

BP AMERICA PRODUCTION COMPANY

San Juan Basin Colorado
Wildlife Mitigation Plan

MARCH 2011

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**BP AMERICA PRODUCTION COMPANY
WILDLIFE MITIGATION PLAN
SAN JUAN BASIN (COLORADO)
February 2011**

Executive Summary

This Wildlife Mitigation Plan (WMP) addresses impacts to wildlife from BP America Production Company's (BP) proposed development activities for mineral interests it owns in the San Juan Basin of Colorado encompassing approximately 102,000 acres (**Figure 1**). The WMP is the culmination of an 18-month collaborative effort among BP, the Colorado Division of Wildlife (CDOW), and The Nature Conservancy (TNC) to develop a plan to mitigate anticipated wildlife impacts within the guidelines provided by the Colorado Oil and Gas Conservation Commission's (COGCC) Rules of Practice and Procedure (Rules) governing oil and gas development activities in Colorado. This plan is specifically designed and customized for the San Juan Basin of southwest Colorado.

COGCC Rules identify sensitive wildlife habitats (SWHs) and restricted surface occupancy (RSO) areas for wildlife, and provide for consultation with CDOW for facilities proposed within these areas. The Rules also allow companies like BP to prepare a WMP to address the impacts associated with one or more planned facilities. Once approved by CDOW, a WMP satisfies any consultation requirement with CDOW that may otherwise be required for each facility within SWHs and RSO areas [Rule 1202.d. (2)], resulting in streamlined permitting for individual facilities addressed in the WMP.

BP and CDOW began discussing options for a WMP for BP's planned development activities in the San Juan Basin as early as October 2008. In May of 2009, BP hired TNC to assist CDOW with analyzing the species and habitats that would be impacted by BP's proposed development activities, and to prepare a landscape model for evaluating possible sites on which to conduct mitigation projects to offset unavoidable impacts. A Project Team comprised of representatives from BP, CDOW, and TNC was formed at that time to oversee the analysis and to develop inputs for TNC's landscape model. TNC's modeling efforts are described in detail in Appendices A and B, and the results of the modeling are incorporated into this WMP.

BP, CDOW, and TNC (the Project Team) solicited input from La Plata and Archuleta Counties, the USFS, the BLM, and the US Army Corps of Engineers (USACE) when developing the list of species and habitats to include in the WMP, and when identifying suitable mitigation areas. CDOW ultimately selected 11 high priority mitigation areas in La Plata and Archuleta County from a broad range of possible sites identified through TNC's modeling and consultation with other agencies. This document describes: (1) how the species and habitats were identified for inclusion in the WMP, (2) how impacts from BP's proposed facilities were estimated, (3) how high priority mitigation areas were selected, and (4) how mitigation projects will be implemented within those areas to offset unavoidable adverse impacts.

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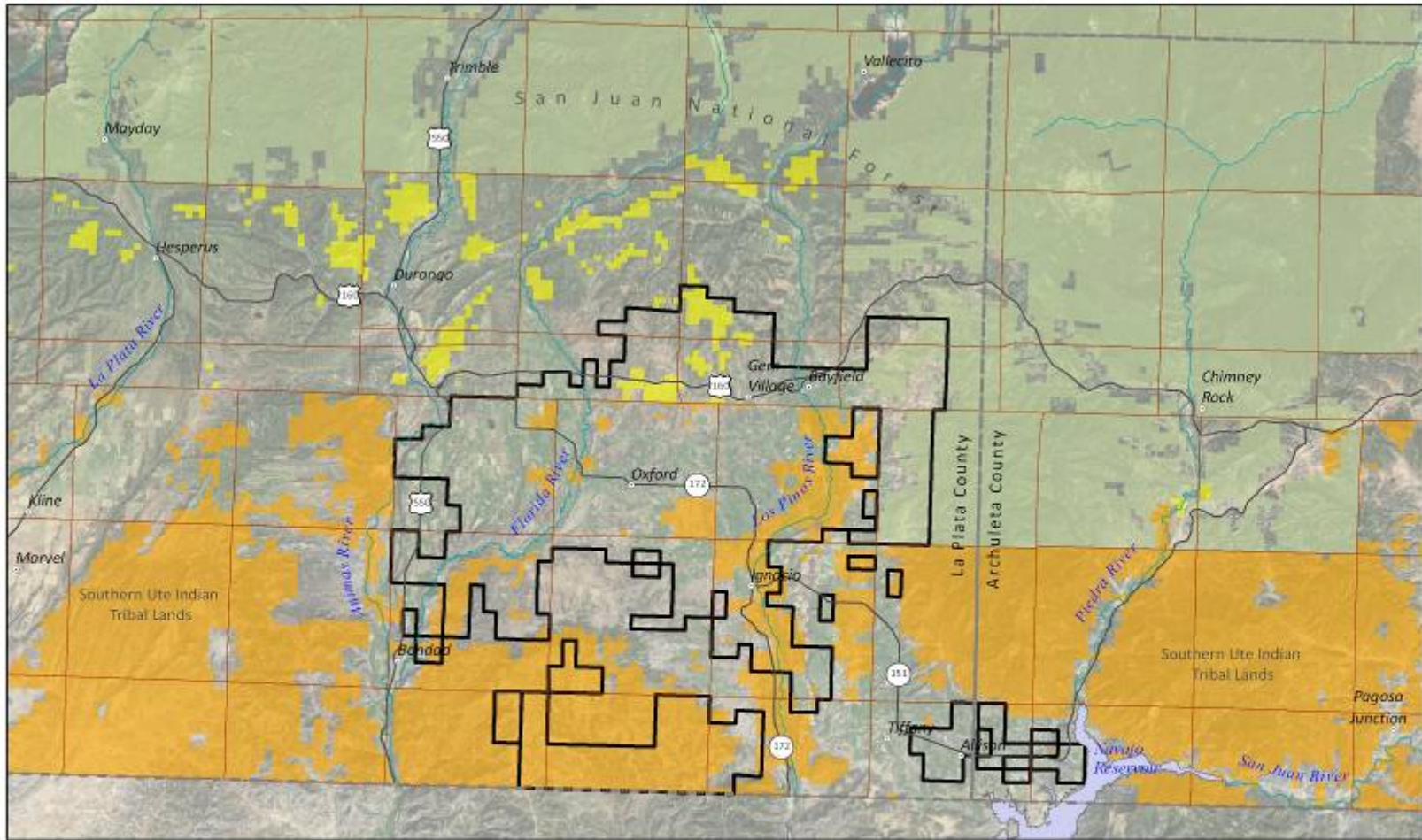


Figure 1 - BP's Development Area in the San Juan Basin

Development Area boundary



Land Ownership (COMaP v7)

- Tribal Lands
- USFS
- BLM

0 2.5 5 10 Miles

Map provided by The Pitkin County, Southwestern Region



I. Scope of Wildlife Mitigation Plan

a. Geographic Scope and Jurisdiction

This WMP applies only to BP's proposed oil and gas facilities regulated by COGCC and/or La Plata and Archuleta Counties, proposed on private, County, State, or Federal lands located within the San Juan Basin, Colorado. Unless explicitly stated in the WMP, the commitments made in the WMP by BP and CDOW in no way alter previous commitments made to County, State, or Federal regulatory agencies. The Southern Ute Indian Tribe was approached and informed about this WMP. The Tribe is not participating, as the WMP was prepared specifically to satisfy COGCC Rule 1202.d. (2) and County permitting requirements. The WMP does not address BP's activities on Tribal lands, and Tribal lands were not included in the evaluation of possible mitigation sites.

b. Number of Facilities Addressed and Duration of WMP

This WMP addresses the impacts to wildlife resources from the 68 proposed BP well locations and ancillary facilities (well pads, pipelines, and roads) described on **Exhibit 1** and in **Table 1**. BP anticipates constructing these facilities within the next two years, but may have up to six years to develop these facilities under this WMP. Both BP and CDOW envision a high likelihood of amending this WMP to address future proposed development. Although BP may not fully develop its entire leasehold in the San Juan Basin, there are approximately 1,000 undeveloped well locations (under existing spacing orders) within BP's development area shown on **Figure 1**.

c. Species addressed in the WMP

CDOW and TNC assembled a list of potential target species and habitats for the WMP based on species and habitats likely to be impacted by BP's proposed development. CDOW and TNC solicited input on the list of species and habitats from La Plata County, Archuleta County, the USFS, the BLM, and the USACE. Although many of the species and habitats of concern incorporated on the list are not specifically regulated by COGCC, BP agreed to address these species and habitats during development of the WMP. Thus, although impacts to species and habitats not regulated by COGCC were evaluated, they were not used when determining the quantity of mitigation necessary to offset impacts (Section II below). Impacts to species and habitats not regulated by COGCC were taken into consideration **only during the selection of potential onsite and offsite mitigation areas** (Section III below).

Some of the COGCC- Rule Series 1200 (Protection of Wildlife Resources), regulated and non-regulated species were addressed individually, while others were nested within the associated ecotype or habitat for the impact analysis.

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- i. Species and habitats addressed individually include:
 - A. Bald eagle (nest sites – COGCC, 1200 Series Rules)
 - B. Golden eagle (nest sites – COGCC, 1200 Series Rules)
 - C. Osprey (nest sites – COGCC, 1200 Series Rules)
 - D. Lazuli bunting
 - E. Elk (winter concentration areas – COGCC, 1200 Series Rules)
 - F. Mule deer (critical winter range – COGCC, 1200 Series Rules)
 - G. Bluehead sucker
 - H. Flannelmouth sucker
 - I. Roundtail chub
 - J. Gunnison's prairie dog
 - K. Riparian and wetland habitats
 - L. Pinyon-juniper woodlands
 - M. Intermountain basin big sagebrush shrubland
 - N. Intermountain basin semi-desert shrub steppe
 - O. Intermountain basin semi-desert grassland
 - P. Rocky Mountain Gambel oak mixed montane shrubland
 - Q. Rocky Mountain lower montane riparian woodland and shrubland
 - R. Rocky Mountain ponderosa pine woodland

- ii. Species that were nested within the ecotype or habitat that they are associated with are described below:
 - A. Species Nested under Mule Deer Critical Winter Range:**
 - *Puma concolor* (Mountain Lion)
 - B. Species nested under Gunnison's Prairie Dog:**
 - *Athene cunicularia hypugaea* (Western Burrowing Owl)
 - C. Species nested under Colorado Plateau Pinyon-Juniper Woodland:**
 - *Dendroica nigrescens* (Black-throated Gray Warbler)
 - *Empidonax wrightii* (Gray Flycatcher)
 - *Baeolophus ridgwayi* (Juniper Titmouse)
 - *Gymnorhinus cyanocephalus* (Pinyon Jay)
 - *Vireo vicinior* (Gray Vireo)
 - D. Species nested under Intermountain Basin Big Sagebrush:**
 - *Amphispiza belli* (Sage Sparrow)
 - E. Species nested under Rocky Mountain Ponderosa Pine Woodland:**
 - *Patagioenas fasciata* (Band-tailed Pigeon)
 - F. Species nested under Riparian/Wetlands:**
 - *Bufo boreas boreas* (Boreal Toad)
 - *Rana pipiens* (Northern Leopard Frog)
 - *Melanerpes lewis* (Lewis' Woodpecker)
 - *Empidonax traillii extimus* (Southwestern Willow Flycatcher)
 - *Coccyzus americanus occidentalis* (Western Yellow-billed Cuckoo)
 - *Zapus hudsonius luteus* (New Mexican Jumping Mouse)

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- *Speyeria nokomis* (Nokomis Fritillary)
- *Juniperus scopulorum* / *Artemisia tridentata* Woodland
- *Populus angustifolia* - *Juniperus scopulorum* Woodland
- *Populus angustifolia* / *Alnus incana* Woodland
- *Populus angustifolia* / *Crataegus rivularis* Woodland
- *Populus tremuloides* / *Cornus sericea* Forest
- *Salix ligulifolia* Shrubland
- *Populus angustifolia* / *Salix ligulifolia* / *Shepherdia argentea* Woodland
- *Populus angustifolia* / *Betula occidentalis* Woodland
- *Populus angustifolia* / *Rhus trilobata* Woodland

Some species and habitats were not specifically evaluated in the WMP. However, they were addressed by selecting onsite or offsite mitigation opportunities that benefit these species in addition to the species and habitats specifically evaluated in the WMP. These species and habitats include:

- i. Birds
 - A. Merriam's Turkey
 - B. Mexican Spotted Owl
 - C. Peregrine Falcon
- ii. Mammals
 - A. Black Bear

The WMP does not include species and habitats of concern that: (1) current data does not show the species as occurring in the potential impact areas; (2) the core habitat of the species was not likely to be highly impacted within the development area (e.g., higher elevation species); and/or (3) potential mitigation or protection actions for the species were not identifiable. These species include:

- i. Birds
 - A. Grace's Warbler
 - B. Gray Flycatcher
 - C. Black-necked Stilt
 - D. Mourning Dove
 - E. Northern Goshawk
 - F. Olive-sided Flycatcher
 - G. Prairie Falcon
 - H. Swainson's Hawk
 - I. White-tailed Ptarmigan
 - J. Northern Harrier

- ii. Mammals
 - A. Black-footed Ferret
 - B. Allen's Big-eared Bat
 - C. Arizona Myotis
 - D. Bighorn Sheep
 - E. Canada Lynx
 - F. Fringed Myotis

- iii. Fish
 - A. Colorado River Cutthroat
 - B. Greenback Cutthroat

II. Evaluation of Species, Habitats, and Impacts

a. Determining the Types and Extent of Potential Impacts

Oil and gas development typically progresses from a single exploratory well through an initial production phase to infill development. Well density, human activity and impacts to wildlife and wildlife habitat increase as development progresses. The development timeline is variable and dependent upon many factors and could last decades. Some oil and gas fields in the continental United States have been producing for over 100 years. Commercial exploration and production of natural gas in the San Juan Basin has been occurring since 1921, and is projected to extend for an additional 30 years or more.

Once well pad density increases beyond one well pad per section, avoidance and minimization measures alone may not be sufficient to maintain pre-existing habitat utilization patterns for many species. Noise and other indirect disturbances from roads, wells, ancillary facilities and their associated human activities often force wildlife to use sub-optimal habitats, resulting in decreased survival rates and productivity. As well density and human activity increase cumulative effects on wildlife occur and mitigation priorities shift from site-specific impact avoidance and minimization to large scale habitat restoration and/or habitat offsets (habitat replacement) to compensate for unavoidable adverse impacts.

For this WMP, TNC conducted an evaluation of habitats that would be potentially impacted by BP's proposed development activities utilizing a GIS methodology provided by CDOW (see Appendix B). The methodology evaluates both direct and potential indirect impacts to the target species identified in Section I. "Direct Impacts" are those related to physical land disturbance and vegetation removal resulting in habitat loss. "Indirect Impacts" extend beyond physical disturbance and vegetation removal. Indirect impacts reduce habitat functionality by affecting wildlife behavior, displacing wildlife to lower quality habitats, and decreasing productivity and/or survival rates. Indirect impacts may also limit wildlife access to otherwise productive habitats because of their proximity to development and associated human

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activities. Indirect impacts include habitat fragmentation from roads, wells, and ancillary facilities.

Although negative effects to wildlife resources from indirect impacts are well documented in scientific literature, the Project Team concluded that due to the extent of existing development and diverse land uses in the project area (which is almost entirely on private lands), it would be difficult to develop a credible methodology to quantitatively assess the incremental indirect impacts from BP's proposed facilities.

BP implements voluntary Best Management Practices (BMPs) as standard operating practices that minimize indirect wildlife impacts to the extent practical. These BMPs reduce, but do not eliminate, the indirect impacts associated with each new facility, further complicating the Projects Team's ability to determine the extent of indirect impacts associated with each new facility. The site-specific operational BMPs implemented by BP at each new facility include:

- *Produced water gathering system*
 - Each new facility is tied into a field-wide produced water gathering system for water disposal. This water gathering system results in a significant reduction in truck traffic and consolidation of water handling facilities;
- *Well automation systems*
 - BP's well automation system reduces on road truck traffic for the purpose of operating individual well sites and limits human presence on locations once drilling and completion has taken place;
- *Closed-loop drilling systems*
 - BP's closed-loop drilling system reduces the risk to wildlife as it replaces the "reserve pit" with a drill cuttings storage pit, minimizing wildlife exposure to drilling fluids. The closed-loop drilling system also greatly reduces the number of truck visits to the location after drilling is complete for the purpose of removing standing liquids from the pit.
- *Use of multiple well pad sites*
 - The use of multiple well pad sites results in a reduction of heavy equipment traffic due to fewer rig mobilizations and de-mobilizations, and reduces traffic-related disturbance to wildlife. Multiple well pads are required by COGCC orders and La Plata County Memoranda of Understanding (MOU's). There are provisions for exceptions to these rules, such as those dictated by topographical constraints, natural resource constraints (wetlands), the proximity of utilities, geologic factors where issues concerning distances between wells are present, other site conditions beyond the control of BP, and environmental and human health and safety concerns.

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- *Use of wildlife friendly seed mixes*
 - BP has and will continue to use habitat specific wildlife friendly seed mix for interim remediation of well pad, pipe line right of way and areas adjacent to non-well locations;

- *Pre-construction biological surveys and compliance with CDOW raptor nest buffer guidelines*
 - BP regularly conducts pre-construction raptor nest and Federal threatened and endangered (T&E) species surveys at infill well pad expansions as well as new construction sites. These biological surveys are conducted prior to final surveying for a project. The purpose of the biological surveys is to implement avoidance strategies where possible and minimize potential impact to nesting raptors and T&E species. These surveys result in modifications to facility design, minor site location adjustments, and operational awareness that reduce direct and indirect impacts when a habitat of concern is identified. BP has previously conducted these biological surveys, even before adoption of HB 1298 and outside of the context of a WMP to support compliance with the Bald and Golden Eagle Protection Act, the MBTA and ESA concerns. Where active raptor nests are identified, BP coordinates with CDOW on site-specific avoidance strategies that meet the intent of CDOW's raptor nest buffer guidelines;

- *Bald and Golden eagle nest and roost screening, day rig activity*
 - BP exercises diligence to screen completion, workover and non-drilling rig activity using the COGCC 1200 Series Rule map of Bald and Golden eagle Restricted Surface Occupancy areas as well as other known nests and roosts prior to commencing rig work. If rig work is scheduled within a CDOW-recommended avoidance buffer during a recommended seasonal closure, BP coordinates with CDOW on site-specific avoidance strategies that meet the intent of CDOW's raptor nest buffer guidelines.

In addition to the site-specific operational BMPs identified above, as part of this WMP BP has undertaken several additional measures to begin to address the cumulative indirect impacts from their operations in the San Juan Basin. These measures include:

- *Habitat Prioritization Landscape Modeling*
 - BP funded landscape modeling for the purpose of identifying and prioritizing the largest remaining blocks of connected wildlife habitats and corridors in the San Juan Basin. The modeling is being used to identify priority areas to focus efforts to protect, enhance, and restore wildlife habitats in order to mitigate incremental cumulative impacts (both direct and indirect) on a landscape scale. The initial results of this modeling effort have been incorporated into Section III and IV of this WMP, and will be used to guide implementation of on the ground habitat mitigation projects to offset habitat loss from development;

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- *Funding for evaluating wildlife species behavioral and population response to gas well development within the San Juan Basin, Colorado.*
BP has committed up to \$475,000 over the next six years to evaluate the effects of natural gas development on wildlife in the San Juan Basin. BP and the CDOW are working on the study plan and design details.

The remainder of the WMP focuses on the replacement of habitats directly impacted by BP's development activities. Although discussed in Section II.b., below, indirect impacts were considered in Appendices A and B only for evaluating *potentially* impacted species and habitats and for the modeling associated with identifying suitable onsite and offsite mitigation areas. ***Only the estimated direct impacts (actual land disturbance and vegetation removal) from BP's proposed facilities were used for calculating the initial goals for mitigation of unavoidable adverse impacts.***

b. Mitigation Goals for WMP

The amount of replacement habitat necessary to offset direct unavoidable adverse impacts from BP's proposed activities must compensate for the amount of habitat that is directly removed during development, plus the loss of habitat functionality within that landscape. Thus, the amount of habitat necessary to offset direct development impacts is only met when the replacement habitat is quantitatively and functionally equivalent to the impacted habitat for the affected species. This approach to mitigation requires that: (1) there is suitable replacement habitat remaining to support the desired populations of species impacted, and (2) the replacement habitat is preserved for as long as the habitat to be replaced is impacted.

The Project Team believes that there is suitable replacement habitat remaining in the San Juan Basin to support desired populations of the species identified in Section I, and that the preservation of replaced habitats to offset BP's development activities can be accomplished through the implementation of this WMP. The WMP is focused on mitigating the direct impacts from habitat removal through establishing functionally equivalent habitat offsets, recognizing that this approach does not address indirect impacts or the overall cumulative effects associated with BP's development activities. Therefore, ***the overall mitigation goal for this WMP is to offset the direct habitat loss from BP's proposed facilities, taking into account both the quantity and functional value of habitat being lost.***

The direct impacts from habitat removal associated with BP's proposed development activities over the next two years are summarized in **Table 1** below. BP anticipates constructing these facilities within the next two years, but may have up to six years to develop these facilities under this WMP. Due to the variable nature of the business environment for natural gas development in the San Juan Basin, both BP and CDOW agree that Table 1 may be modified during the implementation of the WMP to account for modifications in BP's plan of development that require changes to facilities included in Table 1. In the event that facilities are added or deleted from

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Table 1, the mitigation goal for this WMP will be adjusted to account for the direct habitat loss associated with these facilities.

**Table 1
Estimated Direct Habitat Loss (Vegetation Removal) from Proposed Facilities**

Wellsite	Pad		Access Road	Pipeline	Ownership	
	New/ Expansion	Pad Type	New Disturbance (Acres) ¹	New Disturbance (Acres) ¹	New Disturbance (Acres) ¹	Min/Surf
James GU A #2	New	SGL	1.83	0.50	6.27	Fee/Fee
Klusman Ranches GU #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Lewis GU #2	New	SGL	1.83	0.32	N/A	Fee/Fee
Martinez, GU A #2, #4	New	DBL	1.83	0.75	7.33	Fee/Fee
Morrison, Hubert GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Neleigh GU 01-07 #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Sitton Federal GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Taylor GU 21-23 #3	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Weaselskin GU #3, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Baird GU A #2, #4	New	DBL	1.83	0.38	2.17	Fee/Fee
Barnes GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Barnes, John GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Craig GU #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Daughetee, LA GU #3, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Dry Creek Federal GU #2	New	SGL	1.83	0.89	0.99	Fee/Fed
Dunavant GU 1-15U #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Farmer GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Gosney GC A #3, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Groff GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Hungerford GU A PLA-6 #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
James GU A #5	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Jones GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Jones, Lawrence GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Klusman GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Klusman Ranches GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Lamke GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Maestas GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Mankins, Howard GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Mason, Arthur GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
McCarville GU C #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
McCarville GU C #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Pan Am GU C #2, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Patrick, Gary GU #2, #4, Sparks GU B #2, #4	New	QPL	1.83	0.77	2.24	Fee/Fee
Paul Martin SWD	New	SGL	1.83	N/A	N/A	Fee/Fee
Phillips GU A#3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Ray, Billy GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee

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Short, Alva GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Short, Lyle GU A #3	New	SGL	1.83	0.73	N/A	Fee/Fee
Short, Lyle GU A #4	Expansion	QPL	1.17	N/A	N/A	Fee/Fee
Southern Ute GU AK #3, #4	New	DBL	1.83	0.04	0.62	Fee/Fee
Southern Ute GU DD #2, #3, #4	New	TPL	1.83	N/A	N/A	Fee/Fee
Spanish Fork GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Ute GU AA #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Clary GU #3	Expansion	DBL	1.17	0.53	N/A	Fee/Fee
Clary GU #4	Expansion	DBL	1.17	0.16	N/A	Fee/Fee
Dekay GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Dustin GU 09-01 #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
McCarville GU B #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Ray, Billy GU #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Southern Ute 32-09; 06-02 #2	New	SGL	1.83	0.84	1.74	Fee/Fee
Tinker GU 02-09 #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
2008LP001 Fee	New	N/A	N/A	N/A	8.19	No Tribal
2008LP012/014	New	N/A	N/A	N/A	9.99	No Tribal
2008LP018 BH Trail	New	N/A	N/A	N/A	16.53	Tribal cut out
2008LP020/0224/030/41	New	N/A	N/A	N/A	12.97	No Tribal
2008LP022	New	N/A	N/A	N/A	3.99	No Tribal
2008LP039	New	N/A	N/A	N/A	0.00	Line Bored
2009LP008	New	N/A	N/A	N/A	4.41	No Tribal
2009LP014	New	N/A	N/A	N/A	3.87	No Tribal
2009WL001	New	N/A	N/A	N/A	6.06	No Tribal
2010LP013	New	N/A	N/A	N/A	3.66	No Tribal
Brinks Draw	New	N/A	N/A	N/A	13.09	Tribal cut out
2008 LP040	New	N/A	N/A	N/A	0.15	No Tribal
Sparks Patrick	New	N/A	N/A	N/A	2.30	No Tribal

76.44 + 5.92 + 106.59 = 188.94

TOTAL HABITAT LOSS FROM DIRECT DISTURBANCE = 188.94 ACRES

¹ Total acres of new disturbance include areas that will have interim reclamation

The above goals are to be modified by Section III (below) based on the functional value of the habitat where the impacts occur, and the functional value of the mitigation project proposed to offset the impacts.

III. Mitigation Program and Offsets for Unavoidable Impacts

a. TNC Evaluation of Potential Mitigation Sites

i. Evaluation of Potential Onsite Mitigation Areas

In cooperation with CDOW, TNC conducted an analysis of important wildlife habitat and resources within the development area. The purpose was to identify high quality habitats within the area in order to encourage BP to minimize or avoid future development in or near those areas to the extent possible, and to identify any opportunities for onsite mitigation. TNC's onsite analysis

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highlighted high quality habitats, and known locations of selected RSO and SWH species.

TNC used a habitat evaluation protocol, previously used by CDOW when evaluating proposed well locations in the San Juan Basin. This protocol examined 9 habitat qualities or factors that increase the importance of habitat for mule deer and other species of concern within the San Juan Basin. Using a 30 meter grid overlaid on the development area, TNC counted the number of factors present within a 0.25 mile buffer of each individual grid cell. These factors included:

- A. Documented high mule deer density during winter months;
- B. Sagebrush habitat;
- C. Riparian habitat;
- D. Pinyon habitat;
- E. Irrigated agriculture;
- F. South-facing slopes;
- G. Absence of residential or industrial development;
- H. Absence of existing well pad or producing pad (assuming a 2-acre footprint); and
- I. Distance (at least 1640 ft) from State highway or County road.

TNC also documented those areas having 7-8 factors present where habitat quality could be increased through sagebrush or other native habitat restoration in the surrounding area. Finally, TNC included known onsite locations of the following RSO and SWH species, selected in consultation with CDOW staff for avoidance:

- A. Bald Eagle active nest sites;
- B. Bald Eagle winter roost site;
- C. Golden Eagle active nest sites;
- D. Osprey active nest sites; and
- E. Riparian and wetlands areas.

The detailed methodology and results of this onsite analysis are presented in Appendix A. **Figure 2** below shows the results of this analysis to prioritize habitats within the development area.

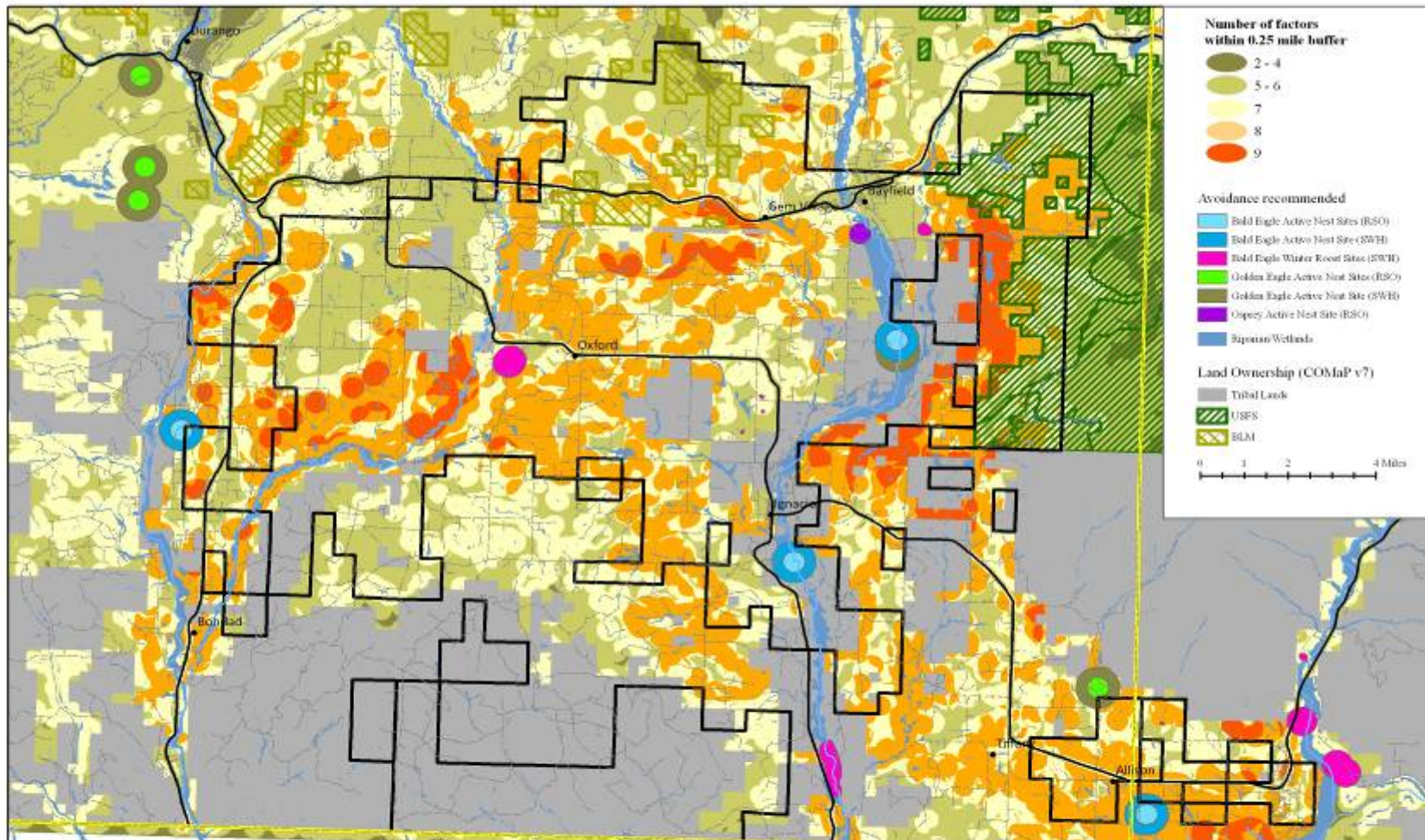


Figure 2 - Onsite Analysis

Onsite Analysis Factors

- Documented high mule deer density during winter months **
- Sagebrush habitat at or adjacent to well location
- Riparian habitat at or adjacent to well location
- South facing slopes at or adjacent to well location
- three distinct cover types (sage, pinyon, and irrigated ag) within 0.25 miles
- absence of residential or industrial development within 0.25 miles
- absence of existing well pad or producing pad (2-acre footprint)
- distance from state highway or county road

** Male Deer Density: CDOW mapped mule deer observed during winter helicopter classification from 2004 to 2008. These data were collected to estimate age and sex ratios by flying areas of relatively higher density of deer. Density is represented for the areas flown because frequency of encounter and group size are recorded and incorporated. High and median density areas are defined as that part of the winter range where 50% of the individuals were observed (High Density) or where 90% of the individuals were observed (Median Density). These areas include what CDOW believes are currently the most important mule deer winter habitat areas within the DAU. They are generally a portion of previously mapped winter and severe winter range.

Map produced by The Nature Conservancy, North America Region/2010/03/04

ii. Evaluation of Potential Offsite Mitigation Areas

TNC used a decision support software called Marxan (Ball and Possingham 2000) to identify potential mitigation sites to offset anticipated direct and indirect impacts to wildlife habitat and resources (see Kiesecker et al. 2009 for example). Marxan attempts to optimize the trade-offs between conservation and the cost of achieving those goals by converging on a set of potential sites that achieve conservation goals while minimizing those factors likely to make management more challenging and costly. TNC included the following inputs into Marxan:

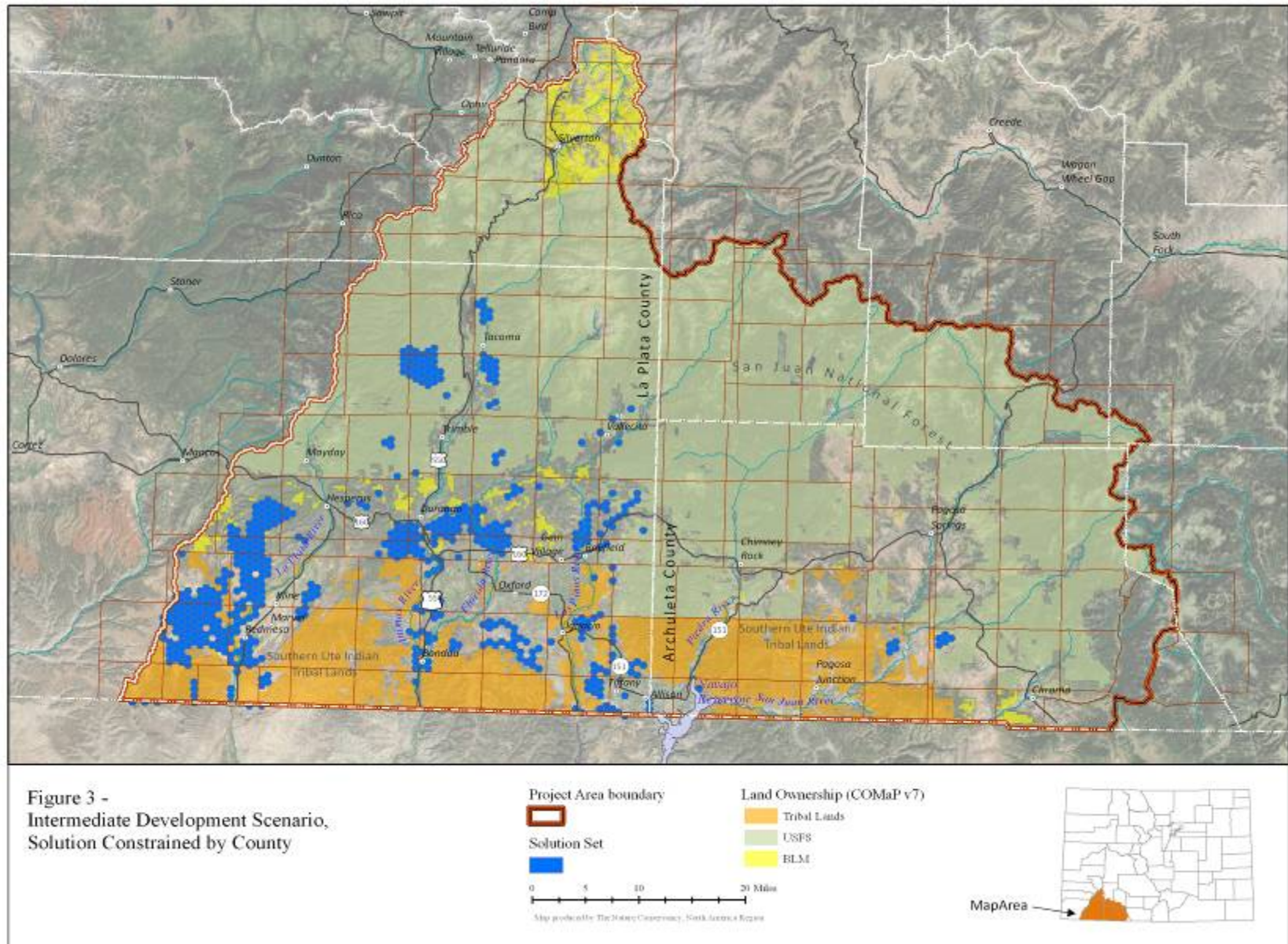
- A. GIS layers representing SWH and RSO wildlife resources as well as other selected conservation targets;
- B. Mitigation goals represented by the acres of direct and potential indirect impacts to wildlife habitat and resources calculated at three different scales of expected development;
- C. A cost surface representing urban development, roads, oil and gas wells, pipelines, transmission lines, and mine locations in the project area; and
- D. A boundary length modifier intended to promote Marxan solutions which cluster the selected sites. A more fragmented network of potential sites would have a greater overall boundary length and would likely lead to less desirable fragmentation of important wildlife habitat.

TNC also removed Tribal lands and the area within the proposed development field from consideration for offsite mitigation sites. With these parameters, TNC generated a set of potential offsite mitigation sites for the following development scenarios:

- A. Site-specific development footprint (anticipated development within the next 2 years) with sites selected to mitigate for potential impacts in the county in which they occur;
- B. Intermediate development footprint (development build-out based on well sites where infill is possible in future years) with sites selected to mitigate for potential impacts in the county in which they occur; and
- C. Broad development footprint (assuming all areas within development area boundary are impacted) with sites constrained to mitigate for potential impacts in the county in which they occur.

The complete analysis for evaluating offsite mitigation areas is contained in Appendix B. **Figure 3** below shows an example set of potential offsite mitigation sites selected to offset impacts from the intermediate development footprint (scenario “B” above). Note that TNC also generated a set of potential offsite mitigation sites for each development scenario unconstrained by county. These results are discussed in detail in Appendix B.

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While the “intermediate development footprint” and “broad development footprint” were used to enhance the variety and number of possible mitigation sites selected by model, the actual mitigation goals for this WMP **only** include the acreage calculated for the “site-specific development” estimated direct habitat loss (as describe in **Table 1**). These “footprints” were not intended to represent actual disturbance, but instead were used to maximize the identification of mitigation sites through modeling.

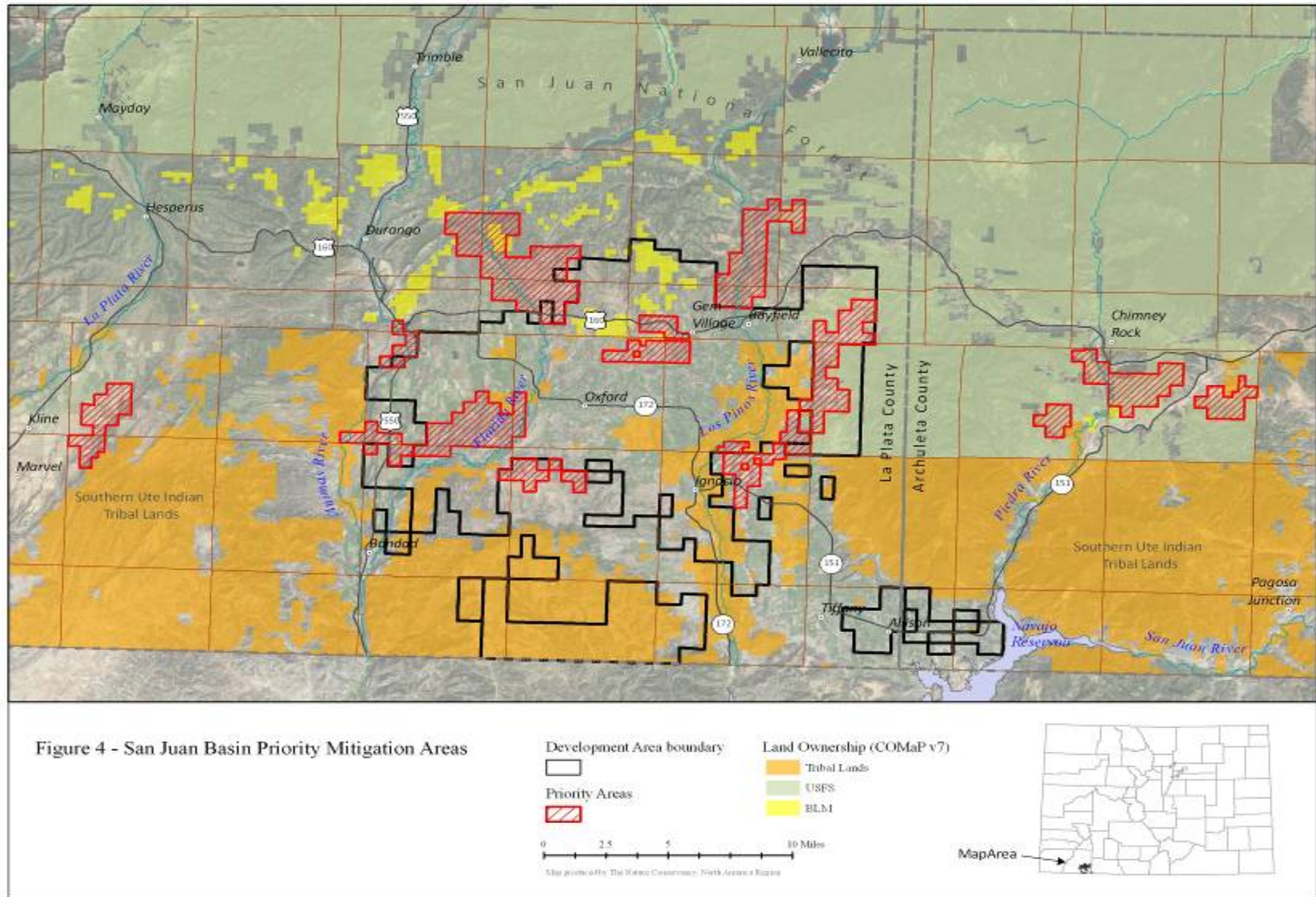
b. Prioritization of Potential Mitigation Sites

For this WMP, CDOW believes that the most effective mitigation strategy to maintain existing wildlife populations is to identify priority mitigation areas on a landscape scale and implement habitat preservation, creation, restoration, and enhancement projects within these areas based on the level of incremental habitat loss occurring throughout the San Juan Basin.

This type of mitigation identifies priority areas for multiple species that are protected from oil and gas development and other land use changes to the extent necessary to preserve existing and future wildlife use. The mitigation areas should be sufficient to ensure viable populations at landscape scale by maintaining local populations and connectivity among populations, while allowing greater levels of development to proceed outside of protected areas without population-level adverse impacts to wildlife resources. The conservation value of a particular mitigation area reflects its contribution to the sustainability of wildlife populations measured at the regional scale.

With this in mind, CDOW selected 11 priority mitigation areas throughout the San Juan Basin, using both the onsite and offsite evaluation of potential mitigation areas conducted by TNC. Priority mitigation areas were selected within and outside BP’s existing and projected development areas in order to preserve existing north-south migratory movements by big game and the continued use of key habitat areas by other wildlife species within the San Juan Basin. The priority mitigation areas identified for this WMP are identified in **Figure 4** below. The intent of the WMP is to offset direct impacts from BP’s proposed facilities (regardless of where they are located within the San Juan Basin) with specific mitigation projects implemented within the identified high priority mitigation areas.

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The overarching goals for all priority mitigation areas and individual mitigation projects implemented under the WMP include:

- i. Preserving existing high quality habitats by limiting additional habitat loss and non-compatible land use changes, and
- ii. Improving habitat conditions as necessary in order to obtain functional wildlife habitat for mitigation offsets.

Building on the general goals above, CDOW will develop a site-specific set of land cover, habitat quality, and land conservation goals for each priority mitigation area. Facilitating the donation of conservation easements or other land interests that preserve wildlife compatible land uses, where appropriate, will be a priority within these areas. Seasonal avoidance and geographically targeted development within these areas is also important to reduce the footprint of human activity and impacts to wildlife.

Habitat creation, restoration, and enhancement projects may be used to improve habitat conditions as part of a mitigation project. Any habitat improvement projects will focus on factors that limit populations, and must be approved by CDOW on a case-by-case basis. In the San Juan Basin, the availability of winter forage is considered a limiting factor for big game, and the availability and continuity of undeveloped riparian habitats year-round is considered a limiting factor for many of the other target species addressed in the WMP. Landowner participation in mitigation projects within the priority mitigation areas is voluntary.

c. Implementation of Offsets (Mitigation Projects)

Implementation of mitigation projects to offset impacts will be supervised by an "Implementation Team" comprised of two representatives from CDOW and two representatives from BP. The Implementation Team will: (1) identify suitable projects to offset impacts, (2) assess the functional habitat value of the mitigation project as compared to the functional habitat loss resulting from impacts associated with proposed facilities, and (3) track impact, mitigation, and mitigation off-set acres on an annual basis. The Implementation Team will review the annual monitoring reports required for each mitigation site and annually review the status of the mitigation goals and mitigation offsets completed under the WMP (Section III.d.).

i. Identification of Individual Mitigation Projects

Potential offset mitigation properties will be identified cooperatively by members of the WMP Implementation Team. Any member of the WMP Implementation Team may bring a potential mitigation property to the attention of the remainder of the Team. When a parcel is identified as a potential mitigation property, the WMP Implementation Team will schedule an onsite inspection to informally investigate the property, discuss property attributes,

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existing and desired conditions, and constraints. If all members of the WMP Implementation Team agree that it is worthwhile to pursue the property as offset mitigation, CDOW will prepare a brief *Project Description* that identifies that attributes of the property and its potential as mitigation. The following information will be included in the *Project Description*:

- *Site and Mitigation Project Information*

- Project name
- Location of the site (regional map) and legal description
- Details of site (e.g., size, topography, soils, present vegetation, existing site conditions, etc.)
- Mitigation acreage goals remaining for WMP
- Existing condition of the property and desired conditions
- Proposed mitigation acreage for the site per Section III.c. above and justification—including specific execution information related to any proposed habitat treatments, such as seed mix, seeding rates, application and manipulating practices, and estimated time-frame to reach site goals
- Proposed general success criteria for any treatments

- *Site Map*

- Shall be no larger than 11 x 17 (unless a different scale is requested by the WMP Implementation Team), including:
 - Landmarks, including property boundary(s) and existing features
 - General habitat types referenced in the mitigation goals for the site

Upon review of the *Project Description*, BP will make the final determination to pursue or decline the property, along with any proposed habitat improvements, as a mitigation project to offset impacts.

ii. Adjustment of Mitigation Goals

The Implementation Team will apply the following adjustments to mitigation goals to account for the functional habitat loss resulting from direct impacts in priority areas, successful interim reclamation, and the functional habitat value of the specific mitigation projects being implemented to offset impacts.

A. Adjustment of Mitigation Goals Based on Direct Impacts in Priority Areas

Due to the quality of the existing habitat within identified high priority mitigation areas, and the specific focus in this WMP on maintaining and improving habitat quality within these areas, direct impacts occurring in high priority mitigation areas will be offset by equivalent mitigation projects at a 5:1 ratio (mitigation area to area of direct habitat loss). The estimated direct habitat loss described in **Table 1** above is revised below in **Table 2** to reflect mitigation goals based on the high functional value of habitat lost in priority areas. Note that habitats impacted outside of high priority

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mitigation areas will be offset by mitigation projects at a 1:1 ratio (mitigation area to area of direct habitat loss).

Table 2
Estimated Functional Direct Habitat Loss from Proposed Facilities

Wellsite	Pad		Access Road	Pipeline	Ownership	
	New/Expansion	Pad Type	New Disturbance (Acres) ¹	New Disturbance (Acres) ¹	New Disturbance (Acres) ¹	Min/Surf
James GU A #2	New	SGL	1.83	0.50	6.27	Fee/Fee
Klusman Ranches GU #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Lewis GU #2	New	SGL	1.83	0.32	N/A	Fee/Fee
Martinez, GU A #2, #4	New	DBL	1.83	0.75	7.33	Fee/Fee
Morrison, Hubert GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Neleigh GU 01-07 #4²	Expansion	DBL	5.85	N/A	N/A	Fee/Fee
Sitton Federal GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Taylor GU 21-23 #3	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Weaselskin GU #3, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Baird GU A #2, #4	New	DBL	1.83	0.38	2.17	Fee/Fee
Barnes GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Barnes, John GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Craig GU #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Daughetee, LA GU #3, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Dry Creek Federal GU #2	New	SGL	1.83	0.89	0.99	Fee/Federal
Dunavant GU 1-15U #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Farmer GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Gosney GC A #3, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Groff GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Hungerford GU A PLA-6 #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
James GU A #5	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Jones GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Jones, Lawrence GU A #4²	Expansion	DBL	5.85	N/A	N/A	Fee/Fee
Klusman GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Klusman Ranches GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Lamke GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Maestas GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Mankins, Howard GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Mason, Arthur GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
McCarville GU C #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
McCarville GU C #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Pan Am GU C #2, #4	Expansion	TPL	1.17	N/A	N/A	Fee/Fee
Patrick, Gary GU #2, #4, Sparks GU B #2, #4	New	QPL	1.83	0.77	2.24	Fee/Fee
Paul Martin SWD	New	SGL	1.83	N/A	N/A	Fee/Fee
Phillips GU A#3²	Expansion	DBL	5.85	N/A	N/A	Fee/Fee
Ray, Billy GU #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee

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Short, Alva GU A #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Short, Lyle GU A #3	New	SGL	1.83	0.73	N/A	Fee/Fee
Short, Lyle GU A #4	Expansion	QPL	1.17	N/A	N/A	Fee/Fee
Southern Ute GU AK #3, #4	New	DBL	1.83	0.04	0.62	Fee/Fee
Southern Ute GU DD #2, #3, #4²	New	TPL	9.15	N/A	N/A	Fee/Fee
Spanish Fork GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Ute GU AA #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Clary GU #3	Expansion	DBL	1.17	0.53	N/A	Fee/Fee
Clary GU #4	Expansion	DBL	1.17	0.16	N/A	Fee/Fee
Dekay GU A #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Dustin GU 09-01 #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
McCarville GU B #4	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Ray, Billy GU #3	Expansion	DBL	1.17	N/A	N/A	Fee/Fee
Southern Ute 32-09; 06-02 #2	New	SGL	1.83	0.84	1.74	Fee/Fee
Tinker GU 02-09 #4²	Expansion	DBL	5.85	N/A	N/A	Fee/Fee
2008LP001 Fee	New	N/A	N/A	N/A	8.19	No Tribal
2008LP012/014	New	N/A	N/A	N/A	9.99	No Tribal
2008LP018 BH Trail	New	N/A	N/A	N/A	16.53	Tribal cut out
2008LP020/0224/030/41	New	N/A	N/A	N/A	12.97	No Tribal
2008LP022	New	N/A	N/A	N/A	3.99	No Tribal
2008LP039	New	N/A	N/A	N/A	0.00	Line Bored
2009LP008	New	N/A	N/A	N/A	4.41	No Tribal
2009LP014	New	N/A	N/A	N/A	3.87	No Tribal
2009WL001	New	N/A	N/A	N/A	6.06	No Tribal
2010LP013	New	N/A	N/A	N/A	3.66	No Tribal
Brinks Draw	New	N/A	N/A	N/A	13.09	Tribal cut out
2008 LP040	New	N/A	N/A	N/A	0.15	No Tribal
Sparks Patrick	New	N/A	N/A	N/A	2.30	No Tribal

102.48 + 5.92 + 106.59 = 214.98

FUNCTIONAL HABITAT LOSS FROM DIRECT DISTURBANCE = 214.98 ACRES

¹ Total acres of new disturbance include areas that will have interim reclamation credited back once completed.

² Bold text reflects a 5x multiplier for development occurring in priority mitigation areas with high functional value.

B. Adjustment of Mitigation Goals Based on Interim Reclamation

BP has an extensive interim reclamation program, reclaiming areas not needed on an ongoing basis for production operations once construction of a new facility is complete. Interim reclamation includes a variety of seed mixes intended to meet BP's stormwater requirements and to return these areas to productive wildlife habitat as quickly as possible (Appendix C).

Nearly all of BP's proposed facilities addressed in this WMP are located within mule deer critical winter range or elk winter concentration areas. Sage and other shrubs are a critical component of mule deer winter range. Mule deer shift their diets to predominately shrubby vegetation following fall frosts. In winter, shrubs may comprise 75 percent or more of their diet.

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Thus, establishing a healthy shrub component is important in returning interim reclaimed areas to productive winter wildlife habitat.

BP will monitor interim reclamation areas to determine when they develop sufficient sage and other suitable winter forage for big game in order to provide productive winter habitat. Appendix D contains performance criteria that will be used by the WMP Implementation Team for adjusting the mitigation goals contained in **Table 2** to provide BP credit on an acre-per-acre basis for successful completion of interim reclamation. The performance criteria in Appendix D ensures that credit for interim reclamation will be provided once these reclaimed areas become productive winter wildlife habitat.

C. Adjustment of Mitigation Goals Based on Functional Value of Mitigation

For the purposes of this WMP, the Project Team identified three factors to assess the functional value of each proposed mitigation project: 1) type and longevity of habitat protection, 2) presence of wetlands, riparian areas, or other critical surface water features, and 3) geographic location with respect to identified priority mitigation areas.

Type and Longevity of Habitat Protection. Protecting or limiting impacts from future development on existing, high quality, functioning habitats is a priority of this WMP. As such, all mitigation projects implemented under this WMP to offset long term habitat impacts will require some form of habitat protection. Protection of existing high quality habitat may not have the greatest population or landscape-level wildlife response to mitigation actions. However, it is a priority under the WMP due to the amount of functioning high quality habitat that exists within the affected area to maintain objectives for the wildlife populations and herd units affected by development.

Examples of potential habitat protection mechanisms include:

1. Conveyance of surface and/or mineral rights on a parcel containing high quality mule deer winter range to a conservation organization or land trust through restrictive covenant or other forms of deed restriction (Note that CDOW will not acquire any surface or mineral rights under this WMP).
2. Purchasing development rights from a private landowner for varying terms;
3. Providing supplemental funds to assist private landowners wishing to place their property in a program to provide quality wildlife habitat for a term not less than 15 years.

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Long term protection of existing high quality habitats has higher functional value for impacted wildlife than short term protection. With this in mind, mitigation goals will be adjusted for mitigation projects that protect wildlife use of existing high quality habitat based on the type and tenure of habitat protection as describe in **Table 3** below:

Table 3 - Adjustment of Mitigation Goals for Type of Land Protection

Type of Land Protection	Mitigation Adjustment (ratio of mitigation project acres/acres of impacted habitat)
Perpetuity (restrictive covenant limiting both surface and mineral development) ¹	0.5:1
Perpetuity (surface restrictive easement only) ¹	1:1
Long Term Surface Lease (20 yrs or greater)	3:1
Long Term Surface Lease (15-19 yrs)	5:1

¹ For the purposes of this WMP, protecting the surface in perpetuity means a restrictive covenant on the surface estate that runs with the land, restricting mineral development to one well pad per 160 acres, and allowing no more than one additional building envelope on properties larger than 80 acres in size (no additional building envelopes for properties less than 80 acres). Restriction on mineral development means foregoing mineral development in perpetuity on the same parcel subject to a restrictive covenant on the surface.

Wetlands, Riparian Areas, or Other Critical Surface Water Features. The presence of wetlands, riparian areas, and other critical surface water features provide essential habitat elements that also raise the functional value of wildlife habitat for the target species identified in this WMP. With this in mind, mitigation goals will also be adjusted as described in **Table 4** below for mitigation projects that include wetlands, riparian areas, or other critical surface water features:

Table 4 - Adjustment of Mitigation Goals for Including Wetlands, Riparian Areas, or Other Critical Surface Water Features in Mitigation Project

Feature that Adds Functional Habitat Value	Mitigation Adjustment (ratio of mitigation project acres/acres of impacted habitat)
Wetland, Riparian Area, or other Critical Surface Water Feature ¹	0.75:1 (based on acres of actual wetland, riparian area, or other water feature size – not parcel size).

¹ For the purposes of this WMP, wetland = wetland per USACOE 1987 Manual and applicable Regional Supplement (without regard to regulatory jurisdiction); riparian area = 2010 mapped FEMA 100 year floodplain, or if the floodplain is unmapped, 300 ft. from centerline of any USGS mapped perennial stream. The presence of “other critical surface water features” that qualify for this adjustment will be determined by CDOW on a site-specific basis based on the value of the surface water feature for wildlife in the context of the entire property and surrounding lands.

CDOW gave each of the mitigation components described in **Tables 3 and 4** a relative functional value to assist in calculating the impact offset value of a particular mitigation project. The intent is to provide BP an incentive to

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implement mitigation projects with the highest ecological value. Thus, BP can achieve the same level of impact offset by completing a small mitigation project with relatively high ecological value as it could by completing a larger mitigation project with relatively low ecological value.

Several examples illustrating how the functional value of mitigation projects and mitigation goal adjustments would be determined under this WMP are described below:

Example #1 Project Facts - The mitigation goal for habitat loss associated with direct disturbance from proposed facilities is **100 acres**. BP and CDOW agree to implement a preservation project to protect in perpetuity 160 acres of combination sage meadow, wetland, and riparian habitat that currently provides excellent habitat for mule deer and is located within one of the priority conservation/mitigation areas identified in the WMP. The 160 acres contains 5 acres of functioning wetlands (per USACOE 1987 Manual and 2008 Supplement) that are maintained from water rights associated with the property that will be retained in perpetuity. It also contains 45 acres of riparian habitat based on the 2010 FEMA 100 yr floodplain map. The 160 acres will be protected with an appropriate restrictive covenant on the surface that limits any new development to one building site and one well pad per 160 acres.

Example #1 Mitigation Goal Adjustments –

- 1) *Type and Longevity of Habitat Protection* - The project will protect 160 acres of existing high quality habitat in perpetuity with a surface conservation easement. The mitigation adjustment (ratio of mitigation project acres/ acres of impacted habitat) is 1:1 (see Table 3). Since the ratio is 1:1, no additional mitigation acres are credited or subtracted from the 160 acre project.
- 2) *Presence of Wetlands, Riparian Areas, or Other Critical Water Features* – The project contains 5 acres of jurisdictional wetlands that will be maintained in perpetuity and an additional 45 acres of riparian habitat. The mitigation adjustment for the 50 combined acres of wetland and riparian habitat is 0.75:1 (see Table 4). Put another way, the 50 acres of wetlands and riparian habitat is worth $50 \times 1/.75 = 66.67$ acres of mitigation due to its functional value. Thus the wetland/riparian portion of the project is worth an additional $(66.67 - 50 = 16.67)$ acres of mitigation due to the functional value of the wetland area.

Example #1 Summary - The 160 acre preservation project would have a functional value as mitigation for $160 + 16.67 = 176.67$ acres of direct habitat loss. Since the mitigation goal to offset habitat loss is 100 acres, the project exceeds the mitigation goal by 76.67 acres, leaving a "bank" of the additional 76.67 acres of mitigation value to offset future habitat losses.

Example #2 Project Facts - The mitigation goal for habitat loss associated with direct disturbance from proposed facilities is **100 acres**. BP and CDOW agree to purchase a 21 year lease on a 320 acre private parcel within a priority area that contains dry land pasture. The lease terms would remove all grazing and require that the property be managed solely as wildlife habitat. BP and CDOW agree that in order for the property to function as wildlife habitat, approximately 160 of the 320 acres would be seeded with sage and native grasses and forbs, and invasive species control would be implemented for three years.

Example #2 Mitigation Goal Adjustments – Type and Longevity of Habitat Protection - The project will lease 320 acres for wildlife habitat for 21 years, requiring 160 acres of seeding and invasive species control. The mitigation adjustment (ratio of mitigation project acres/ acres of impacted habitat) is 3:1 for a 21 year lease (see Table 3).

Example #2 Summary - The 320 acre, 21 year habitat lease within a priority area would have a functional value as mitigation for $320 \times 1/3 = 106.7$ acres of permanent direct habitat loss. Since the mitigation goal to offset direct habitat loss is 100 acres, the project exceeds the mitigation goal by 6.7 acres, leaving a bank of 6.7 acres of mitigation value to offset future habitat losses.

d. Monitoring and Reporting Requirements

Once a property has been identified as a mitigation parcel, and BP has accepted a *Project Description* for the property, a *Biological Baseline Report (BBR)* will be completed prior to implementation of the mitigation project in order to quantify the existing condition and relevant features of the property and its wildlife conservation values. The purpose of the **BBR** is to establish a starting point from which the success or failure of the mitigation project can be measured, and to provide establishment of appropriate on-going monitoring protocols for the variables that will be used to assess the progress of the project through time. The **BBR** must be approved by all members of the Implementation Team.

The components of the **BBR** for individual mitigation projects may vary depending on the specific type of mitigation project being implemented, but in all cases the **BBR** should: (A) assess the existing condition of major ecological components of the mitigation site based on existing information, and where existing information is lacking, compile appropriate quantitative information, and (B) establish a monitoring plan to assess whether the objectives and goals of the mitigation actions are being achieved. The monitoring plan should:

- i. Identify specific, measurable goals (success criteria) for the mitigation site based on the habitat components existing at the site and the desired condition of the specific habitat components that are the focus of the mitigation project;
- ii. Identify the monitoring protocols and frequency of monitoring required to determine whether the success criteria have been met;
- iii. Establish a timeline for achieving the identified success criteria for the mitigation site. The monitoring plan should include annual goals that must be met each year to move towards ultimately achieving the success criteria, and

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remedial actions that will be taken if the annual goals are not achieved. A monitoring report format should also be established.

Monitoring will be used to assess progress toward maintaining and/or achieving the objectives of individual mitigation projects that have been selected by the WMP Implementation Team. Periodic monitoring of the site will occur per the monitoring schedule outlined in the **BBR**. Failure to meet the identified success criteria for the mitigation site within the timeline established in the **BBR** may result in loss of mitigation credit for the project or delayed mitigation credit until success criteria have been met. In evaluating success criteria, modifications or adjustments may be necessary if negative conditions beyond the control of BP occur, including, but not limited to, acts of God, acts of the government, unusually severe weather and any other significant and unforeseeable events.

The periodic monitoring data shall be compiled in a site-specific *Periodic Monitoring Annual Report (PMAR)*. This report shall be reviewed and approved by the Implementation Team in accordance with section III c (above). Components of the report should include information such as:

- ***Site and Mitigation Project Information***

- Project name
- Indication of monitoring period and report number (i.e. first annual report, second annual report, third, etc.)
- Details of site (e.g. present vegetation, existing site conditions, etc.).
- Dates of implementations and milestones.
- List of equipment and methods employed at the site
- List of problems and implemented and proposed remedial measures.
- Any proposed subsequent year monitoring schedule alterations.
- Any proposed alterations to mitigation site success criteria.
- A current year quantitative data summary.
- Tabulated quantitative and qualitative data of subsequent annual reports versus success criteria and goals from the **BBR**.
- Summary—including a qualitative assessment of mitigation site progress.
- Implementation Team's signatures of approval.
- Appended periodic monitoring field forms.

- ***Site Map***

Shall be no larger than 11 x 17 unless a different scale is requested by the WMP Implementation Team and including:

- Landmarks, indicating revised and altered property boundary(s) and site features.
- Existing habitat types and areas of treatments and alterations (if any).
- Locations of any established and newly proposed photographic record stations and long-term sample points or plots for measuring success criteria.

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Following approval of the **PMAR** it shall be appended to the **BBR**. The Implementation Team shall meet quarterly to review the status of individual mitigation projects, and annually to review the status of the WMP. BP will provide CDOW an annual summary of facilities developed under the WMP, interim reclamation efforts for those facilities (including the monitoring of interim reclamation success per Appendix D), and mitigation projects implemented to offset unavoidable adverse impacts from developed facilities. This summary will include:

- i. Updates to **Table 1** and **Exhibit 1** that identify facilities that have already been developed, and the acres of direct habitat impacts from those facilities;
- ii. Any areas of interim reclamation completed per the criteria in Appendix D; and;
- iii. The status and mitigation goals for mitigation projects implemented to offset adverse impacts.

Modifications or reprioritization of specific mitigation opportunities, goals, and projects will be discussed during the annual WMP review.

IV. Responsibilities of the Parties

The following summarizes the implementation responsibilities of BP and CDOW (the Parties), and the General Terms of this Plan.

a. BP's Responsibilities

For the facilities describe in **Table 1** and on **Exhibit 1**, BP agrees to continue to implement its impact avoidance and minimization measures outlined in Section II.a., and to implement mitigation offsets for unavoidable adverse impacts as described in this document in a timely manner.

BP agrees to assign two BP staff to the WMP "Implementation Team" described in Section III.c. The Implementation Team will meet quarterly to identify suitable projects to offset impacts and assess the functional habitat value of the mitigation projects utilizing the procedures outlined in this document. The Implementation Team will also review the monitoring reports required for each mitigation site and annually review the status of the mitigation goals and mitigation offsets completed under the WMP. Although CDOW may bring mitigation proposals to the Implementation Team for review, it will be BP's primary responsibility to bring mitigation proposals to the Implementation Team for review.

BP agrees to prepare the **BBR**, conduct periodic monitoring as required in the **BBR**, and prepare the **PMAR** for each mitigation site until each project is deemed complete by the WMP Implementation Team. In addition, BP agrees to annually prepare a written summary of the construction status of facilities described in **Table 1** and on **Exhibit 1**.

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Due to the sensitivity and irreplaceable nature of RSO resources, the mitigation offsets contemplated in this document do not adequately address these resources. For the facilities describe in **Table 1** and on **Exhibit 1**, BP agrees to observe the RSO buffer restrictions contained in COGCC Rules. If BP cannot reasonably comply with the RSO buffer restrictions for a particular facility, BP agrees to enter into an individual consultation with CDOW on that facility under Rule 306.c. to evaluate options for avoidance, minimization, and mitigation.

b. CDOW's Responsibilities

Per COGCC Rule 1202.d. (2), CDOW agrees to waive its Rule 306.c. consultation process with respect to the facilities described in **Table 1** and on **Exhibit 1**, provided that BP remains in compliance with this document and is making good faith efforts to complete the mitigation commitments described herein in a timely manner. Accordingly, within five days of electronic notice of the posting of a Form 2A, CDOW shall inform COGCC in writing that CDOW waives consultation on the Form 2A. If the Form 2A includes an RSO area, CDOW shall inform BP and COGCC within five days that an individual consultation is required under Rule 306.c.

CDOW agrees that this document shall be used to satisfy any requests from La Plata County or Archuleta County for BP to consult with CDOW regarding the facilities described in **Table 1** and on **Exhibit 1**, or for BP to submit a CDOW-approved mitigation plan for these facilities.

CDOW agrees to assign two CDOW staff to the WMP "Implementation Team" described in Section III.c. The Implementation Team will meet quarterly to identify suitable projects to offset impacts and assess the functional habitat value of the mitigation projects utilizing the procedures outlined in this document. The Implementation Team will also review the annual monitoring reports required for each mitigation site and annually review the status of the mitigation goals and mitigation offsets completed under the WMP. CDOW agrees to assist BP with identifying mitigation proposals for review by the Implementation Team.

c. General Terms

The Parties agree that the WMP shall expire when the facilities, described in **Table 1** and **Exhibit 1**, are constructed, or six years from the signature date of this document, whichever occurs sooner. The parties agree that Table 1 and Exhibit 1 may be amended as necessary during the six year term of the WMP with approval from the Implementation Team. Obligations and commitments made under this WMP related to specific mitigation projects may extend beyond the expiration term of this document, until such projects are deemed complete by the Implementation Team.

Either of the undersigned parties may terminate their consent to this WMP upon 30 days written notice to the other party. Upon such termination, all future benefits and obligations of the parties under this WMP are terminated. Notwithstanding such

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termination, the parties remain obligated and are required to continue to comply with the terms and conditions of this WMP, including mitigation projects to offset unavoidable adverse impacts, for any Form 2A that was approved during the effective period of this WMP.

The terms of this WMP may be extended to additional BP-proposed facilities and for additional duration with express written consent of both parties. The Parties agree that the terms of this WMP shall inure to the benefit and be binding upon the parties hereto and the parties' respective successors and assigns. Neither party may assign its rights or obligations under this WMP without express written consent of the other party. It is expressly understood and agreed by the parties that, except for the rights of enforcement by the COGCC, nothing in this WMP shall give or allow claim or right of action by a third party.

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 institutional authority 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 they have full authorization to execute this WMP.

d. Dispute Resolution

In the event of any dispute or disagreement arising from or relating to this WMP, the parties hereto shall use reasonable efforts to settle the controversy. To this effect, upon notice from one party to the other of a dispute or disagreement, they shall consult and negotiate with each other using the Implementation Team in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties.

V. Execution

BP America Production Company

By: _____ Date: _____
Print: _____
Title: _____

Colorado Division of Wildlife

By: _____ Date: _____
Print: _____
Title: _____

Effective Date: _____
Expiration Date: _____