Appendix K

Compensatory Mitigation Framework for the Morley Nelson Snake River Birds of Prey National Conservation Area

Gateway West Transmission Line Project
Compensatory Mitigation Framework for the
Morley Nelson Snake River Birds of Prey National Conservation Area

1 INTRODUCTION

As discussed elsewhere in the final supplemental environmental impact statement (FSEIS), the enabling legislation for Morley Nelson Snake River Birds of Prey National Conservation Area (SRBOP), Public Law (P.L.) 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.

As discussed in the FSEIS Chapter 3.0, the requirement for mitigation for impacts to the SRBOP's resources, objectives, and values, including compensatory mitigation for any remaining effects, would be consistent with the Bureau of Land Management's (BLM) management responsibilities under the Federal Land Policy and Management Act (FLPMA) and P.L. 103-64. The management approach would also be consistent with the Presidential Memorandum on mitigation, the Department of Interior (DOI) manual 600 DM 6 on landscape-scale mitigation (DOI 2015), and the BLM's interim mitigation policy (IM 2013-142 [BLM 2013]), which direct the BLM to avoid, minimize, and compensate for impacts. The BLM's policy manual on the management of National Conservation Areas (NCA; Manual Section 6220) also requires mitigation for impacts from rights-of-way (ROW). This mitigation standard of net benefit would comply with P.L. 103-64's requirement to enhance the resources, objects, and values of the NCA and it would also comply with the direction provided in the Presidential Memorandum on mitigation and DOI manual 600 DM 6 on landscape-scale mitigation to achieve a net benefit, when appropriate or required. DOI manual 600 DM 6 on landscape-scale mitigation states "landscape-scale strategies and plans identify clear management objectives for targeted resources…at landscape-scales, as necessary, including across administrative boundaries."

After assessment of the Rocky Mountain Power and Idaho Power Company (Proponents) Mitigation and Enhancement Portfolio (MEP) and in response to recently released policies concerning the requirements of mitigation for large landscape-scale projects, the BLM has developed this Compensatory Mitigation Framework (Framework) that would address avoidance, minimization and compensatory mitigation actions concerning the SRBOP. This Framework supersedes the MEP. In the Record of Decision, the Authorized Officer will determine if the Framework has met the enhancement standard in P.L. 103-64.

1.1 Framework Purpose and Objective

The Framework for the SRBOP is intended to analyze and facilitate the development of a Compensatory Mitigation Plan (CMP) to offset reasonably foreseeable remaining residual effects from the Gateway West Transmission Line Project (Project). The CMP cannot be developed until the selection of a route occurs and the Proponents complete final engineering and design. Only after the completion of final engineering and design can site-specific compensatory mitigation be determined to account for residual

impacts. Thus, the Framework is intended to be scalable and not specific to any alternative or site-specific mitigation project. With development and implementation of the CMP, the Proponents will be taking the necessary steps to compensate for residual Project impacts and achieve enhancement (i.e., net benefit) of resources and their values, services, and functions within the SRBOP as mandated by the enabling statute (P.L. 103-64).

The overall objectives of the Framework are to:

- create a common understanding regarding application of the mitigation hierarchy and expectations of the CMP between the Proponents and the BLM on the principles, standards, methods, time frames, and other considerations that will guide the development of the CMP; and
- provide clear expectations and methodology for assessing the adequacy of the CMP.

The Framework summarizes mitigation actions and planning undertaken by the BLM and the Proponents to prepare the final environmental impact statement (FEIS) and SEIS to ensure that the Project is in compliance with applicable laws, regulations, policies, and plans related to affected resources and their values, services, and functions. Additional resource protection guidance and recommendations have evolved over the course of the SEIS development and new information that has become available during the SEIS process has been incorporated into the SEIS analysis and mitigation development (see Chapter 1, Sections 1.1.1 and 1.2). The Framework summarizes how the SEIS analysis has followed existing agency mitigation strategies and the mitigation hierarchy.

The BLM and the Proponents will utilize this Framework in developing a Project-specific CMP proposal. The CMP will identify specific compensatory mitigation projects intended to offset Project impacts across all affected land ownerships and jurisdictions. Subject to BLM determination that the CMP is sufficient and that its implementation is consistent with applicable laws and government policies, the BLM will utilize the CMP to develop individual project authorizations (e.g., for the BLM, CMP implementation will be made a condition of ROW grants and permits issued to the Proponents). Any subsequent National Environmental Policy Act (NEPA) analysis required for CMP site-specific projects will be done on a case-by-case basis. Since the CMP's overall success may be dependent on the successful implementation of each CMP mitigation project component, the BLM would retain discretion to suspend or terminate its authorization in the event that any CMP mitigation project is not successfully implemented, regardless of that project's location or jurisdictional considerations.

The Framework has been cooperatively developed by resource specialists from the BLM and Proponents (see Contributors) intended to effectively guide the eventual development of the CMP(s) for the Proponents' Project Plan of Development (POD). The principles, standards, and technical elements within the Framework have been drawn from and are consistent with departmental and agency policy and guidance documents (BLM 2013; Clement et al. 2014; DOI 2015). Many of the mitigation actions and project types originated from elements in the Proponents' MEP and have been

expanded or revised based on analysis and recommendations from the Boise Resource Advisory Council, BLM subject matter experts, and public comment on the Draft SEIS.

1.2 The Mitigation Hierarchy

The FEIS and SEIS documents have been developed in accordance with current relevant laws, regulations, policies, and plans, including those guiding agency decisions that may have an impact on resources and their values, services, and functions. Project siting and design, required design features, selective mitigation measures, and implementation plans have been developed to consider the full mitigation hierarchy to avoid, minimize, rectify, or reduce impacts over time, and last, to compensate for residual impacts prior to issuing the Notice to Proceed.

The mitigation hierarchy is illustrated in Figure 1 and described below in general and in the context of the Project in particular:

Avoidance: Measures taken to avoid impacts altogether by not taking a certain action or parts of an action. Avoidance measures applied to the Project include, among other things, reviewing each route's potential impacts to sensitive resources prior to considering it for detailed analysis. Avoidance also includes more site-specific avoidance activities, such as those described in the Project Environmental Protection Measures (EPM). *See* Appendix M of the FSEIS. It is also expected that further avoidance will occur through the Proponents' final engineering and design if a route is selected. The intent of such actions is to avoid impacts to the SRBOP to the greatest extent possible while recognizing that all of the feasible routes will have some impact on the SRBOP.

The development of the route alignments is described in Chapter 2 of the FEIS and SEIS; the description provides the reasons why some were not selected for detailed study. Seven routes were considered for Segment 8 and 11 routes for Segment 9. Routing options in and near the SRBOP include, among others, alignments to avoid the SRBOP, non-motorized areas, crossings of the Snake River, sage-grouse habitat, historic trails, important archaeological areas, and populated areas. Routing also considered colocation within the West-wide Energy (WWE) Corridor. No feasible route was identified that would completely avoid the SRBOP. Any route south of the SRBOP in Idaho would have to cross designated wilderness and/or the Saylor Creek Air Force Range. Any route north and east of the SRBOP would cross several high-voltage transmission lines and/or the cities of Kuna or Boise.

The Project was designed to avoid sensitive resources to the extent practicable. For example, early on in the planning phase, cultural resources were identified. Proposed project roads were rerouted if it became clear they would impact a cultural site. Waterbody crossings were routed to avoid new crossings to the extent practicable. Avoidance of sensitive species and habitat was a key consideration in siting however; they could not be avoided given other siting constraints. Micro-siting and local rerouting of roads and alignments will be used to avoid disturbance to species and halting of

construction will occur if a new cultural site is discovered during construction. These measures are included in various resource EPMs, such as:

- CR-6: Avoidance areas will be flagged or otherwise marked prior to construction activities. Flagging or other marking will be removed once construction is completed in an area.
- WET-1: Impacts on wetland and riparian areas will be avoided unless physically or economically infeasible or where activities are permitted. Land management agencies' plans (RMPs, MFPs, and Forest Plans) that have standards, guidelines, stipulations, or avoidance buffers will be adhered to. Where these do not exist, Inland Fish Strategy (INFISH) buffers will be followed,
- VEG-4: Prior to the start of construction and maintenance activities, all contractor vehicles and equipment (including personal protective equipment) will be cleaned of soil and debris capable of transporting invasive plant seeds or other propagates. All vehicles and equipment will be inspected by Agency-approved inspectors and certified as weed free by agency approved personnel, in order to ensure they have been cleaned properly. The final Reclamation and Noxious Weed Plans will include the location of all cleaning stations, how materials cleaned from vehicles at these stations will be either captured or treated so that cleaning station locations would not also become infected, and who would confirm/certify that vehicles leaving cleaning stations and/or entering construction sites are free of invasive plant materials.
- TESPL-3: Qualified botanists shall conduct pre-construction surveys during a season when target species are readily identifiable for special status or globally rare species. Where feasible, micro-siting of project facilities shall avoid direct impacts to identified populations. Survey reports documenting the surveys, their results, and recommendations must be provided to land management agency for approval prior to construction. Agency botanists may evaluate individual sites based on site specific conditions. Documentation of the evaluation of avoidance of impacts to sensitive and globally rare plants must be provided to the Agencies prior to construction.
- TESWL-4: The Environmental Construction Inspection Contractor (CIC), an agency biologist, or agency designee will accompany the Construction Contractor site engineers during the final engineering design or prior to ground-disturbing activities to verify and flag the location of any known occupied structures (e.g., nests, burrows, colonies) utilized by sensitive species. This will include, but not be limited to, artificial burrows that have been constructed as part of research/restoration efforts, prairie dog colonies, and raptor nests, which could be impacted by the Project based on the indicative engineering design. The final engineering design will be "micro-sited" (routed) to avoid direct impact to these occupied structures to the extent practical within engineering standards and constraints.
- TESWL-9: Sage-grouse – On federal lands, surface disturbance will be avoided within 4 miles of occupied or undetermined greater sage-grouse leks from March 1 to July 15. This distance (i.e., 4 miles) may be reduced on a case-by-case

basis by the applicable agency, if site-specific conditions would allow the Project to be located closer to the lek than 4 miles (e.g., topography prevents the Project from being visible from the lek, or a major disturbance such as a freeway or existing transmission line is located between the Project and the lek).

Minimization: Measures taken to minimize impacts by limiting the degree or magnitude of the action and its implementations. Minimization measures taken by the Project include, for example, actions to decrease effects on wildlife species such as design components to lessen aerial collisions with the transmission lines and timing restrictions for construction and maintenance. Measures to prevent spread of weeds and shrink impacts of clearing have also been included in the Project actions. Minimization of visual impacts has informed Project routing and structural design to diminish impacts to important visual resources such as historic trails and scenic areas. Multiple EPMs designed to minimize impacts have been included as part of the Project and can be found in Appendix M of the FSEIS. It is also expected that further minimization methods will be implemented through the Proponents final engineering and design if a route is selected. Multiple EPMs designed to minimize impacts have been included as part of the Project, including:

- VIS-6: To minimize sensitive feature disturbance and/or visual contrast in designated areas on federal lands, structures will be placed so as to avoid sensitive features such as, but not limited to, riparian areas, water courses and cultural sites and/or to allow conductors to clearly span the features, within the limits of standard tower design. Where conflicts arise between resources, the applicable land manager will be consulted.
- VIS-7: To reduce visual impacts on federal land, including potential impacts on recreation values and safety, towers will be placed at the maximum feasible distance from the highway, canyon and trail crossings within limits of standard design and to the extent practical.
- WILD-3: The Project will be designed and constructed in compliance with Avian Power Line Interaction Committee (APLIC) standards (APLIC 2006, 2012) in order to reduce impacts to avian species. Any changes to the Project's design, as requested by federal, state, or local jurisdictions, as well as any changes considered by the Proponents, will also be in compliance with APLIC guidance.
- VEG-1: During construction, blading of native plant communities should be minimized, consistent with safe construction practices. Where feasible, shrubs should be cut at or near ground level to facilitate re-growth after construction. The footprint of construction and operations facilities should be kept to the minimum necessary.
- WILD-9: To the extent feasible, all vegetation clearing will be conducted to avoid the avian breeding season (generally April 15 through July 31, depending on local conditions and federal land management plan requirements) in order to minimize impacts to migratory birds. Where this is not feasible, pre-construction surveys within the disturbance footprint shall be conducted within seven days prior to clearing. If an active nest (containing eggs or young) of a bird species protected under the MBTA is found during either pre-construction surveys or

construction activities, the nest will be identified to species, inconspicuously marked, and left in place until any young have fledged before the vegetation is removed.

Rectification/Reduction or Elimination over time: Measures taken to rectify impacts by repairing, rehabilitating, or restoring the affected environment or by reducing or eliminating the impact over time by preservation and maintenance operations during the life of the impacting action. Rectification, reduction, and elimination measures adopted by the Project include identified EPMs (see Appendix M of the FSEIS) as well as Mitigation Plans for the Project. Example mitigation-oriented EPMs include:

- G-1: Resource Management Plan (as amended) design criteria, Best Management Practices (BMPs), and mitigation requirements will apply on BLM-managed lands.
- OM-15: To help limit the spread and establishment of noxious weed species in disturbed areas, desired vegetation needs to be established promptly after disturbance. The Proponents will rehabilitate significantly disturbed areas as soon as possible after ground-disturbing activities and during the optimal period. Seed and mulch will be certified "noxious weed free" and seed mix will be agreed to in advance by the landowner or land managing agency.
- CR-2: An Inadvertent Discovery Plan will be included as part of the HPTP. This plan will specify what steps will be taken if a subsurface cultural resource is discovered during construction, including stopping construction in the vicinity of the find, notification of the appropriate land management agency, identification of a qualified archaeologist to conduct an evaluation of the find, and the development of an approved data recovery program or other mitigation measures.
- CR-5: If construction will adversely affect any properties listed on, or eligible for listing on, the National Register of Historic Places (NRHP), mitigation will be required. Mitigation will be in accordance with the HPTP and may include, but not be limited to, one or more of the following measures: a) avoidance through the use of relocation of structures through the design process, realignment of the route, relocation of temporary workspace, or changes in the construction and/or operational design; b) the use of landscaping or other techniques that will minimize or eliminate effects on the historic setting or ambience of standing structures; and c) data recovery, which may include the systematic professional excavation of an archaeological site or the preparation of photographic and/or measured drawings documenting standing structures
- REC-20: Temporarily disturbed lands within the ROW will be re-contoured to blend with the surrounding landscape. Re-contouring will emphasize restoration of the existing drainage patterns and landform to pre-construction conditions, to the extent practicable. (Tower pads would not be recontoured.)
- WET-3: Where impacts on wetlands are not avoidable, site-specific crossing plans and measures to mitigate impacts will be submitted to the appropriate regulatory agency, as well as the land managing agency. The Proponents will

obtain all necessary permits prior to discharging dredged or fill material to waters of the U.S. and state.

Project design has involved careful routing and siting to avoid and minimize impacts to resources (e.g., residential areas, agriculture, vegetation, wildlife, cultural, visual, National Historic Trials, military training, etc.). Project design to avoid and minimize impacts to resources included avoiding important, scarce, and/or sensitive resources where possible; maximizing the use of existing utility corridors and roads; and closely paralleling existing transmission lines within these corridors. If an action alternative is chosen, additional measures to avoid and minimize impacts will take place during final engineering and design. Pre-construction micro-siting and variations may also provide further avoidance and minimization of impacts.

The EPMs in the FEIS were incorporated into the 2013 Record of Decision (ROD) and subsequently included in the Proponents' POD in August 2014 (see Appendix B). To ensure the Project's conformance with both federal and state regulatory requirements, the design of the Project and the development of EPMs have followed the hierarchy for mitigation and included avoidance, minimization and rehabilitation/restoration measures. EPMs will be incorporated into Project design to avoid or minimize environmental impacts of the proposed Project. The Proponents have committed to implementing these EPMs during construction, operation, and maintenance of the proposed Project. The EPMs will be reviewed, revised, and developed further, as appropriate, to reduce impacts to resources and their values, services, and functions and, along with explicit Implementation Plans, will be included in the POD for this Project. The POD will be reviewed and approved by the BLM. If the Project is authorized, the POD will be used by the agencies in crafting the ROW and other Project-related authorizations as appropriate. Consideration of the anticipated effectiveness of these EPMs incorporated into the FEIS and SEIS impact assessment will be taken into account during the identification and development of compensatory mitigation.

Compensatory Mitigation (also referred to as "offset"): Measures taken to compensate for impacts by replacing or providing substitute resources or environments. Compensatory mitigation inside the SRBOP boundary must offset residual impacts that cannot be avoided, minimized and/or rectified, reduced or eliminated, in order to achieve enhancement of resources and their values, services, and functions. Guidance for compensatory mitigation actions and projects will be discussed in detail and will be the primary focus of the remainder of this document.

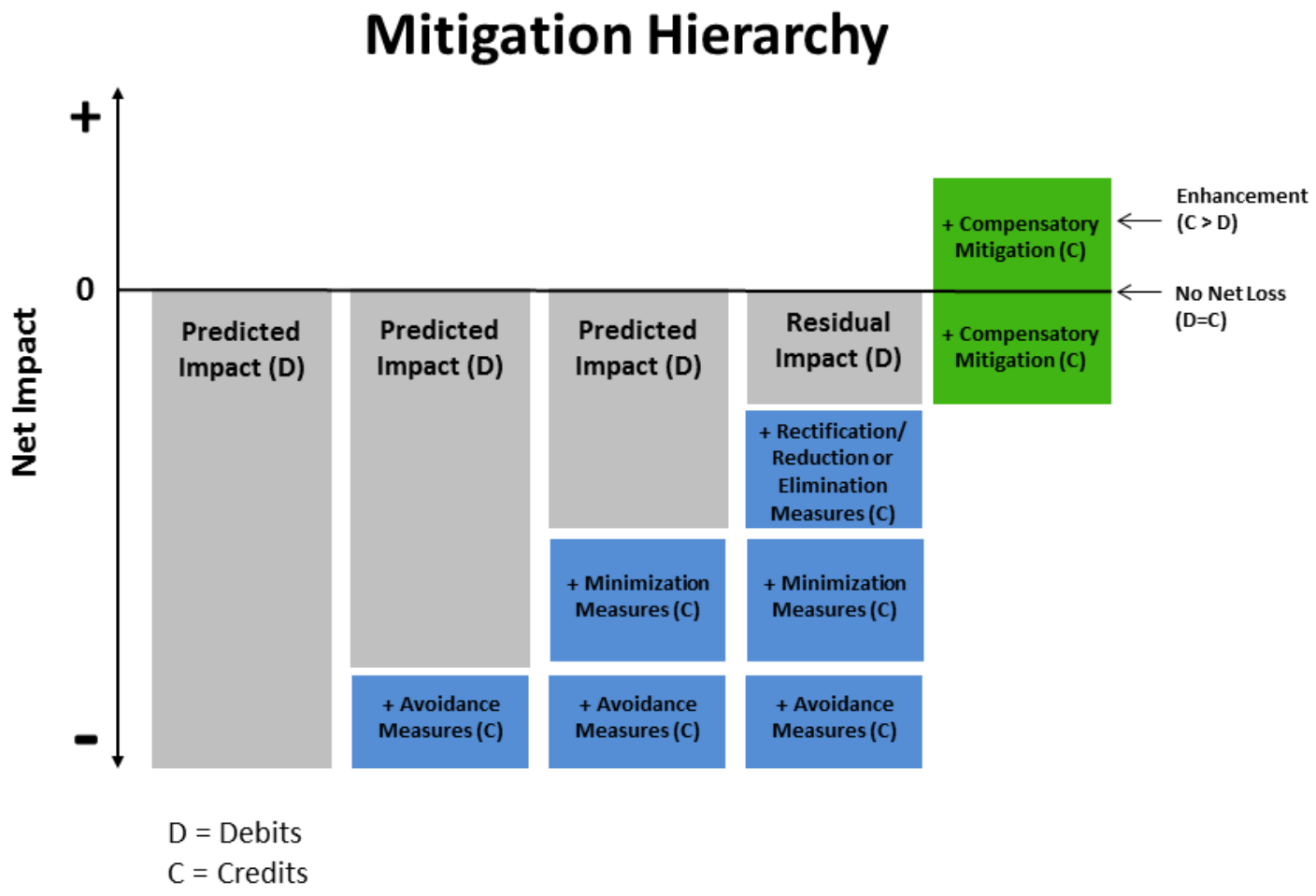

Figure 1. Mitigation Hierarchy

1.3 Compensatory Mitigation

Within the SRBOP, the CMP would achieve enhancement of resources as prescribed in the enabling legislation. The decision-maker will look at the totality of the CMP to determine whether these requirements will be met by the CMP.

Compensatory mitigation would be required to address foreseeable residual impacts (i.e., reasonably foreseeable effects that remain after the application of the first four steps of the mitigation hierarchy) to affected resources and their values, services, and functions from the Project.

The CMP, prepared in accordance with the framework, would demonstrate and ensure that mitigation measures and compensatory mitigation sites are durable, defined by outcomes, implemented and monitored for effectiveness, considered within an adaptive management framework, reported upon, managed by a responsible party, informed by the best available science, and developed through effective, early, and frequent communication with cooperating agencies and applicable stakeholders.

1.3.1 Principles, Standards, and Technical Elements

The following general compensatory mitigation principles, standards, and technical elements provide an introduction to components that should be included in the CMP. More detailed, Project-specific information is provided in the remainder of this Framework and will assist in the Proponents' development of the CMP. The following discussion provides the principles, standards, and technical elements the Proponents will consider when developing the CMP and will direct the development of the CMP with regard to the following:

- Landscape-scale Approach
- Best Management Practices
- Durability
- Mitigation Measures' Outcomes and Performance Standards
- Effectiveness Monitoring
- Adaptive Management
- Reporting
- Responsible Parties
- Best Available Science
- Communication: Transparency, consistency, and participation

The CMP would include BMPs that are state-of-the-art, efficient, appropriate, and practicable mitigation measures for avoiding, minimizing, rectifying, and reducing or eliminating impacts over time.

The CMP would demonstrate where applicable that mitigation measures and compensatory mitigation sites are durable for the duration of the impacts resulting from the Project. Durability includes three types of considerations for mitigation measures

and for compensatory mitigation sites: resource, administrative, and financial. Resource considerations for durability include, but are not limited to, ensuring that mitigation measures and/or compensatory mitigation sites achieve and maintain their required outcomes, including being resilient to foreseeable change agents (e.g., wildland fire, invasive species) for the duration of the impacts. Administrative considerations for durability include, but are not limited to, actions that limit or exclude land use activities that are incompatible with mitigation measures and/or compensatory mitigation sites, such as those required by permit terms and conditions, land use planning, or legal designations. Financial considerations for durability include, but are not limited to, ensuring there will be financing sufficient to maintain, monitor, and adaptively manage mitigation measures and/or compensatory mitigation sites for the duration of the impacts from the Project.

The CMP would clearly articulate the duration of the impacts from the Project and ensure that compensatory mitigation measures and sites are addressing the impacts for an equivalent period of time. At a minimum, the duration of compensatory mitigation measures should extend until the residual effects have been restored. In addition, the CMP would demonstrate (e.g., through financial assurances) that the responsible party for a mitigation measure and/or a compensatory mitigation site will maintain the mitigation's durability. The CMP would articulate that the responsible party is obligated to correct any loss of durability (i.e., a reversal), except if the BLM determines that the loss of durability was caused by a force majeure event (i.e., an event that cannot be reasonably anticipated or controlled, such as natural disasters outside of a predicted range of disturbance, additional governmental restrictions, etc.).

The CMP would establish clearly defined and measurable outcomes for those compensatory mitigation measures, although it may also be necessary to establish minimum actions (i.e., outputs) that would be taken in order to achieve those outcomes. The CMP would also develop performance standards that will be used to monitor and assess the effectiveness of compensatory mitigation measures. Mitigation measures' outcomes should support the resource objectives of the SRBOP Resource Management Plan (RMP) and/or the objectives of other federal agencies, Tribal, state, and/or local governments. The CMP would provide performance standards that will be used to monitor and assess the effectiveness of the compensatory mitigation measure in achieving the required outcome. The same or compatible methods, including metrics, as used to identify resource objectives and/or used to measure the reasonably foreseeable impacts of the Project should be used to design the performance standards in order to be able to best measure the effectiveness of the mitigation measures for those impacts.

The CMP would identify and provide protocols to ensure that mitigation measures are monitored in order to verify the required outcomes are being achieved and/or for ensuring that specific adaptive management requirements are being implemented. The CMP would identify the type, extent, and duration of effectiveness monitoring for mitigation measures, as guided by the degree of uncertainty associated with a mitigation measure, the amount and type of the mitigation measure, and the potential need for adaptive management. The CMP would identify the party responsible for conducting effectiveness monitoring and, if necessary, the Proponents would enter into

a formal and binding agreement with the BLM or another entity to conduct the effectiveness monitoring. Effectiveness monitoring should be designed around the same or compatible methods, including metrics, as used to identify resource objectives, measure the reasonably foreseeable impacts of the Project, and/or define the mitigation measure's outcome and performance standards. The financial cost of implementation and effectiveness monitoring will be the obligation of the responsible party. These costs will be included in the determination of the amount of compensatory mitigation.

The CMP would clearly articulate adaptive management provisions that respond to lessons learned from scientific research, implemented mitigation measures, and associated effectiveness monitoring. The responsible party will be required to implement adaptive management of mitigation measures to reduce uncertainty and achieve the required mitigation outcomes.

Individual site-specific projects would describe reporting procedures that include preparation and submission of periodic reports to the appropriate BLM office on the implementation and effectiveness of the mitigation measures. Monitoring reports should typically consist of written summaries, implementation and effectiveness monitoring data in order to verify that mitigation measures are being implemented as required in the land use authorization and that the required outcomes are being achieved and/or for ensuring that specific adaptive management requirements are being implemented. The BLM will use these reports to help determine if the responsible party needs to complete any necessary corrective actions or adaptive management in order to achieve the required mitigation outcomes.

The CMP would identify a responsible party accountable for fulfilling all aspects of mitigation obligations including, but not limited to, ensuring the durability and effectiveness of mitigation measures, achieving mitigation measures' outcomes, and complying with monitoring, adaptive management, and reporting requirements.

The CMP would use the best available science (e.g., peer-reviewed research and methods, scientifically robust monitoring data and modeling results, well-documented case studies, etc.), to inform the identification and analysis of reasonably foreseeable impacts and mitigation for those impacts. For compensatory mitigation obligations, it may be appropriate to include scientific studies/inventories that can aid in determining the appropriate type, duration, and amount of compensation. Generally, scientific studies/inventories, on their own, should not be considered compensation, unless the studies/inventories directly offset the impact or are necessary to inform the maintenance, monitoring, and/or adaptive management of the compensatory mitigation measures, or otherwise directly benefit the management of the impacted resources.

Because the BLM has determined that compensatory mitigation is warranted for impacts within the SRBOP, the BLM has established a mitigation standard of enhancement (i.e. net benefit) to comply with the enabling statue and achieve resource objectives. The CMP would identify and describe how it intends to achieve the mitigation standard, and what metrics and accounting system, whether qualitative (e.g., subjective and/or intuitive) or quantitative metrics, will be used. Guidance for the development of metrics and accounting systems are provided in the resource component sections below.

The Proponents' compensatory mitigation obligation would be commensurate with the reasonably foreseeable residual effects from the Project's impacts and the compensatory mitigation measures would demonstrate the appropriate level of timeliness and be additional. The CMP will ensure that any compensatory mitigation obligation is reasonably related and proportional to the reasonably foreseeable residual effects from the Project (i.e., commensurate). The type of compensatory mitigation should have a reasonable relationship to the Project's reasonably foreseeable residual effects, which can include both in-kind and out-of-kind compensatory mitigation measures. The BLM will evaluate the types of compensatory mitigation measures based on their ability to provide the maximum benefit to the impacted resources. In addition, the amount of compensatory mitigation should be proportional to the Project's reasonably foreseeable residual effects. Proportionality includes factors such as the quality of the resource (at both the impacted site and compensatory mitigation sites), the timeliness of the compensatory mitigation measure, the risk of a measure's failure, and the established mitigation standard (i.e., enhancement/net benefit).

Compensatory mitigation measures would demonstrate the appropriate level of timeliness. The CMP would describe when the measure's outcomes will be achieved. The BLM's general preference is that compensatory mitigation outcomes be achieved in advance of the Project's impacts. The implementation of this preference is dependent on the urgency of the compensatory mitigation needs, the amount and type of the compensatory mitigation measures, and the financial capability of the Proponents. The BLM may allow for the Projects' residual effects to precede the achievement of compensatory mitigation outcomes. However, the CMP would need to account for the increased uncertainty and the time-value of delayed benefits during the determination of the compensatory mitigation obligation.

Compensatory mitigation measures would improve upon the baseline conditions of the impacted resources, be demonstrably new, and establish that they would not have occurred without compensatory mitigation (i.e., additional). The CMP would ensure that compensatory mitigation measures are in addition to any existing and funded investments, or any foreseeably expected investments, that benefit the same resources at the same compensatory mitigation site (i.e., financial additionality). The CMP would also ensure that compensatory mitigation measures improve upon the baseline conditions of the impacted resources beyond the conditions that would have happened without the compensatory mitigation (i.e., resource additionality).

In summary, at a minimum the CMP should contain:

1. type of resource(s) and/or its values(s), service(s), and function(s), and amount(s) of such resources to be provided (usually expressed in acres or some other physical measure), the method of compensation (restoration, establishment, preservation, etc.), and the manner in which a landscape-scale approach has been considered;
2. factors considered during the compensatory mitigation site selection process;
3. compensatory mitigation site protection instruments to ensure the durability of the measure;

4. baseline information;
5. the mitigation value of such resources, including a rationale for such a determination;
6. a mitigation work plan including the geographic boundaries of the measure, construction methods, timing, and other considerations;
7. a maintenance plan;
8. performance standards to determine whether the compensatory mitigation measure has achieved its intended outcome;
9. monitoring requirements;
10. long-term management;
11. adaptive management commitments;
12. financial assurance provisions that are sufficient to ensure, with a high degree of confidence, that the compensatory mitigation measure will achieve and maintain its intended outcome, in accordance with the compensatory measure's performance standards, and;
13. potentially additional information as necessary to determine appropriateness, practicability, and equivalency of compensatory mitigation projects, particularly as they relate to the principles, standards, and technical elements described above.

1.3.2 Preparation, Implementation, Management, and Monitoring

Preparation of the CMP will involve discussions, collaboration, and coordination between the Proponents and the BLM. This coordination may include the establishment of an ad-hoc "Working Group" comprising the Proponents and BLM representatives. Involvement by county, state, and federal agencies with jurisdiction over the Project will ensure that the CMP is sufficient and consistent with applicable laws and government policies.

The CMP would include a schedule detailing the sequence for implementing the restoration of temporarily and permanently impacted areas caused by construction of the Project and the sequencing of proposed compensatory mitigation actions including timeframes for securing compensatory mitigation lands and for implementing mitigation actions on those lands.

The BLM with the assistance of the CMP Working Group, if formed, will establish the timeframes for which they will have each mitigation action attain its full mitigation credit (e.g., restoration of habitat values, land acquisition, etc.) as required to compensate for the Project's impacts. Specific criteria will need to be developed that describes and measures the success and failure of each the mitigation action. The desired ecological outcomes will be based on the results of the impact assessment and ecological evaluation, both referenced earlier in this document, with an overall goal of achieving an enhancement/net benefit for the resources and their values, services, and functions through implementation of the CMP.

The CMP would include an overall management plan for all the compensatory mitigation actions that details how mitigation actions and or initiatives will be managed and how enhancement actions will be implemented and monitored. The Proponents, or other identified responsible parties, will be responsible for monitoring and reporting to the BLM whether mitigation and the associated management actions are implemented as stated in the CMP ("implementation monitoring") and immediately address any inconsistencies, in coordination with the BLM. The Proponents will also be responsible for monitoring and reporting to the BLM the response of affected resources at the construction impact sites as well as at mitigation action sites to confirm the targeted resource outcomes are being achieved ("effectiveness monitoring"). Monitoring will also be used to identify mitigation actions that are not achieving the desired result and remedial actions will be developed and implemented.

The CMP would include scientifically accepted monitoring methods and a detailed regime for monitoring and assessing attainment of targeted ecological outcomes, over the life of Project impacts. The Proponents will be responsible for reporting the monitoring findings and recommendations for a specified time period, as required by the federal permitting process for the duration of the mitigation effort(s) as determined by evaluated success of the mitigation. The report will describe all mitigation and management actions carried out during the reporting year, and all remedial management work performed in response to monitoring actions. The report will include an evaluation of mitigation success in meeting ecological targets (i.e. outcomes), and a description of the methods used to perform the evaluation.

The BLM will track the monitoring reports to determine if actions and outcomes are consistent with applicable law, the CMP, the FEIS, the ROD(s), and their respective Project authorizations including ROWs and permits. The agencies will work cooperatively to identify and address inconsistencies. Each agency will reserve the ability to take all measures available under law and regulation to ensure compliance with the terms and conditions of its respective authorization.

Table 1. Coordination and Actions taken to Comply with the Mitigation Hierarchy

Coordination/Action	Project Component	Reference to Discussion	Summary
Project Design	FEIS Alternatives	FEIS 2.2	Alternative Development: Discusses why certain alternatives were developed and why they were preferred alternatives or other alternatives
		FEIS 2.4	Route Action Alternatives: Discusses specifics for each route alternative: ▪ 2.4.1.1 lists the BLM Preferred Alternatives for each segment: Each alternative states what factors informed routing, such as being within the WWE corridor, paralleling existing lines, rebuild of existing lines instead of additional lines, complying with sage-grouse core directive, avoidance of importance historical sites, avoidance of important wildlife areas, etc. Specific avoidance actions are listed under each Segment and Alternative. ▪ 2.4.1.8 lists Twin Falls County Preferred Alternatives ▪ 2.4.1.9 lists Owyhee County Preferred Alternatives ▪ 2.4.1.10 lists Idaho Army National Guard Preferred Alternatives: Segment 8 – to avoid adversely affecting training (ground maneuver and aerial compact training operations) in the Orchard Combat Training Center. ▪ 2.4.2 – 2.4.11 discuss all alternatives for each Segment, where they are located, and what factors were considered in their development
	SEIS Alternatives	SEIS 2.3	Alternative Development: Sub-sections describe Segments and routes and some of the routing criteria used: ▪ SEIS 2.3.3 Action Alternatives Considered in the SEIS – Describes the different alternatives ▪ SEIS 2.3.4 BLM Preferred Alternatives ▪ SEIS 2.3 No Action Alternative ▪ SEIS 2.5 Other Routes Considered – Describes other routes and factors leading to them not being considered in detail; such as not being economically feasible, causing excessive impacts to private property, crossing more sensitive resources than other alternatives with no clear beneficial trade-off, other resource concerns, or being very similar to routes already analyzed
	Alternatives Considered and Eliminated	FEIS 2.4.12	Describes Alternatives Eliminated from Detailed Study for each segment. This section describes each alternative, where it would be located, and reasons for elimination from further study such as: ▪ Substantially longer route (often times resulting in more effects on sensitive resources) ▪ Steep slopes

Table 1. Coordination and Actions taken to Comply with the Mitigation Hierarchy (continued)

Coordination/Action	Project Component	Reference to Discussion	Summary
			Substantially more effect on sensitive resources (such as big game crucial range, sage-grouse core habitat, raptor nests, historic trails and other cultural resources, visual resources, wetlands, conservation areas or other special designation areas) ▪ Extensive greenfield development ▪ Does not meet reliability requirements ▪ Crossing more forested habitat ▪ Crossing densely populated areas ▪ Constraints due to existing utility development ▪ Increased impacts to agriculture
		SEIS 2.5.3	Discusses Other Routes/Alternatives Eliminated from Detailed Study
Required Design Features	FEIS	FEIS Table 2.1-2	Summary of Project Facilities
		FEIS 2.3	Substation Alternatives: ▪ Describes substations, construction components and needed improvements to existing infrastructure
		FEIS 2.6	Design Alternatives: ▪ Describes alternatives to the various components, such as structure design (2.6.1), structure finish and surface treatment alternatives (2.6.2), underground alternatives (2.6.3)
		FEIS 2.7	Components common to all action alternatives: ▪ Describes components (2.7.1) for system construction (transmission line, communication system, access roads, multipurpose yards, fly yards, substations) (2.7.2), operations and maintenance (2.7.3), and decommissioning (2.7.4).
		FEIS Table 2.7-1	Proposed Environmental Protection Measures (This is not called out as design features in the FEIS but is referred to as design features by chapters in the SEIS)
	SEIS	SEIS 2.2.1	Transmission Line Substation Facilities
		SEIS Table 2.2-2	Summary of Project Facilities
		SEIS 2.6	Design features, including proposed MEP and EPMs
		SEIS Chapter Sections 3.X.2.5	Proponent-Proposed Design Features and Measures
Selective Mitigation Measures	FEIS	FEIS 2.7.5	Proposed EPMs and Agency Mitigation Measures
		FEIS Table 2.7-1	Proposed Environmental Protection Measures

Table 1. Coordination and Actions taken to Comply with the Mitigation Hierarchy (continued)

Coordination/Action	Project Component	Reference to Discussion	Summary
		FEIS Chapter Sections 3.X.2.2	Avoidance, minimization, and mitigation measures are discussed for the various resources in the appropriate section
		FEIS 3.11	Special Status Wildlife and Fish ▪ 3.11.1.4 Page 3.11-12 through 3.11-25; Page 3.11-18: TESWL-2 ▪ 3.11.2.2 – Avoidance, minimization, and mitigation measures are discussed throughout this section for each species. Also, refer to table 2.7-1
		FEIS Appendix C	Mitigation Plans ▪ C-1 Historic Properties Treatment Plan ▪ C-2 Draft Framework for Compensatory Mitigation for and Monitoring of Unavoidable impacts to Waters of the U.S. ▪ C-3 Greater Sage-grouse Avoidance, Minimization, and Mitigation Measures
		Appendix I	Wildlife Stipulations
		Appendix J	Sage-Grouse Impact Analysis
	SEIS	SEIS 2.3.1.3	Proponent-Proposed Mitigation and Enhancement Portfolio
		SEIS 2.6	Design features, including Proposed MEP and EPMs ▪ Table 2.6-1 Summary of mitigation proposals applicable to Segments 8 and 9 Revised Proposed Routes ▪ 2.6.1 Additional BLM Mitigation Categories
		SEIS Chapter Sections 3.X.2.5	Proponent-Proposed Design Features and Measures
		SEIS Chapter Sections 3.X.2.6	BLM Compensatory Mitigation Measures
		SEIS Appendix C	Proponents' Mitigation and Enhancement Portfolio
Implementation Plans	FEIS	FEIS POD Volume I	▪ Appendix C: The Environmental Compliance Management Plan ▪ Appendix D: Reclamation and Framework Plan ▪ Appendix E: Framework Noxious Weed Plan ▪ Appendix F: Framework Storm Water Protection Plan ▪ Appendix G: Framework Spill Prevention, Containment, and Countermeasures Plan ▪ Appendix H: Plant and Wildlife Conservation Measures Plan ▪ Appendix I: Framework Stream, Wetland, Well, and Spring Protection Plan ▪ Appendix J: The Framework Paleontological Resources Protection Plan

Table 1. Coordination and Actions taken to Comply with the Mitigation Hierarchy (continued)

Coordination/Action	Project Component	Reference to Discussion	Summary
			▪ Appendix K: The Agricultural Protection Plan ▪ Appendix L: The Framework Traffic and Transportation Management Plan ▪ Appendix M: Framework Blasting Plan ▪ Appendix N: Framework Erosion, Dust Control, and Air Quality Plan ▪ Appendix O: Framework Fire Prevention and Suppression Plan ▪ Appendix P: Framework Hazardous Materials Management Plan ▪ Appendix Q: Framework Construction Emergency Preparedness and Response Plan ▪ Appendix R: Operations, Maintenance, and Emergency Response Plan ▪ Appendix S: Cultural Resources Protection Plan ▪ Appendix T: Preconstruction Checklist ▪ Appendix U: Framework Flagging, Fencing, and Signage Plan ▪ Appendix V: PacifiCorp's Transmission Construction Standards ▪ Appendix W: PacifiCorp's Transmission and Distribution Vegetation Management Program Specification Manual and Idaho Power Company's Transmission Clearing Specifications and Framework for Managing Noxious Weeds ▪ Appendix X: Land Description of Project Components on Federally Managed Public Lands ▪ Appendix Y: Other Information ▪ Appendix Z: Environmental Protection Measures
Implementation Plans	2013 ROD	Appendix	▪ Appendix C: Draft Off-site Compensatory Mitigation to Offset Project Impacts to Greater Sage-grouse ▪ Appendix D: Draft Migratory Bird Habitat Mitigation Plan ▪ Appendix E: Programmatic Agreement ▪ Appendix G: Draft Framework for Compensatory Mitigation for and Monitoring of Unavoidable Impacts to Waters of the United States

1.4 Guide to Resource Sections

The BLM and Proponents have identified three categories of resources within the SRBOP as follows:

- Cultural Resources and National Historic Trails,
- Recreation and Visitor Services, and
- Habitat.

Each of the following sections outlines and analyzes the specific details of the Framework for each of these three categories of resources within the SRBOP. Each resource section has the following subsections:

- Introduction
- Impact Assessment
- Mitigation – starts with a short description of avoidance, minimization, rectification/reduction or elimination over time and then describes potential compensatory mitigation projects for each of the three types of compensatory mitigation:
  - Preservation (Protection)
  - Restoration
  - Establishment (Science and Education)

2 CULTURAL RESOURCES AND NATIONAL HISTORIC TRAILS

2.1 Introduction

The Section 106 regulations (36 Code of Federal Regulations [CFR] 800) applicable to cultural resources impacts on this project fall under the National Historic Preservation Act (NHPA). Compliance with the Section 106 regulations for the NHPA is being handled through the Programmatic Agreement (PA) for the Project, which involved multi-year and multi-agency negotiations with numerous consulting parties, including Native American tribes. The PA was signed in 2012 and was attached to the Gateway West FEIS and ROD. The PA allows for a sampling inventory to model potential cultural resource impacts by alternative to allow comparative analysis.

The NHPA compliance process results in evaluating which cultural resources are determined eligible for the National Register of Historic Places (NRHP). Only those cultural resources determined eligible to the NRHP, referred to as "historic properties," are assessed for impacts from a project or "undertaking." The challenge is that, under NEPA, all of the cultural resources need to be considered rather than just those deemed "historic properties". For example, some historic trails, traditional cultural use areas for tribes and cultural landscapes may fall outside of the official definition for "historic properties" As contained in the NHPA Section 106 regulations.

The NHPA requires an agency to evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate the effect to historic properties. However, the regulations only discuss mitigation in a general sense as a mechanism to reduce to historic properties. The regulations do not define mitigation or specify what constitutes mitigation.

A connected process of the PA is the creation of a Historic Properties Treatment Plan (HPTP), which will outline the mitigation plan for the Project, as well as provide for site-specific mitigation once all the cultural inventory has been completed, under the NHPA. The Presidential Memoranda on mitigation, DOI manual 600 DM 6 on landscape-scale mitigation and current BLM guidance on mitigation do not specifically address cultural resources. As a result, the purpose of this portion of the Framework is to outline how impacts to cultural resources will be assessed and what types of mitigation measures will be implemented to mitigate for those impacts, with the goal of achieving enhancement of cultural resources in the SRBOP.

For historic trails, the National Trails System Act (NTSA) is the legislation that governs the protection of Trails that are congressionally designated National Historic Trails (NHT). The NTSA stipulates that projects may not "….substantially interfere with the nature and purpose of the trail." BLM Manual 6280 lays out the agency policy for compliance with the NTSA, management of the trails, as well as guidance for analysis of NHT in the NEPA process. While the FEIS and ROD for the Gateway West Project did not address Manual 6280, because they preceded the release of the Manual, the trails chapter of this SEIS does address the Manual.

The Manual stipulates that the NEPA documentation for NHTs needs to include analysis of the potential impacts to the nature and purpose of the designated NHT as well as

those undergoing a National Trail Feasibility Study. The analysis needs to take into account the trail resources, qualities, values, and associated settings and the primary use or uses of any NHTs. The Manual also discusses mitigation to impacts and requires consideration of mitigation opportunities "….to the level commensurate with the adverse impact to the nature and purposes; resources, qualities, values and associated settings; and the primary use or uses of the NHT." However, specific mitigation guidance or expected outcome is not delineated in the Manual.

Potential compensatory mitigation, including enhancement, for the cultural resource and national historic trails values identified in the enabling act for the SRBOP (P.L. 103-64) is the subject of this resource section.

2.2 Impact Assessment

Impacts to cultural resources and historic trails can be direct and indirect, as well as cumulative. Construction and operation and maintenance of the transmission line and its ancillary facilities and roads could directly impact existing cultural resources, such as prehistoric or historic archaeological sites, while indirect effects from a visual sense could affect historic architectural or built environments and cultural landscapes. Impacts are discussed separately for cultural resources and historic trails and are in Chapter 3 of the SEIS, Section 3.1 – National Historic Trails; and Appendix J, Section 3.3 – Cultural Resources. Impacts to cultural resources are referenced in Sections 3.3.2.3 and 3.3.2.4 and Table 3.3-7. For historic trails, impacts are referenced in Sections 3.1.2, 3.1.2.2, and 3.1.2.3, and Table 3.1-19.

In addition, after construction, public use of existing and new access roads may encourage unauthorized site access, illicit artifact collection, and resource vandalism. Transmission line structures may introduce visual impacts on existing cultural resources, especially historic trails, where setting is a key element of their NRHP eligibility. The presence of large transmission structures would also introduce long-term, cumulative visual impacts.

The analysis methods for determining the impacts, minimization, and mitigation to cultural resources and historic trails are subjective in nature, and thus more qualitative than quantitative, because these are finite, non-renewable resources. While it can be assumed that certain cultural resources may be more important than others, the only standard by which they are compared is the NRHP criteria of significance, identified in 36 CFR 60.4. Moreover, it can be assumed that different portions of the population, such as Native American tribal members, may not value cultural resources the same way, with some land users placing more significance on certain types of cultural resources than others. The process of evaluating cultural resources under the NHPA for their eligibility to the National Register may result in resources being determined eligible to the National Register and determined a "historic property." Those sites that are either on or eligible for the National Register are more significant than those that are not but there is still no comparison of these sites against one another. Those that are not eligible do not receive the same consideration under the NHPA. For other resources that are not evaluated under this process, or fall outside of an "historic property" definition, there is no accepted standard by which to judge their values.

However, in both cases, the important factor is the integrity of the site and whether the character-defining features that give significance to the site are intact.

In Manual 6280, NHTs are considered as a contiguous unit and may have portions that are no longer visible trail routes, as well as segments with intact trail ruts or other features. Under the NHPA, the trail segments need to possess the character-defining features that make them eligible to the National Register and thus are considered "historic properties," but under Manual 6280 they are still considered NHTs whether they retain such integrity or not. The Comprehensive Management and Use Plan (CMUP; NPS 1999) established High Potential Sites and Segments (HPSS) as the criteria for significant elements of the NHT to be protected and preserved. Consequently, the recommended guidance under the Manual for avoidance, minimization, and mitigation focuses on these HPSS. While generally the physical trails themselves can be avoided for direct impacts, the indirect impacts become more challenging to mitigate. The analysis in the SEIS relies on a viewshed model that takes into account the setting of the historic trail, the integrity of the visual context, and the proximity and prominence of the Project within the historic trail setting.

NEPA requires that all cultural resources are taken into consideration. Consequently, the best formula that can be utilized is a relative one of high, medium, and low impact on the resources and a relative classifying of cultural site types using site importance and integrity. The logical action is to consider those sites that are the most pristine, intact, and multifaceted and provide the most benefit to the resource, as well as the public value, for the most exhaustive mitigation. For example, a historic site that has intact structural elements and no visual intrusions or modifications to its historic and landscape setting would rank high in its cultural integrity and therefore be impacted more by the project than a site that already has introduced modifications. These factors will come into play in determining applicable avoidance, minimization, and mitigation and how, or if, compensation for impacts is necessary.

Determining impacts to cultural resources is subjective. However, through use of the HPTP for historic properties and the methodology described above for other cultural resources, impacts can be assessed by cultural resource professionals. Furthermore, through avoidance and minimization many of those impacts can be all together avoided or minimized to the maximum extent possible. Finally, compensatory mitigation can be used to account for remaining residual impacts to an extent that ultimately leads to achieving enhancement of cultural resources in the NCA.

2.3 Mitigation

As discussed elsewhere, the first steps in the mitigation hierarchy are avoidance and minimization. In general, most, if not all, of the direct impacts to cultural resources and historic trails will be avoided by locating towers and other ground-disturbing features at the maximum separation and maximizing span distance. Many of these are captured in the FEIS standard design features and EPM. Minimization actions will include topographic screening of sites from the Project, crossing historic trails perpendicular to the trail and in locations without trail traces or where the setting lacks integrity, and providing buffers around the cultural sites.

For cultural resources that cannot be avoided or minimized, mitigation plans outlined in the SEIS through both the HPTP and other mitigation plans will be generic and not include any site-specific compensatory mitigation. This is partially due to the fact that the final cultural resource inventories covering 100 percent of the selected alternative will not be completed until after the ROD pursuant to the executed PA, when the Proponents present the final engineering and design plan. The components of the overarching HPTP will discuss general mitigation measures that could be implemented project-wide and may include, among others, such ideas such as interpretive signs and kiosks, stabilization of historic buildings, and oral histories. The HPTP will also include such chapters as monitoring during and after construction and inadvertent discoveries. Again, this will apply to historic properties, not other cultural sites such as cultural landscapes and traditional cultural use areas. The consulting parties to the PA, as well as agencies and tribes, will be consulted in the development of the HPTP. A similar working group with cultural resource expertise will be consulted to review the CMP cultural resource mitigation projects addressing other cultural sites not covered in the HPTP.

Some mitigation discussions appear in the body of the SEIS which for trails are Sections 3.1.2.5 and 3.1.2.6 as well as Appendix J and for cultural resources Section 3.3.2.5. EPMs are outlined in Sections 3.3.2.6 and 3.3.2.7. The SRBOP RMP outlines desired future conditions for cultural resources that would protect cultural and historical resources and preserve past, present, and future traditions and practices. This would be accomplished through protection using physical and administrative measures, education, interpretation, and special designations. Protective measures would include restricting vehicles to designated routes in the Archeological Historic District and fencing to protect sites *in situ*. The Oregon Trail could be protected by establishing it as a Visual Resource Management (VRM) Class II area. Adverse impacts would be mitigated using a variety of options including documentation of sites, testing or data recovery, acquiring lands containing significant cultural resources, and enlarging the Oregon Trail Special Recreation Management Areas. The RMP also recommends monitoring the effectiveness of any programs implemented by having periodic site visits to assess conditions.

The CMP must include the following types of measures that would represent identifiable projects that enhance cultural resources and historic trails within the NCA:

- Preservation (Protection),
- Restoration, and
- Establishment (Science and Education).

2.3.1 Preservation (Protection)

Protection projects could include establishing protective barriers such as fences or berms, closing roads to motorized vehicles near sites or road segments that are historic trail routes, stabilizing physical elements of buildings or other structures, or hardening ground surfaces and establishing erosion controls. Acquisition of historic sites or historic trail segments off-site and on other land ownership is encouraged to protect these sites by incorporating them into public or collaborative public/private

management. To ensure ongoing protection of cultural resources, law enforcement patrols of site areas and periodic cultural resource monitoring would be implemented. Options for such monitoring could be to establish a site stewardship program through cultural resource volunteers, trails advocacy groups, or tribal programs.

While most mitigation is intended to be commensurate with the impact, in kind, and directly correlated to the site or in the vicinity of the resource, enhancements will be more expansive and elaborate. Enhancement projects for cultural resources would be viewed slightly differently than for other resources in that the concept of "baseline" or a threshold to be reached is difficult to apply. For the most part, enhancement would be projects that go beyond the standard of stabilizing sites or doing data recovery on an archeological site. Enhancement on a data recovery project involving an archaeological site could be developing a public outreach component to allow site tours during excavation, additional research and publication of a public version of the report, a school program, and media programming. More complex restoration projects would also qualify as enhancement, especially if they involve other disciplines. For example, a historic ranch complex could be acquired as protection and the enhancement portion could be to restore the complex to its historic setting by removing invasive plant species, replanting ranching period crops, orchards or other trees, and rehabilitating and restoring the house and outbuildings to the appropriate architectural period. In addition, further enhancement could be to develop the ranch complex into a recreational site and enhance visitor opportunities with interpretive informational features such as signs, periodic events/tours or even have a living history site open at least on a periodic basis.

As an example, an opportunity in the SRBOP for enhancement that would involve a collaborative effort, and multiple resources, would be Celebration Park. The county park features a well-known petroglyph boulder site, a historic railroad bridge, and a small interpretive museum.

2.3.2 Restoration

Restoration projects could include stabilizing and rehabilitating historical sites such as structures or features mostly of an architectural nature. One example would be restoration of historic structures. It could also include the restoration of the setting around such a site such as the landscape and surrounding vegetation. Restoration could entail removal of modern features and intrusions within the cultural context of the site. For example, an historic trail setting that is currently surrounded by invasive plants such as cheatgrass could be restored to native shrub-steppe vegetation. Restoration of natural areas that have significance to a particular ethnic group, such as tribal root-gathering grounds, could also be considered.

2.3.3 Establishment (Science and Education)

Establishment focuses mainly on research, interpretation, and public awareness and enjoyment of cultural sites. Examples of potential mitigation projects, especially for historic trails, include interpretive signs, kiosks, and visitor centers that would describe the site and provide background information to the public. Research, oral histories, and ethnographies would be other options to enhance knowledge of cultural resources. Additional actions that could promote these locations for public interest would be to

produce school programs and curriculum, establish parking areas at historic trail access points, and build turnstiles and gates in existing fences where trails could be accessed. Many of the latter efforts could dovetail with recreation and visitor services to augment recreation sites. An example of a project that would fall into this category would be the expansion of a recreation area near historic trail ruts to include a hiking area and interpretive panels for this section of the trail.

3 RECREATION AND VISITOR SERVICES

3.1 Introduction

While recreation may not have had been emphasized early in the history of BLM, FLPMA recognized recreation as an important component of multiple use management. Over the years, definitions of recreation have differed in their particular emphasis but have shared a common core: recreation is a behavior that individuals choose to engage in for the purpose of realizing experiences and personal benefits, such as renewal or refreshment. The individual attains experiences and benefits by participating in preferred recreation activities in preferred recreation settings.

Public lands can provide visitors a wide array of satisfying recreation experiences. The goal of the public land manager is to provide opportunities for visitors to obtain desired experiences and beneficial outcomes while protecting resources. The manager accomplishes this goal by planning for and managing the physical, social, and operational settings and the activities that occur within them.

In the last several decades, there has been a growing recognition of how much recreation contributes to the quality of life, economy, society, and environment. Changing public values and expectations of land management agencies to meet the demand for diverse recreation uses has created the need for changes in managing recreation and visitor services. These changes and resulting advances in recreation management knowledge and practices have been responsible for the evolution in BLM's outcomes-focused management approach. Outcomes-focused management is defined as an approach to recreation management that focuses on the positive outcomes gained from engaging in recreational experiences. The Presidential Memoranda on mitigation, DOI manual 600 DM 6 on landscape-scale mitigation and current BLM guidance on mitigation do not specifically address recreation and visitor services. As a result, the purpose of this portion of the Framework is to outline how impacts to recreation will be assessed and what types of compensatory mitigation measures will be implemented to mitigate for those impacts, with the goal of achieving enhancement of recreation and visitor services in the SRBOP.

BLM Manual 8320 (Recreation Planning) directs the BLM to designate administrative units known as Special Recreation Management Areas (SRMAs) where there is a need for a higher level of managerial presence or investment than is typical of most public land. The SRBOP RMP designated four SRMAs based on significant recreational, scenic, or cultural values: Snake River Canyon, Owyhee Front, Oregon Trail, and C.J. Strike.

Potential compensatory mitigation, including enhancement, for the recreation and visitor services values identified in the enabling act for the SRBOP (P.L. 103-64) is the subject of this resource section.

3.2 Impact Assessment

Impacts to recreation resources are direct and indirect, as well as cumulative (refer to Sections 3.17 and 3.24 in Chapter 3 and Section 4.4.19 in Chapter 4). Construction and operation and maintenance of the transmission line and its ancillary facilities and

roads could directly impact recreation resources and users by changing the existing or desired recreation setting, the recreation opportunities provided, and the user's subsequent experience, while indirect effects from construction may reduce visitation to the SRBOP. The presence of large transmission structures would also introduce long-term cumulative visual impacts. Impacts are discussed in Chapter 3 of the SEIS.

Assessing impacts to recreation can be subjective as different members of the public place different values on competing types of recreation. However, both quantitative and qualitative types of data are useful to understand social situations and interaction. Quantitative data about the numbers of recreationists that use the SRBOP can be collected from traffic counters, register boxes, and campground receipts. Qualitative data documents the experiences and benefits associated with a quality recreation opportunity. These data help in understanding the who, what, when, where, and why people recreate in specific areas (outcomes) and what influences these outcomes (setting characteristics). The experience and outcome data allow land managers to better plan for, offer, and measure what visitors consider quality recreation opportunities.

Collecting qualitative data requires a dialogue with existing and potential visitors, residents, partners, community leaders, and other stakeholders to determine:

- What activities are preferred?
- What experiences are realized when participating in these preferred activities?
- What individual, social, economic, and/or environmental benefits are attained on-site?
- What benefits stay with the individual off-site, and what benefits cumulatively lead to off-site beneficial outcomes to communities, economies, and the environment?
- What Recreation Setting Characteristics support the desired experiences and benefits?

Various techniques can be used to ask these questions and document responses.

3.3 Mitigation

Many avoidance and minimization measures are identified in the FEIS standard design features and EPMs. For impacts to recreation resources that cannot be avoided or minimized in the SRBOP, this Framework provides general concepts and examples of projects that the Proponents would include in the CMP to ensure compensatory mitigation to achieve enhancement of recreation resources within the SRPOB.

There are a variety of potential projects that would fit within the different types of compensatory mitigation identified for the SRBOP: Preservation (Protection), Restoration, and Establishment (Science and Education). The CMP would include potential projects such as those included below but these should not be interpreted as a comprehensive or all-inclusive list.

Completion of recreation compensatory mitigation projects as identified in the CMP must result in enhance experiences for the SRBOP visitor.

3.3.1 Preservation (Protection)

3.3.1.1 Travel Plan Implementation

Mitigation opportunities include aid in implementation of a travel planning. This could include activities such as signing, road maintenance, road closures, road rehabilitation, and additional law enforcement presence. Timely implementation of the travel plans would enhance the recreation experience and would benefit other resources in the SRBOP.

3.3.1.2 Park Ranger Program

A park ranger program could be developed in order to protect and enhance the existing recreational setting and visitor experience. Park rangers (non-law enforcement) would educate the public on the values, resources, and regulations associated with the SRBOP through in-person contact, presentations, monitoring activities, and conduct general recreation duties such as servicing recreation sites. The goal of this program would be enhanced appreciation and understanding of the SRBOP resulting in less vandalism and other illegal activities.

3.3.1.3 Law Enforcement

The Gateway West Project would allow greater access to public lands that are not easily accessible at this time due to the increase in maintained roads. This would increase use of the public lands along the route of the Project. Additional law enforcement would improve public safety.

3.3.2 Restoration

3.3.2.1 Dump Removal

Unfortunately, dumping is a frequent occurrence in the SRBOP. A program could be developed to remove dump sites within the SRBOP. This project would allow for more dump site clean-up and removal than is currently occurring within the SRBOP. Additional law enforcement presence would be required as part of the project to aid in identifying individuals participating in illegal dumping and discourage additional dumping locations throughout the SRBOP.

3.3.2.2 Sign Repair and Maintenance

A sign program could be developed to monitor the conditions of signs within the SRBOP and provide funding to repair or replace damaged signs. The presence of well-kept signs benefits the recreational experience within the SRBOP.

3.3.2.3 OHV Trail System Development

Establishing and managing of a free cross-country OHV area in close proximity to current OHV users of the SRBOP would restore OHV opportunities that may be impacted by the Gateway West Project and lessen the impact of illegal OHV use within the SRBOP.

3.3.2.4 Recreation Site Improvements and Development

Recreation facility improvements at existing sites plus the addition of new recreation sites would enhance the recreational experience in the SRBOP.

3.3.2.5 Relocation of Existing Powerlines

The relocation of existing powerlines outside of the SRBOP would help to mitigate impacts to the recreational setting.

3.3.3 Establishment (Science and Education)

3.3.3.1 Visitor Center

A visitor center could be established for the SRBOP to provide additional education and outreach opportunities about the values of the SRBOP.

3.3.3.2 Shooting Range

Establishing and managing a shooting range outside of the SRBOP would help to mitigate impacts to the recreational setting.

3.3.3.3 Shooting Education Program

A shooting education program could be enacted to discourage shooting of abandoned debris and the use of lead bullets in the SRBOP to mitigate impacts to the recreational setting. The goal of the education program would be a change in user behavior resulting in less abandoned shooting debris and use of lead shot.

3.3.3.4 SRBOP Outreach/Education Program

An expanded SRBOP outreach/education program could be developed. This could include increasing partner capacity to communicate information about SRBOP values, resources, and management. The program could develop technology such as mobile applications to provide on- and off-site information to visitors. For example, a mobile application could be developed to include, among other things, SRBOP history, SRBOP tour routes, bird identification information, and information on other locations within the SRBOP, such as Swan Falls Dam.

3.3.3.5 Raptor Housing Improvements

The SRBOP mew (a building to house raptors) could be improved in order to provide enhanced facilities for the existing raptors and provide the capacity to house additional animals, such as reptiles, for education purposes.

3.3.3.6 Local Museum Improvements

The local museum could be expanded to provide additional education and outreach opportunities about the history and other values of the SRBOP. This project would enhance the recreation experience in the SRBOP.

4 HABITAT

4.1 Introduction

In 1993, the SRBOP contained predominantly intact upland plant communities including desert scrub and sagebrush steppe communities (e.g., shrub structure unaltered by fire). In 2008, the SRBOP RMP ROD was issued (BLM 2008). Between 1993 and 2008, fires altered 230,000 acres of the NCA to the extent that shrub-dominated communities were replaced by early successional plant communities containing an inter-mix of native and non-native invasive species. Within the RMP, three Management Areas (MAs) and associated Desired Future Conditions (DFCs) were designated and prioritized. MAs depict locations where specific management actions including rehabilitation and fire suppression are prioritized based on ecological resiliency and function for highest fire management priority and restoration potential. Three MAs and corresponding DFCs for vegetation are designated and prioritized in the RMP.

- MA 1 is composed of sagebrush and salt desert shrub communities, and is identified in the RMP as the area within the SRBOP most resistant and resilient to disturbance with the highest probability of restoration success (BLM 2008).
- Areas designated as MA 2 still contain habitat structure (e.g., shrub communities) that provide some habitat connectivity value for supporting a raptor prey base, but to a lesser extent than what is found in MA 1.
- MA 3 is managed at a lower priority level than MA 1 or 2 due to almost complete loss of shrub structure and the associated lack of ecological resilience and resistance of the current plant communities.

The RMP for the SRBOP emphasizes the restoration and rehabilitation of all areas outside the Idaho Army National Guard Orchard Combat Training Area to bring raptor populations and habitat to more desirable conditions. The RMP identifies appropriate management actions to avoid or minimize environmental impacts where practicable, while meeting the purposes for which the SRBOP was established. The RMP states that mitigation may also be developed during site-specific activity and project-level analysis to meet management direction for the SRBOP. This direction includes:

- protecting remaining shrub communities,
- restoring shrub habitat, and
- completing fuels management projects.

Potential compensatory mitigation, including enhancement, for habitat values identified in the enabling act for the SRBOP (P.L. 103-64) is the subject of this resource section.

4.2 Impact Assessment

Impacts to raptors and their habitat are assessed in Sections 3.10, 3.11 and 3.14 of the FSEIS. A model compensatory mitigation accounting system has been developed to quantify impacts to raptor habitat in the SRBOP. Raptor habitat is assumed to be a suitable surrogate for quantifying adverse impacts (i.e., debits) and beneficial effects

(i.e., credits) to raptor populations. The BLM will use the methods in the conceptual model to calculate compensatory mitigation debits and credits for any authorization that impacts raptor habitat in the SRBOP.

Table 2 shows the various condition classes for vegetation communities found in the SRBOP. The DFC of MA 1 is a mosaic of multi-aged shrubs, forbs, and native and adapted non-native perennial grasses (i.e., Ecological Potential [EP]). Although this DFC is synonymous with the highest-valued raptor habitat, other condition classes provide suitable raptor habitat (i.e., grass-dominated native shrubland/grassland [NSG]) or adequate raptor habitat (i.e., multi-aged shrubland with an invasive grass understory [SX]) due to the community's increased ability to move to a higher condition class (via the restoration pathways shown in Figure E) or remaining vegetative structure.

Table 2. Vegetation Community Condition Classes and Relative Raptor Habitat Value

Condition Class	Canopy Cover of Primary Components (%)			Habitat Value
	Sagebrush	Invasive Annual Grass	Other	
Ecological Potential (EP)	≥ 15	< 50	native perennial grass > seeding	1.0
Early-seral Native Shrubland/Grassland (NSG)	< 15	< 50	native perennial grass > seeding	0.8
Shrublands/Invasive Annual Grasses (SX)	≥ 5	≥ 50	NA	0.6
Non-native Seeding (NNS)	< 15	< 50	seeding > native perennial grass	0.4
Invasive Annual Grassland/Forbs (X)	< 5	≥ 50	NA	0.2
Facility/Developed Sites	0	0	NA	0.0

Calculating Current Baseline

One method for establishing a baseline for SRBOP raptor habitat is to assign values to vegetation community condition classes based on the services and functions they provide as habitat for raptors and raptor prey. For this example, one of five condition classes (Table 2) is assigned to each acre within the analysis area. Each condition class carries a habitat value between 0 and 1. When considered cumulatively, a mean per-acre habitat value can be calculated for the area and impacts (i.e., debits) and offsets (i.e., credits) assessed for habitat loss and restoration treatments, respectively. The mean SRBOP habitat value for an analysis area is calculated by averaging the habitat values of each acre within the analysis area. The resulting mean habitat value would represent the current baseline before Project impacts.

Calculating Debits

The construction, operation and maintenance of the Gateway West Project would result in complete loss and degradation of SRBOP raptor habitats at locations where facilities are sited and construction areas surrounding these facilities, which generally would be cleared of vegetation during construction. Some of these construction areas would be restored over time to EP, while other areas immediately surrounding facilities would be periodically re-disturbed or maintained in a condition class with relatively lower habitat value (e.g., NSG or NNS). These areas may continue to experience ongoing

disturbance during operation but could also retain some raptor habitat component. A minor subset of the Project's overall disturbances would result in complete loss of habitat value; within the SRBOP this would mostly be limited to the footprint of individual facilities.

4.2.1 Conceptual Model Example: Mitigation Calculations for Impacts Resulting in Complete Loss of Habitat within Management Area 1

The following example uses the model method to calculate the debits and required credits (i.e., the mitigation requirements) related to impacts of a hypothetical project sited within MA 1 for acres with a complete loss of habitat (i.e., mitigation to compensate for the Project's permanent footprint). Similar but modified methods would be used for the other impacts (i.e., temporary, non-periodic and temporary, periodic impacts) in MA 1, as well as all impacts in MA 2 and MA 3.

Calculation of Existing Baseline Condition

First, assume that each cell in Figure A represents 1 acre of a Wyoming Big Sagebrush habitat of varying condition classes, each of which has a different potential restoration pathway (as shown in Figure E). The example area (Figure A) has a finite area of 30 acres (A1) that contains a variety of condition classes with different habitat values (A2). The mean value of the raptor habitat in this area is 0.57/acre (A3).

Figure A. Existing Baseline Condition

EP (1.0)	EP (1.0)	EP (1.0)	NSG (0.8)	SX (0.6)
EP (1.0)	EP (1.0)	EP (1.0)	SX (0.6)	X (0.2)
EP (1.0)	EP (1.0)	SX (0.6)	NNS (0.4)	X (0.2)
NSG (0.8)	NNS (0.4)	NSG (0.8)	X (0.2)	X (0.2)
X (0.2)	X (0.2)	X (0.2)	SX (0.6)	SX (0.6)
X (0.2)	X (0.2)	X (0.2)	SX (0.6)	NNS (0.4)

A1). 30-acre area of Wyoming Big Sagebrush Ecological Site
A2). EP: 8 x 1.0 = 8.0; NSG: 3 x 0.8 = 2.4; SX: 6 x 0.6 = 3.6; NNS: 3 x 0.4 = 1.2; X: 10 x 0.2 = 2.0
A3). Mean habitat condition value = (8.0+2.4+3.6+1.2+2.0) = 17.2/30 acres = ***0.57/acre***

Calculation of Debits for Permanent Project Impacts

Figure B displays the effects of the hypothetical project consisting of components that result in a complete loss of 5 acres of habitat (e.g., conversion of habitat to permanent facility footprint; red rectangles in Figure B). In this example, habitat loss within the area would last for the life of the project (i.e., a permanent impact; B1), and the BLM would permanently lose the ability to restore the impacted acres to their EP (as per RMP Objectives and Management Actions [BLM 2008]). The habitat values for each of the lost acres would be reduced to 0, and consequently, the resulting mean habitat value is reduced to 0.49/acre (B2 and B3).

Figure B. Debits for Permanent Project Impacts

EP (1.0)	EP (1.0)	EP (1.0)	NSG (0.8)	SX (0.6)
EP (1.0)	EP (1.0)	EP (1.0)	SX (0.6)	X (0.2)
EP (1.0)	EP (1.0)	SX (0.6)	NNS (0.4)	X (0.2)
NSG (0.0)	**NNS** (0.0)	**NSG** (0.0)	**X** (0.0)	**X** (0.0)
X (0.2)	X (0.2)	X (0.2)	SX (0.6)	SX (0.6)
X (0.2)	X (0.2)	X (0.2)	SX (0.6)	NNS (0.4)

B1). Permanent loss of 5 ac of EP potential (red rectangles)
B2). EP: 8 x 1.0 = 8.0; NSG: 1 x 0.8 = 0.8; SX: 6 x 0.6 = 3.6; NNS: 2 x 0.4 = 0.8; X: 8 x 0.2 = 1.6
B3). Mean habitat condition value = (8.0+0.8+3.6+0.8+1.6) = 14.8/30 acres = **0.49/acre**

Calculation of Credits for Habitat Restoration Treatments

To return the area to the mean habitat value that existed at baseline, habitat restoration treatments would be required (see Figure C). In the first step, 5 acres at other locations within the affected area (green rectangles in Figure C) would be treated to mitigate the lost habitat value and compensate for the lost opportunity to restore the developed acres to their EP (C1). Habitat values for each treated acre would increase to 1.0 (i.e., the EP; C2). As a result, mean habitat value would increase to 0.55/acre (C3); however, this would still be below the baseline of 0.57/acre.

Figure C. Credits for Initial Habitat Restoration Actions

EP (1.0)	EP (1.0)	EP (1.0)	**NSG→EP** (1.0)	**SX→EP** (1.0)
EP (1.0)	EP (1.0)	EP (1.0)	**SX→EP** (1.0)	X (0.2)
EP (1.0)	EP (1.0)	**SX→EP** (1.0)	NNS (0.4)	X (0.2)
NSG (0.0)	NNS (0.0)	NSG (0.0)	X (0.0)	X (0.0)
X (0.2)	X (0.2)	X (0.2)	SX (0.6)	**SX→EP** (1.0)
X (0.2)	X (0.2)	X (0.2)	SX (0.6)	NNS (0.4)

C1). Treat 5 ac to replace lost opportunity to restore 5 ac to EP potential at developed sites
C2). EP: 13 x 1.0 = 13.0; NSG: 0 x 0.8 = 0; SX: 2 x 0.6 = 1.2; NNS: 2 x 0.4 = 0.8; X: 8 x 0.2 = 1.6
C3). Mean habitat condition value = (13.0+0+1.2+0.8+1.6) = 16.6/30 acres = **0.55/acre**

Credits for Additional Habitat Restoration Actions

Because the mean habitat value following the initial step would remain below the baseline (i.e., 0.55/acre after mitigation treatments is less than 0.57/acre at baseline), additional acres would need to be treated (Figure D). One approach that could be used to equal or exceed baseline conditions (i.e., increase habitat values) would be treating additional acres to attain the DFC for raptor habitat (orange rectangles in Figure D; D1).

In practice, SX (Shrublands/Invasive Annual Grasses) is not a target DFC for habitat restoration treatments. However, SX does provide better structure, and therefore better raptor habitat, than NNS (Non-native Seeding). In turn, although NNS is more desirable for long-term soil stabilization and reduced fire risk than X (Invasive Annual Grassland/ Forbs), NNS is also not a DFC for SRBOP raptor habitat (i.e., the focus of habitat management objectives and actions in MA 1).

However, if the existing condition of SX acres not treated in the first step (C1) were replaced at additional treatment sites to condition classes that would provide DFC for raptor habitat (i.e., EP or NSG; D2), the resulting mean habitat values would increase to 0.64/acre (D3), which would exceed the baseline mean habitat value (A3).

Figure D. Credits for Additional Habitat Restoration Actions

EP (1.0)	EP (1.0)	EP (1.0)	NSG→EP (1.0)	SX→EP (1.0)
EP (1.0)	EP (1.0)	EP (1.0)	SX→EP (1.0)	**X→NSG** (0.8)
EP (1.0)	EP (1.0)	SX→EP (1.0)	**NNS→EP** (1.0)	X (0.2)
NSG (0.0)	NNS (0.0)	NSG (0.0)	X (0.0)	X (0.0)
X (0.2)	X (0.2)	X (0.2)	**SX→EP** (1.0)	SX→EP (1.0)
X (0.2)	X (0.2)	X (0.2)	**SX→EP** (1.0)	**NNS→EP** (1.0)

D1). Treat 5 acres to replace loss of 5 acres of Existing Condition (or DFC) at Treatment Sites
D2). EP: 17 x 1.0 = 17.0; NSG: 1 x 0.8 = 0.8; SX: 0 x 0.6 = 0; NNS: 0 x 0.4 = 0; X: 7 x 0.2 = 1.4
D3). Mean condition value = (17.0+0.8+0+0+1.4) = 19.2/30 acres = **0.64/acre**

Any number of alternative scenarios to achieve mean baseline conditions could be substituted for or added to the additional credit step in Figure D, on the condition that treated acres end up in a DFC for SRBOP raptor habitat. Figure E shows various potential pathways for restoration to DFC.

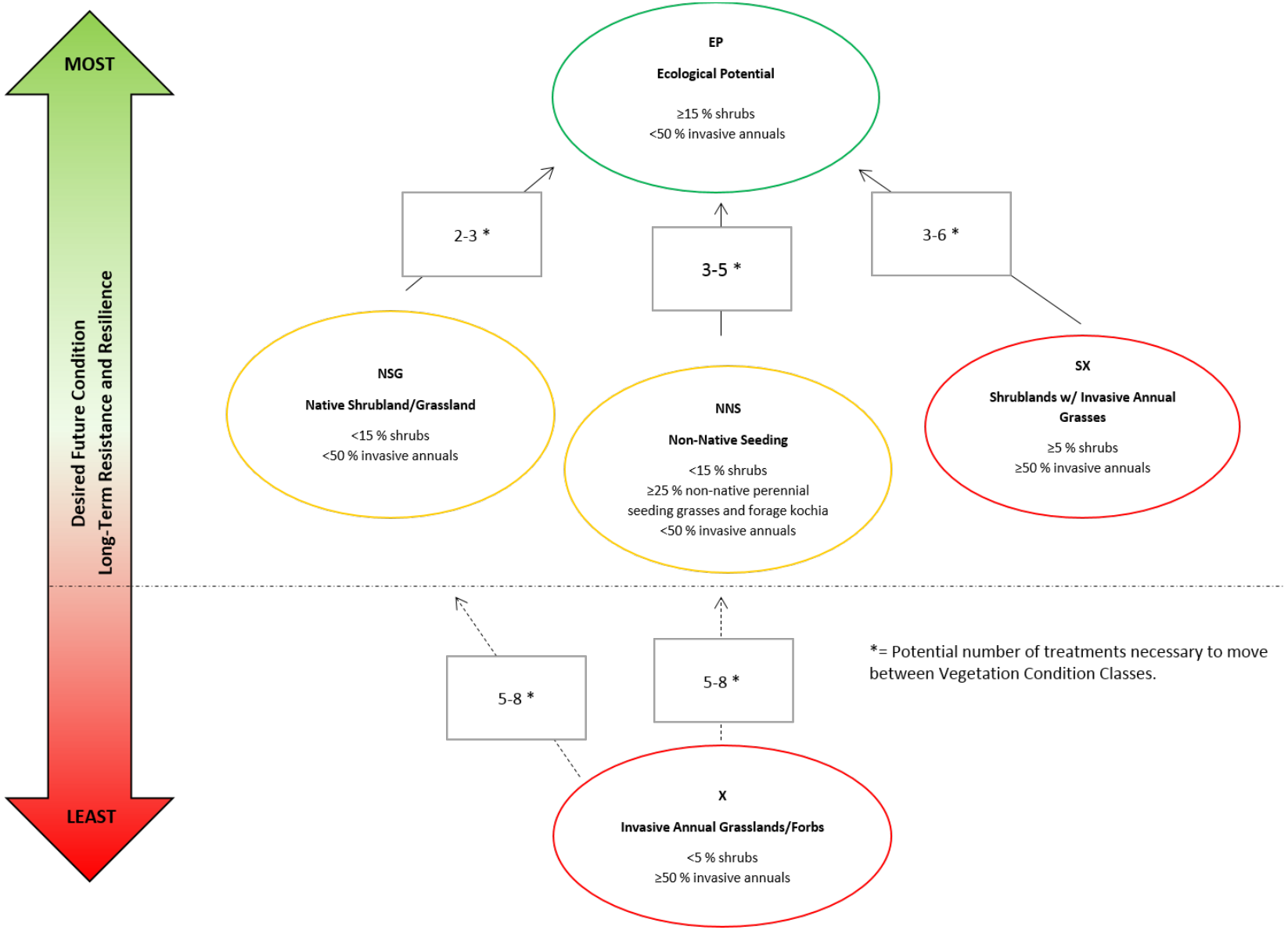

Figure E. Raptor Habitat Condition Classes: Pathways and Estimated Number of Required Restoration Treatments

4.2.2 Conceptual Model Example Summary

This model establishes a logical and transparent approach to assessing baseline conditions as they apply to raptor habitat within the finite area of the SRBOP and provides a simple method for calculating the mitigation required to achieve a return to or exceedance of baseline raptor habitat conditions in the SRBOP, using flexible habitat restoration treatments.

The most important and primary point of the example presented is that returning to baseline conditions requires a habitat restoration ratio greater than 1:1.

General guidelines for habitat restoration treatments that return to or exceed mean baseline conditions include:

- Habitat restoration treatment sites should be prioritized by ability to achieve EP or DFC for raptor habitat.
- Loss of the possibility to achieve EP at permanent impact sites (i.e., Project footprint) should be compensated by uplifting vegetation conditions to EP at additional habitat restoration treatment sites.
- Loss of existing condition at habitat restoration treatment sites could be compensated by uplifting vegetation conditions to DFC for SRBOP raptor habitat (i.e., EP or NSG) at additional habitat restoration treatment sites.

4.3 Mitigation

The SRBOP RMP has the following vegetation mitigation goals:

- Develop ecosystem connectivity and spatially and temporally robust habitat structure and function.
- Build resistant and resilient landscapes that maintain and increase meta-stability for plant and wildlife communities.
- Reduce fire size and frequency to maintain desired plant community structure and function.

Many avoidance and minimization measures are identified in the FEIS standard design features and EPMs. For vegetation resources that cannot be avoided or minimized in the SRBOP, this Framework provides general concepts and potential projects that will be identified in the CMP to ensure compensatory mitigation to achieve enhancement of raptor populations and habitats within the SRBOP.

The overall credits from compensatory mitigation would exceed the overall debits of the Project to result in enhancement (i.e., net benefit) to SRBOP raptor populations and habitats. Enhancement is defined as an improvement over current baseline conditions.

Habitat restoration treatments would be the primary compensatory mitigation the BLM will require to address impacts from the construction of Gateway West Project to SRBOP raptor populations and habitats.

Habitat restoration may also include treatments for traditional use vegetation for tribal purposes.

Siting Compensatory Mitigation

Habitat restoration treatments would primarily be conducted within MA 1 because the RMP identifies this area as having the highest probability of restoration success (BLM 2008). The model assumes that the EP of an area is specific to the Ecological Site Descriptions (ESDs) of the vegetation community.

In addition, habitat restoration treatments would be located within fuel break compartments that contain a gradient of the raptor habitat condition classes described in Table 2. Fuel breaks will compartmentalize habitat restoration areas to provide durability for treatments.

Restoration treatment areas within MA 1 will be defined and prioritized based on:

1. where treatments would provide the best connectivity between existing shrub communities,
2. where perennial native and non-native vegetation (seedings) exist and provide stable ecological conditions that facilitate restoration success,
3. where existing ongoing restoration and research demonstration projects can continue to be leveraged, and
4. where sites have the ability to achieve EP or NSG (i.e., DFCs for SRBOP raptor habitat).

It should be noted that, depending on initial condition class, it may take multiple treatments to achieve a DFC for raptor habitat (Figure E). In addition, the entire SRBOP is a finite area, and areas identified for restoration treatments will be further bounded to ensure a relationship between Project impacts and mitigation measures. All compensatory mitigation measures should be durable for the duration of the Project impacts, and thus provide benefit to SRBOP raptor populations and habitats for that duration.

Additional Considerations for Compensatory Mitigation

The risk of failure of habitat restoration treatments will be accounted for in two ways:

1. The party responsible for the habitat restoration treatments (i.e., the Proponents) will be required to achieve the outcome (i.e., a specific habitat condition class), as opposed to specific amount of output.
2. The BLM will adjust the acreage of required habitat restoration treatments to account for the potential failure to achieve improved raptor habitat outcomes.

All compensatory mitigation measures that may be included in the CMP will be managed adaptively to achieve their required outcomes, based on required monitoring and reporting.

Finally, any time lag between the onset of impacts from the Project and the achievement of compensatory mitigation outcomes will also be accounted for by adjusting the acreage of habitat restoration treatments.

There are a variety of potential projects that would fit within the different types of compensatory mitigation that may be included in the CMP: Preservation (Protection), Restoration, and Establishment (Science and Education). Examples of possible projects are included below but this is not a comprehensive or all-inclusive list.

4.3.1 Preservation (Protection)

4.3.1.1 Wildfire Fuel Breaks

One method of habitat preservation is the use of wildfire fuel breaks to increase the durability of habitat restoration treatments. For example, a network of fuel breaks could be used to compartmentalize the landscape and assist fire suppression resources to minimize large fire growth and protect habitat restoration treatments.

Fuel breaks enhance fire suppression efforts by (1) providing tactical and logistical opportunities to fire personnel, including easy and efficient access to fire prone areas, (2) compartmentalizing areas between fuel breaks to contain wildfires into more manageable units, and (3) minimizing fire spread after ignition. Fuel breaks, if implemented and maintained, provide fire suppression personnel with an opportunity to safely engage wildfires and to more effectively attack wildfires across a larger area with fewer resources. A system of fuel breaks created by a combination of mechanical and chemical treatments would protect habitat mitigation measures and human life and property by reducing the spread of future fires, including human-caused fires ignited near energy corridors, roadways and agricultural lands.

4.3.1.2 Fuel Break Components

The National Wildfire Coordination Group (NWCG) defines a fuel break as “a natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled” (NWCG 2012). In order to provide durability to habitat mitigation from wildfire, fuel breaks should be designed to reduce flame lengths, slow the spread of fast-moving wildfire, and provide opportunities for firefighters to more safely and effectively gain control of or contain a fire. There are three primary components to a fuel break:

1. *Non-vegetated Roadbed:* All fuel breaks would have a roadbed (including shoulder and barrow ditch) free of vegetation. A roadbed free of vegetation is the non-burnable area that acts as the true break in fuel continuity.
2. *Accessibility:* The road associated with the fuel break should be maintained and accessible to fire equipment such as dozers, fire engines, and command vehicles. The logistics of fighting fire is aided by a road network that allows for the flow of resources and supplies to the fire within a reasonable timeframe to contain the fire. An accessible roadway also improves safety to fire resources by providing quick ingress and egress in case of emergencies associated with changing fire conditions.
3. *Fuel Treatment Zone:* Vegetative fuels along both sides of the roadbed should be reduced or modified in order to change the fire behavior as the fire burns into the fuel break. Reducing fuel and its continuity will reduce flame length, rate of spread, fireline intensity, and spotting distance of an encroaching wildfire which increases the effectiveness of wildfire suppression resources.

4.3.1.3 Application of Fuel Break Components

Accessibility and Roadbed Maintenance

Road improvement and maintenance would include using heavy equipment to blade or grade existing roadways to remove vegetation and improve access. Grading of road surfaces would allow for maintenance and improvement and creation of ditches and shoulders. Maintenance of roads may also include installing culverts, constructing rolling dip gravel stream crossings, road resurfacing, installing cattle guards, installing sediment barriers, and surfacing areas with gravel. Application of pre-emergent herbicides or soil sterilants after grading will reduce the spread and establishment of vegetation within the roadbed. All roadways identified as a fuel break would need periodic maintenance to ensure access for suppression equipment and a roadbed free of vegetation.

Fuel Treatment Zone

A 200-foot-wide reduction or modification of vegetation along both sides of the roadbed allows fire suppression resources to address a fire coming any direction. The 200 feet of treatment on both sides of the roadbed significantly increases the area and time the advancing fire's behavior is being reduced or modified, increasing time and space for the firefighters to respond to and anticipate the constantly changing fire environment. Treatment along both sides of the roadbed may be accomplished through various methods.

4.3.1.4 Fuel Break Criteria

Fuel breaks would meet the following criteria to be effective and provide a benefit to fire suppression resources:

- Strategic – located in high fire-prone areas where they are readily accessible providing firefighters a tactical and safe area to establish anchor points for suppression actions
- Landscape level – utilizes road network to compartmentalize wildfires across the landscape at a scale commensurate with the wildfire issue
- Timely – established and functional when needed during fire season (May-October)
- Feasible – implementation and maintenance costs should not limit ability to create effective treatments

Suggested Actions

- Spatially identify a network of fuel breaks along existing roads within, and adjacent to, the SRBOP that would:
  - Prioritize areas within the NCA to help guide the timing and location of a strategically phased implementation plan.
  - Reduce the amount of human caused fire originating along transportation corridors that threaten adjacent wildlands;
  - Provide fire personnel with a safe working environment to conduct fire suppression activities;

  - Contain wildfires at a smaller size, thereby reducing the time and exposure of fire suppression resources and the public to the hazards of wildland fires; and
  - Protect developing and existing wildlife habitat and vegetation restoration investments.
- Identify areas within the NCA where the following fuel break treatment type is most appropriate and will provide durability to habitat mitigation measures:
  - Disking/Blading Barren Strips,
  - Chemical,
  - Vegetative – native or non-native, and
  - Mowing.
- Identify appropriate fuel break width based on fuel break type and potential constraints across the landscape.
- Develop a range of implementation costs over a 30-year period using the cost estimate table for each fuel-break treatment type.

4.3.2 Restoration

A variety of vegetative restoration methods can be utilized as part of the Framework to restore prey habitat in the SRBOP.

4.3.2.1 Herbicide – Biological and Chemical

Use of BLM-approved herbicides (BLM 2014) within the context of Integrated Pest Management are considered an effective restoration tool. Herbicide use includes; selective control to target a specific invasive/noxious weed species using both pre and post emergent herbicides, or biocontrol agent(s), targeted release of more desirable species, site/seedbed preparation prior to seeding or planting and selective post treatment weed control.

4.3.2.2 Seeding – Drill and Broadcast

Where altered and ecologically depauperate conditions exist, successful seeding can accelerate community composition and reduce plant soil gaps, which lowers weed invasion risk. Some primary factors that influence species establishment include seed germination attributes, initial establishment traits, growth rates, species compatibility, seedling tolerances, persistence, and grazing impacts.

Different seeding techniques are necessary for different types of terrain (Monsen et al. 2004, Chapter 4). Techniques that apply seed directly from equipment onto the ground, such as rangeland drills, spreader seeders, cultipackers and imprinters, are generally the best choice for seeding wherever terrain permits. Sites that are too steep, rocky, or debris-covered for these techniques can be aerially seeded, although establishment from aerial seedings may be low on low-moisture sites. Mechanical soil disturbance should be kept to a minimum on sites with residual biological soil crusts and native perennials capable of resprouting after fire. Minimum-till drills offer lower-impact alternatives to conventional rangeland drills (Monsen et al. 2004, Chapter 4).

4.3.2.3 Planting

Reestablishment of big sagebrush and associated native shrubs following wildfire or other disturbance is critical to facilitate vegetation recovery and to provide community structure and services. Poor establishment of shrubs from seed can result from several factors, including adverse environmental conditions, herbaceous competition, the use of maladapted seed, and inappropriate seeding strategies (Monsen et al. 2004). The use of planting stock can circumvent some of these problems (Shaw 2004). Use of container, bareroot, or wildings can be used to augment seedings and increase more rapid development of shrub cover than seeding alone.

Planting tools include the use of hand tools (Macleod, Polaski, shovel, planting bar) or mechanical plug/transplanters pulled by a tractor.

4.3.2.4 Microsite Alteration

The use and installation of remote irrigation systems, as well as on-site structures/features such as straw wattles, rocks, and vertical mulching (Bainbridge 2007) can ameliorate the desiccating effects of wind and heat exposure for new seedlings. Application of these features can substantially increase plant survivorship and promote active seedling recruitment and persistence.

Tools could include the use of water tenders that are retrofitted with hoses and impact sprayers, and installation of remote, but portable water tanks with solar pumps and gravity or pump driven drip lines. The installation of hardscape (rocks) or softscape (mulch/vertical mulch) could also buffer more harsh environmental conditions especially if combined with natural topographical features like swales and northern exposures that already exhibit higher resilience features.

4.3.2.5 Exclosure Construction

Use, maintenance, and development of exclosures can provide increased assurances that restoration treatments will be successful because land uses that affect new seedings such as livestock grazing are removed. Currently, there are 25 exclosures in the NCA that can be leveraged for restoration activities both inside and outside MAs 1 and 2. An assessment of the status of these has been completed. Expansion or combining exclosures to increase size and management efficiency would provide added benefit by limiting the number of exclosures in the NCA and increasing the size, which would equate to increasing the patch size of restoration treatments.

4.3.2.6 Retreatment of Restoration Sites

Retreatment of restoration sites will be based on specific restoration monitoring objectives and adaptive management short and long term triggers. Retreatments can be minimized and restoration durability increased if treatments incorporate the following principles (Monson 2004):

- The proposed changes to the plant community would be necessary and ecologically attainable.
- The terrain and site would support the desired changes.

- Precipitation would be adequate to assure establishment and survival of indigenous and planted species.
- Competition would be controlled to ensure that planted species can establish and persist.
- Plant and manage site adapted species, subspecies, and varieties.
- A multispecies species seed mixture should be planted.
- Sufficient seed of acceptable purity and viability should be planted.
- Seed would be planted on a well-prepared seedbed.
- Plant during the season that provides the most favorable conditions for establishment.
- Newly seeded areas would be managed properly.

4.3.3 Establishment (Science and Education)

An environmental education program could be developed to increase public awareness of the importance of prey habitat to the raptors nesting in the Snake River Canyon. One aspect of the program could include the role of native vegetation in providing food and shelter for prey species. Another aspect of the program could educate the public on wildfire prevention.

5 GLOSSARY

Adaptive management: a system of management practices based on clearly identified outcomes and monitoring to determine whether management actions are meeting required outcomes; and, if not, facilitating management changes that will best ensure that outcomes are met or re-evaluated. Adaptive management recognizes that knowledge about natural resource systems is sometimes uncertain.

Additionality: a compensatory mitigation measure that improves upon the baseline conditions of the impacted resource, and is demonstrably new and would not have occurred without the compensatory mitigation measure.

Appropriate: necessary for and effective at achieving the outcome.

Authorized land user: an external entity that has an approved land use authorization.

Authorized land user-responsible compensatory mitigation measures: actions to restore, establish, enhance, and/or preserve resources (i.e., accrual of credits) by an authorized land user for the purpose of compensating for residual effects to resources from their authorized land use activities (i.e., accrual of debits); also referred to as permittee-responsible compensatory mitigation.

Avoidance: avoiding the impact altogether by not taking a certain action or parts of an action (40 CFR 1508.20(a)).

Baseline: the pre-existing condition of a resource, at all relevant scales, which can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists absent the project's implementation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

Best management practices (BMPs): state-of-the-art, efficient, appropriate, and practicable mitigation measures for avoiding, minimizing, rectifying, and reducing or eliminating impacts over time.

Change agents: an environmental phenomena or human activity that can alter or influence the future condition and/or trend of a resource. Some change agents (e.g., roads) are the result of direct human actions or influence; others (e.g., climate change, wildland fire, and invasive species) may involve natural phenomena or be partially or indirectly related to human activities.

Commensurate: a compensatory mitigation obligation that is reasonably related and proportional to the reasonably foreseeable residual effects from a land use activity that warrants compensation.

Compensation: compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20(e)).

Compensatory mitigation measure: an action that results in the restoration, establishment, enhancement, and/or preservation of resources in order to offset a residual effect from a land use activity.

Compensatory mitigation site: the areas where compensatory mitigation measures are located.

Credit: a unit of measure representing the restoration, establishment, enhancement, and/or preservation of resources by a compensatory mitigation measure.

Decision document: a formal agency decision, such as a Decision Record or Record of Decision associated with a NEPA document, or other program-specific decision documentation.

Durability: the maintenance of the effectiveness of a mitigation measure and/or a compensatory mitigation site for the duration of the impacts from the associated land use activity, including resource, administrative, and financial considerations.

Duration of the impact: the time that resource impacts (including direct and indirect effects) from a land use activity persist, even if this time period extends beyond the expiration of the land use activity. The duration of some impacts may be perpetuity.

Effects: the adverse direct, indirect, and cumulative impacts from a land use activity; effects and impacts as used in this policy are synonymous. Mitigation addresses the adverse direct and indirect impacts to the baseline conditions of resources (including consideration of the quality and quantity of those resources) from land use activities. The assessment of cumulative impacts provides a broader context for understanding the direct and indirect impacts.

Enhancement: the manipulation of resources to heighten, intensify, or improve a specific resource.

Establishment: the manipulation of resources to create a resource that did not previously exist at that site.

Formal and binding agreement: a legal document signed by an authorized officer of the BLM and any other applicable parties that outlines the terms and conditions of an arrangement between parties.

Impacts: the adverse direct, indirect, and cumulative effects from a land use activity; effects and impacts as used in this policy are synonymous. Mitigation addresses the adverse direct and indirect impacts to the baseline conditions of resources (including consideration of the quality and quantity of those resources) from land use activities. The assessment of cumulative impacts provides a broader context for understanding the direct and indirect impacts.

Important: resources that have a high level of significance for land management.

In-kind compensatory mitigation: the replacement or substitution of resources that are of the same type and kind as those impacted.

Land use activities: the occupancy, use, development, or traversing of BLM-managed surface or mineral estate; may be BLM-proposed or externally-proposed.

Landscape: a geographic area encompassing an interacting mosaic of ecosystems and human systems that is characterized by a set of common management concerns. The landscape is not defined by the size of the area, but rather by the interacting elements that are relevant and meaningful in a management context. The term “landscape” may

include water-centric scales, such as watersheds, if they represent the appropriate landscape-scale.

Minimization: minimizing impacts by limiting the degree or magnitude of the action and its implementation (40 CFR 1508.20(b)).

Mitigation: includes, avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and, compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

Mitigation hierarchy: the process and order for identifying, analyzing, and requiring mitigation, generally, by first avoiding impacts, then minimizing, rectifying, and reducing or eliminating impacts over time, and then compensating for some or all of the remaining impacts (i.e., residual effects).

Mitigation obligation: the types of and amount of mitigation required by the BLM to mitigate reasonably foreseeable impacts to resources from a land use activity.

Mitigation standard: a description of the extent to which mitigation will be applied in order to support achieving resource objectives (e.g., net gain, no net loss). Mitigation standards can be identified in land use plans and other types of NEPA analyses and decision documents.

Multiple use: the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output. (FLPMA § (103) (c), 43 USC 1702(c)).

NEPA process/analysis: analysis prepared pursuant to the National Environmental Policy Act, such as a planning- or project-level environmental assessment (EA) or environmental impact statement (EIS).

Net gain: when mitigation results in an improvement above baseline conditions.

Net loss: when the lack of mitigation results in a negative change to baseline conditions.

No net loss: when mitigation results in no negative change to baseline conditions (e.g. fully offset or balanced).

Objective: a description of a desired outcome for a resource.

Out-of-kind compensatory mitigation: replacement or substitution of resources that are of different type and kind as those impacted.

Outcome: a clearly-defined and measurable result that reflects the desired condition of a resource.

Output: the type and/or amount of actions or work to benefit a resource.

Performance standard: observable or measurable metrics that are used to determine if outcomes are met, and often include defined timeframes.

Practicable: available and capable of being done after taking into consideration existing technology, logistics, and cost in light of a mitigation measure's beneficial value and a land use activity's overall purpose, scope, and scale.

Preservation: the removal of a threat to, or preventing the decline of, resources. Preservation may include the application of new protective designations on previously unprotected land or the relinquishment or restraint of a lawful use that adversely impacts resources.

Public lands: any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except (1) lands located on the Outer Continental Shelf; and (2) lands held for the benefit of Indians, Aleuts, and Eskimos. (FLPMA § (103) (e), 43 USC 1702(e)).

Rectification: rectifying the impact by repairing, rehabilitating, or restoring the affected environment (40 CFR 1508.20(c)).

Reduction or elimination over time: reducing or eliminating the impact over time by preservation and maintenance operations during the life of the land use activity (modified from 40 CFR 1508.20(d)).

Residual effects: any adverse reasonably foreseeable effects that are expected to remain after application of the first four steps in the mitigation hierarchy; also referred to as unavoidable impacts. The implementation of mitigation measures (e.g., rectification) at some point in the distant future does not eliminate any residual effects that will exist until that mitigation measure's outcome is achieved.

Resources: see Resources (and their values, services, and/or functions).

Resources (and their values, services, and/or functions): resources are natural, social, or cultural objects or qualities; resource values are the importance, worth, or usefulness of resources; resource services are the benefits people derive from resources; and, resource functions are the physical, chemical, and/or biological processes that involve resources. (For the purposes of this policy, resources exclude non-renewable resources used for the production of energy (e.g. oil, gas, coal and other mineral resources). For brevity, in this policy, also referred to as "resources."

Responsible party: the entity accountable for fulfilling all aspects of mitigation obligations, including, but not limited to, ensuring the durability and effectiveness of mitigation measures, achieving mitigation measures' outcomes, and complying with

monitoring, adaptive management, and reporting requirements. The responsible party may be the authorized land user, the BLM, a third party, or a combination.

Restoration: the process of assisting the recovery of a resource (including its values, services, and/or functions) that has been degraded, damaged, or destroyed to the condition that would have existed if the resource had not been degraded, damaged, or destroyed.

Reversal: the loss of durability or effectiveness of a mitigation measure and/or a compensatory mitigation site.

Timeliness: the lack of a time lag between the impact to the resources and the achievement of the outcomes of the associated mitigation measures.

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