This report was based on an earlier version of the Mitigation and Enhancement Portfolio,
not the version submitted as the Proposed Action.

Boise District Resource Advisory Council Subcommittee Review and Comments on the Gateway West Transmission Line Project Mitigation and Enhancement Portfolio for the Morley Nelson Snake River Birds of Prey National Conservation Area

May 30, 2014

TABLE OF CONTENTS

LIST OF TABLES

ATTACHMENTS

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INTRODUCTION

The Boise District Resource Advisory Council (RAC) advises and makes recommendations to the Bureau of Land Management (BLM) on resource and land management issues in southwestern Idaho. The RAC formed a subcommittee in November 2013 to work on issues surrounding siting the Gateway West Transmission Line Project (GWW) in portions of the Boise District in and around the Morley Nelson Snake River Birds of Prey National Conservation Area (BOPNCA), as well as on private lands. The subcommittee began evaluating the issues related to the GWW, as described in the *Boise District Resource Advisory Council Subcommittee Report on Gateway West Segments In or Near the Morley Nelson Snake River Birds of Prey National Conservation Area* which accompanies this report. The accompanying report summarizes our route option review and recommendations relative to the GWW within and near the BOPNCA.

One task that the subcommittee has undertaken is an evaluation of the Draft Mitigation and Enhancement Portfolio Proposal (Draft Portfolio) prepared by Rocky Mountain Power and Idaho Power Company (hereafter the Companies). The Companies originally submitted the Draft Portfolio to BLM during the comment period for the GWW final environmental impact statement (FEIS) and then revised the document and submitted it to the RAC subcommittee for further evaluation in January 2014. This report presents a summary of the Draft Portfolio and the subcommittee's comments and recommendations for consideration by the RAC, BLM and the Companies in finalizing this important component of GWW.

The Draft Portfolio submitted by the Companies is designed to go above and beyond the standard mitigation requirements (which includes avoidance and minimization through implementation of design features and environmental protection measures/best management practices), which are addressed separately in the permitting process. The Draft Portfolio includes both compensatory mitigation and enhancement components. The compensatory mitigation program addresses the "residual effects" which persist after standard mitigation has been implemented. This additional mitigation is required to return an impacted area to baseline conditions[1]. The enhancement program is designed to go beyond the compensatory mitigation and create a net benefit to the BOPNCA relative to current conditions. The enhancement program has been tailored to the special features of the BOPNCA and the desired future conditions, as determined by the BLM.

The mitigation and enhancement program in the Draft Portfolio should be designed to last the duration of the project permit and monitored throughout:

[1] For the purposes of this report, baseline conditions are based on the ecological site potential for a specific area.

> The BLM should ensure adequate management, protection, and monitoring of the mitigation during the expected lifetime of the development project and its associated impacts.-Draft MS-1794 – Regional Mitigation Manual Section (P) http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2013.Par.57631.File.dat/IM2013-142_att1.pdf

A mitigation and enhancement plan should be consistent with the enabling legislation for BOPNCA, Public Law 103-64, which established the BOPNCA in 1993 for the following purposes:

> The purposes for which the conservation area is established, and shall be managed, are to provide for the conservation, protection, and enhancement of raptor populations and habitats and the natural and environmental resources and values associated therewith, and of the scientific, cultural, and educational resources and values of the public lands in the conservation area.
>
> Section 2(4) of the Act defines the term "raptor habitat" to include the habitat of the raptor prey base as well as the nesting and hunting habitat of raptors within the conservation area.
>
> Section 1((5)(D) states, "Protection of the conservation area as a home for raptors can best and should be accomplished by the Secretary of the Interior, acting through the Bureau of Land Management, under a management plan that: (…) (D) allows for diverse appropriate uses of lands in the area to the extent consistent with the maintenance and enhancement of raptor populations and habitats and protection and sound management of other resources and values of the area."
>
> Section 2002 of Public Law 111–11—Mar. 30, 2009, established the National Landscape Conservation System (NLCS) within the BLM and automatically made Snake River Birds of Prey National Conservation Area, among other National Conservation Areas and other special areas, part of the NLCS. Public Law 111-11 specifically mandated the NLCS to uphold the enabling legislation for each of the components of the NLCS. Section 2301 added "Morley Nelson" to the NCA's title to recognize the contribution of that individual.

Morley Nelson was the first to recognize the significance of what is now the BOPNCA, and his life work was dedicated to demonstrating that raptor protection could be compatible with electrical power transmission and distribution.

The BOPNCA is included in the National Landscape Conservation System, which was created in 2000 with a mission to "conserve, protect, and restore these nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations." This system was formally established by Congress through the Omnibus Public Land Management Act of 2009 and includes 878 federally recognized areas and approximately 27 million acres of National Conservation Areas, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, National Monuments, National Scenic and Historic Trails, and other special areas. The BLM's National Conservation Lands include 16 NCAs and five similar units in ten states.

To authorize a right-of-way under the Federal Land Policy and Management Act (FLPMA) through any portion of the BOPNCA, the BLM is charged with demonstrating that: 1) the use is compatible with the enabling legislation of the BOPNCA (PL 103-64, BLM 2012a); 2) the agency has avoided impacting the BOPNCA to the greatest extent possible (MS 6220); 3) impacts to Greater sage-grouse (BLM 2012b), private property, and local communities, among others, are considered; and 4) an enhancement program will result in a net benefit to the NCA for the duration of the permit (PL 103-64). This report focuses on item 4.

HISTORY OF INFORMATION SUBMITTED

The following is a chronology of information submitted or presented to the subcommittee related to the requirement for a mitigation and enhancement plan for the BOPNCA:

- On December 17, 2013, the Companies gave a presentation on the proposed Draft Portfolio at the RAC subcommittee meeting. The subcommittee held a discussion following the presentation. Comments were later developed by subcommittee members and one member of the public, Michael N. Kochert. The document submitted by Mr. Kochert was titled "Comments on the Gateway West Enhancement and Mitigation package". This document is dated January 5, 2014 and is included as Attachment A.

- On January 13, 2014, the Morley Nelson Snake River Birds of Prey National Conservation Area Gateway West DRAFT Mitigation and Enhancement Portfolio Proposal was transmitted via email to the subcommittee with applicable Environmental Protection Plans (Appendix A) and Cost Estimator tables for BOPNCA Enhancement (Appendix B). The document was prepared by the Companies and dated January 2014.

- On January 16, 2014, the Companies provided an update on the Draft Portfolio to the subcommittee focusing on proposed route Segments 8 and 9 and the components of the plan including habitat restoration, law enforcement, visitor enhancement, land purchase, and existing facility removal. The Draft Portfolio also proposed an oversight committee made up of members with an intimate knowledge of the area. A discussion followed the

update, and comments were provided to the Companies by the subcommittee and the public. These comments are included later in this document.

- On January 28, 2014, the subcommittee provided a brief overview of the Draft Portfolio during the RAC meeting.

- On February 26, 2014, a representative of the Idaho Army National Guard (IDARNG) presented an overview of the Mitigation and Enhancement Program for the Orchard Combat Training Center (OCTC) which is also within the BOPNCA.

- On March 3, 2014, the BLM circulated a list of questions submitted by subcommittee members regarding the Draft Portfolio in preparation for the March 10, 2014 subcommittee meeting.

- On March 10, 2014, the Companies presented an update of the Draft Portfolio and responded to the questions posed by the subcommittee. In addition, a panel discussion was held that included representatives from the BLM, U.S. Geological Survey (USGS), the Audubon Society, and Intermountain Rangeland Consultants regarding the challenges and opportunities in restoring habitat in the BOPNCA. The panel discussion was followed by a presentation by a retired USGS raptor expert on raptor monitoring issues. The Companies also responded to the questions previously circulated by the BLM (see previous item).

- On March 11, 2014, the subcommittee received draft comments from the Golden Eagle Audubon Society in a document titled "Gateway West Mitigation and Enhancement Portfolio – DRAFT Greater Eagle Audubon Society (GEAS) Comments – February 27, 2014". These comments are included as Attachment B.

- On April 2, 2014, the Companies gave a presentation of a summary of the Draft Portfolio. One objective of the presentation was to provide a distinction between mitigation and enhancement portions of the Draft Portfolio and separately discuss the components of each. The Companies also showed how the funding in the Draft Portfolio could be scaled depending on the routes selected and provided a handout showing how to use the Gateway West Snake River Birds of Prey Enhancement and Mitigation Calculator.

- On April 23, 2014, the Companies provided an estimate of the enhancement funding for the routes recommended by the subcommittee, as well as for all other route options that have been considered by the subcommittee for reference.

SUMMARY OF THE COMPONENTS AND THE PROPOSED FUNDING IN THE DRAFT PORTFOLIO

The Companies first submitted the Draft Portfolio in June 2013 during the FEIS comment period. The Portfolio described "a proposed approach to determine the level of mitigation and enhancement needed to allow for the approval of both Segments 8 and 9." Proposed funding levels in the Draft Portfolio were based on modified versions of the Companies' proposed routes in the FEIS. Proposed Segment 8 was modified by Alternatives 8D and 8E, and Proposed Segment 9 was modified by Alternative 9G. These routes are identified in the subcommittee's report on route options as "Draft Portfolio Proposed Routes." The anticipated level of disturbance and line mileage within the BOPNCA for the Draft Portfolio Proposed Routes can be considered "a metric than can be applied regardless of the alternative route considered". In other words, the proposed compensatory mitigation and enhancement for the Draft Portfolio Proposed Routes can be considered a baseline proposal. In the event that different route options are selected by BLM, portions of the compensatory mitigation and enhancement for the BLM selected routes would be determined by a ratio or scaling factor applied to the Draft Portfolio Proposed Routes. In describing the impact of the project on the BOPNCA, the Companies used results of the FEIS analysis, which addressed impacts to cultural resources, plant and wildlife resources (general vegetation, invasive plant species, wetlands, and special status plant species), and raptors and their habitat.

The Draft Portfolio consists of 1) measures and plans for avoidance, minimization, restoration, and compensatory mitigation to offset residual impacts; and 2) elements to enhance the objects and values of the BOPNCA. This review is limited to a review of the components of compensatory mitigation and enhancement. Compensatory mitigation in the Draft Portfolio includes:

- **Habitat Restoration**. Funding for habitat restoration is proposed by the Companies within the BOPNCA in addition to reclamation of temporary disturbances. The acreage used in the calculation is scaled by impact and is based on the operational footprint of the project such as a tower footprint and any new permanent access roads. Habitat restoration efforts will be directed towards a return to native vegetation.

- **Law Enforcement**. Funding for part-time law enforcement is proposed to focus on and minimize/eliminate illegal behavior, particularly in response to new permanent access roads.

The Companies indicate that impacts to cultural resources will be mitigated by implementation of the Segment Historic Properties Treatment Plans and a Historic Trails Mitigation Plan. Also, in the event that there would be any impacts to wetlands or riparian areas, those impacts would be offset and mitigated by the implementation of the wetland mitigation plan titled

"Compensatory Mitigation for and Monitoring of Unavoidable Impacts to Waters of the United States". Table 1 provides the estimated cost of the compensatory mitigation components in the Draft Portfolio.

Table 1. Estimated Cost of Compensatory Mitigation.

Element	Habitat Restoration	Law Enforcement ¼ FTE for 10 years	Total
Compensatory Mitigation	$266,400	$350,000	$616,400

Enhancement in the Draft Portfolio includes:

- **Habitat Restoration**. Funding for habitat restoration is proposed by the Companies within the BOPNCA in addition to compensatory mitigation and the reclamation of temporary disturbances. The acreage used in the calculation is based on the construction footprint of the project, which is larger than the operational footprint. The funding is scalable depending on the number of acres and the quality of land affected by the project. High quality lands, such as undisturbed habitat, would be mitigated with a higher number of acres, while lower quality land, such as land occupied by invasive species, would be mitigated with a lower number of acres. Habitat restoration would be aggressive and concentrated with the intent of a high success rate for each acre restored. Habitat restoration efforts will be directed towards a return to perennial vegetation.

- **Land Purchase.** Funding for land purchase is proposed by the Companies to protect cultural resources and habitat. The Companies would provide funding to be used for the purchase of property(ies) with unique cultural, visual, and/or ecological values to further protect those resources from future damage. Properties would be purchased from willing sellers within the BOPNCA boundaries, and the amount of money offered for property purchase would be scaled using the miles of the BOPNCA crossed by the proposed route.

- **Law Enforcement.** Funding for law enforcement is proposed by the Companies to reduce inappropriate behavior within the BOPNCA. The Draft Portfolio provides for a BLM ranger to offset potential unlawful activity that may be associated with the increased access created by new rights-of-way and maintenance roads. The funding is scaled by line miles of the routes within the BOPNCA and would last for an initial 10-year period followed by an additional 10 years but with funding for fewer hours per week.

- **Visitor Enhancement.** Funding for visitor enhancement is proposed by the Companies to educate visitors of the values of BOPNCA and in the appropriate behavior within and use of the BOPNCA. This funding is also scaled by line miles of the routes within the BOPNCA.

- **Management Fund.** A management fund is proposed by the Companies to cover the costs of the oversight committee, administration, and monitoring. The management fund, regardless of routes ultimately approved by the BLM, is a fixed amount equal to the amount currently proposed. The oversight committee would be made up of people with knowledge of the BOPNCA and surrounding area.

- **Idaho Power Existing Facility Removal**. The Companies propose to remove portions of two existing lower-voltage power lines and one substation owned by Idaho Power from areas within the BOPNCA to further enhance the BOPNCA. The BLM could elect to leave some of the power poles from the removed lines as perching and nesting opportunities for birds of prey. The Companies still have customers to serve in these areas and have included in the removal of the lower-voltage power lines the additional infrastructure required (which is outside the BOPNCA) to continue service to these customers.

Table 2 provides the estimated cost of the enhancement components based on the Draft Portfolio Proposed Routes. The total cost of compensatory mitigation and enhancement is shown on Table 3.

Table 2. Estimated Cost of the Enhancement Components of the Draft Portfolio.

Element	Habitat Restoration	Law Enforcement ¾ FTE for 10 years, ½ FTE for an additional 10 years	Land Purchase	Visitor Enhancement	IPC Line Removal	Management Funding	Total
Enhancement	$3,297,600	$1,750,000	$320,000	$500,000	$1,922,000 (cost to Companies)	$1,000,000	$6,867,600 (excluding line removal costs)

Table 3. The Estimated Total Cost of Proposed Compensatory Mitigation and Enhancement Components.

Element	Habitat Restoration	Law Enforcement ¾ FTE for 10 years, ½ FTE for an additional 10 years	Land Purchase	Visitor Enhancement	IPC Line Removal	Management Funding	Total
Mitigation	$266,400	$350,000	--	--	--	--	$616,400
Enhancement	$3,297,600	$1,750,000	$320,000	$500,000	$1,922,000 (cost to Companies)	$1,000,000	$6,867,600 (excluding line removal costs)
TOTALS	$3,564,000	$2,100,000	$320,000	$500,000	$1,922,000 (cost to Companies)	$1,000,000	$7,484,000 (excluding line removal costs)

The total cost of the Draft Portfolio based on the Companies proposed routes, including costs incurred by the Companies to remove Idaho Power facilities is $9,406,000.

During the April 18, 2014 meeting, the subcommittee completed the identification and categorization of alternative routes for Segments 8 and 9 in and around the BOPNCA. The subcommittee classified route options as either recommended or not recommended. The subcommittee then requested that the Companies provide an estimated enhancement funding value for the recommended routes. The Companies provided the estimated enhancement funding for all subcommittee route options (routes ranked recommended and not recommended), and the values and other information are provided in Table 4.

In addition to Table 4, the Companies also provided the following summary information and example calculation of the estimated enhancement funding values using the subcommittee recommended routes:

- Companies' Draft Portfolio Proposed routes
  - Segment 8 with 8D and 8E – *36.6 miles*
  - Segment 9 with 9G – *52.3 miles*
- Subcommittee recommended alternative routes – miles on BLM within the BOPNCA
  - Segment 8, Summer Lake Option 1 revised – *15.4 miles*
  - Segment 9, Baja Road-Murphy Flat South revised – *46.1 miles*
- Percentage of subcommittee recommended alternative line miles to Companies' Proposed routes
  - Segment 8, Summer Lake Option 1 revised – 15.4/36.6 = *42.08%*
  - Segment 9, Baja Road-Murphy Flat South revised – 46.1/52.3 = *88.15%*

- Estimated enhancement funding value of subcommittee recommended route options based on Companies' proposed enhancement funding amount for habitat restoration, land purchase, law enforcement, and visitor enhancement for each segment
    - Segment 8, Summer Lake Option 1 revised – $2,527,765*42.08% = *$1,063,684*
    - Segment 9, Baja Road-Murphy Flat South revised – $3,339,835*88.15% = *$2,944,065*
- Total estimated enhancement funding value for subcommittee recommended route options
    - $1,063,593 + $2,943,908 + $1,000,000 (management fund) = **$5,007,501**
- Total value of estimated enhancement for subcommittee recommended route options
    - $5,007,503 + $1,922,000 (Idaho Power facility removal) = **$6,929,503**

Table 4. Subcommittee Route Options Estimated Enhancement Funding.

Route	BLM*	Subcommittee Route Options Category	Subcommittee Route Options - % of Companies' Proposed Routes	Subcommittee Route Options - Estimated Enhancement Funding**
Segment 8				
Draft Portfolio Proposed Route 8	36.6	Not recommended	100%	$2,527,765
Applicant Proposed (FEIS)	25.4	Not recommended	69.40%	$1,754,241
Bowmont North	4.8	Not recommended	13.11%	$331,510
Bowmont South	12.1	Not recommended	33.06%	$835,682
Bowmont South - 500kV Rebuild	0.7	Not recommended	1.91%	$48,345
King Hill-Mayfield	1.7	Not recommended	4.64%	$117,410
Melmont Option 1	9.3	Not recommended	25.41%	$642,301
Melmont Option 2	9.4	Not recommended	25.68%	$649,207
OCTC Alpha Sector By-pass Variation (FEIS Alt 8D)	2.9	Not recommended	7.92%	$200,287
Sinker Butte (FEIS Alt 8E)	38.6	Not recommended	105.46%	$2,665,894
Summer Lake (Option 2)	18.8	Not recommended	51.37%	$1,298,415
Summer Lake Option 1	15.4	Recommended	42.08%	$1,063,595
Segment 9				
Draft Portfolio Proposed Route 9	52.3	Not recommended	100%	$3,339,835
Applicant Proposed (WWEC Alternative - FEIS)	4.8	Not recommended	9.18%	$306,524
Baja Road-Murphy Flat North Option 1	48.7	Not recommended	93.12%	$3,109,942
Baja Road-Murphy Flat North Option 2	47.1	Not recommended	90.06%	$3,007,767
Baja Road-Murphy Flat North Option 3	48.7	Not recommended	93.12%	$3,109,942

Table 4. Subcommittee Route Options Estimated Enhancement Funding.

Route	BLM*	Subcommittee Route Options Category	Subcommittee Route Options - % of Companies' Proposed Routes	Subcommittee Route Options - Estimated Enhancement Funding**
Baja Road-Murphy Flat S.	46.1	Recommended	88.15%	$2,943,908
Baja Road-Sinker Creek	43.7	Not recommended	83.56%	$2,790,646
Baja Road-Summer Lake	46.7	Not recommended	89.29%	$2,982,223
Bruneau South Variation (FEIS Alt 9H)	1.4	Not recommended	2.68%	$89,403
Cove Variation (FEIS Alt 9D)	5.8	Not recommended	11.09%	$370,383
Glenn's Ferry-Mayfield	2	Not recommended	3.82%	$127,718
Owyhee Uplands (DEIS Alt 9E)	2.7	Not recommended	5.16%	$172,420
Owyhee Uplands (FEIS Alt 9E)	5	Not recommended	9.56%	$319,296
Sinker Creek Variation	0.2	Not recommended	0.38%	$12,772

** Miles of transmission line on BLM managed land within the BOPNCA.

** Includes funding for habitat restoration, land purchase, law enforcement, and visitor enhancement. Does not include management funding ($1M) and does not include cost to Companies for facility removal ($1.922M).

RAC SUBCOMMITTEE AND PUBLIC COMMENTS AND RECOMMENDATIONS ON THE DRAFT PORTFOLIO

General Comments

The subcommittee commends the Companies for including several components that address important BOPNCA values in their Draft Portfolio. We agree with the apparent long-term commitment implied by the financial support designated for law enforcement, the management oversight group, and cultural resources protection. Although we may disagree with the dollar amounts proposed in both real and relative terms, we agree that a long-term commitment is necessary to mitigate the direct impacts of the GWW project through the BOPNCA and to enhance the area for future generations.

The subcommittee also commends the Companies for their continued involvement and cooperative interaction during the course of the 6-month process of the subcommittee meetings and deliberations. We have learned from the Companies and sincerely appreciate their cooperation and adaptability during the process.

The BOPNCA was established to protect raptor populations and habitats and the natural, environmental, scientific, cultural and educational resources found within the conservation area. The enhancement package applies to these resources. In addition, the enhancement package must take into account the current resources available to protect the NCA. Native vegetation in the NCA has suffered greatly due to fires, off-road vehicle use and a lack of restoration resources. On the other hand, there are dozens of groups in the Boise area conducting outings and tours to educate the public about the NCA. The enhancement package should focus on the resources within the NCA that are most in need of enhancement- raptor populations, habitats and the natural environment. This includes restoring native habitat, closing and monitoring roads that fragment the landscape, and decreasing the destructive impacts of fires.

Lastly, while the subcommittee thanks the Companies for their expertise during this process, we cannot endorse the enhancement package as presented. The Companies' enhancement package proposes a myriad of various projects without demonstrating how standards of enhancement will be met during the life of the project. We encourage the BLM to take a hard look at the true cost of enhancement. The enhancement package should not be punitive, but must meet the high standards outlined in the NCA legislation.

The Subcommittee did not reach a conclusion on the funding levels contained in the Draft Portfolio. However, the general consensus of the subcommittee is that the proposed funding levels are too low. As BLM moves forward with any additional NEPA reviews the Subcommittee recommends that BLM explore how successful mitigation and enhancement packages have been developed in other areas of the country. Settling upon a dollar amount for mitigation and enhancement will entail numerous negotiation sessions between the Companies

and BLM. Hopefully, it will include some background assessments of the environmental, social and economic benefits and costs of lines crossing the BOPNCA. We encourage the BLM and the Companies to derive a valid economic assessment of the benefits and costs of the actions specific to the BOPNCA for the NEPA process.

The subcommittee found that the Draft Portfolio did not adequately address enhancement of raptor populations and scientific resources and values, and we recommend that it be expanded to include components to enhance these two important values recognized by the enabling legislation. In addition, we recommend that Law Enforcement and Visitor Enhancement be combined into one category, called Visitor Management which would also include Education. There should be separate categories for Enhancement of Raptor Populations and Research and Monitoring. The subcommittee recommends that the BLM and the Companies re-evaluate priorities and revise the proposed allocations among these components.

To be consistent with the enabling legislation, the RAC subcommittee recommends that the Draft Portfolio should seek to conserve, protect, and enhance these specific resource issues:

- Raptor populations;
- Raptor habitats (raptor habitat includes the habitat of the raptor prey base as well as the nesting and hunting habitat of raptors within the BOPNCA);
- Natural and environmental resources and values associated with the BOPNCA;
- Scientific resources and values of the public lands in the BOPNCA;
- Cultural resources and values of the public lands in the BOPNCA; and
- Educational resources and values of the public lands in the BOPNCA.

We believe that the Draft Portfolio should be designed and implemented with the following considerations:

- Be consistent with the BOPNCA Enabling Legislation and highlight the relevant features, particularly raptors, their prey and the supporting habitat;
- Be diverse: contain a diverse portfolio of enhancement options, some of which the Draft Portfolio contains;
- Be durable: the functional time span of each component of the Draft Portfolio needs to be discussed, and the benefits need to last for as long as the impacts of the transmission line are expected to be present;
- Accurately assess the probability of restoration success: the measure of success should not be the number of attempts at restoration, but achieved restoration to a set of pre-agreed upon criteria;
- Protect high-quality habitat and restoration areas: successful restoration efforts need to be protected; and

- Be reasonable (both locally and nationally): the enhancement opportunities provided by the Draft Portfolio should not relieve the BLM of their responsibility to provide funding to manage the BOPNCA. That said, the enhancement components of the Draft Portfolio should be substantive.

SPECIFIC COMMENTS AND RECOMMENDATIONS

Habitat Restoration

The subcommittee believes that the Draft Portfolio should contain an integrated and adaptive approach with a long-term focus for habitat restoration in the BOPNCA using current scientific research and information as presented to the subcommittee on March 10, 2014 by representatives from the BLM, USGS, the Audubon Society, and Intermountain Rangeland Consultants. We believe that innovative methods for rangeland restoration should be evaluated and pursued within the BOPNCA that could eventually be used broadly to help manage lands outside the BOPNCA.

As we have discussed during the deliberations of the subcommittee, the concept of "baseline" conditions needs careful consideration and a clearer definition. Efforts at restoration and rehabilitation should be undertaken with the awareness that the BOPNCA includes some of the harshest environments in the Great Basin. The BOPNCA is in an environment that experiences extremely low precipitation, high summer temperatures, and invasion of habitat-altering annual grasses, all of which increases fire frequency. It will be extremely difficult to accomplish the restoration goals of the BLM and Companies without strategic planning and implementation that may include repeated efforts to establish vegetation in this harsh environment. We recommend that areas proposed for habitat restoration and enhancement be defined in detail via maps. However, we have concerns that small-scale, intensive and very expensive rehabilitation efforts will ultimately fail due to repeated fires, lack of maintenance, and other factors. We would prefer seeing larger, strategic areas treated than the small microcosms described in the Draft Portfolio.

We recommend that the portfolio's emphasis on small microcosms be reduced and combined with a landscape-scale strategy for habitat protection, restoration, and enhancement. Key remnant native sagebrush (*Artemisia*) patches within the BOPNCA that exhibit ecological integrity and are still "intact" should be identified, and preserving their integrity should be a priority. The subcommittee recommends that remnant stands of sagebrush and other perennial vegetation such as winterfat (*Krascheninnikovia lanata*) be protected using strategically placed firebreaks and other tools. Firebreaks may later be modified to protect newly restored and connected patches to help ensure protection from future fires. Successful protection of remaining habitat and restoration investments will require decreasing the response time of fire suppression efforts and increasing the response capability. These goals could be accomplished through a variety of partnerships and cooperative programs, including, but not limited to, the following:

- Providing additional fire-fighting resources (equipment, training, staff and funding, etc.);
- Updating cooperative agreements and coordinated response programs with rural fire departments, municipal Fire Departments, and Rangeland Fire Protection Associations to reduce the response time; and
- Updating the Idaho Fire Prevention Plan[2] to better protect native vegetation within the BOPNCA by preventing human-caused wildfires.

Enhancement of Raptor Populations

The first step in maintaining and enhancing raptor populations is to ensure that the new transmission lines have no adverse effects on raptors. Ultimately, enhancement measures should improve or at least maintain current raptor population levels. The permitting process should disallow line construction within the BOPNCA during the nesting season (February-August) to avoid direct disturbance to nesting raptors. Biologists and engineers should work together to design towers that are friendly to raptors but not to ravens. For example, the density of steel latticework on the bridge above the conductors should be as low as possible to discourage raven nesting. Towers with tubular metal poles may not benefit raptors because of vibrations and the lack of suitable perching and nesting sites.

The Draft Portfolio should include funding for construction of artificial platforms on transmission towers within the BOPNCA that will provide nesting sites at a safe location below the conductors. New towers in areas that replace or parallel existing lines should be designed in a way to encourage continued nesting by raptors, particularly ferruginous hawks (*Buteo regalis*), which are currently nesting on existing transmission towers. Where existing lines are planned for removal, structures that are suitable for raptor nests and perches should be left intact. Artificial nesting platforms can provide new and alternative nesting substrate for raptors, particularly ferruginous hawks and golden eagles (*Aquila chrysaetos*), in areas without cliffs or existing transmission lines (e.g., Murphy Flat). Providing opportunities for nesting on taller structures might benefit eagles on the Owyhee Front by reducing their exposure to disturbance from off highway vehicles.

Enhancing raptor populations requires enhancing prey populations, and prey populations are best enhanced by managing their habitat. The two principal prey species within the BOPNCA are the Piute ground squirrel (*Urocitellus mollis)* and the black-tailed jack rabbit *(Lepus californicus).* Ground squirrels are the primary prey of prairie falcons (*Falco mexicanus*), the raptor species for which the BOPNCA was first recognized and created. Jack rabbits are the primary prey of golden eagles. Jackrabbits require shrubs for food and cover; ground squirrels thrive best in vegetation communities dominated by native perennial shrubs and grasses.

[2] http://www.blm.gov/pgdata/etc/medialib/blm/id/fire/fire_restriction_maps.Par.70675.File.dat/2013_IdahoFireRestrictionsPlan_508.pdf

Restoring habitat and increasing prey populations will benefit raptors, but additional measures to enhance raptor populations directly should be included in population enhancement strategies. We recommend that a proactive and accelerated program for retrofitting distribution lines within the BOPNCA be undertaken to reduce the potential for electrocution of raptors. Poles should be retrofitted using designs developed by Morley Nelson for Idaho Power and following guidelines described in the Avian Power Line Interaction Committee's publication "Suggested Practices for Avian Protection On Power Lines: The State of the Art in 2006" (APLIC 2006). More frequent patrols should be conducted to determine if poles being used by raptors are raptor-safe.

Research and Monitoring

The subcommittee recommends that the Companies provide funding for research and monitoring in the BOPNCA. We recommend that effective monitoring be proposed at all trophic levels. Habitat restoration should be monitored in conjunction with trends in prey and raptor populations. Monitoring should focus on the effects of the new transmission lines and associated mitigation and enhancement efforts, but to be effective, it must consider resources throughout the BOPNCA.

We believe that the Draft Portfolio should specify a vegetation monitoring plan for native shrubs, grasses, and forbs that will allow an evaluation of the effectiveness of habitat restoration and an understanding of success rates. The monitoring information will be the basis for adapting the restoration approach to challenges and failures so that long-term success can be achieved. The results and findings should be considered as a model for other sites across the West where sagebrush recovery and restoration are needed.

We recommend that monitoring protocols be put in place to understand the effects of transmission lines and raptor response to nest and perch enhancement and identify any negative impacts of power line construction. Use of the new transmission lines by raptors and ravens should be monitored as it was along the PP&L 500-kV transmission line in the 1980s (Steenhof et al. 1993).

Monitoring trends in raptors nesting on transmission lines must be carried out in conjunction with monitoring population trends throughout the BOPNCA. The Ferruginous Hawk should be a priority for monitoring because it is the species most likely to respond to transmission lines within the BOPNCA Priorities and approaches for monitoring raptors throughout the BOPNCA should follow recommendations from the Raptor Monitoring Workshop held in June 2008 (Attachment C). Golden Eagles and Prairie Falcons should be a high priority for monitoring because these species were cornerstones in establishing the BOPNCA and because a large set of background data has been collected on them. The Golden Eagle is a good indicator raptor species because it relies on black-tailed jackrabbits, and the jackrabbit's status is associated with shrub habitat. The Prairie Falcon is a ground squirrel specialist and is sensitive to changes in ground

squirrel abundance as a result of climate change and habitat alteration. Prairie Falcon nesting populations in the canyon have not been assessed since 2003. Future studies should be designed to assess whether these three important species are or are not adapting to habitat changes that have occurred. Species that respond favorably to shrub loss (e.g., northern harriers [*Circus cyaneus]*, short-eared owls [*Asio flammeus]* or agricultural development (e.g., Swainson's hawks [*Buteo swainsoni]*, red-tailed hawks [*Buteo jamaicensis*], American kestrels [*Falco sparverius]*) should be a lower priority for research and monitoring.

We recommend that the Draft Portfolio also provide for monitoring trends in small mammal populations that are key prey species (ground squirrels and jack rabbits) on a landscape level throughout the BOPNCA. The monitoring of small mammals should be coordinated with raptor monitoring.

New and improved access roads associated with transmission line construction and operation could increase recreational shooting near the lines. There is a concern that elevated soil concentrations of lead from shooting and trash and litter accumulation could have long term impacts on prey and raptor populations. The Companies should propose studies that evaluate the extent of lead in the environment in the BOPNCA and examine potential solutions. There also may be a need to examine the effects of recreational shooting on raptor and prey populations.

Proposed research and monitoring should recognize and take advantage of previous work undertaken within the BOPNCA. This component should include the resources necessary to perform an integrated and adaptive approach. We view the oversight committee as being critical in helping to define both integrated research objectives and monitoring needs of the area. Biologists from several agencies and universities are currently conducting research projects within the BOPNCA. We recommend that the oversight committee be proactive in focusing, prioritizing, and integrating these and future research efforts to ensure that they address BLM's long-term and short-term needs in a coordinated way. The Companies should consider funding a repository for archiving and disseminating data collected in the BOPNCA to be used by both researchers and managers. The NCA Research Group recently identified a need to compile available data from previous studies and monitoring efforts, and to make these data available and accessible. We recommend formalizing and expanding the research and monitoring program to maximize the benefits and leverage additional funding opportunities. One possibility would be to create an endowment (see below) to fund research and monitoring into the future.

Visitor Management

We are pleased that the Draft Portfolio includes funding for enhanced BLM law enforcement patrols. This funding should continue for the duration of the permit. An expanded on-site presence will reduce degradation caused by irresponsible public recreational use. Partnering with local communities and civic groups could expand opportunities for visitor contact within the

BOPNCA. Again, the oversight committee can provide guidance about this important component of the Draft Portfolio.

The BLM already has an excellent public education program for the BOPNCA. It employs a full time Environmental Education Specialist, dedicated to the BOPNCA. This specialist gives more than 100 presentations at schools and special events each year and contacts more than 8,000 individuals. The BLM has a sign management plan for the BOPNCA, maintains a website about the BOPNCA, and has developed a visitor's guide that contains general maps of the BOPNCA, raptor viewing information, and recreational opportunities. Public education about NCA raptors and their habitat also occurs at the Peregrine Fund's World Center for Birds of Prey, the Idaho Fish and Game's MK Nature Center, Canyon County's Celebration Park visitor center, and the Kuna Chamber of Commerce visitor facility. The Snake River Raptor Volunteer group is also involved in public education. The subcommittee finds that public education is currently closer to meeting objectives than other programs.

Land Purchase

The Companies' recommendation for property purchase was based on enhancing the preservation of cultural resources. We recommend re-evaluating whether land purchase should be a priority or whether it would be best to invest funds in an endowment (see below) to enhance all resources and values over a longer time frame. If land purchase is a component of the enhancement package, some degree of funding should be included to help manage these lands.

Fund Management

The Subcommittee believes that BLM should explore establishing a fund located with a third party, such as an Idaho state agency, to receive and manage enhancement funds on behalf of the BLM. The state agency would distribute funds at the direction of BLM with the advice of the Implementation and Oversight Committee.

Implementation and Oversight Committee

The Companies have suggested creating and funding an oversight committee to make recommendations to the BLM on the implementation of the enhancement program. We recommend that the oversight committee include interested and involved people with local expertise on each of the trophic levels (plants, prey, and raptors). The structure, responsibilities and management of the oversight committee have yet to be determined. One option is for the oversight committee to be a subcommittee of the Boise District RAC. However, we view the oversight committee as being critical to the long-term sustainability of the BOPNCA and the Companies' success with implementation of the Draft Portfolio. We recommend that the BLM establish the oversight committee as soon as feasible and seek their involvement in the immediate and long-term decisions needed to sustain the integrity of the BOPNCA.

Duration of the Enhancement Components

The BLM should ensure that adequate funding is provided for enhancement components during the period for which the right-of-way permit is granted. Contingencies for responding to fires that may impact restoration areas should be included in the permit. The relevant issues should be revisited to determine if the goals of enhancement have been met when the permit is renewed.

Allocation Prioritization

We respectfully attempt to categorize and prioritize the efforts and funding implied in the Draft Portfolio. We recommend that the BLM consider the enhancement components in the following order of priority:

- Enhancement of Raptor Populations
- Habitat Restoration
- Research and Monitoring
- Implementation and Oversight Committee
- Visitor Management
- Land Purchase

We believe it is important that the BLM ensure adequate funding for all enhancement components. It is especially important for the first four categories listed above.

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Steenhof, K., M.N. Kochert, L.B. Carpenter, and J.A. Roppe. 1993. *Nesting by raptors and common ravens on electrical transmission line towers.* J. Wildl. Manage. 57(2):271-281.

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ATTACHMENT A

Comments on the Gateway West Enhancement and Mitigation package from Michael N. Kochert

01/05/2014

To: Gateway West Subcommittee co-chairs
Fr: Michael N. Kochert
Re: **Comments on the Gateway West Enhancement and Mitigation package.**

Thank you for the opportunity to attend your 17 December 2013 meeting on the Gateway West transmission line and to hear the presentation describing the Enhancement and Mitigation plan for the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA). This message is a follow-up to my oral comments at the meeting.

As a matter of introduction, I have conducted and directed research and monitoring of raptors, prey, and vegetation in the NCA for nearly 45 years. I also studied colonization and use of the 500 kV PP&L (PacifiCorp) transmission line by raptors and ravens with agency and industry colleagues for 10 of those years.

My comments are as follows:

1. I commend Idaho Power and Rocky Mountain Power for the comprehensive package, and I commend the BLM Boise District and NCA staffs for their input to the effort.

2. The NCA was established by the U.S. Congress because the area contains an internationally unique aggregation of nesting raptors, and the legislation calls for protection and enhancement of the unique raptor nesting populations. Given that, most of my comments are predicated on the premise that major actions in the NCA need to consider the ultimate effect on the unique raptor resource.

3. Although the Enhancement and Mitigation package is quite comprehensive, a major deficiency of the package is that it lacks a monitoring component. Given that the package identifies a fairly substantial investment for many enhancement and mitigation actions, it is very important to evaluate the effectiveness of those actions. For example, I sensed at the meeting that there was not complete agreement on the predicted success rate of the habitat restoration efforts. As I stated at the meeting, I commend the parties involved for proposing to undertake such a challenging effort. However, given the extremely dry climate in the NCA in the recent past and predicted for the future, success of restoration efforts in the low precipitation zone in the Grand View and Bruneau areas could be extremely low. Even in decent precipitation years vegetation restoration in these areas could be a challenge. Given the uncertainty, I believe that restoration efforts should be monitored for effectiveness.

   I suggest that the Enhancement and Mitigation package provide for development of a comprehensive, peer reviewed monitoring plan. The monitoring efforts, if designed

properly, would provide the opportunity to for adaptive management experiments. The plan should identify the metrics for success. For example, will restoration success be a measure of vegetation in the restored areas or will it be prey composition and density, or reproductive performance of the nesting raptors?

4. Because construction of the transmission lines and the major proposed enhancement actions has the potential to ultimately affect the raptor populations, I believe it is incumbent to monitor the status of the major raptors in the area. I believe that colonization of the transmission line should be monitored much like it was done with establishment of the PP&L 500-kV transmission line in the 1980s (Steenhof et al. 1993). The monitoring of the PP&L line provided valuable information to the utility, and it also identified the effect of the line on the raptor and raven population.

   It seems to me that the goal of the large-scale restoration efforts is to enhance the habitat and ultimately enhance or maintain the raptors. In my opinion, evaluating the effectiveness of large-scale restoration efforts without assessing raptor populations is falling short of completely evaluating the effectiveness of restoration efforts. A well-designed monitoring effort at the three main trophic levels would serve as a good adaptive management experiment for the restoration efforts.

5. I noticed that the Enhancement and Mitigation package did not mention or address raptors. I believe that that installation of nesting platforms can be an important enhancement and management effort. We found from our long-term research on the PP&L transmission line that the nesting platforms enhanced raptor nesting success (Steenhof et al. 1993). We also found that, when place properly, nesting platforms can attract raptors to nest below the conductors. For example, in all cases where Golden Eagles nested in towers with nesting platforms below the conductors, eagles nested in the platforms and in no other position of the tower. When planning for the 500-kV transmission line in the late 1970s, the PP&L (PacifiCorp) sought Morley Nelson's advice about placement of nesting platforms to enhance raptor nesting opportunities on the transmission line. During my work on the PP&L transmission line project I observed that PP&L personnel readily climbed to the nesting platforms located just above the waist below the conductors and performed work in the nest without the need to shut down the transmission line.

6. I have no problems with the proposal to removal of 8 miles of existing 46-kV transmission line between Bowmont and Gage substations. However, I suggest that IPC leave the existing poles and cross arms to reduce the cost of removal and to provide nesting and perching opportunities for raptors.

7. Several miles of 3-phase, cross arm distribution and transmission lines exist in the NCA, and electrocution of raptors has been reported on these power lines (Lehman and Barrett 2002). In my opinion, a positive enhancement effort would be to patrol untreated distribution and transmission lines for dead raptors and to retrofit any pole where an electrocution has occurred. Poles should be retrofitted using designs developed by Morley Nelson for Idaho Power and following procedures described in APLIC (2006).

Literature Cited

Avian Power Line Interaction Committee (APLIC). 2006. Suggested practices for raptor protection on power lines; The state of the art in 2006. Edison Electric Institute; Raptor Research Foundation, Washington, D.C. USA.

Lehman, R. N., and J. S. Barrett. 2002. Raptor electrocutions and associated fire hazards in the Snake River Birds of Prey National Conservation Area. Idaho Bureau of Land Management Technical.

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ATTACHMENT B

Gateway West Mitigation and Enhancement Portfolio – DRAFT GEAS Comments – February 27, 2014

Gateway West Mitigation and Enhancement Portfolio – DRAFT GEAS Comments – February 27, 2014

To: Bureau of Land Management Resource Advisory Committee Gateway West Subcommittee Co-Chairs

From: Golden Eagle Audubon Society

Re: Comments on the Gateway West Enhancement and Mitigation Portfolio, 1/10/2014

Thank you for this opportunity to comment on the Gateway West Enhancement and Mitigation Portfolio. We, the Board of Directors, write these comments on behalf of members of Golden Eagle Audubon Society (GEAS). GEAS constitutes some 1,500 members primarily residing in southwest Idaho. Our strategic focus is the conservation of birds, wildlife, and their habitats and promotion of wildlife appreciation by SW Idaho residents. Regarding the Gateway West Enhancement and Mitigation Portfolio, our primary concerns include the potentially highly inaccurate success estimate for restoration of native plant communities; the potential missed opportunities to enhance raptor nesting, perching and foraging opportunities; and the lack of a reliable monitoring strategy to track the value of proposed (and needed) enhancement and mitigation actions. GEAS would like to see the outcomes of this Enhancement and Mitigation Portfolio positively affect plants and wildlife, more specifically birds and bird habitat. The majority of our members live and bird watch in southwest Idaho and the Morley Nelson Snake River Birds of Prey National Conservation Area (SRBOP) is very dear to our membership. We propose actions that can lead directly to an overall enhancement of SRBOP for the betterment of raptors, other birds, other wildlife and their habitats, and to better enjoyment for the wildlife-loving public.

General Comments:

GEAS applauds Rocky Mountain Power and Idaho Power's (hereafter, 'the Companies') effort to work "in spirit of cooperation" to "meet enhancement requirements" (page 6) and the thoughtfulness the Companies have put forth for the need for remediation (i.e., habitat restoration component is scaled to the number of acres impacted during construction, page 35).

The Portfolio indicates that the Enabling Legislation for SRBOP, Public Law 103-64, established the SRBOP in 1993 for the "…conservation, protection and enhancement of raptor populations and habitats and the natural and environmental resources and values associated therewith, and of the scientific, cultural, and educational resources and values…." Section 2(4) of the Act defines the term "raptor habitat" to include the habitat of the raptor prey base as well as the nesting and hunting habitat of raptors within the conservation area. Furthermore, it references the 2008 SRBOP Resource Management Plan (RMP) indicating: "the SRBOP is managed by BLM under the concept of dominant use rather than multiple use. This means that prior to authorizing uses,

BLM determines the compatibility of those uses with the purposes for which the NCA was established."

Based on the Public Law and the RMP, the Portfolio states (Page 33, Sect. 8.2) that, "locating utilities within these (designated) corridors is consistent with the RMP and with the enabling legislation for the SRBOP and therefore should require no additional enhancement to be consistent with the enabling legislation." GEAS does not agree with this position. Degradation to raptor habitat as a result of powerline construction is not consistent with enabling legislation. Enhancement therefore is a required act to mitigate for reduction and damage to raptor habitat, not simply an in-kind act "in the spirit of cooperation". Further, it is the Companies responsibility as a direct economic beneficiary of the line installation to ensure – for the long-term – that raptor habitat is not degraded as a result of the powerline. The Portfolio correctly cites the SRBOP RMP stating, "to stabilize and increase the small mammal prey base, remnant upland native shrub must be preserved, interconnected and expanded (page 36)". Thus, to meet RMP objectives as well as operate in the spirit of cooperation, the Companies should be seeking to expand and inter-connect native vegetation in order to achieve objectives stated in the RMP.

GEAS contends that the Companies are in a positive economic situation right now as they have saved significant expenses by routing Sections 8 and 9 through SRBOP – a decision GEAS vocally supported with comments submitted during the Final Environment Impact Statement comment period. The Companies saved substantial dollars by using SRBOP because the route covers fewer miles, there is less need to compensate private landowners, and there are minimal new road construction costs. Funding the restoration approach we propose is not out of the realm for the Companies and is in the Companies best interests to demonstrate their social responsibility and sustainability highlighted in their business plans and reports.

Specific Comments and Recommendations

The most critical component to long-term stability of the world-renowned raptor populations of SRBOP is maintenance and enhancement of native vegetation communities that support diverse, abundant prey bases for the raptors. Therefore, GEAS provides comments that can lead to the direct actions necessary to achieve habitat restoration and enhancement goals.

GEAS proposes the use of an integrated and adaptive approach where restoration is applied. We contend that the habitat treatment success rates estimated in the Portfolio (80%) counters what restoration ecologists working in the SRBOP have found. The success of treatments in the precipitation and temperature zone occupied by SRBOP has very low restoration success for reseeding and other habitat enhancements using traditional approaches (M. Germino, D. Shinneman, and D. Pilliod, pers. comm.) due to SRBOP susceptibility to invasion by cheatgrass and accelerated fire cycle. Some habitat projects for the sole purpose of vegetation enhancement have actually increased the spread of cheatgrass. Work by Brooks and Chambers

(2011) on resistance and resilience highlights the difficulties that must be confronted by restoration efforts in these dry, low elevation areas and represents the kind of science that should be understand before implementing a restoration plan in the SRBOP.

Cheatgrass presence complicates these efforts. The invasion of cheatgrass has changed the fire frequency in sagebrush systems such as the SRBOP where, prior to cheatgrass invasions, fire occurred on average every 70 years. Cheatgrass presence has accelerated fire return intervals to 5 to 7 years, a drastic change that has completely altered habitat in the SRBOP and makes remnant stands of native vegetation a vital element of the long-term health of SRBOP and its ability to support raptors. Thus it is critical to first protect remnant sagebrush patches using firebreaks (i.e., forage kochia) as proposed by the BLM fuels experts (L Okeson, pers. comm.). As restoration activities progress, firebreaks may be modified (i.e., replaced with native vegetation to connect restored areas and planted around the newly restored and connected patches) to help ensure protection from future fire.

Likewise, much effort has been expended on habitat enhancement in SRBOP, yet we know very little about what factors influence success and failure. GEAS proposes a restoration approach that is informed by ongoing research, designed to test and improve our knowledge as restoration is implemented, spatially explicit, and timed to appropriately capitalize on optimal weather conditions.

Ongoing restoration research carried out by the NCA Restoration Working Group is well suited to inform the Companies restoration efforts as they develop new techniques and understand the importance of seasonal and annual timing of implementation as a key factors influencing success (M. Germino, D. Shinneman, and D. Pilliod, pers. comm.). The Work Group should be a key element of project planning and their published information and monitoring data should be employed as specific strategies are developed.

Restoration initiated through the Enhancement and Mitigation Portfolio should start with these data in hand. Initial restoration plots should be placed and planted so they build upon and improve the research data, and bridge to application at larger spatial extents. That is, plots should be placed in areas that will eventually connect remnant native vegetation patches and seeded/planted in a range of treatments the Work Group research shows have higher success probabilities. This approach is critical to prepare for the second, larger application: because the actual restoration implementation must be timed with optimal weather, this “learn-do” approach will increase the likelihood of success when full implementation occurs.

GEAS recommends that this restoration approach begin with the identification of the key remnant native sagebrush patches within the SRBOP that exhibit ecological integrity and are still “intact”. These areas are the “base” for this type of approach. The second step would focus

restoration efforts in areas between these key remnant patches in an effort to connect these key areas together. The overall goal of this approach is to eventually create ecologically intact, large, and connected sagebrush areas important for the many species that thrive in these conditions.

The timing of restoration actions as specified above and success for restoration is dependent upon precipitation (large rain events) in the spring before restoration actions (planting, etc.) occur. It is imperative that restoration funds be flexible. Funds must be banked and allocated when the conditions are right for restoration actions. The restoration fund can be accessed when the conditions are prime for restoration actions. GEAS recommends the funding committed by the Companies be established as a Trust Fund which is managed by a Board or Oversight Committee. The Committee should have discretion to apply or reserve funding in a time-sensitive context (i.e., commit restoration funds in positive weather years). The Trust would serve a second function as a pot of 'matchable' dollars that could attract additional funds to augment restoration of SRBOPA.

As restoration actions occur, monitoring must be implemented to quantify and understand where and why success rates are high, address challenges and failures, and allow for adapting the restoration approach over the years so that the dollars spent on restoration will be successful over the long-term. The Portfolio fails to specify a monitoring effort. This is an important aspect that must be addressed and is crucial to the success of this approach. If vegetation reestablishment is the goal, then appropriate vegetation monitoring protocols must be put in place with data collected both before and after construction on the line, within the key remnant sagebrush patches, and at sites designated for restoration and mitigation.

Monitoring needs to be carefully considered and matched to expected outcomes temporally and ecologically. For example, restoration actions over a relatively small proportion of SRBOP are not likely to have measurable effects on, for example, prairie falcon populations across the entire SRBOP. It may, however, have some influence on nest success or breeding density of proximal nesting territories. Likewise, demographic response by prairie falcons may lag habitat recovery by several years. These examples illustrate the need for a thoughtful monitoring approach that begins with fine-resolution, vegetation monitoring and eventually scales to measuring the response by raptors that are most likely to be influenced by the restoration. The monitoring strategy should be implemented using an experimental design, where "control areas" and "experimental areas" are monitored so that comparisons can be made to determine successes, address failures, and inform late stage and future restoration actions accordingly. Again, this monitoring effort is critical to the adaptive restoration process and is required by BLM regulations.

GEAS proposes action on an overall approach that meets the enabling legislation and RMP guidance, employs the best science while engaging the fuels expertise at BLM, and sets the stage

for a more programmatic approach to habitat recovery in the SRBOP. Coordination between BLM land managers and ecologists, the Companies' natural resource and administrative specialists, and the NCA Restoration Working Group is critical to implement this approach. GEAS is committed to this collaborative, adaptive approach and pledges continued participation where appropriate.

Additional Comments on Enhancement and Mitigation

Recreational Shooting

Although not directly addressed in the Portfolio, GEAS members are strongly in favor of a shooting closure within 200 yards of new and existing powerlines as well as access roads. A shooting closure is consistent with and supports a range of recommendations and offerings in the Portfolio. For example, the Portfolio indicates that, "access roads … may increase the risk of vandalism … (page 32)." A shooting ban of 200 yards from roads and powerlines would be enforceable (consistent with Law Enforcement provisions, page 37) and discourage both firearm-caused vandalism and additive mortality to raptors and prey. Furthermore, we contend that one of the greatest threats shooting brings to the SRBOP is the potential for fire ignition. There are numerous incidents of target-shooting-related fire ignitions in southwest Idaho, some of which sparked immense, destructive blazes. Wildfire is a recognized threat to native vegetation (and consequently small mammals and raptors) in the SRBOP and an economic threat to the powerlines. A shooting ban would reduce all of these threats and, when paired with increased law enforcement, is completely enforceable.

Vegetation Restoration (reclamation)

Regarding plant/seed mixtures: Page 36 states "mixes should include shrubs that are suitable for small mammals." *While we don't argue with this intent, we expect that shrubs and forbs planted and seeded need to be a close match to the local soil and climate conditions… i.e., native plants. It's important this is clearly stated.*

Regarding the need for better (more accurate and precise) maps of proposed restoration: I.e., "… developing a geodatabase layer using the proposed facility locations and then overlaying that "footprint" database, whether for construction or operation footprint, with the relevant vegetation or land ownership geodatabase layer." GEAS recommends the restoration effort be fully informed with highly accurate spatial data and planning. SRBOP is one of the best-mapped areas in Idaho with a long history of spatial data. In preparation for spatial planning, the best available data on historic restoration activity and restoration research should be overlaid with topography, soils, fire perimeter and other GIS layers to ensure proper construction sighting, mitigation siting and restoration actions.

Page 36: “in accordance with the RMP, habitat restoration projects should be located in areas where it is most beneficial to raptor prey populations” therefore a spatial component to the restoration exercise is essential.

Need ‘security’ fund for fire response on top of management; page 32 cites a concern that “access roads … may increase risk of vandalism, weed infestation, litter, etc.” We feel that the increased risk of fire ignition is the most critical threat posed by increased access. Some 80% of fire ignitions in the NCA are human-caused (L. Okeson, pers. comm.). We agree, that access also means quicker response to fire ignition but we also know that fires expand rapidly. Therefore we suggest a dedicated effort to sign the areas regarding risks and costs of wildfire and a proactive effort to deter ignitions (including a firearm ban).

Raptor nest/perch augmentation

Proactive retrofitting is an important element especially to honor the intent of the NCA as a world-renown site for Birds of Prey (NCA not an end unto itself … they are identified and situated for specific resource functions; SRBOP specifically designated for raptors, use for other purposes must be compatible with enhancements for BOP). GEAS recommends retrofitting existing structures where appropriate to enhance nest and perch sites for raptors.

Leave structures on removed lines

Page 39 and 40, referring to removal of Swan Falls to Bowmont line and Mountain Home to Bennet line: GEAS recommend the Companies do not remove structures that are suitable for raptor and raven nest and perches. We recognize there may be safety considerations but recommend that all structures that are not deemed unsafe be left. In addition to opportunities for raptors and ravens, many cavity nesting (excavators and secondary) will benefit from the nest site opportunities. Furthermore, a wide variety of birds would benefit for the elevated perch opportunities.

We recommend that cost savings of structure removal be redirected to (1) decommissioning and restoration of the service roads for these lines (thus improving and protecting slickspot peppergrass habitat), and (2) enhancements on the primary lines.

GEAS recommends the Enhancement Portfolio reference using ‘state of the art’ guidelines to add desirable nest opportunities.

Monitoring

As stated above, monitoring needs to be a specific element of the Portfolio. GEAS recommends that the Portfolio references the BLM Assessment Inventory and Monitoring program and any local (i.e., NCA specific) monitoring protocols and specifically describes the need for targeted monitoring of vegetation response to restoration, small mammal population trend, and raptor response to nest and perch enhancement. Monitoring is best conducted under an experimental design so trials inform subsequent efforts and expenditures.

Vegetation

Page 36: … "to stabilize and increase the small mammal prey base, remnant upland native shrub must be preserved, interconnected and expanded." Monitoring of upland native shrub is critical to measure success of restoration actions.

Prey base

Page 36: Citing the SRBOP RMP: the greatest benefit to raptors is in the stabilization of the prey base" thus no amount of restoration nor reclamation will meet RMP standards unless the prey base responds and the only way to accurately test this is through monitoring of the prey populations themselves.

Raptors

Monitoring protocols should be put in place to understand the effects of the line and help target measures to address any negative impacts through further management action. Ultimately enhancement measures should improve or at least maintain current population numbers in the area.

Again, Golden Eagle Audubon Society Board of Directors appreciates this opportunity to comment on the Gateway West Enhancement and Mitigation Portfolio. We look forward to further engagement in successful siting of the Gateway West line in SRBOP and in successfully enhancing native vegetation, small mammal, and raptor communities in southwest Idaho.

On behalf of the Golden Eagle Audubon Society Board of Directors,

Sean Finn
Conservation Committee Chair
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ATTACHMENT C

Summary of Findings and Recommendations for Raptor Monitoring Generated from the Workshop on Monitoring Raptor Status and Trends in the NCA

Summary of Findings and Recommendations for Raptor Monitoring Generated from the Workshop on Monitoring Raptor Status and Trends in the NCA

Staff from the BLM Boise District and the US Geological Survey (USGS) Forest and Rangeland Ecosystem Science Center (FRESC) planned and implemented a workshop in June 2008 to form a strategy to monitor raptors in the NCA (USDI 2008). The workshop included 37 scientists, specialists, and managers met to "develop an adaptive management framework for raptor monitoring for the NCA to include regular long-term monitoring to assess raptor status, and monitoring related to specific management or projects."

Objectives of the workshop were to:

1. prioritize raptor species for long-term monitoring,
2. recommend efficient wildlife monitoring designs to assess the conservation and enhancement of raptor populations and habitats in the NCA, and
3. propose how raptor (and/or other species) monitoring can be used to evaluate vegetation treatment projects implemented in the NCA

This attachment summarizes findings and recommendations of the workshop group that addressed monitoring raptor status and trends in the NCA. A full report of the workshop is presented in USDI (2008). Workshop participants recommended that monitoring should be designed to detect change and prompt a management decision if change exceeds an acceptable standard or pre-determined threshold. In general, upon detecting an unacceptable change or trend, additional investigation(s) should be conducted to gain more detailed understanding of cause-effect relationships, mechanisms, etc.

RESPONSE OF WORKSHOP PARTICIPANTS TO THE QUESTIONS:

Because questions 1 and 2 are interrelated, both questions were addressed simultaneously in discussing the approaches for the different species.

Question 1. Which raptor species warrant intensive long-term monitoring and what monitoring designs are effective for assessing the status of these species, as well as generate information on the other raptor species?

Question 2. How often should various raptors be surveyed and what should be the periodicity of monitoring

The report recommended a 2-tiered approach for monitoring raptors that included intensive monitoring for priority species and a less intensive strategy for multiple species. Workshop participants identified Golden Eagles, Prairie Falcons, Ferruginous Hawks, and Burrowing

Owls as priority species with the eagles and falcons as the top priority. The less intensive strategy would focus on the benchland and wintering raptors. Benchland nesting raptor species, specifically included Burrowing Owl, Ferruginous Hawk, Northern Harrier, and Short-eared Owl. *The term "benchland" referrers to the plain surrounding the Snake River Canyon (USDI 1996:9).* Wintering raptor species, specifically Rough-legged Hawk, Northern Harrier, Red- tailed Hawk, Golden Eagle, and Prairie Falcon.

Golden Eagles and Prairie Falcons were considered top priority because:

- These species were cornerstones in establishing the NCA
- A vast background data has been collected on them from which to detect change (40+ years for Golden Eagles and periodically over 30 years for Prairie Falcons).
- They utilize different prey that vary over time, and eagle and falcon populations fluctuate differently based on previous research
- The Golden Eagle is a good indicator raptor species because it relies on black-tailed jackrabbits, and jackrabbit status is associated with shrub habitat condition.
- The Prairie Falcon is a ground squirrel specialist during the breeding season and is sensitive to changes in ground squirrel abundance as a result of climate change and habitat alteration.
- Most Prairie Falcons leave the NCA following ground squirrel estivation, and factors affecting falcons can extend beyond the NCA. Trends in numbers may reflect conditions on and off the NCA, and migratory species, such as Prairie Falcons, may be affected more by climate change than resident species.
- The NCA contains a low number of nesting eagle pairs, and loss of a few nesting pairs should trigger new action by managers.
- Historical counts of falcon pairs have revealed high year-to-year variability
- Analyses of change can be across the NCA or more locally.
- Nesting eagles are relatively inexpensive to monitor compared with data gained.
- Surveyors can effectively gather other data (e.g., covariates).
- The NCA is one of the few places where Prairie Falcons have been studied and monitored in the long-term.
- Prairie Falcons have large home ranges that encompass much of the area within the NCA
- The Golden Eagle is a FWS Bird of Conservation Concern in BCRs 9 (where the NCA lies), 16, 17, 18 & 35, and the FWS is interested in eagle monitoring in the NCA.
- The Prairie Falcon is a FWS Bird of Conservation Concern in BCRs 9, 10, 16, 17, 18 and 32, which comprise the bulk of its range in the U.S.
- The number of Golden Eagles using the NCA approximately doubles in winter with influx from other areas

Ferruginous Hawks and Burrowing Owls were considered priority species because:

- These species nest on the benchlands above the canyon, although Ferruginous Hawks also nest in the canyon.
- They use different vegetation types and prey than Golden Eagles and Prairie Falcons.
- Ferruginous Hawks use shrub and grassland habitats.
- Burrowing Owls use grassland cover types, and owl abundance, distribution, and use of areas is likely to change if shrubland restoration succeeds.
- Preliminary data show no evidence for declines in the Ferruginous Hawk nesting population in the NCA (see Appendix 4). Monitoring would provide for a solid baseline and continued assessment of status
- The Ferruginous Hawk is a FWS Bird of Conservation Concern and BLM Sensitive Species Type 3
- The Burrowing Owl is a FWS Bird of Conservation Concern throughout most of its U.S. range (BCRs 9, 11, 16, 17, 18, 32, 33, 35, 36) and is a BLM Sensitive Species Type 5

Recommended Monitoring for Priority Species

Golden Eagles. Workshop participants recommended that the annual survey of all historical nesting territories in the NCA and in the Comparison Area (the area along the Snake River located upstream and downstream of the NCA) continue as it has for the last 40 years. The annual survey includes assessment of occupancy and productivity.

The quantitative goal of monitoring depends on the location of decline in the NCA and whether it is geographically local or widespread. The goal is to detect change (rate of change or change below an established threshold) in the number of pairs and/or productivity. Participants suggested a loss of 3-4 nesting pairs as a threshold that would trigger action

Management actions: An unacceptable change would trigger a decision to investigate what factors (e.g., fire, OHV and other human disturbance, restored vegetation, etc.,) might be associated with the change in nesting pairs or productivity, relative to the location of the change. Investigations and management actions should consider the time frame for recovery. Eagles are long-lived, which could result in a long time for recovery. The BLM should focus vegetation restoration efforts within 3 km of the canyon rim, or within 3 km of nests outside of the canyon.

Threats to Golden Eagles include vegetation type conversion from shrubs to annual grasses, and human activities - recreation (mainly OHV disturbance). [NOTE: *Abandonment equals take if caused by human activity…Diana Whittington (US FWS) stated that human disturbance to nesting Golden eagles (or the permitting of such) that causes loss of any production in a given year is a violation of the Bald/Golden Eagle Act.*]

Prairie Falcons. The group recommended monitoring falcon abundance and nesting success 3 of every 5 years. One year to consist of a full canyon survey as was done in 2002, and the other 2 years to consist of a stratified random sample of sections of canyon with high and low nesting densities as was done in 2003.

Information from assessing annual nesting success could be adequate to monitor Prairie Falcon reproduction in the NCA because nesting success [the proportion of preselected pairs raising at least one young to ≥ 30 days of age (see Steenhof and Newton 2007)] and productivity (mean number of young reaching ≥ 30 days of age per preselected pair) are highly correlated. It cost about $120,000 to conduct a full canyon survey and collect productivity data in 2002. Using the cost of a full canyon survey with productivity as a base, a full canyon survey with just nesting success would reduce the base cost about 15% and a stratified random sampling effort like that used in 2003 combined with only assessing success would reduce the cost by about 35%. Information on other species (i.e., Red-tailed Hawk and Ferruginous Hawk) also can be collected from the Prairie Falcon point-count surveys.

Participants recommended that the quantitative goals of monitoring be to 1) identify trajectories in the number of nesting pairs and/or nesting success occurring over multiple years in a geographic cluster within the survey area, 2) detect substantial changes in the number of nesting pairs and/or nesting success across larger areas (*substantial change was not defined at the workshop*), and 3) ascertain when the number of pairs falls below the historical minimum of 160 recorded in 1994. Some members of the group cautioned about using absolute thresholds. These levels should serve as triggers for further investigation not as triggers for panic.

Management actions: A decline in the number pairs or nesting success beyond the acceptable level would trigger a management decision to investigate the reasons for the decline. The 1997 survey was a good example of this management process. Results from long-term surveys in selected stretches of the canyon in 1997 indicated a significant decline in the number of falcon pairs. NCA management implemented a full canyon survey in 2002, and results indicated that the number of nesting pairs that year was back at historical high levels.

Recommendations for less intensive monitoring for multiple species

Raptors that nest on the benchlands. Workshop participants recommended that monitoring focus on:

- Burrowing Owls
- Ferruginous Hawks
- Northern Harriers
- Short-eared Owls.

The Burrowing Owl should be a focal species for the ecological communities on the benchlands. Short-eared Owls and Northern Harriers can be nomadic, and numbers vary widely from year to year in the NCA, which is an important consideration for the monitoring design. Year to year changes in local numbers are likely to reflect nomadism as much as they reflect population changes. The Short-eared Owl is a FWS Bird of Conservation Concern and a BLM Sensitive Species (type 5). Swainson's Hawk were not a great concern in the NCA because of low number of pairs.

Recommended monitoring approach: The standardized roadside point-count survey method described in Conway et al. (2008) and Conway and Simon (2003) was recommended for surveying Burrowing Owls and the other species. Routes should be established with some structured sampling frame. Conway and Simon (2003) recommend one route per township. Participants recommended using the existing road network for transects and broadcast surveys for Burrowing Owls and the other species where applicable. When pairs are located, surveyors can search the area of activity to find a nest and assess productivity or nesting success.

Workshop participants recommended that the use of transects for multiple species should be examined further to address the following:

- whether transects should be surveyed year round.
- what information would be collected from the transects–trend over time?
- how nesting success can be assessed from transects.
- what changes can be detected to trigger a management decision?

Wintering raptors. The following species were identified for monitoring on the benchlands:

- Rough-legged Hawk,
- Northern Harrier
- Red-tailed Hawk
- Golden Eagle
- Prairie Falcon

Some participants felt that a measure of raptor use would be a good indicator of restoration success. [*There were differing opinions on this statement. Some Group I participants and Group III (see Statement 1 of Question 2 of Group III) did not agree with the statement, and Group II felt that the approach should be evaluated (see recommendation 4, Question 1)]*.

Data from past studies should be evaluated to assess if comparisons can be made with new survey data. John Doremus collected wintering data on certain species. Bill Mattox and James McKinley surveyed road transects from 1998 to 2005 that included all raptor species detected in the Orchard Training Area within the NCA. Also Watson et al. (1996) recorded raptor

species occurrence collected from randomly distributed point counts during the BLM/IDARNG Research Project

Recommended monitoring approach: Participants believed that point-count surveys could be conducted from randomly dispersed points or points along transects. The group recommended use of the roadside point-count survey method. A monitoring plan should consider surveying year-round benchlands road transects during the two years in five when Prairie Falcon monitoring is not being done (see Prairie Falcons 2,a above). [*Note: the recommended periodicity (number of times in a year) of the surveys was not discussed at the workshop and will be addressed in the NCA monitoring plan*]. Workshop participants recommended that surveyors collect other data (e.g., weather, habitat, land use, etc.) as covariates to detect factors influencing birds. The specific covariates will be identified in the planning process. Also the monitoring design should consider stratified random sampling based on management needs.

General Discussion. Some participants suggested the BLM identify and monitor raptor migration corridors in NCA. Also, some asked if we are comfortable with our knowledge of status and our estimates for raptors in NCA (excluding Prairie Falcons and Golden Eagles). Also should the BLM consider a comprehensive assessment / inventory as a basis for monitoring the status of species and their response to management activities?

Question 3. Which raptor species provide the most reliable data to evaluate long-term (i.e., 20 years) habitat restoration success across the NCA?

Golden Eagles and Prairie Falcons were listed because these two species have different primary prey species that are associated with shrubland habitats. Black-tailed jackrabbits (the eagle's main prey) require shrubs. Although Piute ground squirrels (the falcon's main prey) do not require shrubs, their populations are more stable in shrub habitats. Eagles have a relatively small home range compared to the falcon's large home range, which provides managers with a reflection of impacts at different scales and locations. The Golden Eagle population is relatively stable vs. Prairie Falcon's variability in occupancy/productivity.
Raptor use of restored areas vs. untreated areas needs to be assessed, but the challenge is how to do it. Some participants suggested using solar powered GPS satellite-received transmitters on female Prairie Falcons to assess use of treated and untreated areas. *Note: Some participants felt that data from males might be more revealing if transmitters of the appropriate size are available.* Participants recommended that treatment and control experiments should be monitored before, during, and after treatments.

RESEARCH QUESTIONS

The group suggested that protocols be established to assess the array of research questions so that studies can complement each other. Participants identified the following research questions:

- Why are some Golden Eagle territories that have burned more productive than others? (Diet studies may be one way to approach this question.)
- What is the trade-off of using non-natives in vegetation restoration vs. no action?
- Can Loggerhead Shrikes be used as an indicator of restoration success?

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