RUBY PROJECT COOPERATIVE CONSERVATION AGREEMENT FOR THE GREATER SAGE-GROUSE AND PYGMY RABBIT

Bureau of Land Management, Wyoming Game and Fish Commission, Utah Division of Wildlife Resources, Nevada Department of Wildlife, and Ruby Pipeline, LLC

June 2010

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I. Introduction

The purpose of this cooperative conservation agreement (Agreement) is to describe measures for minimizing potential impacts to the greater sage-grouse and the pygmy rabbit, that Ruby Pipeline, LLC (Ruby) will undertake, arising from the construction and operation of its Ruby Pipeline Project (Project). The Project consists of a 675-mile, 42-inch diameter natural gas pipeline, along with associated compression and measurement facilities, located between Opal, Wyoming and Malin, Oregon. An approximate 2.6-mile lateral would also be constructed north from the pipeline's termination point just north of the Oregon-California border to the Malin Hub in Klamath County, Oregon. The pipeline right-of-way would cross four states: Wyoming, Utah, Nevada, and Oregon. Four new compressor stations would also be installed as part of the Project.

Ruby has applied for a right-of-way grant across lands managed by the Bureau of Land Management (BLM) in each of the four states crossed by the Project, portions of which contain greater sage-grouse and pygmy rabbit habitat. The U.S. Fish and Wildlife Service (USFWS) recently concluded that listing of the greater sage-grouse under the Endangered Species Act (ESA) (16 U.S.C. §§ 1531-1544) was warranted, but precluded by higher priority listing activities, thus placing the sage-grouse on the list of ESA candidate species. USFWS is currently conducting a status review of the pygmy rabbit to determine whether it warrants listing under the ESA. The BLM has designated the greater sage-grouse and pygmy rabbit as sensitive species.

On December 29, 2010, the BLM in Wyoming issued an Instruction Memorandum (IM) No. 2010-012 regarding management of Greater sage-grouse within the State. Management is conducted in coordination with the Wyoming Game and Fish Department within all habitats identified by the State of Wyoming as sage-grouse "core areas". Additionally, when the USFWS designated the Greater sage-grouse as a candidate species, the BLM-Washington Office (WO) issued an IM regarding sage-grouse management and included considerations for energy development. BLM WO IM No. 2010-071 (March 5, 2010) recommends that BLM consider a combination of actions in sage-grouse priority habitats, including requiring onsite avoidance, minimization, and mitigation measures, as well as offsite mitigation. The IM indicates that BLM will engage State counterparts in further efforts to identify priority habitat for purposes of implementing the sage-grouse conservation strategies identified therein. The Ruby Project was designed to identify areas within sage-grouse habitat and to avoid, minimize, or mitigate impacts to such habitat generally. The Project is consistent with IM 2010-071 because Ruby has developed specific, onsite sage-grouse avoidance, minimization, and mitigation measures as part of its Plan of Development (Appendix S), which Ruby will implement during Project construction and reclamation. In addition, Ruby has agreed to additional Conservation Planning for the benefit of Greater sage-grouse and the pygmy rabbit through this Agreement.

Ruby has entered into this Agreement in order to coordinate and collaborate with the Wyoming Game and Fish Commission, the Utah Division of Wildlife Resources, and the Nevada Department of Wildlife, (collectively the "State Agencies") and BLM regarding the implementation of effective conservation measures for pygmy rabbit and greater sage-grouse within and in the vicinity of its proposed right-of-way. USFWS

participated in the collaborative development of this Agreement and supports the efforts of Ruby, BLM, and State Agencies in their intent to further conservation of these species. Oregon Department of Fish and Wildlife (ODFW) did not identify any sage-grouse core use areas or pygmy rabbit colonies that would be impacted by the proposed route. However, consistent with Oregon state policy which identifies a formula for mitigation for all affected species and their habitats, a separate agreement was negotiated directly between ODFW and Ruby.

II. Cooperators and Immediate Points of Contact

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III. Purpose of the Conservation Agreement

This Agreement for the conservation of pygmy rabbits and greater sage-grouse represents a collaborative effort between BLM, the State Agencies, and Ruby (collectively the "Parties"). In recognition of the March 5, 2010 "warranted but precluded" finding by Fish and Wildlife Service for greater sage-grouse and the pending petition to list the pygmy rabbit under the ESA, and the fact that construction of the Project will impact these species, it is Ruby's intent to create a conservation benefit to these species by funding conservation efforts beyond the avoidance, minimization, and restoration measures Ruby will implement during construction. This Agreement is designed to (1) incorporate by reference avoidance, minimization, and restoration measures that Ruby will implement during the construction of the Project to minimize Project impacts on the greater sage-grouse and pygmy rabbit, and (2) fund additional conservation measures that will provide conservation benefits to these species. If the USFWS lists either species prior to the termination of this Agreement, the signatories anticipate that the avoidance, minimization, restoration, and conservation measures and funding referenced and described herein will be included in any biological assessment and related ESA consultation that may be required.

IV. Authority

The Federal Land Policy and Management Act (43 U.S.C. § 1737), which provides overall direction to the BLM for management of public lands, allows the BLM to participate in conservation agreements. The BLM Manual, Section 6840 (Special Status Species Management), provides overall policy direction to BLM managers to conserve listed threatened or endangered species on BLM administered lands, and to ensure that actions authorized on BLM-administered lands do not contribute to the need to list species deemed by the BLM to be "sensitive."

The Wyoming Game and Fish Commission has the authority to "enter into cooperative agreements with federal agencies, corporations, associations, individuals, and landowners for the development of state control of wildlife management and demonstration projects". Wyo. Stat. Ann. § 23-1-302(a)(x).

The Utah Division of Wildlife Resources is authorized to "enter into cooperative agreements and programs with other state agencies, federal agencies, states, educational institutions, municipalities, counties, corporations, organized clubs, landowners, associations, and individuals for purposes of wildlife conservation" (Utah Code 23-22-1). The Utah Division of Wildlife Resources is the wildlife authority for Utah, and is appointed as the trustee and custodian of protected wildlife (Utah Code 23-14-1).

The Nevada Department of Wildlife has the authority to "enter into cooperative or reciprocal agreements with the Federal Government or any agency thereof, any other state or any agency thereof, any other agency of this state, any county or other political subdivision of this state, to the extent permitted by the provisions of chapter 277 of NRS, any public or private corporation, or any person, in accordance with and for the purpose of carrying out the policy of the Commission." Nev. Rev. Stat. § 501.351.

V. Species Involved

A. Greater Sage-Grouse

The greater sage-grouse (*Centrocercus urophasianus*) is the largest North American grouse species. Adult male greater sage-grouse range in length from 66 to 76 centimeters (26 to 30 inches) and weigh between two and three kilograms (four and seven pounds). Adult females are smaller, ranging in length from 48 to 58 centimeters (19 to 23 inches) and weighing between one and two kilograms (two and four pounds). Males and females have dark grayish-brown body plumage with many small gray and white speckles, fleshy yellow combs over the eyes, long pointed tails, and dark green toes. Males also have blackish chin and throat feathers, conspicuous phylloplumes (specialized erectile feathers) at the back of the head and neck, and white feathers forming a ruff around the neck and upper belly. During breeding displays, males exhibit olive-green apteria (fleshy bare patches of skin) on their breasts (USFWS 2008).

The greater sage-grouse is a member of the Phasianidae family. It is one of two species in the genus; the other species is the Gunnison sage-grouse (*C. minimus*). Until recently, the species was described as including sage-grouse in south-central Colorado and eastern Utah. In 2000, Gunnison sage-grouse from extant populations in

southwestern Colorado and southeastern Utah were classified as a separate species (USFWS 2008). This Agreement does not address the Gunnison sage-grouse.

Greater sage-grouse depend on a variety of sagebrush-steppe habitats throughout their life cycle, and are considered obligate users of several species of sagebrush (e.g., Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*), mountain big sagebrush (*A. t. vaseyana*), and basin big sagebrush (*A. t. tridentata*). Greater sage-grouse also use other sagebrush species such as low sagebrush (*A. arbuscula*), black sagebrush (*A. nova*), fringed sagebrush (*A. frigida*) and silver sagebrush (*A. cana*). Thus, greater sage-grouse distribution is strongly correlated with the distribution of sagebrush habitats. Greater sage-grouse exhibit strong site loyalty to breeding and nesting areas (USFWS 2008).

B. Pygmy Rabbit

The pygmy rabbit (*Brachylagus idahoensis*) is a member of the family Leporidae, which includes rabbits and hares. The pygmy rabbit is the smallest North American rabbit. Adult weights range from 0.54 to 1.2 pounds (245 to 553 grams); adult lengths range from 9.1 to 12.1 inches (in) (23.1 to 30.7 centimeters). Adult females are generally larger than adult males. The species can be distinguished from other rabbits by its small size, gray color, short rounded ears, small hind legs, and the absence of white on the tail (USFWS 2005).

Pygmy rabbits typically occur in areas of tall, dense sagebrush (*Artemisia* spp.) cover growing on deep, loamy soils. The rabbits are highly dependent on sagebrush to provide both food and shelter throughout the year. The winter diet of pygmy rabbits is comprised of up to 99 percent sagebrush, which is unique among rabbits. The specific diets of pygmy rabbit in spring and summer likely vary by region (USFWS 2005).

The pygmy rabbit is one of only two rabbits in North America that digs its own burrows. Pygmy rabbit burrows are typically found in relatively deep, loose soils of wind-borne or water-borne (e.g., alluvial fan) origin. Pygmy rabbits, especially juveniles, likely use their burrows as protection from predators and inclement weather. The burrows frequently have multiple entrances, some of which are concealed at the base of larger sagebrush plants. Burrows are relatively simple and shallow, often no more than 6.6 feet (two meters) in length and usually less than 3.3 feet (one meter) deep with no distinct chambers. Burrows are typically dug into gentle slopes or mound/inter-mound areas of more level or dissected topography. In general, the number of active burrows in a colony increases over the summer as the number of juveniles increases. However, the number of active burrows may not be directly related to the number of individuals in a given area because some individual pygmy rabbits appear to maintain multiple burrows, while some individual burrows are used by multiple individuals (USFWS 2005).

Pygmy rabbits occasionally make use of burrows abandoned by other species, such as the yellow-bellied marmot (*Marmota flaviventris*) or badger (*Taxida taxus*). As a result, they may occur in areas of shallower or more compact soils that support sufficient shrub cover. Natural cavities (such as holes in volcanic rock), rock piles, stone walls, and areas around abandoned buildings may also be used. During winter

months, pygmy rabbits make extensive use of snow burrows, possibly as access to sagebrush forage, as travel corridors among their underground burrows, for protection from predators, and/or as thermal cover (USFWS 2005).

The pygmy rabbit's current geographic range, excluding the Columbia Basin Distinct Population Segment, includes most of the Great Basin and some of the adjacent intermountain areas of the western United States. The northern boundary extends into southeastern Oregon and southern Idaho. The eastern boundary extends into southwestern Montana and southwestern Wyoming. The southeastern boundary extends into southwestern Utah. Central Nevada and eastern California provide the southern and western boundaries (USFWS 2005).

Literature indicates that pygmy rabbits were never evenly distributed across their range. Rather, they are found in areas within their broader distribution where sagebrush cover is sufficiently tall and dense, and where soils are sufficiently deep and loose to allow burrowing. In the past, dense vegetation along permanent and intermittent stream corridors, alluvial fans, and sagebrush plains probably provided travel corridors and dispersal habitat for pygmy rabbits between appropriate use areas. Since European settlement of the western United States, dense vegetation associated with human activities (e.g., fence rows, roadway shoulders, crop margins, abandoned fields) may have also acted as avenues of dispersal between local populations of pygmy rabbits (USFWS 2005).

VI. Existing and Potential Threats

The loss of sagebrush-steppe vegetation from fire, livestock grazing, invasive non-native plant species, energy development, urbanization, and agricultural conversion is likely the most significant factor contributing to pygmy rabbit and greater sage-grouse population declines. Because sagebrush-steppe vegetation is critical to both species, further loss of sagebrush may be detrimental to these species. Fragmentation of sagebrush plant communities also poses a threat to pygmy rabbit and greater sage-grouse populations as their dispersal potential becomes limited. Also, the greater sage-grouse requires large, extensive sagebrush-steppe landscapes for its seasonal habitats (UDWR 2009, USFWS 2008; NDOW 2005).

VII. Avoidance and Minimization Measures and Additional Conservation Actions

A. Ruby's Responsibilities

1. Avoidance and Minimization Measures

As part of its right-of-way grant application, Ruby must submit "a detailed construction, operation, rehabilitation, and environmental protection plan," also known as a Plan of Development (POD) to BLM. 43 C.F.R. § 2804.25(b). While Ruby's POD describes how it will comply with the applicable laws, regulations, and BLM Resource Management Plans in the construction and operation of the Project, it also describes additional environmental protection measures that Ruby will implement on the public and private lands crossed by the Project.

Appendix S of Ruby's POD, incorporated by reference herein, identifies the avoidance, minimization, and conservation measures specific to the greater sage-grouse and pygmy rabbit that Ruby has committed to implement during the construction and operation of the Project.

2. Additional Conservation Actions

Ruby will commit to support additional conservation efforts related to sagebrush-dependent species. These efforts are to be funded by Ruby in the amounts as outlined below. These amounts were developed based in part on the following assumptions:

1. 115-foot-wide construction right-of-way, with additional width where needed for topography, road crossings, or difficult construction issues.

2. An approximate average land value of $600 per acre as determined through the Habitat Equivalency Analysis (HEA), attached hereto as Appendix A, for Wyoming and Utah portions of the line.

3. An approximate average land value of $759 per acre for Nevada portions of the line as determined through a state-specific independent assessment of project impacts and habitat valuations utilizing a Habitat Characterization Matrix approach (attached hereto as Appendix B).

Based on the HEA process, Ruby will provide funds under this agreement in the amounts of $1,266,377 for Utah, and $909,543 for Wyoming.

Based on the Habitat Characterization Matrix process as conducted in Nevada, Ruby will fund this agreement in the amount of $8,826,411.[1]

The total conservation effort funded by Ruby for these sagebrush-dependent species is $11,591,369 over the entire span of the project. Conservation measures for migratory birds and endangered species are outlined in separate agreements executed between Ruby and the USFWS and will be carried out in accordance with those two agreements.

Ruby shall deposit the funds in the accounts for each state, as designated in Appendix C to this Agreement, within 30 days of the BLM's issuance of any Notice to Proceed for the Project. However, if there are any legal challenges to the BLM Right-of-Way or other Project authorization that prevent Ruby from commencing construction, Ruby's obligation to deposit funds will not accrue until 30 days after it is allowed to commence construction. Once deposited, neither the BLM nor any of the State Agencies shall have any obligation to refund or reimburse the funds received from Ruby through this Agreement for any reason. Funds for the conservation of sagebrush-dependent species will be managed in accordance with Appendix C to this Agreement.

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[1] The Habitat Matrix Characterization Process (Appendix B) was the preferred methodology for the BLM-Nevada due to habitat continuity (246 miles) and the ability of that process to depict species impacts based on detailed seasonal range information available in Nevada as opposed to a general assessment of habitat quality based on Landfire habitat data used for the HEA(Appendix A).

All projects funded by Ruby under this Agreement must benefit the pygmy rabbit and the greater sage-grouse and will be determined in accordance with Appendix C of this Agreement. Any project funded through this Agreement must address deficiencies or shortfalls in habitat conditions which are identified risk factors to the seasonal life history requirements of these species. Risk factors may be identified through BLM Land Use Plans, State Habitat Action Plans, or population-level conservation planning documents. Funds provided herein cannot be used to offset or replace funding by Congress or affected state legislatures. Ruby may request a list of projects funded through this Agreement.

B. Bureau of Land Management Responsibilities

The BLM will continue to coordinate with Ruby in an effort to provide for the conservation of greater sage-grouse and pygmy rabbits by providing technical assistance and guidance regarding reasonable measures to be taken by Ruby to minimize impacts to greater sage-grouse and pygmy rabbits, or otherwise conserve the species, during the construction, operation, and maintenance of the Project.

C. State Wildlife Agency Responsibilities

The State Agencies will continue to coordinate with Ruby in an effort to provide for the conservation of greater sage-grouse and pygmy rabbits by providing technical assistance and guidance regarding reasonable measures to be taken by Ruby to minimize impacts to greater sage-grouse and pygmy rabbit during the construction, operation, and maintenance of the Project. In addition, the State Agencies will be responsible for reporting to Ruby the projects that were funded as a result of this Agreement. Appendix C includes a general description of projects proposed by the State Agencies at the time of execution of this Agreement.

VIII. Duration of Agreement

This Agreement will become effective upon BLM's issuance of a right-of-way grant to Ruby for the Project and will remain in effect for five years following the date that Ruby deposits the funds described in Section VII.2 of this Agreement into the accounts specified in Appendix C to this Agreement. The Agreement may be extended beyond the specified terms prior to expiration upon the agreement of the Parties. *Provided*, if the BLM or any of the State Agencies determine that the Additional Conservation Actions have not been completed by the Agreement's expiration date or if revegetation has not succeeded, the Parties agree that the Agreement should be extended for additional years at one year increments of time until the BLM and State Agencies concur that the Additional Conservation Measures have been completed and are satisfied with the success of the revegetation.

As described in the POD and the FERC documentation, Ruby will continue to monitor the entire right-of-way for success of reclamation annually for a minimum of five years, and for so long thereafter as continued efforts to achieve success are required. In any areas where noxious weeds have expanded their range on the right-of-way, Ruby will take steps each year to control those weeds, as directed by agency protocols. In areas where revegetation has not succeeded, Ruby will take additional

steps to seed and reclaim such areas every second or third year, as directed by the FERC or affected land management agency.

IX. Modification of the Agreement

Any party may modify this Agreement by providing written notice to, and obtaining the written concurrence of, the other Parties. Such notice shall include a statement of the proposed modification, the reason for it, and its expected results. The Parties will use their best efforts to respond to proposed modifications within 60 days of receipt of such notice. Proposed modifications will not become effective unless and until all of the other Parties' provide written concurrence, except as provided in Paragraph VIII.

X. Termination of the Agreement

This entire Agreement, including Appendix S of Ruby's POD and Appendix C of this Agreement, has been incorporated into FERC's Certificate of Public Convenience and Necessity for the Project and will be incorporated into and made a condition of BLM's right-of-way grant. Thus, it is enforceable against Ruby as a term and condition of FERC's Project authorization and the BLM's right-of-way grant. Ruby may not terminate its participation in this Agreement, in whole or in part, at any time before the date of expiration, without the written concurrence of BLM and revision of the right-of-way grant.

XI. Dispute Resolution

A. The Parties agree to work together in good faith to resolve any disputes related to implementation of this Agreement, including Appendix C.

B. If a dispute arises between the BLM and one of the State Agencies, the disputing Parties agree to utilize the dispute resolution processes described in Appendix C to this Agreement.

C. If a dispute arises between Ruby and one or more of the other Parties, the disputing Parties will provide written notice to the other Parties of the dispute as soon as possible. The disputing Parties will meet within 30 days of notice of dispute and attempt to resolve the dispute. If agreement cannot be reached within 30 days of the dispute resolution meeting, then the dispute will be raised to the Vice President, Ruby LLC, the BLM Authorized Officer of the state in which the dispute has arisen and the respective director of the wildlife agency of that state. The BLM Authorized Officers are the State Directors for Nevada and Wyoming, and the Utah West Desert District Manager. If the dispute cannot be resolved within 60 days after being raised to the BLM Authorized Officer and wildlife agency director of the state in which the dispute arose, any Party may withdraw from the Agreement and take any action authorized by law.

XII. Succession and Transfer

This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and transferees.

XIII. No Third-Party Beneficiaries

This Agreement does not create any new right or interest in any member of the public or any State as a third-party beneficiary, nor shall it authorize anyone not a party to this Agreement to maintain a suit for injuries or damages pursuant to the provisions of this Agreement. The duties, obligations, and responsibilities of the Parties to this Agreement with respect to third parties shall remain as imposed under existing law.

XIV. Notices and Reports

Any notices and reports, including monitoring and annual reports, required by this Agreement shall be delivered to the persons listed in Section II above.

XV. Availability and Use of Funds

Implementation of this Agreement is subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this Agreement will be construed by the Parties to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. The Parties acknowledge that BLM and the State Agencies will not be required under this Agreement to expend any federal agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

No funds disbursed by Ruby pursuant to this Agreement may be used by any agency to unlawfully augment any agency's federal appropriations, whether in violation of the United States Constitution, Title 31, U.S.C. Section 1301(a) (the "Purpose Statute"), Title 31, U.S.C. Section 3302(b) (the "Miscellaneous Receipts Act"), or other applicable law.

XVI. Duplicate Originals

This Agreement may be executed by facsimile signatures and in counterparts, each of which when so executed, shall constitute an original, and all of which taken together shall constitute one and the same document. This Agreement may also be executed in any number of duplicate originals. A complete original of this Agreement shall be maintained in the official records of each of the parties hereto.

XVII. Relationship To Authorities

The terms of this Agreement shall be governed by and construed in accordance with applicable federal law. Nothing in this Agreement is intended to limit the authority of the BLM to fulfill its responsibilities under federal laws or the authority of the State Agencies to fulfill their responsibilities under state law. All activities undertaken pursuant to this Agreement must be in compliance with all applicable state and federal laws and regulations.

XVIII. Sovereign Immunity

The States of Wyoming, Utah, Nevada, and the Bureau of Land Management do not waive their sovereign immunity by entering into this Agreement, and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this agreement.

XIX. References Cited

Nevada Department of Wildlife. 2005. Nevada Wildlife Action Plan, *available at* http://www.ndow.org/wild/conservation/cwcs/index.shtm#plan.

U.S. Fish and Wildlife Service. 2008. Greater Sage-Grouse Interim Status Update.

U.S. Fish and Wildlife Service. 2005. 90-day Finding on a Petition to List the Pygmy Rabbit as Threatened or Endangered, 70 Fed. Reg. 29253.

Utah Division of Wildlife Resources (UDWR). 2009. Utah Greater Sage-grouse Management Plan. Utah Department of Natural Resources, Division of Wildlife Resources, Publication 09-17, Salt Lake City, Utah, USA.

XX. APPENDICES

A. Habitat Equivalency Analysis

B. Nevada Habitat Characterization Process Matrix Impact Assessment

C. Proposed State Agency Conservation Projects

Ruby Project Cooperative Conservation Agreement for the
Greater Sage Grouse and Pygmy Rabbit

In signing this agreement I hereby acknowledge my acceptance of and agreement with the Ruby Project Cooperative Conservation Agreement for the Greater Sage-Grouse and Pygmy Rabbit.

Ron Wenker June 18, 2010

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RECEIVED
JUN 21 2010
BLM - Price, UT

RECEIVED
JUN 23 2010
BLM - Price, UT

In signing this agreement I hereby acknowledge my acceptance of and agreement with the Ruby Project Cooperative Conservation Agreement for the Greater Sage-Grouse and Pygmy Rabbit.

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2

Appendix A

Habitat Equivalency Analysis

A. Habitat Equivalency Analysis

A HEA approach was used to determine habitat compensation ratios for the Project. HEA is a method of quantifying interim and permanent habitat injuries, measured as a loss of habitat services from pre-disturbance conditions, and scaling compensatory habitat requirements to those injuries (King 1997; Dunford et al. 2004; Allen et al. 2005; Kohler and Dodge 2006; National Oceanic and Atmospheric Administration 2006, 2009). Habitat services are generally defined by a metric that represents the functionality of that habitat (i.e., the ability of that habitat to provide "services" such as nest sites, forage, cover from predators, etc.).

Interim habitat injuries are those habitat services that are absent during disturbance and during vegetation restoration that would have been available if that disturbance had not occurred. Permanent habitat injuries are those habitat injuries remaining after vegetation recovery is complete (e.g., permanent roads). The objective of an HEA is to replace lost services with like services, providing 1:1 replacement for interim and permanent injury.

Current Habitat Quality

The methodology implemented for assessing habitat quality along the Ruby pipeline corridor used three equally weighted variables (vegetation type, patch size, and fire condition class) given a score from 1 (low) to 3 (high) as described in Appendix A. These variables were multiplied to each other to give a range of scores from 1 to 27 indicating low to high, respectively, habitat quality for sage-grouse. Rationale and description of each variable, as well as how they were applied to the HEA model, is detailed in Appendix A.

1. Habitat Available by Project Condition

Three scores (vegetation type, patch size, and fire condition class) were applied using ESRI ArcGIS 9.3 GIS software to quantify the number of acres within each of the habitat quality score categories (1, 2, 3, 4, 6, 8, 9, 12, 18, and 27) at four disturbance-level condition types over the life of the Project (Baseline, Construction, Restoration, and Recovery) for each state and aggregate vegetation type.

1) **Baseline**—The baseline condition quantifies habitat services available to sage-grouse before disturbance (pre-construction).
2) **Construction**—The construction condition quantifies habitat services available to sage-grouse during construction. This calculation assumes 100% loss of habitat functionality for sage-grouse within the construction ROWs and other disturbed sites. At Construction, vegetation patches

[2] Full text the Habitat Equivalency Analysis is on file with FERC linked to this Conservation Agreement. (Document No. CP09-54-000)

identified at Baseline would be fragmented by the ROW, temporary access roads, and other pipeline-associated infrastructure.

3) **Restoration**—The restoration condition quantifies habitat services available to sage-grouse after construction is complete and some habitat services are restored to the disturbed sites (calculated by the number of habitat services within the ROW and other disturbed areas where 100% loss of habitat services were assumed, like compressor stations), generally as a result of initial Ruby reclamation efforts that would reduce ROW disturbance. At Restoration, pipeline construction and re-seeding are assumed to be complete, but baseline vegetation conditions would not yet have recovered; thus vegetation patches identified at Baseline would still be fragmented by the ROW, temporary access roads, and other pipeline-associated infrastructure.

4) **Recovery**—The recovery condition quantifies habitat services available to sage-grouse after the vegetation has recovered. This calculation assumes no loss of habitat functionality for sage-grouse except in areas of permanent disturbance (e.g., compressor stations). At recovery for un-treed vegetation types, the vegetation patches would no longer be fragmented by the pipeline or temporary access roads. However, because a permanent ROW would be maintained free of trees, treed vegetation types would sustain permanent injury and patch fragmentation.

2. Calculation of Scaled Habitat Compensation

Usually, a HEA balances habitat injury with other habitat of the same type and quality; thus, the acres of replacement habitat can be directly calculated. Because the habitats analyzed in the Project corridor were of varying quality, and specific compensation habitats have not yet been identified, an alternate approach was used to calculate the compensation acreages for sage-grouse by each vegetation type and state. This approach assumes that compensatory habitats will provide the same mean habitat quality score as the injured habitats at baseline.

The habitat compensation for the Project is reported both in acres of off-site habitat replacement and as a habitat compensation ratio. Habitat compensation ratios are commonly used in environmental compensation planning. For example, a habitat compensation ratio of 2:1 would indicate that for every 1 acre of habitat disturbed, 2 acres of habitat are needed to compensate for that loss. These 2 acres could comprise 2 off-site acres of similar quality (for permanent disturbance), the restoration of the disturbed acre (primary restoration) plus 1 off-site acre of similar quality, or improvements in habitat quality that provide the same habitat services as those lost. To express the habitat compensation for the Project as a ratio, the proportion of ROW area to be replaced off site was added to 1 (representing primary restoration of the Restoration ROW). Habitat compensation ratios were calculated for each vegetation type and state and are interpreted as "acres of habitat restoration and/or compensation required for every one acre disturbed by the pipeline Restoration ROW."

3. Habitat Service Level Metric

For the purposes of this HEA, sage-grouse habitat (e.g., sagebrush steppe, wet meadows, riparian/wetland complexes) is the ecosystem of interest. The most direct metric to define and compare is number of sage-grouse. However, sage-grouse population data along the Project corridor are not available. Furthermore, the ability to quantify sage-grouse population impacts associated with development and determining appropriate mitigation based on the number of birds is difficult. Therefore, since the objective of an HEA is to replace lost habitat services with like services, and sage-grouse population data are not available, a metric was developed that represents habitat quality for greater sage-grouse along the Project corridor. The metric representing the habitat services provided to sage-grouse contains the product of three equally-weighted scores: 1) importance of vegetation type to sage-grouse, 2) size of the vegetation patch relative to home range sizes of indicator bird species for that vegetation type, and 3) LANDFIRE Fire Regime Condition Class. The product of these scores is the habitat quality score.

4. Extent of Injury Analysis

Separate HEA models were run for each vegetation type (n = 14) and state (n = 4) for sage-grouse. Four metrics were used in the HEA injury analysis: "Pipeline Intersect," "Construction ROW," "Restoration ROW', and "Recovery ROW." Pipeline Intersect was defined as the area of the vegetation patches within a 10-mile buffer of the pipeline (i.e., 5 miles to either side of the pipeline centerline) that came in contact with any area disturbed by construction, including construction ROW, access roads, compressor stations, and storage yards for equipment and materials. Thus, Pipeline Intersect is a measure of acres available for use by sage-grouse along the Project ROW. The Construction ROW is a measure of the direct and indirect disturbance of the Pipeline Intersect acres that would result from construction-related activities; Recovery ROW is a measurement of the immediate injury to the resource. The Recovery ROW is a measure of the acres of disturbance remaining each year after reclamation activities have occurred.

5. Calculation of Habitat Services Lost over the 40-Year Analysis Period

In all four states high-quality sage-grouse habitat is predominantly sagebrush steppe and salt desert shrub, marginal habitat consists of more agriculture and developed areas or unhealthy or disturbed sagebrush or salt desert shrub communities, and low-quality habitat has increased occurrence of introduced grasses and forbs or sparsely vegetated areas.

For each project condition and vegetation type, the habitat injury was quantified for the year of construction and 40 years afterward. A recovery period of 40 years was selected as the estimated recovery for most vegetation types. Sagebrush and salt desert shrub have longer recovery periods (120 and 70 years, respectively) and were included in the analysis, however the habitat services lost for all vegetation types were only evaluated for 40 years after the year of construction. Thus, in the model, recovery never occurred for those vegetation types. Habitat services were calculated for each year between Restoration and Recovery assuming a linear rate of increase. Many vegetation types were expected to recover in less than 40 years (i.e., grassland/herbaceous) while others were assigned a permanent disturbance associated with ROW maintenance (i.e., forested habitats).

6. Construction Disturbance and Restoration

The Construction ROW represents the acres of direct and indirect disturbance within the Pipeline Intersect during construction of the pipeline. The Construction ROW is wider than the Restoration ROW, which is the area of direct impact (i.e., the footprint of the Project). It was assumed that there would be a 100% loss of habitat functionality in the Construction ROW during construction and in the Restoration ROW in the first year after construction. The Baseline habitat condition in the area of direct Project disturbance (i.e., Restoration ROW) is characterized in Tables 5 through 8 by state and vegetation type.

7. Habitat Injury and Compensation

Tables 9 through 12 summarize the estimation of habitat services and habitat injury in the Project corridor over 40 years for all four states, respectively. The scaled habitat compensation to offset injury is the recommended number of acres that should be replaced *in addition to* restoration of the disturbance of vegetation in the ROW, temporary roads, and equipment/materials holding yards. The habitat compensation ratio takes the number of compensatory acres and expresses it in proportion to the acres in the ROW. Unlike the compensatory acres reported, this ratio *includes* restoration of the temporary disturbance of vegetation in the ROW, temporary roads, and equipment/materials holding yards. For example, a mitigation ratio of 1.5:1 would read: for every 1.0 acre of this habitat disturbed in the ROW, 1.5 acres need to be restored and/or replaced (e.g., restoration of the 1.0 acre disturbed + purchase or restoration of 0.5 acre of similar habitat). Additional information is provided in Appendix A Section 3.2.1.3

One of the tenants of HEA is that habitat is replaced with like habitat so that there is no net loss in ecosystem services. As such, conifers should be replaced with conifers, sagebrush with sagebrush, etc. Additionally, the replacement or compensatory habitats should be of equal quality to those disturbed by the project.

Table 1. Estimation of Sage-grouse Habitat Services and Habitat Injury in the Project Corridor through Wyoming and Scaled Habitat Compensation to Offset Injury from HEA Model.

Aggregate Vegetation Type	Baseline Service Level in the Pipeline Intersect (service-acres per year)	Average Service Level per Acre (services/acre)	Baseline Services Over 40 Years (service-acre-years)	Habitat Injury (service-acre-years lost in 40 years)	Permanent Injury (% of Baseline lost)	Scaled Habitat Compensation (acres)	Compensation Ratio (acres restored:acres in Restoration ROW)
Agricultural and Developed	17,628	4.04	705,118	209	0.00%	1.29	1.1:1
Conifer Forest	217	8.71	8,667	937	2.40%	2.69	1.45:1
Deciduous Forest	2,407	12.13	96,292	813	0.50%	1.67	1.24:1
Grassland/Herbaceous	228	5.95	9,131	720	5.15%	3.03	1.20:1
Introduced Annual Grass and Forb	107	1.66	4,283	100	1.61%	1.51	1.1:1
Introduced Perennial Grass and Forb	20	2.88	818	5	0.00%	0.04	1.1:1
Mixed Deciduous Conifer Forest	0	--	0	--	--	--	--
Pinyon-Juniper Woodland	58	8.70	2,321	145	3.53%	0.42	1.45:1
Riparian	9,813	9.00	392,527	1,005	0.00%	2.79	1.08:1
Sagebrush Steppe	1,300,400	19.65	52,015,994	1,156,472	1.74%	1471.65	2.83:1
Salt Desert Shrub	29,173	19.12	1,166,933	224,405	11.28%	293.36	3.18:1
Shrubland	7	7.50	267	37	0.00%	0.12	1.31:1
Sparsely Vegetated	124	1.00	4,947	-4,528 [a]	0%	0	1:1
Wetlands	0	--	0	--	--	--	--

[a] negative number indicates a net gain in sparsely vegetated habitat.

-- indicates habitat not present in sufficient quantity to analyze.

Table 2. Estimation of Sage-grouse Habitat Services and Habitat Injury in the Project Corridor through Utah and Scaled Habitat Compensation to Offset Injury from HEA Model.

Aggregate Vegetation Type	Baseline Service Level in the Pipeline Intersect (service-acres per year)	Average Service Level per Acre (services/acre)	Baseline Services Over 40 Years (service-acre-years)	Habitat Injury (service-acre-years lost in 40 years)	Permanent Injury (% of Baseline lost)	Scaled Habitat Compensation (acres)	Compensation Ratio (acres restored:acres in Restoration ROW)
Agricultural and Developed	461,606	3.73	18,464,249	8,579	0.01%	57.56	1.05:1
Conifer Forest	1,141	6.08	45,648	3,991	4.34%	16.40	1.60:1
Deciduous Forest	207,774	19.30	8,310,945	359,077	3.42%	465.13	2.22:1
Grassland / Herbaceous	2,052	4.16	82,088	1,109	0.00%	6.67	1.08:1
Introduced Annual Grass and Forb	4,623	1.75	184,930	153	0.00%	2.19	1.02:1
Introduced Perennial Grass and Forb	50	1.28	1,982	18	0.00%	0.35	1.02:1
Mixed Deciduous Conifer Forest	2,209	7.67	88,348	6,093	0.05	19.86	1.36:1
Pinyon-Juniper Woodland	28,761	18.89	1,150,424	146,147	11.85%	193.37	3.29:1
Riparian	4,253	16.37	170,136	3,891	0.00%	5.94	1.08:1
Sagebrush Steppe	2,076,785	14.29	83,071,404	1,158,122	1.09%	2,026.47	2.75:1
Salt Desert Shrub	1,244,856	9.59	49,794,260	720,121	0.85%	1,877.91	3.03:1
Shrubland	32,089	15.38	1,283,547	41,813	0.00%	67.96	1.41:1
Sparsely Vegetated	1,981	1.00	79,256	-19,945 [a]	0%	0	1:1
Wetlands	2	9.00	80	0	0.00	0.00	1.02:1

[a] negative number indicates a net gain in sparsely vegetated habitat.

-- indicates habitat not present in sufficient quantity to analyze.

Table 3. Estimation of Sage-grouse Habitat Services and Habitat Injury in the Project Corridor through Nevada and Scaled Habitat Compensation to Offset Injury from HEA Model.

Aggregate Vegetation Type	Baseline Service Level in the Pipeline Intersect (service-acres per year)	Average Service Level per Acre (services/acre)	Baseline Services Over 40 Years (service-acre-years)	Habitat Injury (service-acre-years lost in 40 years)	Permanent Injury (% of Baseline lost)	Scaled Habitat Compensation (acres)	Compensation Ratio (acres restored:acres in Restoration ROW)
Agricultural and Developed	88,761	3.55	3,550,455	1,602	0.01%	11.28	1.09:1
Conifer Forest	27	3.00	1,067	231	8.86%	1.93	1.53:1
Deciduous Forest	4,846	9.22	193,824	24,552	8.79%	66.59	1.92:1
Grassland / Herbaceous	18,011	7.12	720,459	7,526	0.00%	26.41	1.17:1
Introduced Annual Grass and Forb	41,926	1.50	1,677,027	1,065	0.00%	17.75	1.03:1
Introduced Perennial Grass and Forb	138	1.95	5,527	15	0.00%	0.19	1.02:1
Mixed Deciduous Conifer Forest	0	--	0	--	--	--	--
Pinyon-Juniper Woodland	211,452	18.42	8,458,090	121,451	1.29%	164.86	2.19:1
Riparian	10,198	18.51	407,915	2,229	0.00%	3.01	1.08:1
Sagebrush Steppe	12,483,369	17.66	499,334,773	4,791,121	0.75%	6,782.56	2.42:1
Salt Desert Shrub	2,041,988	22.59	81,679,535	1,896,988	1.37%	2,099.56	2.88:1
Shrubland	290	6.00	11,606	997	0.00%	4.15	1.26:1
Sparsely Vegetated	1,821	1.00	72,842	-23,495 [a]	0%	0	1:1
Wetlands	0	--	0	--	--	--	--

[a] negative number indicates a net gain in sparsely vegetated habitat.

-- indicates habitat not present in sufficient quantity to analyze.

Table 4. Estimation of Sage-grouse Habitat Services and Habitat Injury in the Project Corridor through Oregon and Scaled Habitat Compensation to Offset Injury from HEA Model.

Aggregate Vegetation Type	Baseline Service Level in the Pipeline Intersect (service-acres per year)	Average Service Level per Acre (services/acre)	Baseline Services Over 40 Years (service-acre-years)	Habitat Injury (service-acre-years lost in 40 years)	Permanent Injury (% of Baseline lost)	Scaled Habitat Compensation (acres)	Compensation Ratio (acres restored:acres in Restoration ROW)
Agricultural and Developed	414,520	4.00	16,580,781	2,928	0.01%	18.29	1.06:1
Conifer Forest	291,055	9.67	11,642,183	520,075	3.46%	1,344.39	3.58:1
Deciduous Forest	1,636	6.11	65,428	8,333	10.97%	34.07	1.86:1
Grassland / Herbaceous	98	4.88	3,922	100	0.00%	0.51	1.08:1
Introduced Annual Grass and Forb	24	1.73	951	8	0.00%	0.11	1.02:1
Introduced Perennial Grass and Forb	0	1.00	6	0	0.00%	0.00	1.04:1
Mixed Deciduous Conifer Forest	0	--	0	--	--	--	--
Pinyon-Juniper Woodland	17,873	10.29	714,927	101,639	12.62%	246.84	2.58:1
Riparian	4,446	10.91	177,857	993	0.00%	2.28	1.04:1
Sagebrush Steppe	1,012,827	17.20	40,513,084	840,104	1.62%	1,220.92	2.59:1
Salt Desert Shrub	41,204	8.72	1,648,146	46,494	1.65%	133.37	3.02:1
Shrubland	7,026	13.17	281,027	7,794	0.00%	14.79	1.28:1
Sparsely Vegetated	62	1.08	2,474	-12,290[a]	0%	0	1:1
Wetlands	0	--	0	--	--	--	--

[a] negative number indicates a net gain in sparsely vegetated habitat.

-- indicates habitat not present in sufficient quantity to analyze.

8. Implementation

To determine the amount of funding appropriated for sage-grouse and pygmy rabbit projects, the total dollars committed to the sage-grouse/pygmy rabbit and migratory bird conservation plans were broken down to the proportion of each habitat (sage-grouse/pygmy rabbit or migratory bird habitat in non-sage-grouse/pygmy rabbit habitat) occurring along the Project corridor. Sage-grouse habitat, regardless of service level, occurred along 72% of the Project corridor, thus 72% of the dollars allocated to the conservation plan projects were allocated to sage-grouse/pygmy rabbit projects; all pygmy rabbit habitat along the Project corridor was contained within sage-grouse habitat. Therefore, $7,172,053 was allocated to sage-grouse/pygmy rabbit projects. $2,827,947 (28% of conservation plan project funding) was allocated for migratory bird projects, which will be addressed in a separate agreement between Ruby and the FWS.

To determine the amount of sage-grouse/pygmy rabbit project dollars ($7,172,053) appropriated to each state, the total service-acres of sage-grouse habitat lost per state were calculated. The amount of conservation project dollars appropriated to each state was equal to the proportion of sage-grouse habitat service-acres lost within that state relative to the total sage-grouse habitat services lost along the entire Project corridor. Table 13 depicts the habitat services lost in sage-grouse habitat over 40 years. Nevada had the most service acres lost (61.5% of Project corridor) and therefore was allocated the greatest proportion of conservation project funds ($4,407,093; 61.5% of $7,172,053), followed by Utah ($1,266,377; 17.7%), Wyoming ($909,543; 12.7%), and Oregon ($589,038; 8.2%).

Table 5. Habitat Services Lost in Sage-grouse Habitat along Project Corridor and Total Funds Appropriated for Sage-grouse/Pygmy Rabbit Projects by State.

Aggregate Vegetation Type	WY	UT	NV	OR
	Service-Acres Lost	Service-Acres Lost	Service-Acres Lost	Service-Acres Lost
Grassland / Herbaceous	720.00	1,109.00	7,526.00	100.00
Introduced Annual Grass and Forb	100.00	153.00	1,065.00	8.00
Introduced Perennial Grass and Forb	5.00	18.00	15.00	0.00
Riparian	1,005.00	3,891.00	2,229.00	993.00
Sagebrush Steppe	1,156,472.00	1,158,122.00	4,791,121.00	840,104.00
Salt Desert Shrub	224,405.00	720,121.00	1,896,988.00	46,494.00
Shrubland	37.00	41,813.00	997.00	7,794.00
Total per state	**1,382,744.00**	**1,925,227.00**	**6,699,941.00**	**895,493.00**
% per state	**12.68%**	**17.66%**	**61.45%**	**8.21%**
$ per state	**$909,542.71**	**$1,266,377.72**	**$4,407,093.81**	**$589,038.27**

Appendix B

Nevada Habitat Characterization Matrix Impact Assessment Process

B. Nevada Habitat Characterization Matrix Impact Assessment Process

Methods

The Nevada Bio-Team team began the Cooperative Conservation Agreement process by completing an analysis of the impacts of the proposed Ruby Pipeline Project. Starting at the Utah/Nevada state line (approximate milepost 230) and ending at the Oregon state line, the team completed a detailed assessment that considered the life history requirements of both species along three pipeline route alternatives (Proposed, Black Rock and Sheldon Routes). The process involved contractors associated with Ruby Pipeline LLC (Ruby), the Bureau of Land Management (BLM), and the cooperating agencies, but focused primarily on local expertise and on-the-ground resource knowledge of employees of the BLM and the Nevada Department of Wildlife (NDOW).

The process utilized detailed mapping of the pipeline routes provided by Ruby that was projected over various layers of GIS information. These layers included aerial photography, vegetation and soils mapping, NDOW seasonal range mapping, Nevada Natural Heritage data, and current wildlife survey information from Ruby and the agencies. The process, dubbed a "mile-by-mile" analysis, displayed each mapped seasonal range or life history element along the routes by species. Participants then engaged in a detailed discussion of the impacts of the pipeline for that specific resource value. Discussions considered habitat quality, degree of utilization by the species, habitat degrading features such as anthropogenic impacts, recent wildfires, invasive species, and other relevant information such as radio-telemetry or historical utilization.

Each route segment was then categorized using a set of Habitat Matrix definitions specific to each species. Categories were defined to provide a habitat quality metric as a basis for future consideration of mitigation opportunities. Thus, higher-category habitats affected by the pipeline would be considered for higher levels of mitigation than lower-ranked habitats. The Team considered on-site mitigation or conservation opportunities in addition to an assumption of basic reclamation/re-vegetation of the 115-foot-wide pipeline right-of-way. Additionally, the Team considered minimization and avoidance opportunities along the route in the form of recommended limited operating periods. These were applied in consideration of the construction phase of the project where a high potential for disruption of particular life history stages was anticipated.

Finally, the Team used roads information for a GIS analysis projecting the impact of ancillary roads by route alternative. While the Project will utilize only existing roads outside the pipeline right-of-way, many of these are typically two-track and currently

unimproved. These access roads may require upgrading and widening to support pipeline construction and associated heavy equipment needs.

Habitat Matrix Categories

The Habitat Matrix system for ranking habitats associated with the pipeline footprint was initially developed by Ruby contractors and provided to the agencies for comment and revision. As the "mile-by-mile" process evolved, the efficacy of the existing definitions was tested and refined resulting in the definitions displayed in the following example for sage-grouse.

Habitat Matrix Definitions – Sage-grouse

Categories	Description
1	Project route overlays or is within two miles of one or more active leks, wet meadow, riparian/wetland complexes comprising high use late-summer brood-rearing habitat, or known winter concentration areas.
2	Project route overlays nesting/early brood-rearing, fall habitat.
3	Project route overlays nesting/early brood-rearing or dispersed fall and winter range habitats which may be compromised by anthropogenic features such as moderate-heavy use roads, power lines, agriculture or other habitat fragmenting activities.
4	Project route overlays fragmented sagebrush-steppe vegetation within any seasonal range of sage-grouse which has been impacted by invasive/noxious weed species, fire, anthropogenic features, or other factors which render it of marginal value to any life history requirements.
None	Outside identified range of sage-grouse

Habitat Matrix Results

The process determined that of the 357.6 miles of pipeline crossing Nevada, 246 miles were within sage-grouse habitat (69%). By category, 66.5 miles were Category 1, 89.4 miles were Category 2, 70.8 miles were Category 3, and the remaining 14 miles in Category 4. The Nevada Bio-Team then considered an appropriate methodology for weighting the individual categories through a system of ratios. The system weighted Category 1 habitats at 4:1, Category 2 habitats at 3:1, Category 3 habitats at 1:1, and Category 4 habitats at 0:1. Impacted acreages were then calculated using a figure of 14

impacted acres per mile (ac/mi) of habitat (acreage within a 115-foot width over one mile).

The following calculations display the results of this methodology:

Category 1:	66.5 miles	X	14 ac/mi	X	4:1	=	3,724 acres
Category 2:	89.4 miles	X	14 ac/mi	X	3:1	=	3,755 acres
Category 3:	70.8 miles	X	14 ac/mi	X	1:1	=	991 acres
Total Weighted Habitat Acreage						=	8,470 acres

Ancillary Roads

The Nevada Bio-Team recognized an additional level of impact associated with the roads system utilized for access during pipeline construction. Impacts accrued to wildlife as a result of the use period and necessary road upgrades were considered to be variable. While some roads will accommodate construction with minimal impact, terrain and existing road condition may also dictate significant road upgrades. The Team mapped the ancillary roads identified by Ruby and settled on a nominal impact buffer totaling 30 feet. Further, in consideration of the variability, the team declined to apply a habitat category mitigation ratio system to these roads as was done with the pipeline footprint. Thus, the acreage impacts for the roads system were a direct calculation of total roads length buffered by 30 feet. The mapping identified approximately 870 miles of roads associated with pipeline construction. Acreage accrues over this width at approximately 3.63 acres per mile. The resulting roads impact was calculated at 3,159 acres.

Per-Acre Conservation Compensation

In support of the Cooperative Conservation Agreement, the Nevada Bio-Team solicited an extensive list of projects from both NDOW and the BLM Nevada field offices. The Team, in direct consultation with the Nevada BLM State Director's Office and the NDOW Director's Office, carefully selected projects from the list that directly applied to both the impacts of the pipeline and the specific affected populations, with a particular focus on sage-grouse. Risk factors to these populations were previously well defined in stakeholder-developed population management plans through the Nevada Governor's Sage-Grouse Initiative.

An initial list of over $40 million of project proposals was distilled into a $12.9 million package based on an original concept of the pipeline corridor requiring a 195-foot width. Subsequently, that width calculation was revised to the current 115-foot projected width to reflect the nominal construction width for the project and the conservation compensation package adjusted accordingly. The resulting $8.8 million project package correlates to a per-acre compensation rate of $759. The impact-weighted acreages combined with the selected projects yielded a per-acre valuation which lies within a range of values experienced from other energy projects in the West.

Conservation Compensation Calculations

Utilizing the formulae for computing impacted acreages from the pipeline footprint and ancillary roads, the Nevada Bio-Team computed a final compensation proposal based on the $759 per-acre rate.

Weighted pipeline footprint acreage	8,470
Un-weighted ancillary roads acreage	3,158
Total Compensation Acreage	**11,629 acres**

11,629 acres X $759/ac = $8,826,411 total compensation package

Appendix C

Proposed State Agency Conservation Projects

C. Proposed State Agency Conservation Projects

Nevada

The Nevada State Office of the Bureau of Land Management (BLM) and the Nevada Department of Wildlife (NDOW) have reached tentative agreement with regards to the anticipated receipt of enhancement funding in connection with the Ruby Pipeline Project Cooperative Conservation Agreement for Sage-grouse and Pygmy Rabbit (Agreement).

All funds received from Ruby for conservation projects in the State of Nevada in the Cooperative Conservation Agreement will be deposited in an NDOW account for projects designed to enhance sagebrush habitat crossed by the Ruby Pipeline Project, add to the state of knowledge of these species, or provide protection of high-quality habitat by acquisition. This account will be interest-bearing and the funds will be available for appropriate matching to enhance project capabilities. Use of the funds must be used directly to offset impacts to sagebrush steppe communities, sage-grouse, pygmy rabbit, and related wildlife issues generated by the Ruby Pipeline Project and may not be used for any other purpose.

Project Process
Funds would be separated into three sub-accounts (Elko, Winnemucca, and Surprise) based upon the amount of sage-grouse and pygmy rabbit habitat crossed by the Project as reflected by the mile-by-mile analysis performed by the Nevada Bio-Team.

A technical team of resource specialists comprised of representatives from both agencies in each area will recommend projects to the Management Team, which will be composed of the Nevada BLM Deputy State Director for Natural Resources, Land and Planning and the NDOW Habitat Division Chief. Project recommendations may also come from the Nevada Partners for Conservation and Development for consideration. Proposed projects may be located on Federal or non-Federal lands, but must address deficiencies or shortfalls in habitat conditions which are identified risk factors to the seasonal life history requirements of these species.

The Management Team will review all proposed projects. Any project to be funded through the Agreement and located on public land must be approved by the Nevada BLM Deputy State Director for Natural Resources, Land and Planning. Any project to be funded through the Agreement but will not be located on public land must be approved by the NDOW Habitat Division Chief. No project shall be funded until it is approved.

If any dispute arises under the Agreement between the Nevada BLM Deputy State Director for Natural Resources, Land and Planning and the NDOW Habitat Division Chief, the matter will be elevated to the Nevada BLM State Director and the Director of NDOW for resolution. For any dispute referred to the Nevada BLM State Director and the NDOW Director, a final decision must be reached within 60 days of referral.

Projects may be managed by either agency or the Nevada Partners for Conservation and Development depending upon the details of the project, the location of the project, and the ability of that agency/organization to provide project management support. It is understood that a portion of the supplied project funding will support project administration, National Environmental Policy Act compliance, materials, contract fees, appraisals, and other direct project-related purchases.

The BLM will ensure that project activities located on public lands are in compliance with the National Environmental Policy Act and land management plans for the specific project location.

The managing entity will provide a full accounting of expenditures and a report of project completion that will be supplied to Ruby annually within eight weeks of the end of the federal fiscal year.

All funds supplied by Ruby will be expended within five years of receipt by NDOW, unless the Agreement's duration is extended in accordance with section VIII of the Agreement.

Utah

The Utah Department of Wildlife Resources (UDWR) will coordinate cooperatively within the framework of the Utah Watershed Initiative, which includes partnerships with BLM, U.S. Forest Service, Utah School and Institutional Trust Lands Administration, Natural Resources Conservation Service, and other state and local governmental entities. The Initiative has identified high-priority areas in need of restoration in sage-grouse and pygmy rabbit habitats across the state of Utah. Any project to be funded through the Agreement and located on non-public land must be approved by the UDWR Director. Any project to be funded through the Agreement and located on public land must be approved by the Utah BLM West Desert District Manager with concurrence from the UDWR Director. No project shall be funded until it is approved.

All funds received from Ruby for conservation projects in the state of Utah in the Agreement will be deposited in a UDWR account for projects designed to enhance sagebrush habitat crossed by the Ruby Pipeline Project, add to the state of knowledge of these species, or provide protection of high-quality habitat by acquisition, and may not be used for any other purpose. The funds may be available for appropriate matching to enhance project capabilities.

All funds conveyed in support of the conservation purposes of the present agreement will need to generate reportable sagebrush/grassland or salt desert shrub benefits within the same 8-digit "hydrologic unit" (watershed) or "HUC-8" where the habitat impacts occur. All restoration projects must yield habitat benefits for sage-grouse or pygmy rabbits, and may provide secondary benefits to mule deer or sharp-tailed grouse, which use some of the same wildlife habitats as the primary conservation species. Off-site mitigation where soils, vegetation, precipitation, and other physical conditions are appropriate may be considered to facilitate a meaningful offset of impacts to wildlife and their habitats where onsite mitigation is not practical. If habitat restoration projects cannot be identified to benefit either species, then mitigation will be accomplished with research and/or other conservation actions to be determined by sage-grouse and pygmy rabbit technical teams and management plans.

Project selection processes, allowable expenditures, and required reporting practices will be detailed and available on the Watershed Restoration Initiative website (http://wildlife.utah.gov/watersheds/) for public review and comment.

Wyoming

Wyoming Game and Fish Department will coordinate cooperatively within the framework of the Wyoming Landscape Conservation Initiative (WLCI), which includes partnerships with Wyoming Game and Fish Department, BLM, U.S. Forest Service, USGS, Wyoming Department of Agriculture, USFWS, county conservation districts and local counties in southwest Wyoming. The WLCI has identified potential habitat areas for improvement and enhancement in sage-grouse and pygmy rabbit habitats in southwest Wyoming. The WLCI Executive Committee may review all proposed conservation projects to be funded through the Agreement. Any conservation projects to be funded through the Agreement and located on public land must be approved by the Wyoming BLM State Director. Any conservation project to be funded through the Agreement and located on non-public land must be approved by the Director, Wyoming Game and Fish Department. No project shall be funded until it is approved.

All funds received from Ruby for conservation projects in the State of Wyoming in the Agreement will be deposited in a Wildlife Heritage Foundation restricted account, to be administered by the WLCI, for projects designed to enhance sagebrush habitat crossed by the Ruby Pipeline Project, add to the state of knowledge of these species, or provide protection of high-quality habitat by acquisition. The funds may not be used for any other purpose. This account will be interest-bearing and the funds will be available for appropriate matching to enhance project capabilities.

The WLCI operates at a landscape scale to implement habitat improvements that benefit the life history requirements of target species, including greater sage-grouse and pygmy rabbit, and to monitor species and habitat in concert with the on- and off-site mitigation and reclamation efforts required or volunteered by industry. Funds provided for

enhancement of habitats for pygmy rabbit and sage-grouse would be applied within the WLCI operating framework and the terms of this Agreement.

All funds conveyed in support of the conservation actions for the purposes of this agreement will generate reportable sagebrush/grassland or salt desert shrub restoration benefits within the general vicinity of the Ruby Pipeline project (i.e., southwest Wyoming). All conservation projects must yield habitat benefits for sage-grouse or pygmy rabbits and may provide secondary benefits to mule deer or other species which use some of the same wildlife habitats as the primary conservation species. Habitat enhancements where soils, vegetation, precipitation, and other physical conditions are appropriate may be considered to facilitate a meaningful conservation of wildlife and their habitats. If on-the-ground habitat restoration projects cannot be identified to benefit either species, or additional pre-treatment information is deemed necessary prior to implementing an on-the ground conservation action, then enhancement will be accomplished with data gathering, research, effectiveness monitoring, and/or other conservation actions developed in collaboration with WLCI partnership.