

Appendix E
Biological Resources Protection Plan

Biological Resources Protection Plan

**Whitewater Unit Master Development Plan
Fram Operating, LLC**

Presented to:

**Bureau of Land Management
Grand Junction Field Office
Grand Junction, Colorado**

April 2014

BIOLOGICAL RESOURCE PROTECTION PLAN

WHITEWATER UNIT MASTER DEVELOPMENT PLAN

1.0 Introduction

This Biological Resources Protection Plan (Plan) describes measures to be taken by Fram Operating, LLC (Fram) and its contractor(s) (Contractor) to avoid or minimize adverse effects to biological resources during construction, operation, and abandonment of the Fram Whitewater Unit Master Development Plan Project (Project). Measures identified in this Plan apply to work within the project area defined as surface disturbing activities and traffic.

Fram and Contractor(s) personnel are to be thoroughly familiar with this Plan and its contents prior to initiating construction on the Project.

2.0 Purpose

This Plan was developed to mitigate potential impacts to biological resources from construction, operation, and abandonment of the Project. The protective, mitigation measures identified, below, are intended to minimize or avoid short- and long-term effects to biological resource habitats and populations.

3.0 Responsibilities

3.1 Fram

Fram is responsible for meeting the goals and objectives of this Plan and for monitoring Project-related work to ensure that the Contractor(s) applies the measures and complies with the natural resources constraints. Fram is responsible for pre-construction surveys to identify sensitive areas, determine status of raptor nests, and apply appropriate buffers and/or timing restrictions recommended by the agencies.

3.2 Contractor

The Contractor is responsible for adhering to biological resource construction timing restrictions described below.

4.0 Protection Measures

In order to avoid long-term effects to key wildlife species and federally threatened and BLM-sensitive plant and animal species, protection measures have been developed in consideration of the requirements of the Bureau of Land Management (BLM) Grand Junction Field Office (GJFO).

4.1 Seasonal Limitations and Buffer Zones

There are a number of seasonal timing limitations and required buffer zones for sensitive resources within the project area. A seasonal timing limitation is defined as the time of year

when no surface disturbing activities or drilling/completion are allowed in a particular sensitive area. These timing limitations are also referred to as seasonal closures or construction constraints. Buffer zones are areas surrounding a sensitive location (e.g., raptor nest and special status plants) where seasonal timing and spatial limitations would apply. Timing limitations occur for the following species that could be potentially affected by the Project:

- Breeding migratory birds;
- Raptor nests;
- White-tailed prairie dog towns;
- Mule deer;
- Elk; and
- Federally threatened plant species.

4.2 Pre-construction Surveys

Fram conducted surveys for biological resources within the project area, including threatened, endangered, and sensitive plants, raptor nests, prairie dog towns, wetlands, waters of the U.S. (WoUS), and noxious weeds in 2010, 2011, and 2012 (WestWater Engineering, 2010, 2011, 2012a, and 2012b). Additional surveys will be conducted prior to construction activities to determine the status of raptor nests documented within the project area. The following surveys have been completed within the project area on all BLM-administered lands, and on private lands where survey permission was granted:

Special Status Plant Surveys. Special status plant (Colorado hookless cactus and BLM-sensitive plant species) surveys were conducted in suitable habitat within 100 meters of pipelines and access road improvements/construction, and 200 meters of proposed well pads.

Raptor Surveys: Raptor surveys were conducted within 0.25 mile of proposed well pads, pipelines, and access roads within appropriate habitat. If cliff habitat was present, surveys were extended to 0.5 mile of proposed disturbance boundaries.

Burrowing Owl Surveys. Burrowing owl surveys were conducted within 0.25 mile of proposed disturbance in accordance with Colorado Department of Parks and Wildlife (CPW) burrowing owl survey protocol.

White-tailed Prairie Dog and Kit Fox Surveys: Pedestrian ground surveys were conducted within 100 meters of the Proposed Action.

Wetland Surveys: Wetland evaluations were conducted within the project area to identify potentially jurisdictional wetlands and Waters of the U.S. (WoUS) based on vegetation, soils, and hydrologic characteristics present at the site.

Noxious Weeds and Non-Native Plant Species Surveys: Weed species were documented within 100 feet of proposed disturbance.

5.0 General Protection Measures

In February 2014, Fram and CPW signed a Wildlife Mitigation Plan (Attachment 1) which identifies best practices for oil and natural gas development within the Whitewater Unit to protect wildlife and to document that consultation on wildlife issues has occurred. Fram has agreed to all measures included in the Wildlife Mitigation Plan.

In addition to site-specific seasonal timing limitations and buffer zones identified below, Fram will comply with the following plant and wildlife protection measures:

- Construction will not proceed in restricted areas until final clearance is obtained by the applicable federal and state agencies. This restriction applies to raptors, migratory birds, white-tailed prairie dogs, and listed plants.
- Fugitive dust will be controlled during construction of well pads and along unpaved access roads as needed.
- Posted speed limits will be followed. Where there is no posted speed limit, speeds on unpaved roads and disturbed areas will not exceed 20 miles per hour to reduce fugitive dust and minimize potential wildlife collision.
- After well pad construction, wildlife-friendly fencing will be erected around well-pad disturbance to exclude livestock grazing and promote successful revegetation. Fencing will be in place during the first two growing seasons after well pad construction, or until it is no longer necessary.
- A policy stating that no guns, dogs, drugs, or alcohol will be in place for all employees and subcontractors to minimize potential conflicts with wildlife.
- Fram will install natural gas, oil, and produced water gathering pipelines to reduce operational traffic and associated dust.
- Fram will provide environmental awareness training to all employees during orientation to address native wildlife, sensitivity to various kinds of impacts, consequences of poaching, information about federal and state wildlife laws, licensing and residency requirements, and outdoor recreation opportunities.
- Workers will carpool to construction locations to reduce traffic.
- Single-purpose roads will be gated and general public access will be restricted to reduce traffic disruptions to wildlife where possible, and with landowner consent.
- Remote telemetry will be used for all well locations during operations. Initially, regular visits (daily) are necessary but once the well has been in production for some period of time, the daily trips can be reduced to a single weekly or monthly visit.
- Earthwork will not be conducted when the wind speed exceeds 30 mph.
- Vegetation will be cleared by mowing or brush hogging where appropriate, leaving the root structure intact – instead of scraping the surface (and in agreement with landowner conditions).
- All pipeline-related disturbance will be reclaimed within one growing season after construction. Interim reclamation at well pads will occur within 6 months of the last scheduled well on a pad or within 12 months of a well drilled on the pad.
- All disturbed surfaces not to be used during operation will be revegetated/reclaimed with native, palatable species for wildlife, with grasses, shrubs, and forbs. Disturbed areas will be recontoured and graded to pre-project contours to create physical diversity of landforms (e.g., slopes, surface undulations, minor depressions, rock piles, etc.).

- Multi-well pads will be used to minimize surface disturbance. Up to 108 wells are proposed to be drilled on the 12 well pads.

6.0 Aquatic Wildlife Protection Measures

To minimize adverse effects at the drainage crossings with water present, Fram will comply with the following aquatic wildlife protection measures:

- Follow measures described in their Stormwater Management Plan to minimize the potential for spills of fuel and/or other hazardous materials to reach drainages.
- Use native stream-bed materials for trench backfill.
- Avoid applying herbicides within 100 feet of streams, wetlands and floodplains, unless approved by the BLM.

7.0 Colorado River Endangered Fishes and other Sensitive Fish Species

To mitigate adverse effects to sensitive fish species (e.g., Colorado River cutthroat trout) from withdrawal and discharge of hydrostatic test waters, Fram will implement the following measures:

- Water will be withdrawn from Brandon Ditch, North Fork Kannah Creek, and an unnamed tributary to Kannah Creek. The FWS will be consulted on appropriate methods to avoid or minimize impingement or entrainment of sensitive fish species in surface water proposed for water withdrawal.
- Discharge all hydrostatic test water in vegetated upland areas at a distance from drainages to encourage infiltration and minimize flow into drainages. Discharge locations will be approved by the BLM GJFO.

8.0 White-tailed Prairie Dog Protection Measures

Fram will avoid construction within active white-tailed prairie dog towns, if feasible. However, if active towns cannot be avoided, Fram will avoid activities within active white-tailed prairie dog towns during pupping season on BLM-administered lands from April 1 through July 15.

9.0 Mule Deer and Elk Protection Measures

Fram will implement the following mule deer and elk protection measures on federal and non-federal lands:

- Redistribute large, woody material salvaged during clearing operations. Disperse materials over disturbed surfaces from which the trees and brush were originally removed to provide wildlife habitat and a deterrent to vehicular traffic.
- As required by lease stipulation, avoid construction within sensitive big game winter habitats from December 1 through April 30.
- During operations, to minimize traffic within big game sensitive winter wildlife habitat from December 1 through April 30, oil and produced water from selected well pads (Federal 1-2-15-1, Federal 1-2-16-1, Federal 1-2-22-1, Federal 1-2-26-2, and Federal 1-2-

33-1) that flows to the Sink Creek Facility from May 1 to November 30, will be collected by truck directly at the well pad for off-site transport.

- Fram will be responsible for maintaining locked gates leading to sensitive big game winter habitats.

10.0 Migratory Birds

Fram will comply with the following migratory bird protection measures on federal and non-federal lands:

- Vegetation clearing will occur between May 15 and July 15.

11.0 Raptor Protection Measures

Fram will revisit nests documented within 0.25 mile of the project area prior to surface-disturbing activities that would occur between February 1 and August 15 to determine nesting activity.

- If the nest is determined to be occupied and active, Fram will avoid surface disturbing activities within 0.25 mile or 0.5 mile of the raptor nest during FWS and CPW seasonal breeding periods (see Table 1, below).
- If the nest is not occupied, or nestlings have fledged and dispersed from the nest, construction or other disturbing activities will occur without consideration of seasonal breeding periods identified in Table 1.

The following nests were documented within 0.25 mile of the Project (WestWater Engineering, 2010 and 2011; CPW, 2008a):

- Burrowing owl (March 15 – August 15):
 - One nest within 0.25 mile of Federal 1-2-26-2
- Cooper's Hawk (April 1 – August 15):
 - One nest within 0.25 mile of existing access road, south of Sink Creek Facility
 - One nest within 0.25 mile of Lands End Road
- Unknown Hawk (February 1 – August 15):
 - One nest within 0.25 mile of access road to Federal 2-2-2-1
 - One nest within 0.25 mile of Lands End Road near Federal 12-98-24-2
 - Four nests within 0.25 mile of Lands End Road
 - One nest within 0.25 mile of access road to Federal well pads 13-98-12-2 and 13-97-8-2

Table 1
Raptor Species that Might Nest in the Vicinity of the Project Area with Seasonal Timing and Spatial Buffers Recommended by FWS and CPW

Species	Breeding Season Timing Buffer	Breeding Season Spatial Buffer (mile)
Bald Eagle	November 15 - July 31	0.5
Burrowing Owl	March 15 - August 15	0.25
Cooper's Hawk	April 1 - August 15	0.25
Ferruginous Hawk	February 1 - August 15	0.5
Flammulated Owl	March 1 - August 15	0.25
Golden Eagle	December 15 - July 15	0.5
Great Horned Owl	February 1 - August 15	0.25
Long-eared Owl	February 1 - August 15	0.25
Merlin	March 1 - August 15	0.25
Northern Goshawk	March 1 - September 15	0.5
Northern Harrier	April 1 - August 15	0.25
Northern Pygmy Owl	March 1 - August 15	0.25
Northern Saw-whet Owl	March 1 - August 15	0.25
Osprey	April 1 - August 31	0.25
Peregrine Falcon	March 15 - July 31	0.5
Prairie Falcon	March 15 - July 31	0.5
Red-tailed Hawk	February 15 - August 15	0.25
Sharp-shinned Hawk	April 1 - August 15	0.25
Swainson's Hawk	April 1 - August 15	0.25
Sources: BLM, 2011; CPW, 2008b; and Romin and Muck, 2002.		

12.0 Threatened, Endangered, and Sensitive Plant Protection Measures

Fram conducted surveys for federally threatened Colorado hookless cactus and BLM sensitive plant species (special status plants, collectively) that could occur within the Project area (WestWater Engineering, 2010, 2011, 2012a, and 2012b) on BLM-administered lands and on private lands where survey access was permitted. The following measures will be applied to minimize or avoid effects to special status plants documented during survey efforts within the Project area:

- No well pads will be constructed within 20 meters of documented Colorado hookless cactus plants. Where feasible, well pads will be placed further than 20 meters from BLM-sensitive plants.
- Pipeline corridors will be constructed adjacent to existing disturbance (roads or existing pipeline corridors) where feasible, or collocated with new proposed access roads.
- Pipeline corridors and new access roads will be constructed further than 20 meters from documented Colorado hookless cactus plants and BLM-sensitive plants, if feasible. In situations that this scenario is not possible for pipeline corridors, Fram will minimize effects to special status plants by reducing the construction corridor width, constructing

the pipelines on the opposite side of existing disturbance if special status plants are not present, or constructing the pipelines within an existing road if special status plants are present on both sides of the road.

- No construction would occur within 100 meters of Colorado hookless cactus plants during the flowering season (April and May).
- Orange fencing will be erected along well pad, pipeline, and access road construction disturbance extents within 20 meters of known Colorado hookless cactus and BLM-sensitive plant species to ensure construction traffic and workers would not accidentally crush plants.
- During construction, Fram will water (no additives) existing gravel/dirt roads, pipeline construction corridors, and/or well pads within 100 meters on either side of known special status plants to reduce possible dust deposition. Water will be obtained from an approved water source.
- Straw bale wattles, silt fences, or other measures will be installed on the edge of proposed ground-disturbance and existing access roads if proposed disturbance is within 20 meters of documented Colorado hookless cactus and/or BLM-sensitive plants to reduce the potential for altering hydrology / habitat within occupied habitats.
- A biological monitor will be present on-site during all ground-disturbing activities, including installation of best management practices (conservation measures) and reclamation activities to ensure effects to special status plants are minimized as much as possible. Areas requiring a biological monitor will be determined in conjunction with BLM GJFO.
- Fram will follow BLM's *Noxious and Invasive Management Plan for Oil and Gas Operators* (BLM, 2007) to control or eliminate noxious weeds and other undesirable plants documented within the project area.
- Fram will inform all employees about prohibitions against possessing, damaging, and destroying ESA-listed plants.

In areas that permission to complete surveys was not acquired, but the area could provide potential habitat for federally threatened plants (Colorado hookless cactus), Fram will have a biological monitor present to avoid or minimize effects to federally listed species, where feasible. These efforts could include:

- Minor alteration of the pipeline alignment to avoid removal of a Colorado hookless cactus plant(s).
- Reduce the pipeline construction corridor to minimize effects to potentially suitable habitat.
- Reconfigure the proposed well pad to avoid removal of Colorado hookless cactus plant(s).

In addition, Fram will provide details of cactus plant locations, as well as actions taken to minimize effects to the plants and/or habitat to the BLM GJFO when and if additional Colorado hookless cactus plants are encountered.

13.0 Weed Control

Fram will monitor and promptly control Colorado State-listed Class A and Class B noxious weeds and other undesirable plants as described within BLM's *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, (BLM, 2007). Weed infestations will be treated

and monitored, and retreated, if necessary. Weeds within sensitive resource areas will be spot-treated. Reports would be provided to BLM GJFO by December 1 of each year until desired level of control is achieved.

14.0 References

Bureau of Land Management. 2007. Noxious and Invasive Weed Management Plan for Oil and Gas Operators. U.S. Department of the Interior, Bureau of Land Management. Glenwood Springs Field Office. Glenwood Springs, Colorado. March.

Bureau of Land Management. 2011. Draft Standard Stipulations for Raptors. Colorado State Office.

Colorado Parks and Wildlife (formerly Colorado Division of Wildlife). 2008a. Golden Eagle Nest Sites. GIS data. Colorado Division of Wildlife, Fort Collins, Colorado. October 8, 2008.

Colorado Parks and Wildlife (formerly Colorado Division of Wildlife). 2008b. Recommended buffer zones and seasonal restrictions for Colorado raptors. February.

Romin, L.A., and J.A. Muck. 2002. Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances. U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake City, Utah.

U.S. Fish and Wildlife Service. 2008. Programmatic Biological Opinion for Water Depletions Associated with Bureau of Land Management's Fluid Mineral Program with the Upper Colorado River Basin in Colorado. ES/GJ-6-CO-08-F-0006. U.S. Fish and Wildlife Service, Ecological Services, Grand Junction, Colorado.

WestWater Engineering. 2010. Biological Survey Report, Fram Americas, LLC., Mesa County, Colorado. Prepared for Fram Americas, LLC. September.

WestWater Engineering. 2011. Biological Survey Report, Fram Operating, LLC., Mesa County, Colorado. Prepared for Fram Operating, LLC. September.

WestWater Engineering. 2012a. Biological Survey Report, Fram Operating, LLC, Mesa County, Colorado. Prepared for Fram Operating, LLC. May.

WestWater Engineering. 2012b. Biological Survey Report, Fram Operating, LLC, North Access Road, Mesa County, Colorado. Prepared for Fram Operating, LLC. October.

Attachment 1

Wildlife Mitigation Plan

FRAM OPERATING, LLC

WILDLIFE MITIGATION PLAN

WHITEWATER UNIT

February, 2014

Fram Operating, LLC (Fram) and Colorado Parks and Wildlife (CPW) agree to the attached Wildlife Mitigation Plan (WMP) for Fram's proposed oil and gas operations within Fram's Whitewater Project Area; the Project Area (WMP boundary) is approximately 52,543 acres of public, private, and split estate ownership and comprises the northern half of Fram's Federal Whitewater Unit. The purposes of this WMP are to: 1) identify best practices for oil and natural gas development within the Whitewater Unit to protect wildlife and, 2) to document that consultation on wildlife issues has occurred. Fram agrees to implement and otherwise conform its operations to the terms and conditions of this WMP as modified by agreement of the parties. This WMP does not apply to the operations of other oil and gas companies within the Whitewater Unit; however, certain of these companies may be required to adhere to Fram's environmental stewardship standards. Fram will provide this WMP to contractors engaged in Fram's operations within the Whitewater Unit.

CPW acknowledges that it has consulted with Fram regarding proposed oil and gas operations in areas of Sensitive Wildlife Habitat (SWH) and in Restricted Surface Occupancy (RSO) areas within the Whitewater Unit, and agrees that the best practices are incorporated into this WMP. Accordingly, within five days of electronic notice of the posting of a Form 2A on the Colorado Oil and Gas Conservation Commission (COGCC) website, CPW shall inform the COGCC in writing that CPW expedites or pre-approves consultation on the Form 2A. If the Form 2A includes a RSO area, the information submitted to the COGCC by CPW shall state that operations within the RSO are exempted pursuant to Rule 1205.a.(4). If the information is not provided to the COGCC within five days of posting of the Form 2A, CPW shall be deemed to have waived consultation.

The COGCC has authority over Fram's operations on the Whitewater Unit. If Fram is not in material compliance with this WMP, then Forms 2A filed by Fram will be subject to the consultation requirements of Rule 306.c 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 both CPW and Fram. Any such modification 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 implementing regulations. Any such required modification shall 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 implementing regulations.

The term of this WMP is four years and expires on the date indicated below. If this agreement has not been otherwise terminated, the agreement shall terminate on December 1, 2018, unless extended by agreement of both parties. Either party may terminate its agreement to this WMP upon 30 days written

notice to the other party. Upon expiration of the 30 days, 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 the 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.

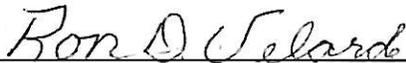
The signatories hereto warrant that they possess the legal authority to enter into this WMP and that they have taken all actions required by the respective parties' procedures, by-laws or applicable law to exercise that authority, and to dually authorize the undersigned signatory to execute this WMP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

FRAM OPERATING, LLC

By 
David Cook, Manager

2/18/14
Date

Colorado Parks and Wildlife

By 
Ron D. Velarde,
NW Regional Manager

Feb. 14, 2014
Date

Effective Date: [date of approval]

Expiration Date: [4 year period] December 1, 2018

WILDLIFE MITIGATION PLAN FOR THE FRAM WHITEWATER UNIT – Whitewater Unit –

I. Introduction

This Wildlife Mitigation Plan (WMP) was developed in consultation with Colorado Parks and Wildlife (CPW) for the Whitewater Unit (WWU). This WMP satisfies the consultation requirement of Rule 1202 for new and reoccupied oil and gas locations within Sensitive Wildlife Habitat (SWH) and Restricted Surface Occupancy (RSO) areas. The general operating requirements in Rule 1203 are incorporated by reference into this WMP. For purposes of presenting the applicable wildlife practices, the Whitewater Unit is described in two Subareas, based on topography and wildlife habitats; they are the Whitewater Unit North Area and the Whitewater Unit South Area, Whitewater Creek Road is the dividing line for the two areas (Figure A).

Fram and CPW will review this WMP annually (January). However, discussions of development activity or changes in species and habitats considered in this WMP may occur prior to or during the annual review. Fram will provide updates, either verbal or informal written summaries, as they relate to current wildlife and natural resource actions, including reclamation, weed control, on-site biological reports, water quality data (for purposes of baseline monitoring), and biological and pre-construction surveys for review by CPW during the semi-annual WMP meeting with CPW; BLM may request and review the updates as well. However, Fram will not relinquish to CPW, BLM or Colorado Oil and Gas Conservation Commission (COGCC) any data or report related to the Whitewater Unit that is not public information with the exception of sensitive biological information that may not be made public by the BLM or CPW.

Fram, and any Fram subcontractor or agent will apply to CPW for a scientific collection permit if wildlife sampling is desired on lands and waters contained in the Whitewater Unit. Fram will work with CPW and private landowners to assist with gaining access for stream monitoring of fish populations and to monitor or survey other wildlife species on private land. If any salvage activity is necessary for wildlife including reptiles or amphibians, Fram will notify CPW of the need and CPW will conduct the work.

Development Background and Context

This agreement is prepared with the purpose of identifying actions that avoid, minimize and mitigate impacts that are expected to be associated with oil and gas exploration and development. Fram expects that after four years of exploratory work (Construction/drilling Phase) it will be able to move into a full Production Phase where a distinctly different set of impacts would occur within the Project Area/Wildlife Mitigation Plan boundary. Future infrastructure needs would be significantly different than the current phase of exploration. Fram and CPW anticipate that this agreement will be amended to reflect conditions at the time this agreement expires; or CPW and Fram will enter into a new agreement to address, evaluate, and mitigate the impacts of oil and gas operations during the Production Phase.

CPW and Fram agree that avoiding and minimizing direct and indirect disturbance in mule deer critical winter range and elk winter concentration areas between December 1 and April 30 is the overarching goal of this plan. CPW and Fram will also avoid, minimize, and mitigate other impacts to wildlife resources in the Project Area/Wildlife Mitigation Plan boundary, including Colorado River Cutthroat Trout habitat, raptors, white-tailed prairie dogs, kit fox habitat, and pronghorn antelope habitats. The

success of this wildlife mitigation plan rests primarily on maintaining winter road closures and adhering to seasonally open roads to comprehensively manage vehicle traffic and its impacts to mule deer and elk. Abandonment or modification of the access schedule and seasonal use patterns prescribed in this plan would have significant adverse impacts on mule deer using critical winter range in the planning area.

Development Activity

A forecast of Fram's future development within the Whitewater Unit is based on a Federal unit for the Dakota and Morrison formations. This agreement pertains to Fram operations that will occur within the two geologic formations; should Fram decide to explore and develop other formations, they will work with CPW to amend the agreement.

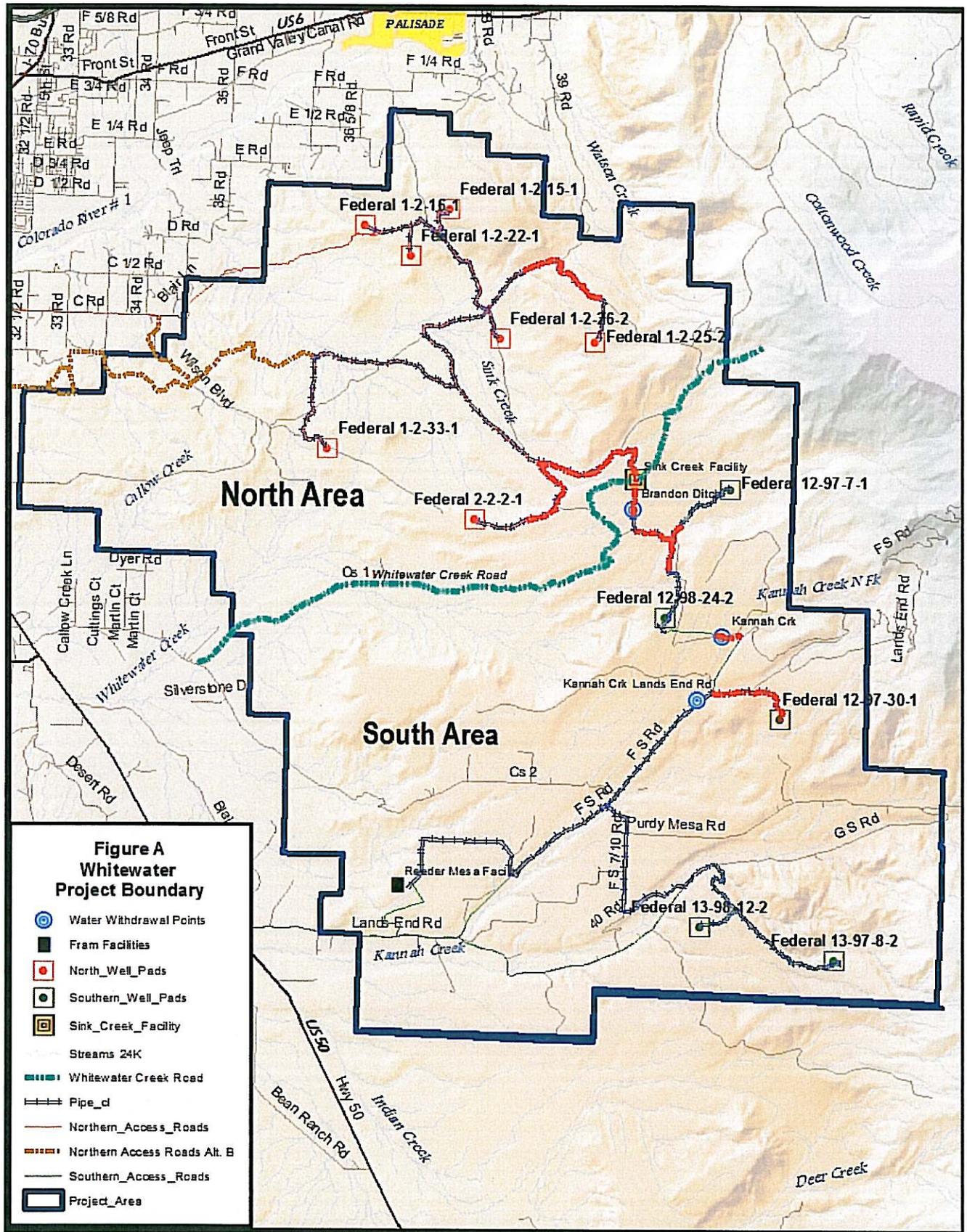
Within the Project Area/Wildlife Mitigation Plan boundary, surface ownership comprises approximately 52,543 acres of public, private, and split estate lands. Figure A depicts Fram's proposed exploration and development for the four year term of this WMP (2014 through 2018) and Fram's operations (*i.e.*, well pads and roads) within the Project Area/Wildlife Mitigation Plan boundary to date. Fram will consult with CPW regarding any changes to its proposed exploration and development beyond the scope of this agreement. The current scope of operations includes construction, operation, maintenance and abandonment of well pads, wells, roads, gas gathering pipelines, oil gathering pipelines and produced water gathering pipelines. The estimated overall life of the project is 20 years. This WMP includes construction/drilling planned for a four year period. Fram's construction and drilling plans from 2014 through 2018 include exploration of the Dakota Formation, with four new well pads in the first year and eight new well pads in the second year. In the longer term of the project, plans include up to nine wells per pad, not to exceed 108 wells total.

Within the project area, Fram proposes to use approximately 17 miles of existing roads that do not require improvement, 23 miles of existing roads that would require varying levels of upgrades and to construct up to 2 miles of new resource roads (see Map 1). Existing two-track roads may be used as "primitive" two track roads to a well pad until it is determined that the well will be productive. Once wells are productive, Fram proposes to upgrade roads as needed, install up to 34 miles of oil, gas, and water gathering pipelines co-located in the same trench. Gathering pipelines would be located adjacent to roads to the greatest extent possible.

Individual well pad facilities will include wellheads, separator units, gas metering units and aboveground oil and produced water tanks with approximately 100 to 400 barrel capacities. Fram will place all necessary collection equipment on two central facility pad sites; the Sink Creek Facility pad and the Reeder Mesa Facility pad.

Fram will conduct its drilling operation in the Project Area/Wildlife Mitigation Plan boundary from newly constructed pads. Fram anticipates using surface water withdrawals from three locations; a Brandon Ditch site in S12, T12S, R98W; a location on Kannah Creek in S19, T12S, R 97W; and a site on Kannah Creek in S25, T12S, R98W (see Figure A for locations); the water will be trucked to each pad location from one of these withdrawal locations. Fram and the City of Grand Junction are working on an agreement which will allow Fram to pump surface water from these three locations.

During the winter months (*i.e.*, from December 1 through April 30) Fram will geographically consolidate (phase) the location and activities of its drilling rigs within the Whitewater Unit North Area. Fram will use a single drilling rig and a single completions rig for operations within the Project Area/Wildlife Mitigation Plan boundary for the life of this agreement.



The Project Area/Wildlife Mitigation Plan boundary is divided into two areas for which the development pattern will be based on voluntary phasing (north and south) and transportation planning, due to the sensitivity of the habitat and efforts to minimize oil and gas exploration disturbance in mule deer and elk winter habitat. For the purposes of describing activities in the Project Area/Wildlife Mitigation Plan boundary, Fram and CPW have created two "Areas": the North Area and the South Area. The Project Area/Wildlife Mitigation Plan boundary is approximately divided north and south by Whitewater Creek Road.

BLM Lease Stipulations Applicable to Pad Location

Proposed Pads	BLM Stipulation	Whitewater Unit North or South
Federal 2-2-2-1	No Wildlife	North
Federal 12-97-30-1	Deer and Elk Winter Range	South
Federal 12-98-24-2	Deer and Elk Winter Range	South
Federal 13-97-8-2	Deer and Elk Winter Range Threatened and Endangered Habitat	South
Federal 13-98-12-2	No Wildlife	South
Federal 12-97-7-1	Deer and Elk Winter Range Threatened and Endangered Habitat	South
Federal 1-2-15-1	No Wildlife	North
Federal 1-2-16-1	No Wildlife	North
Federal 1-2-22-1	Threatened and Endangered Habitat	North
Federal 1-2-25-2	Deer and Elk Winter Range	North
Federal 1-2-26-2	No Wildlife	North
Federal 1-2-33-1	Threatened and Endangered Habitat	North

II. Avoidance

Development Planning to Avoid Wildlife and Wildlife Habitat

The road network necessary for developing the WWU is described in two sections; the North and South sections. The road network for each section is described and depicts the access to well pads and support facilities in each section (see figures titled: North Access; alternative A and B, and the South Access). Two possible routes (C Road and B Road) for the northern access have been identified and are described below.

North Section - Access Routes:

C Road. From SH 141/32 Road, the northern access route follows C Road approximately 2.8 miles to the Whitewater Unit boundary, where it enters the project area. The access route, which will require minimal upgrading (within the existing disturbance) east of 34 Road, passes through approximately 0.7 mile of a northwestern corner of the unit, leaves the unit for approximately 0.7 mile, re-enters the unit, and proceeds approximately 2.0 miles to a resource road leading to proposed Well Pad Federal 1-2-16-1. At this point, the access routes for the northern and southern areas are the same and continue 0.3 mile to a resource road leading to Well Pad Federal 1-2-22-1, another 0.4 mile to a resource road leading to proposed Well Pad Federal 1-2-15-1, and proceeds 1.4 miles to a four-way X junction. Straight ahead, the access route continues 0.4 miles to proposed Well Pad Federal 1-2-26-2. Turning right at the junction, the access route proceeds 1.8 miles to a resource road that continues 3.4 miles to proposed Well Pad Federal 1-2-33-1. Resource roads to each well pad accessed by the northern access route were described above in the description of the primary (southern) access route.

B Road. Under the B Road Alternative, traffic from I-70 and Grand Junction would continue south on 32 Road for 1 mile beyond C Road and turn left (east) onto B Road for winter access to well pads in the northern portion of the project area. This route would follow B Road, which is paved, for 0.76 mile and

turn left (north) onto Valley View Drive, which is unpaved. The route would follow Valley View Drive in a generally northeastern direction for 0.35 mile and continue for 0.11 mile on a new road segment that would be constructed to link the route with an existing unpaved road. The route would turn left onto this road and proceed north for 0.22 mile, at which point the route would turn right onto an existing unpaved road that is east of and separated from B-½ Road by an irrigation ditch. The access route would follow this road 0.44 mile east to enter the project area and continue for 3.62 miles in a generally eastern direction to join the access road leading to well pad Federal 1-2-33-1. Beyond this point, the B Road Alternative would access well pads Federal 1-2-33-1, Federal 2-2-2-1, Federal 1-2-26-2, Federal 1-2-22-1, 1-2-16-1, and Federal 1-2-15-1.

Use of a northern access route in winter months would eliminate the need for access from the south through the sensitive big game winter habitats; the northern access would allow flexibility of operations for the northern pads Federal 1-2-16-1, Federal 1-2-15-1, Federal 1-2-22-1, Federal 1-2-26-2 and Federal 1-2-33-1, allowing for the possibility to construct and drill/complete them in the winter months between December 1 and April 30, without intrusion into big game winter range.

Two well pads, the Federal 1-2-25 2 and the Federal 2-2-2-1, are located in the northern portion of the project area; while well pad 1-2-25-2 has a lease stipulation and therefore construction would only occur outside of winter stipulations, the pads are not located in elk winter concentration areas or mule deer critical winter range (in T12S R99W section 24). Its noteworthy that the access roads to the pads do cross through elk winter concentration areas and mule deer critical winter range via the northern access route during the operations periods. Two support facilities, the Sink Creek facility and the Brandon Ditch water withdrawal point, would require transportation through elk winter concentration areas and mule deer critical winter range regardless of access from the North or South.

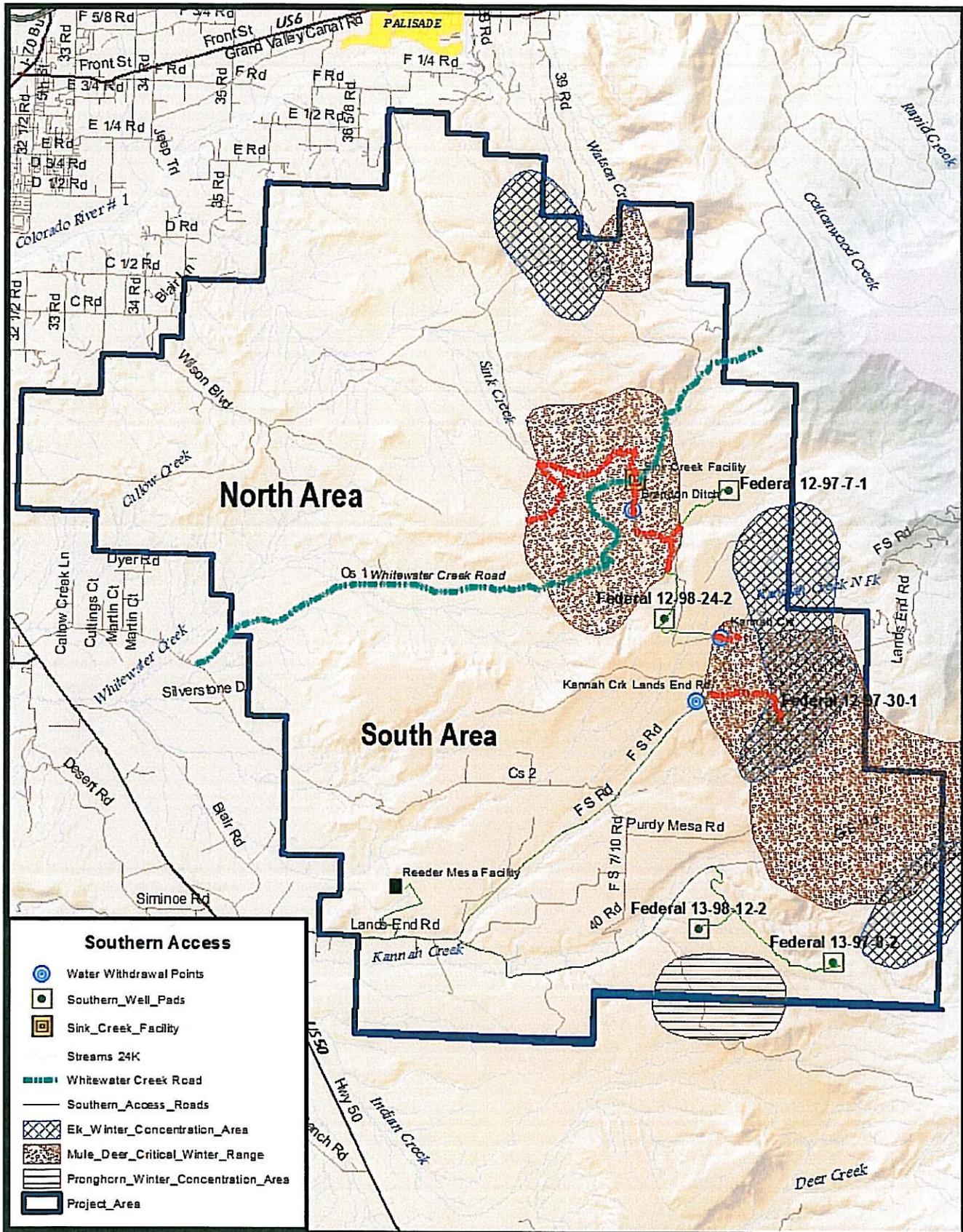
South Section - Access Route:

From US 50, the primary (southern) access route turns east on Kannah Creek Road and proceeds approximately 1.6 miles to the Whitewater Unit boundary and enters the project area. Within the project area, the access route follows Kannah Creek Road, a paved road that will not require upgrades, for approximately 0.5 mile, where an unpaved road that will not require upgrades exits to the left (north) to access the existing Reeder Mesa facility. Beyond this turn-off, the primary access route follows Kannah Creek Road approximately 0.8 mile to encounter a Y-Junction. Veering right (south), the access route continues on Kannah Creek Road for approximately 5 miles, and turns right (south) onto an unimproved road (upgrades required) and proceeds approximately 0.5 mile to a new 0.2 mile resource road that will access proposed Well Pad Federal 13-98-12-2. Proposed Well Pad Federal 13-97-18-2 is located approximately 1.6 miles beyond the new resource road exit.

Use of a southern (the Kannah Creek) access route would minimize the need for access from the north through the sensitive big game winter habitats; the southern access would allow flexibility of operations for the Federal 19-98-12-2 and Federal 13-97-8-2 for year round activities. The Federal 12-98-24-2, Federal 12-97-30-1, and Federal 12-97-7-1 access roads cross into elk winter concentration areas and mule deer critical winter range and thus construction and drilling activities will be conducted outside of the big game winter seasonal restriction.

The Kannah Creek water withdrawal point is located outside of big game winter habitats; however its access road crosses through elk winter concentration areas or mule deer critical winter range; winter vehicle access will be managed to minimize vehicle traffic into winter timing limitations for water withdrawals. Managed traffic consists of scheduling and carry-out, post-development water

withdrawal site visitations to between the hours of 10:00 a.m. and 3:00 p.m. and reduce water withdrawal site visitations between December 1 and April 30 in mule deer and elk winter range.



Construction

To minimize impacts to wildlife, no construction (including drilling and completion) or associated traffic will occur from December 1 through April 30 for five well pads (the Federal 13-97-8-2, Federal 12-97-30-1, Federal 12-98-24-2, Federal 12-97-7-1 and Federal 1-2-25-2), within mule deer critical winter range and elk winter concentration areas. Two other well pads (the Federal 2-2-2-1 and Federal 13-98-12-2) are not located in mule deer critical winter range or elk winter concentration areas and the leases do not have big game seasonal lease stipulations assigned to them; however, the access roads to them pass through areas of winter season big game timing limitations and thus Fram proposes to build them outside the peak winter season of January 1 through March 1. Pad construction and drilling activities conducted outside of the winter seasonal closure will somewhat reduce potential effects to wintering big game, but the full winter avoidance window from December 1 through April 30 is preferable. Fram would access and construct five well pads (the Federal 1-2-15-1, Federal 1-2-16-1, Federal 1-2-22-1, Federal 1-2-26-2, and Federal 1-2-33-1), that are located outside of sensitive big game winter habitats without any winter timing constraints.

Production Vehicle Traffic

To avoid and reduce operational traffic through mule deer critical winter range or elk winter concentration areas, Fram will use the northern access route from December 1 through April 30, transporting oil and produced water directly from five well pads and from the Sink Creek Facility to transportation facilities outside of the Unit. Access to the Sink Creek Facility would require operational traffic such as water trucks to pass through 2.63 miles of mule deer and elk winter ranges. During the operational phase, as proposed by Fram, an average of 11 vehicles per day would use the northern access route during winter timing stipulation. The number of vehicles travelling through mule deer and elk winter ranges to access the Sink Creek Facility would average about five vehicles (based on the proportion of well pads serviced by the facility) with average traffic volume of 11 vehicles per day. The Sink Creek Facility access road passes through elk winter concentration areas and mule critical winter range, where mule deer and elk densities are higher than on overall winter range, so indirect impacts from vehicle traffic may affect more animals. Similar effects would occur to wintering elk, potentially displacing them from habitats adjacent to the Sink Creek road.

During the operational phase, all well pads would be initially accessed by an average of one pumper truck daily (two vehicle trips per day) until telemetry at each well head was fully operational. Other maintenance vehicles would access well pads approximately 10 days per year.

Oil and produced water from three well pads (Federal 13-98-12-2 and Federal 13-97-8-2 and Federal 12-97-31-1) would flow year-round through gathering lines to the Reeder Mesa Facility where trucks would pick up the fluids and transport them off-site (see figure A). In order to avoid or minimize traffic within sensitive big game winter habitat from December 1 through April 30, trucks will collect oil and produced water directly from well pads Federal 1-2-15-1, Federal 1-2-16-1, Federal 1-2-22-1, Federal 1-2-26-2 and Federal 1-2-33-1 rather than letting the fluids flow to the Sink Creek Facility, which is located within sensitive big game winter habitat. Oil and produced water from well pads Federal 1-2-25-2, Federal 2-2-2-1, Federal 12-97-7-1 and Federal 12-98-24-2 will continue to flow to the Sink Creek Facility where the fluids will be picked up and transported off-site by truck, using the northern access route, which would reduce and restrict operational within sensitive big game winter habitat.

In the winter (December 1 through April 30), pumper and maintenance trucks would use the southern route to directly access five well pads (Federal 13-98-12-2, Federal 13-97-8-2, Federal 12-97-30-1, Federal 12-98-24-2 and Federal 12-97-7-1). Pumper and maintenance traffic would use the northern access route in the winter (December 1 to April 30) to access seven well pads: Federal 1-2-16-1, Federal 1-2-15-1, Federal 1-2-22-1, Federal 1-2-26-2, Federal 1-2-33-1, Federal 1-2-25-2 and Federal 2-2-2-1.

III. Minimizing Impacts to Wildlife and Wildlife Habitats

In addition to avoiding impacts to wildlife through planning for and scheduling of vehicle traffic, the following best management practices (BMPs) will further lessen impacts to wildlife in the WWU by minimizing direct and indirect impacts through the use of on-the-ground operational practices. The BMPs described below are grouped into one of two categories; general practices and specific or topical BMPs.

General Development Practices – Applicable to both the North and South Areas

The following technologies and practices will be used by Fram in both the North and South Areas where appropriate to minimize impacts to SWH and RSO areas during development.

General BMPs

In addition to well pad, site specific wildlife seasonal timing limitations and buffer distances specified by BLM leases, Fram will observe the following wildlife avoidance and minimization practices.

1. Use solar panels, as practicable, for an alternate energy source for on well pad location equipment.
2. Fram will, as practicable, use natural gas to help power production equipment and reduce potential need to combust the natural gas.
3. Fram will use multiple drilling technologies, as they deem appropriate based on geologic considerations, (horizontal, directional, slant, other) and in doing so, will attempt to minimize the number of well pads needed and minimize ground/habitat disturbance to the extent possible.
4. Once wells prove productive, Fram will install natural gas, oil, and produced water gathering pipelines to reduce operational traffic and associated dust.
5. All production facilities (storage tanks, load-outs, separators, treating units, etc.) with the potential to leak or spill oil, condensate, produced water, glycol, or other fluids which might be a hazard to public health or safety would be placed within secondary containment structures. Secondary containment structures would consist of corrugated steel containment berms or earthen berms. Compaction and construction of earthen berms surrounding the tank batteries would be performed to prevent lateral movement of fluids through the utilized materials. Secondary containment would be sized to contain a minimum of 110 percent of the storage capacity of the largest tank within the berm. All loading lines would be placed inside the containment berm. Chemical containers would be clearly labeled, maintained in good condition and placed within secondary containment. They would not be stored on bare ground, nor exposed to sun and moisture.
6. Fram will notify and report all spills directly to the CPW office in Grand Junction.
7. Fram expects an average well pad surface disturbance of 2.5 acres or less (well pad disturbance does not include associated pipelines, access roads, or facilities) wherever possible.
8. Fram does not intend to use production pits. However, if pits are used, Fram will use appropriate fencing and netting on temporary fluid pits for the purpose of excluding wildlife (per BLM IM No. 2013-033).
9. Fram will use a closed loop drilling system which will minimize wildlife exposure to fluid pits.
10. Fram will provide a courtesy notice to CPW 72 hours in advance of intensive maintenance activities (such as work-over rigs); emergency situations are exempted from pre notice.

11. Response to emergencies, including spills, (an immediate threat to life, property, or the environment) within the Project Area/Wildlife Mitigation Plan boundary during the Wildlife Sensitive Period will not be considered subject to disturbance limitations. Fram will notify the CPW and will maintain records of these operations.
12. Fram will add CPW contact to their emergency response procedures when the emergency is environmental or fisheries/wildlife related.
13. Fram will avoid locating staging, refueling, and storage areas within 300 feet of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river. Infrastructure, well pads, etc., existing prior to signature date of this agreement are exempt from the setback. Fram may request and negotiate a lesser distance setback in consultation and mutual agreement with CPW and BLM, on federal surface.
14. Fram will provide environmental awareness training to all employees to address consequences of poaching and provide information about federal and state wildlife laws.
15. After well pad construction, wildlife-friendly fencing will be erected around well pad disturbance to exclude livestock grazing and promote successful revegetation. Fencing will be in place during the first two growing seasons after well pad construction.
16. Exclusion fencing should be erected along the revegetated pipeline and road disturbance in highly vulnerable areas (e.g., along streambanks) to exclude livestock, accelerate reclamation of surface disturbances and minimize weed infestations, until monitoring has determined reclamation is successful. The CPW and the BLM will determine areas for potential exclusion.
17. Single-purpose roads will be gated and general public access will be restricted to reduce traffic disruptions to wildlife where possible, and with landowner consent.
18. Fram will use brush-hogging techniques for clearing in big sagebrush shrublands, where appropriate, to leave root structure intact and to preserve seed stock and promote faster sagebrush revegetation.

Roads

Existing roads will be maintained in conditions equal to or better than those existing prior to the commencement of operations. Maintenance of the roads used to access the well pad and support facility locations will continue until abandonment and reclamation of the wells or facilities. Two-track roads will not be flat bladed. When saturated soil conditions exist on access roads or location, or rutting deepens to 3 inches, construction and travel will be halted until soil material dries out, is frozen sufficiently or is otherwise brought to standards appropriate for resource protection and road construction. Use will not proceed under conditions of undue damage and erosion to soils, roads and/or locations. All drainage ditches and culverts will be kept clear and free-flowing, and be maintained in good condition.

1. Specific to roads, Fram will observe the following wildlife-friendly practices: Existing roads used in lieu of new construction wherever feasible.
2. Toe berms of adequate size on all fill slopes facing and or adjacent to potential water to contain any erosion from the fill slope.
3. Fram will use storm water perimeter controls on new facility construction in accordance with the requirements of the existing storm water construction permit through CDPHE. COGCC storm water management BMPs are also applicable.

4. Fram will use hydraulic erosion control measures such as mulch, armoring or other appropriate techniques on all exterior slopes adjacent to waterways. These erosion controls measures will be implemented in accordance with Fram's SWMP.
5. All access roads and facilities other than well pads will be seeded in a timely manner (for reclamation success) after construction has been completed. Reseeding will be consistent with the requirements of COGCC Rules, BLM permits, landowner approval, or CPW-Fram consultation, as applicable.

Pipeline Construction

If wells prove productive, Fram is proposing to include pipelines for necessary and efficient operations in the WWU. The following BMPs are suited to the exploratory and development phase of operations.

1. Fram will schedule cross-country pipeline construction and installation (not including pipelines along roads) outside of the mule deer critical winter range or elk winter concentration areas timing limitations. When construction must occur in the winter timing limitation within SWHAs, consultation with CPW will occur prior to the initiation of such activities to develop minimization, avoidance and mitigation actions for the construction impacts.
2. Where Fram installs gathering lines, the placement will be adjacent to roads wherever possible, unless the existing road is adjacent to waterways.
3. Where Fram installs multiple gathering lines (water, gas, oil), Fram will place them in a single trench to minimize disturbance and construction times for multiple lines from a single operator.
4. 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 as identified by CPW at the time of construction.
5. If Fram installs pipelines, they should be installed at right angles to major drainages, wetlands, and perennial water bodies, such as (but not limited to) Kannah Creek, Sink Creek and the Brandon Ditch. Fram will install pipelines for exploratory development when wells become successful.
6. If necessary, equipment bridges for pipeline construction will be made from either clean rock and flume pipes or timber equipment mats with flume pipes.
7. Fram will use horizontal drill techniques (such as boring) for pipelines at perennial water bodies, such as (but not limited to) Kannah Creek, Sink Creek and the Brandon Ditch, and wetland complexes if necessary.
8. In-stream construction activity will be limited to 24-hours for water bodies less than ten feet wide and to 48-hours for water bodies greater than ten feet wide at locations where horizontal boring is not feasible.
9. A minimum of 5 feet of soil cover will be maintained between the pipeline and the lowest point of the drainage or water body channel.
10. Where gas pipelines are pressure-tested with water, CPW recommends that the test water be captured and consigned to an appropriate disposal facility; CPW requests that test water not be discharged to any surface drainage due to the potential contaminant issues associated with pipeline pressure test water. Any and all surface water discharges must be approved by the Colorado Department of Public Health and Environment's Water Quality Control Division.

Operations

Fram will follow the best management practices described below during the exploratory phase of operations on the Whitewater Unit.

1. Fram will prohibit employees and contractors from carrying projectile weapons (including bows) on active Fram operational areas of their lease holdings.
2. Fram will prohibit pets on operational areas of active leases.
3. Fram will strategically apply fugitive dust control measures within the Project Area/Wildlife Mitigation Plan boundary to reduce coating of vegetation and deposition in water sources. Residual water from surface water withdrawals is appropriate for use in dust control.
4. Fram will not use produced water in its dust control activities.
5. Fram will enforce speed limits, from the beginning of construction throughout the life of the project, and where speed limits are not posted on unpaved access roads, speeds would not exceed 20 miles per hour. Fram will ensure compliance through education, awareness, self-reporting, and active implementation of Fram policies.
6. To reduce the amount of construction traffic to and from well pads and support facility locations, Fram will encourage carpooling transportation for workers to and from the job site.

Wildlife

Aquatic Resources - Kannah Creek, Whitewater Creek and Brandon Ditch

The Whitewater Unit contains an extensive network of perennial and ephemeral drainages that support a wide range of fish species and populations, both seasonally and year round.

1. Schedule necessary construction (bridge, pipeline, other infrastructure) in stream courses to avoid crucial spawning times. General spawning avoidance guidelines for specific species are as follows.

Fish spawn at specific times of the year. The eggs incubate in the gravel until the yolk sac is absorbed and the larval fish can swim up through the gravel and into the main body of water. Eggs incubating in the redds can be smothered by the excessive deposition of sediment, and further affected by fungal spores carried in the sediment. Adults can be affected by the same fungal species with high mortality rates. Fish spawning dates and incubation times vary by elevation and temperatures, but in general the following intervals will apply in Colorado:

- a. Rainbow trout: March 1 - June 30
- b. Bluehead sucker: May 1 - July 31
- c. Flannelmouth sucker: March 15 - July 1
- d. Speckled Dace: May 1 - August 31
- e. Roundtail chub: May 1 - July 31
- f. Cutthroat trout: May 1 - September 1

In-stream construction activities will not occur between March 1 and September 1 to protect eggs from sedimentation. Water withdrawn directly from the North Fork of Kannah Creek, the tributary to the North Fork, and Brandon Ditch during any time of year could impinge and entrain juvenile and fry cutthroat trout in pump intakes.

2. Use suction hose screens for all water withdrawal hoses.
3. Do not remove native riparian canopy or stream bank vegetation where possible.

4. Retain as much woody debris as possible when in-stream construction is necessary.

Riparian Areas and Proximity to Live Water

Fram will implement the following best management practices and mitigation measures for Fram's operations on the Whitewater Unit.

1. Fram will conduct construction, production, and maintenance operations consistent with the Master Storm Water Management Plan (SWMP) for the Whitewater Unit Project Permit # COR-03B947, which will continue to be implemented and updated in accordance with applicable state regulations.
2. Fram will use two or more storm water best management practices to control sediment runoff and control or contain any potential spills, wherever surface disturbance must occur within a riparian habitat, as defined by the presence of non-anthropogenic riparian-associated vegetation.
3. Fram will maintain spill response kits at well pads. Fram will also require contractors (who are hauling materials with the potential of negatively impacting waterways) to carry spill response materials on their vehicles. Should an environmental release occur with a contracted hauler, the hauler is obligated through its contract with Fram to perform appropriate spill response actions with Fram providing oversight.
4. Fram will ensure that its contractors are properly trained and qualified in the use of emergency response equipment.
5. CPW will assist Fram and its contractors in developing and implementing a stream crossing for the Brandon Ditch crossing that will not result in a barrier to fish passage. Construction will also be consistent with BLM's Gold Book standards.
6. 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 Fram with documentation that the equipment was cleaned in accordance with one of the following CPW standards. Also, disinfect all equipment before moving equipment from one stream to another (Kannah and Whitewater Creeks and Brandon Ditch) when working in multiple drainages.
 - a. 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
 - b. 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.
7. Coordinate with CPW and appropriate state and federal agencies, regarding construction of bridges or any stream crossings that could restrict fish passage.

Water withdrawal locations

Fram will obtain water from municipal sources and water will be trucked to individual well pad locations. Fram will pump surface water directly from the North Fork of Kannah Creek, a tributary to the North Fork, and Brandon Ditch. Fram will update CPW of withdrawal activities at regularly scheduled semi-annual meetings.

1. Fram will use engineering controls at all water draw points from any of the following point locations; Kannah Creek, an unnamed tributary to Kannah Creek, and the Brandon Ditch (i.e., overhead loading, one-way valves, install stationary draw hoses with screened intakes), to prevent contamination of the Kannah Creek drainage and Brandon Ditch. Fram will remove the withdrawal structures after the life of the project unless other agreements are made by the private surface owner.
2. Withdraw points will be semi permanent locations and designed to reduce erosion, sedimentation, and maintain native vegetation adjacent to the site.
3. Fram will follow the WMP disinfection protocol for all in-stream pumps, hoses, and other equipment.
4. Fram will use a foot valve at the end of the suction hose to prevent water from flowing back into the stream.
5. Fram will dispose of filtered sediment off-site; and will not dump it back into the creek at any time or at project completion.
6. Fram agrees not to return water removed from a withdrawal point back into the same water source or any other water source; the water must be used for another purpose.
7. Fram will focus water withdrawals during runoff season (April – May). Outside of the runoff season Fram will attempt to use other municipal sources. Surface water withdrawals that occur outside of the runoff season are a concern for aquatic wildlife because of lower stream flow conditions and associated downstream effects, including water temperature, dissolved oxygen, and water chemistry.
8. Fram agrees to build containment systems for diesel storage units at booster stations, if boosters are used.

Black Bear

To minimize negative human-bear interactions and to avoid attracting bears to development sites, Fram will:

1. Conduct regular contractor and employee training with respect to wildlife awareness.
2. Reinforce training at worksite tailgate meetings, monthly safety meetings, and the Environmental Health and Safety (EHS) hazard identification program, and through the use of signs.
3. Bear-proof trash containers should be used and refuse should be collected frequently to minimize potential for conflicts with bears within the project area.

Raptors

The intent of raptor monitoring is to determine the status of nests within the WWU. The entire WWU has been surveyed by ground survey methods (within buffer distances) for existing and proposed pads. Surveys may be conducted at other times than annually if deemed necessary. Buffer distances as depicted in the following table will be applied to proposed and active well pads, when applicable. When surveys determine that a nest is no longer active (for the season), the seasonal disturbance buffer (that portion of buffer outside of the RSO/NSO buffer) may be exempted by the BLM upon Fram's request, rather than having to maintain this buffer throughout the extent of the stipulation period. The RSO buffers apply year round unless specifically exempted by CPW/BLM. The intent of the surveys is to determine the status of nests within specified buffers around Fram's existing well pads and planned well pads.

1. Conduct annual ground surveys for occupied nests and unoccupied nests at existing and proposed well pad locations where new construction and drilling, completions operations or road and facility construction is proposed. Use buffer distances depicted in the following table for survey areas. Full raptor surveys should be conducted for any intensive activities occurring more than two nesting seasons after the last survey.
2. As applicable, apply the raptor disturbance buffers represented in the following table prior to commencing new construction and drilling, completions operations or road and facility construction near occupied nests.

Temporal and Spatial Buffers Recommended by CPW for Select Raptor Species
Recommended Buffer Zones and Seasonal Restrictions Around Raptor Use Sites

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Bald Eagle													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE WINTER NIGHT ROOST without a direct line of sight- No Human Encroachment	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE WINTER NIGHT ROOST with a direct line of sight- No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
HUNTING PERCH - No Human Encroachment	Contact CDOW												
Golden Eagle													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Osprey													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Ferruginous Hawk													
ACTIVE NEST - No Surface Occupancy	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Red-tailed Hawk													
ACTIVE NEST - No Surface Occupancy	1/3 Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	1/3 Mile	■	■	■	■	■	■	■	■	■	■	■	■
Swainson's Hawk													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Peregrine Falcon													
ACTIVE NEST - No Surface Occupancy	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Prairie Falcon													
ACTIVE NEST - No Surface Occupancy	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Northern Goshawk													
ACTIVE NEST - No Surface Occupancy	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
Burrowing Owl													
ACTIVE NEST - No Human Encroachment	150 feet	■	■	■	■	■	■	■	■	■	■	■	■

= time period for which seasonal restrictions are in place.

Other Raptors Not Listed Above													
Active Nest - No Surface Occupancy	0.25 mile	■	■	■	■	■	■	■	■	■	■	■	■
Active Nest - No Human Encroachment	0.25 mile	■	■	■	■	■	■	■	■	■	■	■	■

Source: Klute 2009

Reclamation

Fram will prepare a weed management plan using the Integrated Weed Management Plan for Oil and Gas Operators. All disturbed surfaces will be reseeded with a wildlife-friendly seed mixture approved or recommended by either the BLM or the private surface owner. All seeding would be conducted as soon as possible after construction or according to BLM standards for well pad and pipeline construction. If the seeding is unsuccessful, Fram will make subsequent seedings. Reclamation success should be monitored and evaluated with a standard methodology.

1. All straw bales intended for use on the project (mulching or sediment barriers) must be certified weed free before being brought on site. If a straw crimper, and/or straw mulch blower will be used for project revegetation/reclamation, it must be cleaned and free of weeds and weed seeds prior to entering the site.
2. Close and immediately reclaim all Fram-constructed or improved roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible, to minimize disturbance and habitat fragmentation.
3. Assess reclamation success at least annually through photo documentation, vegetation plots, documentation of invasive weeds and erosion. Evaluate reclamation in different areas that represent different elevations, vegetative communities, slope aspects and water proximity.

IV. Mitigation

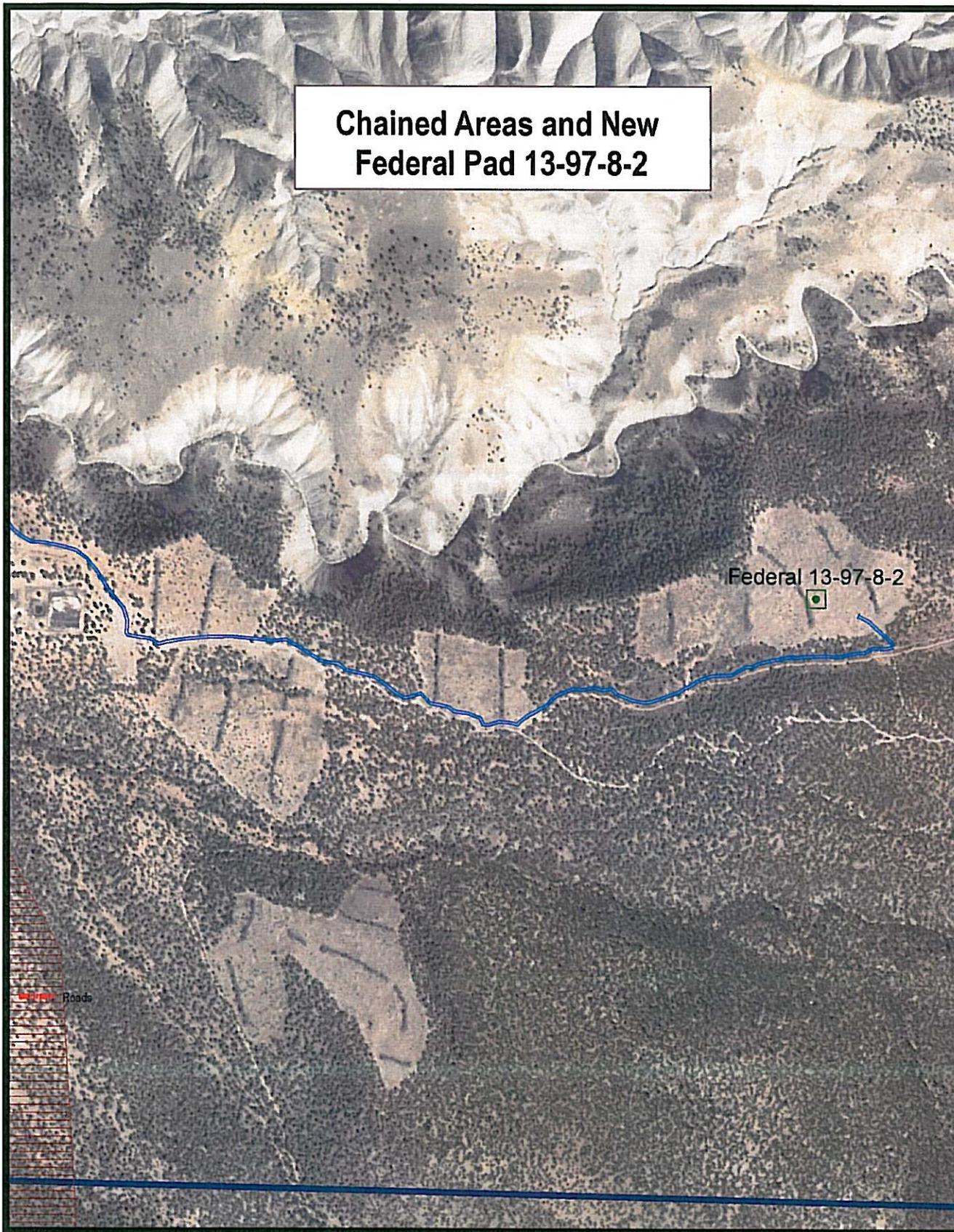
Sensitive wildlife habitats within the Project Area/Wildlife Mitigation Plan boundary include 1,011 acres of pronghorn antelope critical winter range, 4,300 acres of elk winter concentration area, and 9,438 acres of mule deer critical winter range. Fram's project is located along the toe of the Grand Mesa and lies within important critical winter ranges and winter concentration areas for mule deer, elk, and pronghorn antelope.

Fram has put forth significant planning efforts to avoid locating and developing roads, pipelines and well pads in mule deer critical winter range and elk winter concentration areas. Additionally, Fram is committed to using specific BMPs and other measures to minimize impacts to mule deer, elk, raptors, white-tailed prairie dogs, kit fox, certain aquatic species and pronghorn antelope their habitats. However, it is not possible to develop oil and gas resources and avoid all impacts to wildlife.

Fram's Federal 13-97-8-2 well pad and access road is located within a mule deer habitat treatment project area. The project area encompasses three blocks of piñon juniper chaining; the treatment blocks are approximately 16.5 acres, 4.5 acres, and 15 acres in size, for a total of 36 acres. The proposed road upgrade runs along the edge of all three treatment blocks. These treatments areas were designed to increase understory vegetation vigor so as to improve winter habitat for mule deer. The project was completed in the 1960s or 1970s and is currently providing the desired seral stage of winter vegetation for mule deer. The location is depicted in the following map titled (Chained Areas and New Federal Pad 13-97-8-2).

Indirect impact may be any of the following factors individually or in combination: 1) physiological stress to wildlife; 2) disturbance and displacement of wildlife; 3) habitat fragmentation and isolation; 4) alteration of environmental functions and processes (e.g., stream hydrology, water quantity/quality); 5) introduction of competitive and predatory organisms; and 6) secondary effects created by work force assimilation and growth of service industries. These 6 categories constitute the various indirect impact mechanisms that can affect wildlife and represent the disturbance spectrum that form the basis of this compensatory mitigation

**Chained Areas and New
Federal Pad 13-97-8-2**



The access road that Fram proposes to upgrade crosses through the three treatment areas and is approximately 3,716 feet long. If wells prove to be productive, it is proposed to be widened to BLM Gold Book standards. The existing two-track roads are generally 14 to 16 feet in width and upgrading outside the disturbance footprint would not exceed 24 feet in width. The well pad will be approximately 2.5 acres in size. The total direct disturbance is approximately 2 acres for the road and 2.5 acres for the pad; total direct disturbance of 7 acres. Indirect disturbance affects 36 acres of habitat in all three of the treated areas.

Since CPW has invested considerable time, money, and effort to improve mule deer winter habitat in Township 13S, Range 97W, Section 8, and since the new proposed disturbance will result in an absolute loss of 4.5 acres and the diminished value of 36 acres of treated habitat, CPW requires that Fram compensate for the direct habitat loss at a two-for one acre replacement and that the indirect impacts be compensated for on an acre-for-for acre basis.

Habitat Replacement Cost

CPW has found that a typical cost of \$400.00 per acre (indirect impact) and \$800.00 per acre (direct impact 2:1 ratio) is needed to implement effective replacement habitat treatments of the type anticipated to be funded under this Agreement.

Regardless of when (timing) the road and pads are upgraded and developed, CPW will lose its habitat investment in mule deer winter range habitat improvement (existing functional habitat). CPW requires that Fram provide the following offsets to CPW for replacement. Direct disturbance of 4.5 acres at \$800.00 per acre = \$3,600.00. Indirect disturbance of 36 acres at \$400.00 per acre = \$14,400.00. The total offset (replacement cost) for loss of habitat is \$18,000.00. CPW will use the compensation to make habitat improvements to mule deer and pronghorn winter habitat on BLM, Forest Service and/or City lands within the Fram Whitewater Unit boundary and outside of actively developed areas. CPW staff will coordinate with BLM staff on the development of inventory and habitat treatments for this project.

Fram will disburse the mitigation costs to CPW upon BLM approval of the application for permit to drill for the Federal 13-97-8-2 well pad. The mitigation funds will be used exclusively for habitat inventory and or treatments; Fram recognizes that other costs may be required by the NEPA review and approval process and will be considered and agreed upon in consultation with BLM and CPW.

CPW expects that Fram's monetary contributions will support the inventory and habitat treatment project for mule deer and pronghorn antelope within the boundary of the Fram Whitewater Unit Boundary. An inventory program will assist CPW and BLM to identify vegetation trends that in turn will serve to identify important habitat conditions for mule deer and pronghorn as well as identify areas for habitat treatments.

CPW proposes that an inventory be started sometime following the BLM's approval of Fram's EA and after Fram signs this WMP. CPW in cooperation with BLM will identify the best time to start an inventory and will develop the inventory procedures which will be implemented.