locating staging, refueling, and storage areas within 500 feet of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river.
- ❖ Screen water intake hoses to prevent entrapment and impingement of aquatic organisms.
- ❖ Inspect and disinfect all equipment that will contact a stream, spring or water body for cleanliness before commencing work to prevent the spread of disease, aquatic parasites, and invasive species. If heavy equipment arrives from offsite, ensure that the owner/operation provides D90 Energy with documentation that the equipment was cleaned in accordance with one of the following CPW standards-
  - Remove mud and debris from equipment and wet the equipment for a minimum of ten minutes with a solution containing: dialkyl dimethyl ammonium chloride (5-10% by weight), alkyl dimethyl benzyl ammonium chloride (5-10% by weight), nonyl phenol ethoxylate (5-10% by weight), sodium sesquicarbonate (1-5%), ethyl alcohol (1-5%), and tetrasodium ethylene diaminetetraacetate (1-5%), and water, **or**:
  - Remove mud and debris from equipment and wet the equipment for a minimum of ten minutes with water at a temperature greater than 140° F. Consult with CPW on any new stream crossing structures to be constructed, **or**:
  - Other methods to be approved by CPW before use.

#### Pipeline Siting and Construction BMPs:

- ❖ During pipeline construction, for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well-defined game trails.
- ❖ During pipeline construction, open trenches will be inspected by D90 Energy or their contractors at least once daily (in the morning) for any trapped wildlife. If necessary, local CPW staff will be contacted to assist in removing trapped wildlife.

#### Seismic Operations BMPs:

- ❖ Conduct early consultation with CPW staff during the planning of future seismic operations. Timing and methods of seismic operations may be discussed to limit impacts on wildlife and their habitats.

## D90 Energy, LLC & Gondola Resources, LLC

### - North Park -

## Wildlife Mitigation Plan

### *Greater Sage-grouse Priority and General Habitat Management Areas (PHMA & GHMA)*

- *These BMPs will be submitted with any Form 2A permit located within GrSG PHMA and GHMA habitats and in addition to the field-wide best management practices list. Seasonal & daily timing stipulations will not apply to the agreed upon exemption areas along Colorado HWY 14 (Map 7).*
- ❖ Within Greater Sage-grouse PHMA and GHMA habitats, oil and gas operations (construction, drilling, and completions) will be conducted outside the period between **March 1<sup>st</sup> and June 30<sup>th</sup>**.
- ❖ *EXCLUDING EMERGENCY SITUATIONS*, within Greater-Sage-grouse production habitats, all operations and maintenance activities will be limited to between 9:00 am and 4:00 pm during the lekking, nesting, and early brood-rearing seasons (**March 1<sup>st</sup> through May 15<sup>th</sup>**).
- ❖ Avoid noise levels above 75 dBA at the edge of pads and/or facilities closest to the nearest active lek. This BMP is only applicable when there is an active lek within 2 miles of the facilities (well pad, multi well pad, CTB, etc.).
- ❖ To the maximum extent practicable, implement avian perch deterrents or design permanent facilities in a manner that does not provide nesting substrates for raptors, crows, or ravens.
- ❖ With necessary surface owner consent, CPW's wildlife friendly fencing guidelines for any new fences within Greater Sage-grouse production habitat.
- ❖ Implement 25 mph speed limits on all lease roads (fee, state and federal lands) within the NPWMP boundary.
- ❖ Follow COGCC Rule 1202. a. (1) for bear-proof trash receptacles and routine trash disposal at all permanent and temporary facilities.
- ❖ Perform interim reclamation of well pads to what is reasonably necessary for operations and maintenance (O&M) within 12 months of cessation of drilling/after well completion, *unless new wells are scheduled on the same location or a variance is agreed upon with CPW and COGCC.*
- ❖ During pipeline construction, for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well-defined game trails.
  - a. Open trenches will be inspected by D90 Energy or their contractors at least once daily for any trapped wildlife. If necessary, local CPW staff will be contacted to assist in removing trapped wildlife.

## D90 Energy, LLC & Gondola Resources, LLC

### - North Park -

## Wildlife Mitigation Plan

### *Greater Sage-grouse Winter Range Habitats (Map 9)*

- *These BMPs will be submitted with any Form 2A permit application located within the GrSG winter range habitats indicated below and on Map 9, and in addition to the field-wide best management practices list. Seasonal & daily timing stipulations will not apply to the agreed upon exemption areas along Colorado HWY 14 (Map 7).*
- ❖ Within identified Greater Sage-grouse wintering areas in Jackson Co., CO (listed below, and on Map 9), oil and gas operations (construction, drilling, and completions) will be conducted outside the period between **December 1<sup>st</sup> and March 15<sup>th</sup>**
  - a. Township 8 North, Range 80W
    - i. All of Sections 1,2,10,11,12,13,14,16,22,23, and 24; and
  - b. Township 8 North, Range 79 West
    - i. All of Sections 6,7,18, and 19
- ❖ Avoid noise levels above 75 dBA at the edge of pads and/or facilities closest to the nearest active lek. This BMP is only applicable when there is an active lek within 2 miles of the facilities (well pad, multi well pad, CTB).
- ❖ To the maximum extent practicable, implement avian perch deterrents or design permanent facilities in a manner that does not provide nesting substrates for raptors, crows, or ravens.
- ❖ With necessary surface owner consent, utilize CPW's wildlife friendly fencing guidelines for any new fences within Greater Sage-grouse winter range habitats.
- ❖ Implement 25 mph speed limits on all lease roads (fee, state and federal lands) within the NPWMP boundary.
- ❖ Follow COGCC Rule 1202.a.(1) for bear-proof trash receptacles and routine trash disposal at all permanent and temporary facilities.
- ❖ Perform interim reclamation of well pads to what is reasonably necessary for operations and maintenance (O&M) within 12 months of cessation of drilling/after well completion, *unless new wells are scheduled on the same location or a variance is agreed upon with CPW.*
- ❖ During pipeline construction, for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well-defined game trails.
  - a. Open trenches will be inspected by D90 Energy or their contractors at least once daily for any trapped wildlife. If necessary, local CPW staff will be contacted to assist in removing trapped wildlife

## D90 Energy, LLC & Gondola Resources, LLC

### - North Park -

## Wildlife Mitigation Plan

### *BMPs for Wildlife Stipulation Exclusion Area (Map 7)*

- ❖ Adhere to all Rule 1202.a. and 1202.b. statewide operating requirements for wildlife resources, unless a waiver has been agreed upon in writing by CPW. Any waivers will be submitted along with the permit application.
- ❖ Implement 25 mph speed limits on all lease roads (fee, state and federal lands) within the NPWMP boundary.
- ❖ Follow COGCC Rule 1202.a.(1) for bear-proof trash receptacles and routine trash disposal at all permanent and temporary facilities.
- ❖ Perform interim reclamation of well pads to what is reasonably necessary for operations and maintenance (O&M) within 12 months of cessation of drilling/after well completion, *unless new wells are scheduled on the same location or a variance is agreed upon with CPW.*
- ❖ During pipeline construction, for trenches that are left open for more than five (5) consecutive days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well-defined game trails.
  - a. Open trenches will be inspected by D90 Energy or their contractors at least once daily for any trapped wildlife. If necessary, local CPW staff will be contacted to assist in removing trapped wildlife.



## D90 Energy, LLC & Gondola Resources, LLC

### - North Park -

## Wildlife Mitigation Plan

### *Big-game Winter Range Stipulation Areas (Map 8)*

- *These BMPs will be submitted with any Form 2A permit application located within the big game winter range habitats shown on Map 8, and in addition to the field-wide best management practices list. Seasonal & daily timing stipulations will not apply to the agreed upon exemption areas along Colorado HWY 14 (Map 7).*
- ❖ Within mapped big-game winter range habitats (Map 8), oil and gas operations (construction, drilling, and completions) will be conducted outside the period between **December 1<sup>st</sup> and April 30<sup>th</sup>**.
- ❖ *EXCLUDING EMERGENCY SITUATIONS*, all operations and maintenance activities will be limited to portions of the day between 9:00 am and 4:00 pm during the winter season (**December 1<sup>st</sup> through April 30<sup>th</sup>**).
- ❖ Avoid noise levels above 75 dBA at the edge of pads and/or facilities located within big game winter ranges.
- ❖ With necessary surface owner consent, utilize CPW's wildlife friendly fencing guidelines for any new fences within the delineated big game winter range habitats.
- ❖ Implement 25 mph speed limits on all lease roads (fee, state and federal lands) within the WMP boundary.
- ❖ Follow COGCC Rule 1202.a.(1) for bear-proof trash receptacles and routine trash disposal at all permanent and temporary facilities.
- ❖ Perform interim reclamation of well pads to what is reasonably necessary for operations and maintenance (O&M) within 12 months of cessation of drilling/after well completion, *unless new wells are scheduled on the same location or a variance is agreed upon with CPW and COGCC.*
- ❖ During pipeline construction, for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well-defined game trails.
  - a. Open trenches will be inspected by D90 Energy or their contractors at least once daily for any trapped wildlife. If necessary, local CPW staff will be contacted to assist in removing trapped wildlife.

## D90 Energy, LLC & Gondola Resources, LLC

### - North Park -

## Wildlife Mitigation Plan

### *Big-game Winter Range & GrSG Winter Range Stipulation Areas*

- *These BMPs will be submitted with any Form 2A permit application located within both big game and GrSG winter range habitats indicated below and on Maps 8 and 9, and in addition to the field-wide best management practices list. Seasonal & daily timing stipulations will not apply to the agreed upon exemption areas along Colorado HWY 14 (Map 7).*
- ❖ Within identified Greater Sage-grouse wintering areas of the NPWMP (listed below, and Map 9), oil and gas operations (construction, drilling, and completions) will be conducted outside the period between **December 1<sup>st</sup> and March 15<sup>th</sup>**
  - a. Township 8 North, Range 80W
    - i. All of Sections 1,2,10,11,12,13,14,16,22,23, and 24; and
  - b. Township 8 North, Range 79 West
    - i. All of Sections 6,7,18, and 19
- ❖ Within the delineated big-game winter range habitat (Map 8), oil and gas operations (construction, drilling, and completions) will be conducted outside the period between **December 1<sup>st</sup> and April 30<sup>th</sup>**.
- ❖ *EXCLUDING EMERGENCY SITUATIONS*, all operations and maintenance activities will be limited to portions of the day between 9:00 am and 4:00 pm during the winter season (December 1<sup>st</sup> through April 30<sup>th</sup>).
- ❖ Avoid noise levels above 75 dBA at the edge of pads and/or facilities within winter range habitats.
- ❖ To the maximum extent practicable, implement avian perch deterrents or design permanent facilities in a manner that does not provide nesting substrates for raptors, crows, or ravens.
- ❖ With necessary surface owner consent, utilize CPW's wildlife friendly fencing guidelines for any new fences within Greater Sage-grouse and big game winter range habitats.
- ❖ Implement 25 mph speed limits on all lease roads (fee, state and federal lands) within the WMP boundary.
- ❖ Follow COGCC Rule 1202.a.(1) for bear-proof trash receptacles and routine trash disposal at all permanent and temporary facilities.
- ❖ Perform interim reclamation of well pads to what is reasonably necessary for operations and maintenance (O&M) within 12 months of cessation of drilling/after well completion, *unless new wells are scheduled on the same location or a variance is agreed upon with CPW and COGCC.*
- ❖ During pipeline construction, for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well-defined game trails.
  - a. Open trenches will be inspected by D90 Energy or their contractors at least once daily for any trapped wildlife. If necessary, local CPW staff will be contacted to assist in removing trapped wildlife.

## **APPENDIX D**

### **Compensatory Mitigation Tracking Spreadsheets**

**D90 Energy, LLC & Gondola Resources, LLC**

**- North Park -**

**Wildlife Mitigation Plan**

The below table should be updated with the most current version of the donation and mitigation tracking spreadsheet that will accompany the NPWMP agreement documents digitally. This spreadsheet will be maintained regularly by CPW and D90 Energy, LLC. The most current version will be provided and discussed during the annual WMP meeting between CPW and D90 Energy.

## D90 Energy & Gondola - North Park WMP Mitigation & Donation Tracking

## Mitigation for New Facility Construction

Date	Facility Name(s)	Mitigation Required	Mitigation Received
		\$0.00	\$0.00

## Mitigation for Waiver & Exemption Requests

Date	Facility Name(s)	CPW Approval?	Mitigation Received
Total for Waiver & Exception Requests:			\$0.00

## Donations

Date	Type of Donation to CPW	Monetary Value
Total Donations:		\$0.00

**Total Mitigation & Donations Received to Date: \$0.00**

## **APPENDIX E**

### **Facility Density Analyses**

**D90 Energy, LLC & Gondola Resources, LLC**

**- North Park -**

**Wildlife Mitigation Plan**

The following table will be used to calculate the average density of oil and gas facilities per square mile within the North Park Wildlife Mitigation Plan. Additionally, the disturbance per square mile due to oil and gas operations will be included as acres of disturbance per square mile and per constructed facility. This table will be updated annually with information presented at the annual NPWMP meeting between CPW and D90 Energy

D90 Energy, LLC - North Park WMP Facility Density & Disturbance Calculations			
Existing Locations	Pad Size (acres after interim rec.)	Lease Road (acres)	Total Acres
Peterson Ridge 1-20	3.906	0.377	4.283
Oxbow S29	7.854	0.674	8.528
Grizzly S32	1.7	-	1.7
Beaver Creek S10	7.25	4.9	12.15
Shiras S11	8	0	8
Grizzly Annex/Hebron S12	8.901	2.371	11.272
Hebron-Marr S7	4.66	0.696	5.356
Hebron CTB S7	2.49	-	2.49
Gregory S9	4.84	0.5	5.34
Refuge S16	2.52	2.18	4.7
Big Horn S17 CTB	18.35	0	18.35
Mutual S17	9.381	0	9.381
Hebron 18	3.792	0.15	3.942
Pintail S16	9.57	0	9.57
Evans S21	2.81	0.3	3.11
Open Range S18	8.776	2.74	11.516
Coalmont S13	3.992	1.87	5.862
Coalmont Battery	1.29	0	1.29
Judy S30 SWD	2.86	0.8	3.66
Mutual S30	3.6	5.16	8.76
Vaneta S32 SWD	8	-	8
Spicer S32	1.55	0.67	2.22
Surprise-Damfino S6	4.403	0.769	5.172
Surprise 2-8	1.95	1.27	3.22
Surprise S4 CTB	9	1	10
Surprise S9	4.5	0.5	5
Marmot S19	5.81	0	5.81
REU S23	4.63	0.627	5.257
Spicer S32 Annex	4.042	0	4.042
Alcorn CTB	4.99	0.483	5.482
Pending locations with known sizes	Pad Size	Lease Road	Total Acres
High Point S28	5.41	-	5.41
Willow View CTB	7.612	-	7.612

Totals (for existing locations):	165.417	28.037	193.454
----------------------------------	---------	--------	---------

Average Existing Disturbance / Location (acres)	5.51
Square Miles within WMP Boundary	160
Disturbance / Square Mile ( <i>avg. acres/mile<sup>2</sup></i> )	1.209
Existing Pads / Section (avg.)	<b>0.188</b>
Potential new disturbance (20 proposed pads x 6.75 acre avg.. disturbance)	135 acres
Potential disturbance/section (avg.)	2.29 acres
Potential Pads/section (avg.)	<b>0.34</b>



## **APPENDIX F**

### **CPW's Fencing with Wildlife in Mind Document**

**D90 Energy, LLC & Gondola Resources, LLC**

**- North Park -**

**Wildlife Mitigation Plan**

Where the surface owner agrees, D90 Energy, LLC will construct any new necessary fencing to the design criteria found within CPW's Fencing with Wildlife in Mind Document, located at the following web address:

<https://cpw.state.co.us/Documents/LandWater/PrivateLandPrograms/FencingWithWildlifeInMind.pdf>

## **APPENDIX G**

### **Stormwater Management & Spill Prevention Plans**

**D90 Energy, LLC & Gondola Resources, LLC**

**- North Park -**

**Wildlife Mitigation Plan**

[D90 Energy's most current stormwater management plans and spill prevention, control, and countermeasure plans will be maintained at the link below.]

[\*\*D90 Energy SWMP & SPCC PLANS\*\*](#)