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| | additional mitigation; and areas that are too special to develop and deserve protection.<br><br>With this policy, it is our expectation that development can proceed in a more efficient manner while safeguarding the resources that the public has entrusted the BLM to manage." | |
| Introduction | "When reviewing proposed public land uses through the NEPA process, the BLM will ensure conformance with mitigation standards, incorporate appropriate aspects of applicable mitigation strategies, assess the impacts from proposed public land uses to the baseline conditions of resources, identify and consider appropriate and practicable avoidance and minimization measures, and identify and consider appropriate compensation for some or all residual effects (using the criteria established in this policy). The BLM will identify any required mitigation in the decision documents associated with the NEPA analysis and include any required mitigation in the land use authorization. Finally, the BLM should ensure that monitoring and adaptive management of mitigation measures is conducted in order to achieve durable mitigation outcomes." | |
| 1.1.A.1(a) Mitigation, definition from CEQ regulations | • compensating for the impact by replacing or providing substitute resources or environments (see Handbook Chapter 2). | |
| 1.1.A.1(a) Mitigation, hierarchy as defined by 600 DM 6.4B and subsequently in MS-1794 and this handbook | "Collectively, the five aspects of mitigation (avoid, minimize, rectify, reduce/eliminate, compensate) are referred to as the mitigation hierarchy because they are generally applied in a hierarchical manner (600 DM 6.4.B) (Handbook Chapter 1.2). As explained in the Department Manual (600 DM 6.4.A) all five aspects of mitigation can, as a practical matter, be summarized as avoidance, minimization, and compensation. In this handbook, when referring to mitigation, the full five-prong mitigation hierarchy is implied." | (b) (5) [redacted] |
| 1.1.A.5 Mitigation | "Existing legal authorities contain additional protections for some resources that are of such irreplaceable character that minimization and compensatory mitigation measures may not be adequate or appropriate, and therefore avoidance is the only appropriate form of mitigation, consistent with applicable law. The BLM will seek to avoid, to the greatest | |

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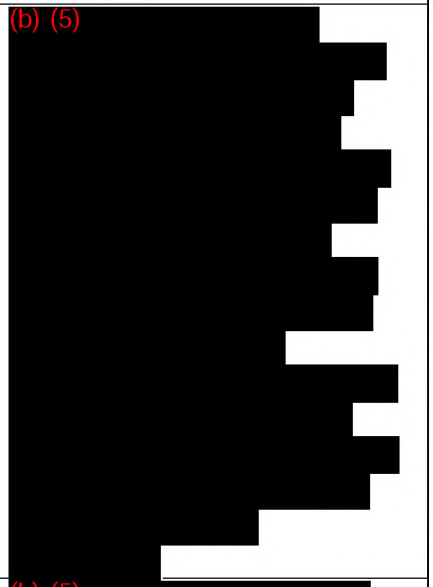
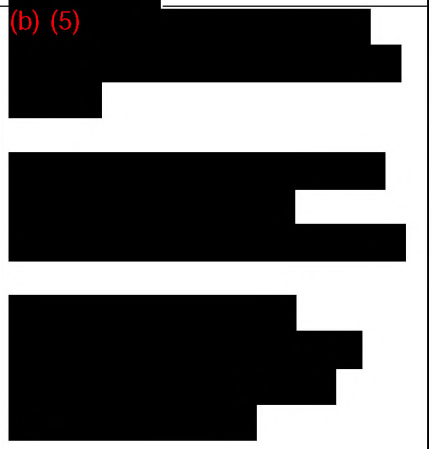
| | extent practicable, reasonably foreseeable impacts to the National Park System, National Wildlife Refuge System, National Landscape Conservation System (National Conservation Lands), Areas of Critical Environmental Concern, and other special status areas (Handbook Chapter 2.1.D)." | |
| 1.1.A.6 Mitigation | "The need for compensatory mitigation should be based on applicable mitigation standards, and what is appropriate for each individual proposed public land use, taking into consideration applicable law, policies, land use plans, and mitigation strategies (Handbook Chapter 2.5.B). In general, the BLM should seek to identify compensatory mitigation measures that will appropriately mitigate the reasonably foreseeable residual effects that warrant compensatory mitigation, after first considering and applying, as appropriate, the first four mitigation approaches in the five-prong mitigation hierarchy, and achieve the maximum benefit to the impacted resources within the context of the conditions and trends of those resources, at all relevant scales. All compensatory mitigation obligations should be commensurate with the impacts from the public land uses (Handbook Chapter 2.5.F.1). Additionally, the BLM's general preference is to achieve compensatory mitigation outcomes in advance of public land uses' impacts (Handbook Chapter 2.5.F.2)." | (b) (5)  |
| 1.1.B.5 Landscape-Scale Approach | "A landscape-scale approach also allows for identification of the most effective compensatory mitigation sites without implying a preference for siting compensatory mitigation closer to or farther away from the impacted site or implying a preference for Federally managed lands. The lack of preference for Federally managed lands in siting compensatory mitigation is due, in some instances, to the BLM's interest in benefiting specific impacted public land resources.<br><br>The maximum benefit to the impacted resource might be achieved at a compensatory mitigation site either geographically close or geographically far from the impacted site, so long as the mitigation at that site has a reasonable relationship to benefiting the public land resources where the resource impact is expected to occur or is occurring. | (b) (5)  |

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| | The site that provides the maximum benefit to the public land resources does not need to be near the site where the resource impact occurred. Compensatory mitigation measures sited on non-BLM-managed lands, which may include lands managed by other land management agencies, will require the consent of the landowner or manager.<br><br>For example, this could include identifying a compensatory mitigation site near the impacted site for a locally important species, such as a scarce and locally endemic plant, that may decline due to the impact of the public land use. Or, it may include identifying a compensatory mitigation site far from the site of the public land use and potentially on non-public lands (with a willing landowner), where the species may have a more pressing ecological need (such as scarce breeding grounds), as long as a reasonable relationship is maintained between the impacts of the public land use and the compensatory mitigation measure(s) implemented at that site." | |
| 1.1.B.6 Landscape-Scale Approach | "Compensatory mitigation may be appropriate even if the compensatory mitigation measures are sited outside the boundaries of the lease, grant, mining plan of operations, etc., as long as a reasonable relationship is maintained between the impacts of the public land use and the compensatory mitigation measure(s) being implemented at that site. The use of compensatory mitigation does not mean that BLM may approve public land uses that cause unnecessary or undue degradation to the public lands (see Handbook Chapter 1.5.C)." | |
| 1.1.D.1 Durability | "Durability includes three types of considerations for mitigation measures and for compensatory mitigation sites: resource, administrative, and financial.<br><br>**a.** 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 changing circumstances (e.g., climate change, fire, invasive species), for the duration of the impacts. | (b) (5) [redacted] |

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| | **b.** Administrative considerations for durability include, but are not limited to, restricting incompatible uses on mitigation sites (e.g., through the use of a conservation easement on private land), or permitting land uses that are supportive of the mitigation sites (e.g., additional restoration projects), through permit terms and conditions, land use planning, or legal designations.<br><br>**c.** 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 public land use (Handbook Chapter 6.2)." | (b) (5) [redacted] |
| 1.1.D.2 Durability | "The duration of the impact is the time that resource impacts (including direct and indirect effects) from a public land use persist, even if this time period extends beyond the expiration of the public land use. The duration of *some* impacts may be in perpetuity, such as the construction of a new transmission line or a county road. The BLM should use the best available science to estimate the duration of the impact. For compensatory mitigation measures and sites, the BLM should consider the duration of the residual effects to be at least until the residual effects have been restored." | (b) (5) [redacted] |
| 1.1.D.3 Durability | "As appropriate, the BLM should ensure that the responsible party is obligated to maintain the mitigation's durability and correct any loss of durability (i.e., a reversal), unless the outcome is not achieved due to a force majeure event. If the loss of durability is not corrected, the BLM will take appropriate follow-up actions, including enforcement actions, consistent with applicable law and as provided for in applicable regulations (see Handbook Chapter 6.3)." | (b) (5) [redacted] |
| 1.1.D.4 Durability | "Details about tools to achieve (degrees of) durability for compensatory mitigation sites on BLM-managed lands and private lands are described in Appendix 1." | |

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| 1.1.E Mitigation Measures' Outcomes and Performance Standards | "When developing mitigation measures, the BLM should establish clearly defined and measurable outcomes for those measures through regulation, land use planning, or in another decision document, as appropriate, although it may also be necessary to establish minimum actions (i.e., outputs) that the responsible party must take to achieve those outcomes. The BLM should also develop performance standards through regulations, land use planning, or in another decision document, as appropriate, as part of the mitigation requirements that the BLM will use to monitor and assess the effectiveness of compensatory mitigation measures.<br><br>1. Mitigation measures should be defined by outcomes, and may also include specific outputs.<br><br>a. Mitigation measures' outcomes should support the applicable land use plan's resource objectives, and/or the objectives of other Federal agencies, Tribal, State and/or local governments, consistent with applicable law.<br><br>b. In general, the BLM should anticipate the need to adapt the mitigation measures to meet the required mitigation outcomes by analyzing different adaptive scenarios in the NEPA analysis for those mitigation measures. For externally proposed public land uses, the BLM should ensure that adaptive, outcome-based mitigation is adequately described in the land use authorization (Handbook Chapter 6).<br><br>2. The BLM should use performance standards to monitor and assess the effectiveness of the mitigation measure in achieving the required outcome. The BLM should use the same or compatible methods, including metrics, that it used to identify resource objectives (e.g., in a land use plan) and/or that it used to measure the reasonably foreseeable impacts (as compared to | (b) (5) [redacted] |

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| | baseline conditions) of a proposed public land use (Handbook Chapter 1.1.A.2), when designing these performance standards to be able to best measure the effectiveness of the mitigation measures for those impacts." | |
| 1.1.F.2.b Implementation (Compliance) and Effectiveness Monitoring | "As mentioned in the first paragraph of this section, the BLM should ensure that mitigation measures are implemented and monitored for effectiveness, as provided for in land use authorizations, and consistent with applicable law and regulation. Where a responsible party uses a third-party compensatory mitigation mechanism to fulfill a compensatory mitigation requirement, it is acceptable for the responsible party to transfer monitoring responsibilities to the third party. (Handbook Chapter 2.5.I).<br><br>When making decisions regarding applications for land uses for which BLM has limited discretion, if there are no applicable regulations or applicable terms and conditions in an existing land use authorization that require mitigation effectiveness monitoring, the BLM will conduct the effectiveness monitoring to assess whether the public land user is complying with the mitigation measures that BLM has required, unless the BLM develops a written agreement with another entity to conduct the effectiveness monitoring." | (b) (5) [redacted] |
| 1.1.F.2.c Implementation (Compliance) and Effectiveness Monitoring | "Whenever appropriate, effectiveness monitoring should be designed around the same or compatible methods, including metrics, that it used to identify resource objectives (e.g., in a land use plan), measure the reasonably foreseeable impacts (as compared to baseline conditions) of a proposed public land use (Handbook Chapter 1.1.A.2), and/or define the mitigation measure's outcome and performance standards (Handbook Chapter 1.1.E)." | |
| 1.1.F.2.d Implementation (Compliance) and Effectiveness Monitoring | "Whenever appropriate, the BLM should incorporate effectiveness monitoring into existing monitoring programs and sampling grids managed by the BLM or other entities to increase the utility and rigor of these data. Similarly, whenever appropriate, effectiveness monitoring should comply with BLM-adopted, standardized, monitoring protocols (e.g., *BLM Core Terrestrial Indicators and Methods (Technical Note 440)*). | |

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| | In this case, these monitoring data should be incorporated into the appropriate databases, etc." | |
| 1.1.H.5 Reporting | "The applicable BLM's authorized officer should submit any compensatory mitigation monitoring reports, after review by the applicable BLM office, to the BLM National Operations Center, which will verify the reports meet the appropriate data standard and store them in a centralized, searchable repository." | (b) (5) [redacted] |
| 1.1.I Responsible Parties | 1. "When mitigation obligations are included in a land use authorization, the BLM will identify a responsible party in the land use authorization that is 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.<br><br>2. If mitigation measures are ineffective, as determined by effectiveness monitoring, the BLM will work with the responsible party to identify appropriate actions for achieving the required mitigation outcomes and for complying with the terms and conditions of applicable land use authorizations. The BLM will take appropriate follow-up actions, including enforcement actions, consistent with applicable law and as provided for in applicable regulations, as necessary, if the mitigation measures were not implemented as designed or if the mitigation measures have not been effective in achieving the required mitigation outcomes, based on effectiveness monitoring (see Handbook Chapter 6.3), unless the outcome is not achieved due to a force majeure event." | |
| 1.1.J Best Available Science | 1. "The BLM will use the best available science[1] (e.g., peer reviewed research and methods, monitoring data and modeling results, well-documented case studies, etc.), including the principles and | |

[1] The phrases "best available science" or "best available data" are often referred to as BLM policy for the information contained in agency documents (BLM Information Quality Act Guidelines, February 9, 2012). BLM policy that data comprise high quality information is consistent with Office of Management and Budget guidance for Federal agencies in implementing Information Quality Act requirements that data be of high objectivity, integrity, and utility for agency decision-making.

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| | practices identified in *Advancing Science in the BLM: An Implementation Strategy*, to inform the identification and analysis of reasonably foreseeable impacts and mitigation for those impacts and achieve effective mitigation outcomes.<br><br>2. For compensatory mitigation obligations, it may be appropriate to include scientific studies or inventories that can aid in determining the appropriate type, duration, and amount of compensation. Generally, scientific studies or inventories, on their own, should not be considered compensation, unless the studies or inventories are clearly necessary to inform the maintenance, monitoring, or adaptive management of the compensatory mitigation measures, or otherwise directly benefit the management of the impacted resources."<br><br>1.2 Implementing the Mitigation Hierarchy | "The BLM will implement the mitigation hierarchy when identifying, considering, and, as appropriate, requiring mitigation, to address reasonably foreseeable impacts to resources. The BLM's aim is to apply the mitigation hierarchy in the manner that achieves the maximum benefit to the impacted resource, consistent with applicable law. First, the BLM will seek to require the public land user to avoid impacts, consistent with applicable law(e.g., by altering project design, location, or timing); then the BLM will seek to require the public land user to minimize impacts (e.g., through project modifications, permit conditions, interim and final reclamation, etc.); and, generally, only if those approaches are insufficient to fully mitigate the impacts from a proposed public land use, will the BLM seek to require the public land user to compensate for some or all of the remaining impacts from the proposed public land use (i.e., residual effects), based on the criteria identified in Handbook Chapter 2.5.B. In limited situations, specific circumstances may exist that warrant deviating from this sequence, such as when seeking to achieve the maximum benefit to impacted resources or when constrained by the terms and conditions of existing land use authorizations or applicable law. In limited instances, the BLM might determine that the impacts (including residual effects) of public land uses may be acceptable | (b) (5)  |

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| | and will not require mitigation, based on the criteria identified in Handbook Chapter 2.<br><br>In many cases, the five aspects of the mitigation hierarchy will overlap. For example, consistent with lease terms and conditions, interim reclamation of a producing oil and gas well may be considered a form of either minimizing or reducing/eliminating impacts over time. Final reclamation, on the other hand, is a form of rectification, but could be considered compensation when an operator performs final reclamation and restoration of orphaned oil and gas well locations and access roads (i.e., locations that no longer have a responsible party) in order to obtain permits for additional new wells and roads in an area that has a surface disturbance limitation/cap in the land use plan, consistent with lease terms and conditions." | |
| 1.3 Advance Consideration of Mitigation: Mitigation Strategies | "Mitigation strategies identify, consider, and communicate potential mitigation needs and mitigation measures in a geographic area, at relevant scales, well in advance of anticipated public land uses (BLM-proposed and externally proposed). The BLM should prepare mitigation strategies where the condition of resources (including their values, services, and/or functions) is declining or has a reasonable potential to decline and new impacts to those resources are reasonably foreseeable, or where resources would otherwise benefit from advance consideration of landscape-scale mitigation. Effective mitigation strategies are created and maintained by fully engaging stakeholders in the process. Mitigation strategies will help to increase the effectiveness, consistency, and transparency of mitigation by shifting away from a reactive and permit-by-permit approach to a more efficient, proactive model that identifies mitigation standards (if they do not already exist) and pre-identifies and pre-considers mitigation measures. Mitigation strategies will assist the BLM to better anticipate reasonably foreseeable impacts, strategically apply the mitigation hierarchy, and generate better outcomes for impacted resources. Mitigation strategies may be developed within a NEPA analysis or developed independently to inform future NEPA analysis and/or decision-making." | (b) (5) [redacted] |

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| 1.4 Advance Consideration of Mitigation: Land Use Planning (interim) | "The land use planning process provides one method for identifying, considering, and, as appropriate, requiring mitigation well in advance of anticipated public land uses. Additionally, the land use planning process provides an opportunity to incorporate relevant components of a mitigation strategy into a land use plan (Handbook Chapter 3). The land use plan can identify resource objectives and associated mitigation standards, land use allocations, and management actions to facilitate the application of appropriate mitigation for public land uses. Also, to support the implementation of durable compensatory mitigation measures on BLM-managed lands, the BLM can support or identify compensatory mitigation sites with land use allocations that limit or exclude incompatible uses of those sites, consistent with applicable law.<br><br>During the land use planning process, consistent with applicable law, the BLM will consider and, as appropriate, include in the land use plan:<br><br>**1.** Scientifically informed and measurable land use plan objectives for resources, which include mitigation standards for resources that are considered important, scarce, sensitive, or have a protective legal mandate (e.g., no net loss, net benefit).<br>**2.** Land use allocations that limit or exclude certain uses (e.g. right-of-way exclusion areas, closures or constraints to fluid mineral leasing) or concentrate certain uses in defined areas (e.g., solar energy zones) or corridors (e.g., right-of-way corridors) in order to avoid and minimize impacts to resources from public land uses. The land use planning process may not be used as a substitute for a withdrawal to close lands to the operation of the Mining Law.<br>**3.** Management actions (e.g., best management practices) that help to support the land use plan's resource objectives, including applicable mitigation standards.<br>**4.** Land use allocations that support or identify compensatory mitigation sites on BLM-managed lands and limit or exclude incompatible uses of those sites. Compensatory mitigation sites may be located within formal designations, such as Areas of | (b) (5) [redacted] |

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| | Critical Environmental Concern (ACEC) or units of the National Conservation Lands, or may be located within general geographic areas without a formal designation where incompatible uses are excluded or restricted." | |
| 1.5 Mitigation of Public Land Uses | "The BLM will identify, consider, and, as appropriate, require mitigation to address reasonably foreseeable impacts to resources through NEPA analyses and within associated decision documents and land use authorizations. The BLM should ensure that mitigation measures have clearly defined and measurable outcomes and are implemented and monitored for effectiveness.<br><br>A. **NEPA for Public Land Uses**<br>Through the NEPA analysis process, the BLM will, to the greatest extent possible, identify and consider the effectiveness of mitigation to address reasonably foreseeable impacts (both significant and non-significant) to resources (and their values, services, and/or functions) from proposed public land uses (BLM-proposed and externally proposed). The BLM will identify any required mitigation in the decision document(s) associated with the NEPA analysis and include any required mitigation in the land use authorization(s).<br><br>Mitigation should not be an afterthought; mitigation should be considered early and throughout the NEPA analysis process (e.g., scoping, proposed action, alternatives, environmental effects). For example, for BLM-proposed public land uses, the BLM should incorporate appropriate mitigation into the proposed project's design as an integral component of the proposed action (i.e., project design features). Or, for externally proposed public land uses, the BLM should encourage applicants to propose appropriate mitigation for their public land use. Where they exist and are relevant, mitigation strategies will be used to inform the NEPA analyses for applicable proposed public land uses. | |

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| | B. **Denying Proposed Public Land Uses**<br>Consistent with applicable law, the BLM generally has broad discretion to grant, grant with modifications, or deny a proposed public land use. Even where the agency has determined that a project proponent has a legal right to conduct the public land use, the BLM often has a degree of discretion on where and how public land uses may occur. Among the reasons that the BLM might deny a discretionary public land use are the inability to mitigate effectively the reasonably foreseeable impacts from a proposed public land use, an applicant's refusal to accept appropriate mitigation requirements, or if the action would violate a law, violate a regulation, violate a policy, or would not conform to a land use plan. Consistent with applicable law, the BLM may decline to authorize discretionary public land uses, including when the impacted resources are too important, scarce, or sensitive to withstand impacts or have legal, regulatory, land use plan, or policy protections that limit or prevent certain types of impacts, even after the implementation of mitigation. Consistent with applicable law, the BLM may also use its discretion to deny public land uses if impacts are expected to extend beyond the BLM's administrative boundaries and negatively affect the management responsibilities of other entities (e.g., units of the National Park System, State Parks) or impact resources managed by those entities that are too important, scarce, or sensitive to withstand those impacts or have legal, regulatory, land use plan, or policy protections that limit or prevent certain types of impacts.<br><br>C. **Unnecessary or Undue Degradation**<br>The BLM cannot authorize a public land use that would result in unnecessary or undue degradation to the public lands (FLPMA § 302(b), 43 USC § 1732(b)). Proposed public land uses that are expected to cause unnecessary or undue degradation will either be denied or modified (via avoidance, minimization, rectification, | |

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| | and reduction/elimination over time) such that the reasonably foreseeable impacts will not cause unnecessary or undue degradation. In limited circumstances, compensatory mitigation can mitigate for impacts that would—in the absence of such compensatory mitigation—constitute unnecessary or undue degradation." | |
| 1.6 Policy Limitations | "Limitations on the use of this policy include the following:<br><br>A. **Previously Approved Land Use Authorizations**<br>For land use authorizations approved by the BLM prior to the issuance of this policy, this policy applies only to the extent consistent with the land use authorization (Handbook Chapter 1.6.C). If a land use authorization is being renewed or amended, refer to Handbook Chapter 1.6.B.<br><br>B. **Renewal or Amendment of Land Use Authorizations**<br>The BLM may require additional mitigation measures, as appropriate and consistent with applicable law, during the renewal or amendment process for land use authorizations that the BLM approved prior to the issuance of this policy to address reasonably foreseeable impacts that have developed since the BLM authorized the public land use or that would cease but for the renewal or amendment of that authorization. Mitigation may not be required to address impacts from the original land use authorization that are no longer present or were adequately mitigated at the time the original land use authorization was approved.<br><br>C. **Valid Existing Rights and Limited Discretion Decisions**<br>This policy applies to a different extent where the BLM's discretion to deny or regulate a proposed public land use is more limited, such as with mining plans of operations, existing leases, existing contracts, or statutorily mandated actions like legislated land exchanges or sales. Nonetheless, the application of | |

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| | mitigation may be appropriate. In these instances, the BLM will still identify and consider the effectiveness of appropriate mitigation measures in its NEPA analyses, including compensatory mitigation; however, any mitigation requirements in the decision should be consistent with the regulations governing mining plans of operations, the terms and conditions of existing leases and existing contracts, or the applicable legislation. For example, if an oil and gas lease has issued with standard lease terms and conditions, the BLM should ensure that any additional and appropriate mitigation measures required for a permit to drill are reasonable and consistent with those lease terms and conditions.<br><br>**D. Land Use Authorizations on Split Estate Lands**<br>This policy applies to land use authorizations where the subsurface estate is owned by the United States, but the surface is owned by a different entity or person (i.e., split estate lands). The BLM generally has the authority to regulate the public land uses that involve federally owned mineral estate by requiring mitigation measures to address reasonably foreseeable impacts, including impacts to the surface estate. The BLM must consider the views of the surface owner(s) prior to its decision, consistent with applicable laws and policies.<br><br>If siting compensatory mitigation on split estate lands, the BLM will ensure that the willing landowner consents and that the site will receive adequate administration, durability, monitoring, reporting, funding, and that BLM is provided reasonable access to the compensatory mitigation site(s) for oversight purposes for the duration of the impacts from the public land use.<br><br>E. **Operations Authorized by the Mining Law of 1872**<br>The BLM should apply this mitigation policy on a case-by-case basis, consistent with the BLM's authority under the Mining Law, when authorizing operations under 43 CFR subparts 3809 or | |

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| | 3715. The BLM will follow the policy in this handbook if the mitigation is necessary to comply with the performance standards in 43 CFR 3809.420, including paragraph (a)(4) ("You must take mitigation measures specified by BLM to protect public lands."), or otherwise to prevent unnecessary or undue degradation. If there are any questions regarding the appropriateness of such measures, consult the Mining Law Administration Program Lead in the relevant State Office.<br><br>The BLM may also identify additional mitigation measures to address potential impacts of approving the plan of operations that may not necessarily rise to the level of constituting unnecessary or undue degradation, including mitigation sited outside the plan of operations boundary. These mitigation measures may be incorporated in the plan of operations decision with the agreement of the operator, along with any mitigation proposed by the operator. Even though these mitigation measures would not be required to prevent unnecessary or undue degradation, they are enforceable if included in the plan of operations decision with the operator's consent.<br><br>All mitigation measures should receive appropriate environmental analysis. For additional guidance regarding types of mitigation that may be required for these types of operations, consult the BLM's Surface Management Handbook, H-3809-1.<br><br>F. **Additional Mitigation Obligations**<br>Mitigation obligations identified through implementation of this policy may supplement, but do not replace, mitigation obligations that may be required by or result from formal consultation with other agencies or entities under statutes, such as the Endangered Species Act, National Historic Preservation Act, the Clean Water Act, or the Clean Air Act, regulations, or policies." | |

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| 1.7 File and Records Maintenance | A. "All records should be maintained in the appropriate case file and comply with any applicable BLM corporate data standards. In addition to the case file, the following records, once submitted by the applicable BLM office, should also be maintained by the National Operations Center:<br><br>1. Compensatory mitigation monitoring reports.<br><br>2. The geospatial area impacted by the public land use and that of compensatory mitigation measures and sites, with metadata describing the associated public land use (e.g., case file number) and the duration that the measure and site should be durable.<br><br>3. The geospatial area of mitigation strategies.<br><br>B. All geospatial data, including maps and geospatial layers, shall comply with national geospatial standards, will be compatible with BLM corporate data standards such as those for the Cadastral National Spatial Data Infrastructure (CadNSDI), PLSS Data Set, and the Land Status System (LR2000)." | (b) (5) [redacted] |
| 2 The Mitigation Hierarchy | "First, the BLM will seek to require the public land user to avoid impacts (e.g., by altering project design, location, or timing), consistent with applicable law; then the BLM will seek to require the public land user to minimize impacts (e.g., through project modifications, permit conditions, interim and final reclamation, etc.); and, generally, only if those approaches are insufficient to fully mitigate the impacts from a proposed public land use, will the BLM seek to require the public land user to compensate for some or all of the remaining impacts from the proposed public land use (i.e., residual effects), based on the criteria identified in Handbook Chapter 2.5.B. In limited situations, specific circumstances may exist that warrant deviating from this sequence, such as when seeking to achieve the maximum benefit to impacted resources or when constrained by the terms and conditions of existing land use authorizations or | (b) (5) [redacted] |

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| | applicable law. In some instances, the BLM might determine that the impacts (including residual effects) of public land uses may be acceptable and will not require mitigation, based on the criteria identified below." | |
| 2.1.D Avoidance | "Existing legal authorities contain additional protections for some resources that are of such irreplaceable character that minimization and compensatory mitigation measures may not be adequate or appropriate, and therefore avoidance is the appropriate form of mitigation, consistent with applicable law. The BLM will seek to avoid, to the greatest extent practicable, reasonably foreseeable impacts to the National Park System, National Wildlife Refuge System, National Landscape Conservation System (National Conservation Lands), Areas of Critical Environmental Concern, and other special status areas." | |
| 2.5 Compensation | "After considering and applying the first four aspects of the mitigation hierarchy, the BLM will, as appropriate, require that public land users compensate for certain types of residual impacts on the public lands by replacing or providing substitute resources or environments, through restoration, establishment, enhancement, and/or preservation of resources.<br><br>The BLM may include these requirements in land use authorizations for which BLM has broad discretion under the law. As mentioned in the Introduction, to the extent that BLM has limited discretion for certain types of land use authorizations, such as those related to uses under the Mining Law or decisions related to existing leases and contracts, the BLM's ability to require those public land users to conduct certain types of compensatory mitigation may be limited by applicable law." | |
| 2.5.A Compensatory Mitigation | "The BLM will identify, consider, and, as appropriate, require compensatory mitigation, based on the criteria identified in Handbook Chapter 2.5.B, to address the reasonably foreseeable residual effects to resources from public land uses.<br><br>When BLM is planning to take an action itself that would impact the public lands, the BLM should strive to design those that land use to avoid residual effects that warrant compensatory mitigation. | |

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| | By applying the criteria in Handbook Chapter 2.5.B, after applying the first four aspects of the mitigation hierarchy, the BLM will identify the extent to which residual effects warrant compensatory mitigation." | |
| 2.5.B. The Need for Compensatory Mitigation | "Consistent with applicable law, the need for compensatory mitigation should be based on applicable mitigation standards, what is appropriate, and the potential for any of the following:<br><br>1. Laws and/or Policies. Residual effects that inhibit achieving compliance with laws and/or policies, if compensatory mitigation were not required. When considering compensatory mitigation for residual effects, the BLM should also take into consideration the management responsibilities of other Federal agencies, Tribal, State and/or local governments and how the laws or policies of these entities could be inhibited by the residual effects.<br><br>2. Land Use Plan Objectives. Residual effects that inhibit achieving applicable land use plan's resource objectives, including any applicable mitigation standards, if compensatory mitigation were not required. When considering compensatory mitigation for residual effects, the BLM should also take into consideration the management responsibilities and interests of other Federal agencies, Tribal, State and/or local governments.<br><br>If a land use plan amendment is being considered to accommodate residual effects that are incompatible with the existing land use plan, compensatory mitigation may still be appropriate to address the resource impacts.<br><br>3. Mitigation Strategy. Residual effects to resources that are considered important, scarce, sensitive, or have a protective legal mandate that have been previously identified in a mitigation strategy as warranting compensatory mitigation. | (b) (5) [redacted] |

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| | 4. NEPA Process. Residual effects to resources that are considered important, scarce, sensitive, or have a protective legal mandate that are identified through a NEPA process as warranting compensatory mitigation.<br><br>If the BLM requires a public land user to rectify or eliminate impacts from a public land use at some point in the distant future (e.g., reclaiming an abandoned oil well 40 years from now followed by successful ecosystem restoration 15 years after that), it does not eliminate the need to identify, consider, and, as appropriate, require compensation for residual effects that will occur in the interim before reclamation and restoration are complete.<br><br>The BLM should consider the four criteria in this section to determine if residual impacts warrant any compensatory mitigation, and if so, the extent to which those residual impacts warrant compensatory mitigation. In other words, when deciding whether compensatory mitigation is warranted, the BLM should consider the extent to which residual impacts should be mitigated to facilitate compliance with law, policy, or land use plan objectives; or to protect resources that are considered important, scarce, sensitive, or have a protective legal mandate, as identified in a mitigation strategy or through the NEPA process." | |
| 2.5.C Residual Effects not Warranting Compensation | "The BLM should generally not require compensatory mitigation for impacts from a proposed public land use to address residual effects to another authorized public land uses (e.g., residual effects to authorized livestock grazing, rights-of-way, solid minerals development, oil and gas development). However, there are two exceptions to this policy, as follows.<br><br>1. The BLM will make every effort to avoid authorizing public land uses that reduce the effectiveness of compensatory mitigation sites and restoration projects (i.e. a reversal). In the rare circumstance where the BLM authorizes such a land use, the BLM will apply the mitigation hierarchy, including | |

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| | compensatory mitigation, as appropriate, to address those impacts.<br>2. It may be appropriate for the BLM to require compensatory mitigation for residual effects to recreational facilities primarily maintained for the direct recreational use of the general public (e.g., a hiking trail system, campsites, boat launch) or for residual effects to authorized range improvements (e.g., fencing)." | |
| 2.5.D Compensatory Mitigation Standard | "When the BLM determines that compensatory mitigation is warranted for addressing a residual effect to a resource, the BLM will seek to apply a no net loss standard, consistent with applicable law, if that resource is important, scarce, sensitive, has a protective legal mandate, or whenever doing so is consistent with established resource objectives. The BLM can implement other mitigation standards, such as achieving net benefit, consistent with applicable law, when the BLM determines such standards are required to achieve resource objectives (Handbook Chapter 4.1.A)." | (b) (5) [redacted] |
| 2.5.E The Types of Compensatory Mitigation | "The BLM recognizes four types of compensatory mitigation measures: restoration, establishment, enhancement, and preservation. The BLM should identify the compensatory mitigation measures that will appropriately mitigate the reasonably foreseeable residual effects that warrant compensatory mitigation and achieve the maximum benefit to the impacted resources within the context of the conditions and trends of those resources, at all relevant scales. The BLM will generally consider appropriate the use of mitigation banks, mitigation exchanges, mitigation funds (also known as in-lieu fee programs), and public land user-responsible compensatory mitigation measures to carry out these types of compensatory mitigation, as discussed in Handbook Chapter 2.5.I." | (b) (5) [redacted] |
| 2.5.F Key Attributes of Compensatory Mitigation | "All compensatory mitigation obligations should be commensurate with the reasonably foreseeable residual effects from public land uses that warrant compensation and that compensatory mitigation measures demonstrate the appropriate level of timeliness and are additional. | (b) (5) [redacted] |

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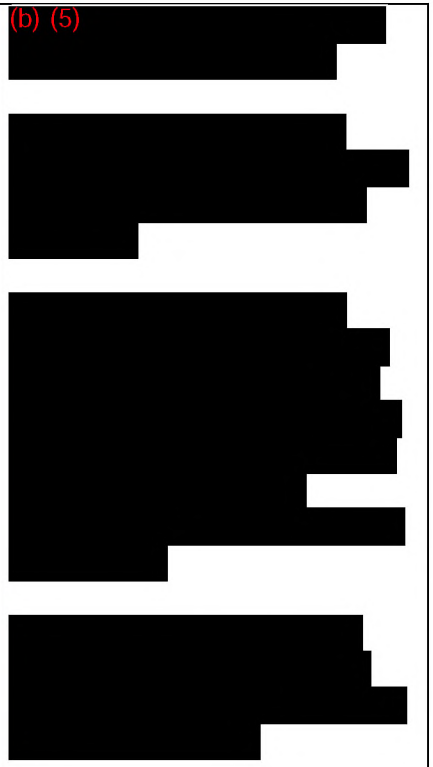
| | 1. Commensurate. The BLM should ensure that any compensatory mitigation obligation is commensurate with the reasonably foreseeable residual effects from public land uses that warrant compensation (i.e., a compensatory mitigation obligation, to be commensurate, should be reasonably related and proportional to the reasonably foreseeable residual effects from a public land use that warrants compensatory mitigation).<br><br>a. The type of compensatory mitigation should have a reasonable relationship to the reasonably foreseeable residual effects of the public land use that warrant compensation in order to be considered commensurate. The BLM should evaluate the types of compensatory mitigation measures based on their ability to provide the maximum benefit to the impacted resources.<br><br>b. The amount of compensatory mitigation should be proportional to the reasonably foreseeable residual effects of the public land use that warrant compensation in order to be considered commensurate. Proportionality necessitates that the amount of compensatory mitigation is approximately equivalent with the reasonably foreseeable residual effects of the public land use that warrant compensation (including consideration of direct and indirect residual effects).<br><br>Proportionality includes factors such as the quality of the resource (at both the impacted site and compensatory mitigation sites), the degree to which the resource is important, scarce, or sensitive, or requires protection (via legal, regulatory, policy, or land use plans), the timeliness of the compensatory mitigation measure, the risk of a measure's failure, and any applicable mitigation standard. In some cases, an impact that affects a relatively small area may be considered proportional to | (b) (5)<br>  |

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| | a relatively large area of compensatory mitigation due to these types of factors, or vice versa.<br><br>c. Compensatory mitigation measures should simultaneously be both commensurate with the residual effects and achieve the maximum benefit for the impacted resources. Determining what is commensurate is achieved by carefully identifying the type of and amount of required compensatory mitigation. Determining the maximum benefit is often achieved by carefully identifying the type of, siting of, and/ or timing of the compensatory mitigation measure, with special consideration to any known limiting factors for the impacted resources.<br><br>d. Whenever compensatory mitigation is required, the BLM should clearly describe in the NEPA analysis and decision document(s) how compensatory mitigation measures are commensurate with the reasonably foreseeable residual effects and achieve the maximum benefit to the impacted resources.<br><br>2. Timeliness. The BLM should ensure that compensatory mitigation measures demonstrate the appropriate level of timeliness.<br><br>a. In developing compensatory mitigation measures' outcomes, the BLM should include timeliness requirements (i.e., description of *when* the measures' outcomes will be achieved).<br><br>b. The BLM's general preference is to achieve compensatory mitigation measures' outcomes in advance of impacts from a public land use (e.g., by the public land user purchasing credits from a mitigation bank, if appropriate). The implementation of this preference will depend on the quantity, quality, and characteristics of the impacted resource, urgency of the compensatory mitigation needs and the amount and type of the compensatory mitigation measures. | |

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| | To provide a degree of certainty to the applicant of a land use authorization, it may be appropriate for the BLM to approve a public land use contingent on the public land user achieving the outcomes of the compensatory mitigation measures. Once the outcomes have been achieved, the BLM could then issue a Notice to Proceed (or a similar notice).<br><br>c. In other cases, the BLM may allow for the residual effects of a public land use to precede the achievement of a compensatory mitigation measure's outcome if the quantity, quality, and characteristics of the impacted resource can withstand such a delay. In this case, the BLM may need to account for the increased uncertainty and the time-value of delayed benefits when determining the compensatory mitigation obligation (Handbook Chapter 2.5.G).<br><br>d. In some cases, it may be appropriate for the public land user to compensate for the reasonably foreseeable slow decline of a resource due to a public land use by phasing in compensatory mitigation measures. In these cases, the compensatory mitigation outcomes should be timed to match the decline in the affected resource.<br><br>i. If an applicant seeks to implement and receive credit for compensatory mitigation measures performed in advance of the submission of a public land use proposal or prior to the BLM's analysis of the proposed public land use, the BLM (and/or another Federal agency or a State agency) and the applicant should develop a written agreement that documents that the credits are being generated for the purpose of compensating for a future impact and the measures are being designed and implemented in a manner consistent with this handbook. Any credits | |

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| | generated in accordance with these types of agreements should be included as part of the proposed action and analyzed by the BLM in the NEPA process. These agreements should document the Standards for Compensatory Mitigation Mechanisms, as describe in Handbook Chapter 2.5.I.1.<br><br>The BLM manages many types of resources, many of which may require a different method for calculating the credit values to be used in these agreements. The BLM expects to issue program-specific guidance that outlines valuation tools for determining the amount of credit that a public land user may obtain from certain types of compensatory mitigation. Until that guidance is issued, BLM offices should coordinate, as appropriate, with each other, other Federal agencies, Tribal, State, and/or local governments to act as consistently as possible in developing these agreements with public land users.<br><br>3. Additionality. The BLM should ensure that any compensatory mitigation that it requires demonstrates additionality (i.e., a compensatory mitigation measure that is demonstrably new and would not have occurred without the compensatory mitigation measure).<br><br>a. Financial additionality: The BLM should ensure that compensatory mitigation measures are in addition to any existing projects funded or foreseeably expected to be funded, that benefit the same resources in the same way at the same sites.<br><br>i. Compensatory mitigation measures on Federal land will demonstrably augment, rather than duplicate, similar projects funded or foreseeably expected to be funded by | |

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| | Federal appropriations, including those projects identified in the BLM's annual work plan. However, the identification of a similar project in a land use plan or a strategy document does not necessarily mean that a compensatory mitigation action is not additional.<br><br>ii. Compensatory mitigation measures on non-Federal land will demonstrably augment, rather than duplicate, similar projects funded or foreseeably expected to be funded by Federal, Tribal, State, and/or local governments, and/or private entities.<br><br>b. Resource additionality: The BLM should ensure that compensatory mitigation measures are demonstrably new and would not have occurred without the compensatory mitigation measure.<br><br>The BLM should not consider new compensatory mitigation obligations associated with a new land use authorization to be additional if they duplicate existing compensatory mitigation obligations associated with an existing land use authorization, even if the existing compensation mitigation obligations have not yet been implemented." | |
| 2.5.G The Amount of Compensatory Mitigation | "Determining the <u>need for</u> compensatory mitigation (Handbook Chapter 2.5.B) is a prerequisite for determining the appropriate <u>amount of</u> compensatory mitigation.<br><br>The BLM should determine the <u>amount of</u> compensatory mitigation that is commensurate to the residual effects that warrant compensatory mitigation and that is consistent with any applicable mitigation standard. The BLM should be transparent and provide a clear rationale for the amount of compensatory mitigation in the NEPA analysis and decision document(s). | (b) (5) [redacted] |

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| | The following process should be used as a framework to determine the <u>amount of</u> compensatory mitigation.<br><br>1. *Determining the Magnitude of the Impacts to the Resource:* After determining that residual effects to a resource warrant compensatory mitigation, the BLM needs to determine the magnitude of those impacts. To do so, the BLM needs to determine:<br><br>a. The baseline condition and trend of the resource, in terms of quantity, quality, and characteristics, at the impacted site.[2] The BLM should consider if the current quantity, quality, and characteristics of the resource is at a desired condition (e.g., ideal habitat size; at its ecological potential; fulfilling a key role), and if the trend in the quantity, quality, and characteristics of the resource is improving, declining, or maintaining. This analysis will likely require consideration of the condition and trend at the site of the impact and within the relevant landscape of the resource.<br><br>b. The amount of change to the baseline condition and trend due to the residual effects from the public land use, in terms of quantity, quality, and characteristics (after consideration and implementation of the first four aspects of the mitigation hierarchy). The BLM should determine how much change from baseline there will be in the quantity, quality, and characteristics of the resource due to the residual effects, and how that change will affect achieving the desired condition and trend of the resource. These changes may be realized at the site and/or across the landscape (e.g. will a change in quality at the site cause a detectable change in quality across the landscape?). | (b) (5) [redacted] |

[2] In some cases, the quantity, quality, and characteristics of a resource can be addressed in a single metric (e.g. functional acres)

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| | This analysis should consider both the direct and indirect impacts. Direct impacts typically consider the footprint of the land use authorization. Indirect impacts vary widely by the type of public land use and the type of resource, but generally are most intense near the impact site and gradually decrease as the distance from the impact site increases.<br><br>2. *Determining the Magnitude of the Benefits Needed to Adhere to the Mitigation Standard:* The BLM should compare the magnitude of the impacts to the resource, as determined in Step 1, to any applicable mitigation standard for the resource, in order to determine the magnitude of the benefits to the resource that is needed to be achieved through compensatory mitigation. For example, if there is a no net loss mitigation standard established in the land use plan for the resource, the magnitude of the impacts to the resource should equal the magnitude of the benefits to the resource from compensatory mitigation measures.<br><br>If no mitigation standard yet exists for the resource, the BLM should use this step in the process to consider the project-specific mitigation standard for the resource (through the decision document supported by appropriate NEPA analysis). It is BLM policy to seek to apply a no net loss standard, consistent with applicable law, if that resource is important, scarce, sensitive, has a protective legal mandate, or whenever doing so is consistent with established resource objectives, as described in Handbook Chapter 2.5.D. The BLM can implement other mitigation standards, such as achieving net benefit, consistent with applicable law, when the BLM determines such standards are required to achieve resource objectives.<br><br>In any case, the magnitude of the benefits to the resource should be commensurate with the magnitude of the impacts to the resource that warranted compensatory mitigation. | |

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| | 3. *Determining the Amount of Compensatory Mitigation Needed to Achieve the Magnitude of the Benefits:* The BLM needs to determine the amount of compensatory mitigation necessary in order to achieve the appropriate magnitude of the benefits to the resource, as determined in Step 2. The amount necessary to achieve the appropriate benefit is dependent on the compensatory mitigation type (Handbook Chapter 2.5.E, e.g. preservation or restoration) and the compensatory mitigation site (Handbook Chapter 2.5.H)<br><br>Compensatory mitigation types and compensatory mitigation sites can achieve various amounts of benefits to the resource with various amounts of effort. For example, a small amount of a much-needed compensatory mitigation measure at a critically-important compensatory mitigation site can produce more resource benefit than a large of amount of a low-value compensatory mitigation measure at a low-importance compensatory mitigation site.<br><br>To identify the achievable benefits from compensatory mitigation types at compensatory mitigation sites, the BLM needs to determine:<br><br>a. The baseline condition and trend of the resource, in terms of quantity, quality, and characteristics, at the compensatory mitigation site. The BLM should consider if the current quantity, quality, and characteristics of the resource is at a desired condition (e.g., ideal habitat size; at its ecological potential; fulfilling a key role), and if the trend in the quantity, quality, and characteristics of the resource is improving, declining, or maintaining. This analysis will likely require consideration of the condition and trend at the compensatory mitigation site and within the relevant landscape of the resource.<br><br>b. The amount of change to the baseline condition and trend due to the compensatory mitigation measures, in terms of quantity, | |

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| | quality, and characteristics (after consideration and implementation of the first four aspects of the mitigation hierarchy). The BLM should determine how much change from baseline there will be in the quantity, quality, and characteristics of the resource due to the compensatory mitigation measures, and how that change will provide a benefit to the desired condition and trend of the resource. These changes may be realized at the site and/or across the landscape (e.g. will a change in quality at the site cause a detectable change in quality across the landscape?).<br><br>In this step, the BLM should consider the type of compensatory mitigation measures that will be implemented, as this will affect the amount of change to the baseline condition and trend that can be realized. This step will determine the amount of compensatory mitigation necessary at the site in order to achieve the appropriate magnitude of the benefits to the resource.<br><br>The same methods, including metrics, used to describe the magnitude of impacts to the resource (as compared to baseline conditions) from the public land use should be used to describe the magnitude of benefits to the resource (as compared to baseline conditions) from compensatory mitigation measures (e.g., "functional acres" impacted and "functional acres" benefitted).<br><br>4. *Considering Risk:* The BLM should consider the risk of mitigation ineffectiveness, or the loss of durability, when determining the amount of compensatory mitigation, including consideration of the risk from foreseeable changing circumstances (e.g., climate change, fire, invasive species). It is a best practice to gain understanding of this risk through analysis in the NEPA process. It may be possible to account for this risk by carefully designing compensatory mitigation measures or by the use of credit reserves, where additional | |

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| | mitigation measures are conducted, but held in reserve and used only if a compensatory mitigation measure fails.<br><br>5. *Considering Timeliness:* The BLM may determine that it should adjust the amount of compensatory mitigation to account for any lack of timeliness with the compensatory mitigation measures.<br><br>6. *Considering the use of Mitigation Banks, Mitigation Exchanges, and Mitigation Funds*: Appropriate compensatory mitigation mechanisms are described in Handbook Chapter 2.5.I. When a public land user is relying on three of the four appropriate mechanisms (mitigation banks, mitigation exchanges, and mitigation funds) to fulfill a need for compensatory mitigation, the BLM may need to take additional steps to ensure that the amount of compensatory mitigation required is equivalent to the amount of compensatory mitigation provided by the compensatory mitigation mechanism.<br><br>a. *Mitigation Banks and Mitigation Exchanges*: When a public land user purchases credits from the responsible party of a mitigation bank or a mitigation exchange to fulfill the need for compensatory mitigation of residual effects, the BLM should verify that the credits are equivalent to the required compensatory mitigation obligation. The BLM should review crediting methodologies adopted by the mitigation banks and mitigation exchanges to help make this equivalency determination. Credit valuation and crediting methodologies may differ depending on the type of bank or exchange and how the managers of those banks or exchanges, or the relevant regulatory agency, are determining credit value.<br><br>b. *Mitigation Funds*: When a public land user makes a financial contribution to a mitigation fund to fulfill the need for compensatory mitigation of residual effects, the BLM should convert each required compensatory mitigation measure into | |

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| | monetary terms in order to determine the appropriate contribution to the fund (i.e., how much does it cost to perform such measures?).<br><br>This determination should be based on full cost accounting and include, as appropriate, expenses such as fund administration, land acquisition, durability measures, project planning and design, materials, labor, monitoring, and reporting. This determination should also take into account contingency costs to account for uncertainties and risk, any necessary financial assurances, and long-term management for the duration of the impacts.<br><br>The BLM should review funding methodologies adopted by mitigation funds to help make this funding determination. For non-market/ecosystem services-based compensatory mitigation measures, methods may exist to estimate the economic/monetary value of the compensatory mitigation measure (e.g., benefit transfer, revealed preference, contingent valuation, avoided cost, etc.).[3]" | |
| 2.5.H Compensatory Mitigation Sites | "To the extent allowed by law, including existing regulations, the BLM should ensure that activities conducted to comply with compensatory mitigation measures are located on compensatory mitigation sites where the maximum benefit to the impacted resource can feasibly be achieved and maintained and that will provide for the appropriate types and amount of compensatory mitigation measures. Compensatory mitigation sites can be identified in advance of anticipated public land uses in land use plans (Handbook Chapter 4.1.C) and/or mitigation strategies (Handbook Chapter 3.4.I), or can be identified through the NEPA process for proposed public land uses (Handbook Chapter 5.7).<br><br>1. The BLM should identify a compensatory mitigation site without implying a preference for siting it closer to or farther from the | |

[3] Federal Resource Management and Ecosystem Services Guidebook; https://nespguidebook.com/

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| | impacted site, as long as a reasonable relationship is maintained between the impacts of the public land use and the compensatory mitigation measure(s) being implemented at that site. It should also be determined without implying a preference for Federally managed lands. If sited on BLM-managed lands, the BLM should consider other potential uses of that land that are incompatible with the compensatory mitigation site. If sited on non-BLM-managed lands, the BLM will require the consent of the landowner or manager.<br><br>a. For management of a compensatory mitigation site on BLM-managed lands, the BLM will ensure, in coordination with the responsible party for the compensatory mitigation measure, that the site will receive adequate administration, durability, monitoring, adaptive management, reporting, and funding for the duration of the impacts from the public land use.<br><br>b. For management of a compensatory mitigation site on non-BLM-managed lands, the BLM should document the landowner's or manager's consent through a written agreement between applicable parties that outlines the terms and conditions of the arrangement, including how the BLM or other entity will gain access to conduct monitoring.<br><br>2. The BLM should assess and document the baseline condition of compensatory mitigation sites to determine the site's potential for achieving benefits to the resources. The baseline condition should include consideration of the conditions and trends of resources, in terms of quantity, quality, and characteristics, and the bio-physical aspects of the site that support the resources (e.g., soil conditions), at all relevant scales. Understanding the baseline conditions of the relevant resources at a compensatory mitigation site is important to ensure that the site has the potential to achieve the required outcome(s). The foreseeable change in baseline condition and the | |

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| | potential to achieve the required outcome(s) should be primary factors in selecting compensatory mitigation sites.<br><br>3. In many cases, the maximum benefit can be found where there is potential to leverage other conservation-related projects funded by Federal or non-Federal entities. The principles of additionality still apply (Handbook Chapter 2.5.F.3).<br><br>4. Multiple compensatory mitigation sites may be appropriate for a single public land use to accommodate the variety of resources with residual effects.<br><br>5. Compensatory mitigation sites may provide opportunities for spatially overlapping compensatory mitigation measures.<br><br>a. A single compensatory mitigation site may provide opportunities for a public land user to mitigate the residual effects under multiple compensatory mitigation measures.<br><br>b. For compensatory mitigation obligations met through mitigation banks and mitigation exchanges, the BLM should be aware of the similar, but distinct concepts of "credit bundling" and "credit stacking".<br><br>i. *Credit bundling* is when a compensatory mitigation credit representing a measure that benefited multiple overlapping resources at a single compensatory mitigation site is sold by a mitigation bank or mitigation exchange to a public land user as single combined credit. The BLM should be aware that a public land user under a compensatory mitigation obligation to the BLM may be able to purchase a single credit from a mitigation bank or mitigation exchange to meet its compensatory mitigation obligation for several | |

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| | impacted resources, if the credit is associated with a measure that benefitted each of the impacted resources.<br><br>*Credit stacking* is when a compensatory mitigation credit representing a measure that benefited multiple overlapping resources is sold by a mitigation bank or mitigation exchange to a public land user as separate and distinct credits. The BLM should not view credits that a public land user has obtained through credit stacking to be used to fulfill compensatory mitigation obligations, as this practice raises concerns regarding additionality, in that the same credit (i.e., the same compensatory mitigation measures) could be sold multiple times (i.e., double dipping)." | |
| 2.5.I Compensatory Mitigation Mechanisms | "Among the compensatory mitigation mechanisms that the BLM will generally consider appropriate, consistent with applicable law are: mitigation banks, mitigation exchanges, mitigation funds (also known as in-lieu fee programs), and public land user-responsible compensatory mitigation measures.<br><br>While it is permissible for the BLM to hold mitigation funds, the BLM is discouraged from doing so due to increased workloads on BLM staff and BLM overhead rates. If the BLM does hold mitigation funds, the full costs to hold the funds should be included when determining the amount of compensatory mitigation, generally consistent with applicable cost recovery authorities. Refer to Appendix 2 for additional policies and procedures regarding the BLM's management of mitigation funds.<br><br>In the case where the BLM is not the manager of the mitigation fund, the BLM will not assume, by agreement or otherwise, control over the use of such funds. This includes direct control, such as by the controlling vote in a decision-making group, or constructive control, such as by having the power to veto an expenditure decision. Consistent with applicable law, however, the BLM may participate in decisions as to their use, so long as the BLM does not have ultimate decision-making authority. The purpose of this restriction is to ensure that such funds are not determined to be | |

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| | Federal funds and thereby subject to Federal rules governing their expenditure. The BLM retains the ability to ensure that required mitigation obligations are implemented and effective.<br><br>1. Standards for Compensatory Mitigation Mechanisms. The BLM should hold all compensatory mitigation mechanisms, if used to meet a compensatory mitigation obligation required by the BLM, to high and equivalent standards. Consistent with applicable law, the BLM should verify and document that the responsible party for a compensatory mitigation mechanism has:<br><br>a. Established and described clearly defined and measurable *outcomes* and *performance standards* for the compensatory mitigation measures, including the types and amounts of resources that will be restored, established, enhanced, and/or preserved, and described how these outcomes will contribute to achieving established resources objectives.<br><br>b. Described the factors considered during the *site selection* process, including how the sites will address landscape-scale needs.<br><br>c. Ensured and described how the *durability* of the compensatory mitigation measures and sites will be maintained.<br><br>d. Assessed and documented the *baseline conditions* of the compensatory mitigation sites, with consideration to the conditions and trends of resources at all relevant scales.<br><br>e. Implemented adaptive management, including a comprehensive *monitoring* program, which considers the conditions and trends of resources at all relevant scales, to assess the effectiveness of compensatory mitigation measures | |

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| | and identify any need for management changes to achieve the required mitigation outcomes. As described in Handbook Chapter 1.1.F, whenever possible, effectiveness monitoring should be designed around the same or compatible methods, including metrics, as used to identify resource objectives (e.g., in a land use plan), measure impacts, and/or define mitigation measures' outcomes, and should be incorporated into existing monitoring programs and sampling grids.<br><br>f. Developed and implemented a *plan* for compensatory mitigation measure(s) and site(s) that describes:<br><br>i. Specifications for implementing the compensatory mitigation measures (e.g., timing, method, source materials, specific geographic area, etc.).<br><br>ii. The schedule and plan to maintain compensatory mitigation measures for the duration of the impacts.<br><br>iii. Any adaptive management triggers, if necessary, in order to achieve the required outcomes of the compensatory mitigation measures.<br><br>iv. The accounting, tracking, and reporting of measures/funds/credits.<br><br>g. Demonstrated financial solvency sufficient to cover all compensatory mitigation obligations (including durability, monitoring, adaptive management, and reporting) for the duration of the impact from the associated public land use(s).<br><br>While each of these standards should be required, regardless of the compensatory mitigation mechanism, the degree of detail to be used in describing how a compensatory mitigation mechanism is | |

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| | meeting each of these standards should be determined in relation to the amount and type of compensatory mitigation measures.<br><br>2. Approval of Compensatory Mitigation Mechanisms. A written agreement should be in place between the responsible party (i.e., the entity accountable for fulfilling all aspects of mitigation obligations) for a compensatory mitigation mechanism, the BLM (and/or another Federal or State agency), and any other applicable parties, which documents the standards described above. The agreement should outline the terms and conditions of the arrangement, including how the BLM or another entity will conduct monitoring.<br><br>3. Determining the Compensatory Mitigation Mechanism for a Compensatory Mitigation Obligation. The BLM will discuss compensatory mitigation mechanism options with the land use authorization's applicant. Public land users who have compensatory mitigation obligations may meet those obligations via a compensatory mitigation mechanism certified or approved by BLM (or certified by another Federal or State agency if the compensatory mitigation mechanism is designed in a manner consistent with this policy). The BLM will determine the appropriate mechanism(s), taking into account the preferences of the applicant and the standards and preferences described in this policy. In order for the BLM to approve the use of a compensatory mitigation mechanism to satisfy compensatory mitigation obligations:<br><br>a. The compensatory mitigation measures performed by the compensatory mitigation mechanism must have a reasonable relationship to the reasonably foreseeable residual effects from the public land use (Handbook Chapter 2.5.F.1).<br><br>b. The compensatory mitigation measures performed by the compensatory mitigation mechanism should be the type of | |

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| | measure(s), sited in the appropriate location(s), that will achieve the maximum benefit for the impacted resources, within the context of the conditions and trends of resources, at all relevant scales, on public or private lands (with a written agreement with the willing landowner).<br><br>The BLM's general preference is to achieve compensatory mitigation outcomes in advance of the impacts of a public land use (Handbook Chapter 2.5.F.2), which may affect how the BLM will consider compensatory mitigation mechanism(s) that are proposed to be used to satisfy compensatory mitigation obligations. Additionally, compensatory mitigation mechanisms used to satisfy compensatory mitigation obligations must appropriately account for the risk of failure of compensatory mitigation measures (Handbook Chapter 2.5.G.4).<br><br>Consistent with applicable law, policies, and land use plans, the BLM may authorize (e.g., by issuing a lease, a right-of-way, etc.) the use of BLM-managed lands as the site for a compensatory mitigation mechanism. Any type of compensatory mitigation mechanism may be implemented on BLM-managed lands, even if the compensatory mitigation measures will be used to mitigate residual effects from public land uses occurring on non-BLM-managed lands. In this case the BLM should take appropriate administrative actions to ensure the durability of the site(s) (Appendix 1)." | |
| 3.1 Benefits of Mitigation Strategies | "Strategically identifying mitigation measures and their associated compensatory mitigation sites across a geographic area to provide opportunities to achieve maximum benefits for impacted resources;" | (b) (5) [redacted] |
| 3.3 Geographic Area of Mitigation Strategies | "The BLM should define the geographic area of a mitigation strategy to include the relevant landscape necessary to sustain the relevant resources. This geographic area should be as narrow or as broad as necessary to sustain or otherwise achieve established resource objectives and to effectively mitigate for foreseeable impacts. The BLM should | |

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| | define the geographic area for mitigation strategies with consideration to (not in priority order):<br>...<br>E. Existing mitigation programs (e.g., State-managed compensatory mitigation programs)." | |
| 3.4 Components of Mitigation Strategies | F. "A description of the potential need for compensatory mitigation by assessing the reasonably foreseeable residual effects that may warrant compensatory mitigation (with consideration of the criteria identified in Handbook Chapter 2.5.B).<br><br>G. An evaluation and prioritization of the types of compensatory mitigation measures that are likely appropriate for the reasonably foreseeable residual effects that warrant compensatory mitigation, including clearly defined and measurable outcomes for those types of measures. When conducting this analysis, the BLM should consider the types of compensatory mitigation measures previously identified in land use plans and/or relevant and existing conservation strategies.<br><br>H. A recommended or required amount of compensatory mitigation measures needed to mitigate for the likely reasonably foreseeable residual effects that warrant compensatory mitigation, with respect to the mitigation standards (if they exist) for the impacted resources.<br><br>1. If the extent of the reasonably foreseeable residual effects is unknown at the time of the mitigation strategy's development, it is important to provide formulaic and/or scalable measures (e.g., compensatory mitigation measures per acre of impact) that can be used to determine the amount of compensatory mitigation when the residual effects become calculable.<br><br>I. An evaluation and prioritization of compensatory mitigation sites that will maximize the benefit for the resources that will likely have residual effects that may warrant compensation, including | (b) (5) [redacted] |

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| | considerations of each site's ability to provide benefits to multiple resources, importance in the geographic area, durability, and additionality. When conducting this analysis, the BLM should consider compensatory mitigation sites previously identified in land use plans and/or relevant and existing conservation strategies.<br><br>1. In some cases, the evaluation and prioritization of the types of compensatory mitigation measures (Handbook Chapter 3.4.G) and this section may be merged to reduce repetition (e.g., where evaluation of compensatory mitigation measures is dependent on the siting of those measures).<br><br>J. A description of appropriate compensatory mitigation mechanisms in the geographic area (e.g., mitigation banks, mitigation exchanges, mitigation funds, public land user-responsible compensatory mitigation measures).<br><br>1. In some cases, the evaluation and prioritization of compensatory mitigation sites (Handbook Chapter 3.4.I) and this section may be merged to reduce repetition (e.g., where mitigation banks exist and are both a priority compensatory mitigation site and an appropriate compensatory mitigation mechanism).<br><br>K. A description of how equivalency will be determined between compensatory mitigation mechanisms.<br><br>1. It may be appropriate to convert the identified amount of compensatory mitigation measures (Handbook Chapter 3.4.H) into a quantity of credits to facilitate the use of mitigation banks and mitigation exchanges. Similarly, it may be appropriate to convert the compensatory measures into monetary terms to facilitate the use of mitigation funds. The BLM should review methodologies developed by the mitigation banks, mitigation exchanges, | |

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| | mitigation funds, and/or other experts to help make this conversion.<br><br>Credit valuation and crediting methodologies may differ depending on the type of bank or exchange and how the managers of those banks or exchanges, or the relevant regulatory agency, are determining credit value. The BLM manages many types of resources, many of which may require a different method for calculating the credit values. The BLM expects to issue program-specific guidance that outlines valuation tools for determining the amount of credit that a public land user may obtain from certain types of compensatory mitigation. Until that guidance is issued, BLM offices should coordinate, as appropriate, with each other, other Federal agencies, Tribal, State, and/or local governments to act as consistently as possible in making determinations about the quantity of credits.<br><br>2. As a mitigation strategy may be active for several years, any credit or monetary determinations should be reviewed and updated over time, as necessary.<br><br>A description of actions necessary to achieve durability of, and to monitor, adapt (if necessary), and report on, mitigation." | |
| 3.6 Utilizing Existing Conservation and Restoration Strategies | "Existing conservation and restoration strategies, from existing efforts and partnerships, including those produced by other Federal agencies, Tribal, State and/or local governments, often include many components of mitigation strategies, as described in Handbook Chapter 3.4. For example, a conservation strategy developed by a multi-stakeholder group for a rare plant species, which identifies restoration focal areas for the species, may be useful to incorporate into a mitigation strategy's discussion of compensatory mitigation sites. The BLM should strive, as appropriate, to incorporate or be consistent with these existing strategies when developing new mitigation strategies." | |

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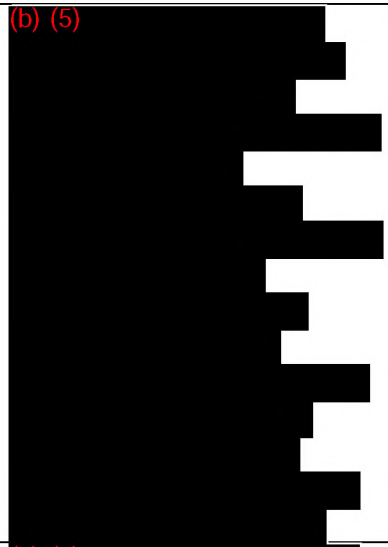
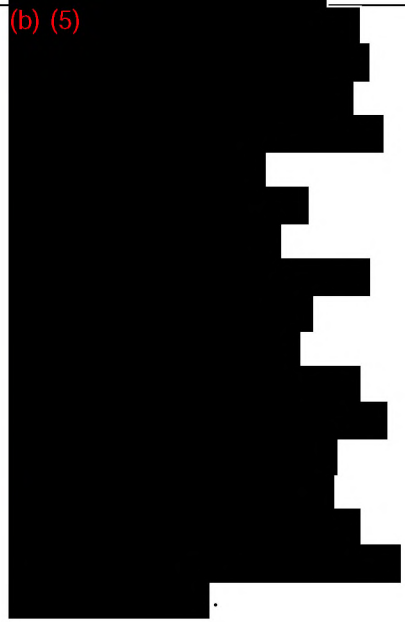
| 4 Mitigation in Land Use Planning | "The land use planning process provides one method for identifying, considering, and, as appropriate, requiring mitigation well in advance of anticipated public land uses. Additionally, the land use planning process provides an opportunity to incorporate relevant components of a mitigation strategy into a land use plan (Handbook Chapter 3). The land use plan can identify resource objectives and associated mitigation standards, land use allocations, and management actions to facilitate the application of appropriate mitigation for public land uses. Also, to support the implementation of durable compensatory mitigation measures on BLM-managed lands, the BLM can support or identify compensatory mitigation sites with land use allocations that limit or exclude incompatible uses of those sites, consistent with applicable law." | (b) (5)  |
| 5 Mitigation in NEPA Analyses for Public Land Uses | "Through the NEPA analysis process, the BLM will, to the greatest extent possible, identify and consider the effectiveness of mitigation to address reasonably foreseeable impacts (both significant and non-significant) to resources (and their values, services, and/or functions) from proposed public land uses (BLM-proposed and externally proposed). The BLM will identify any required mitigation in the decision document(s) associated with the NEPA analysis and include any required mitigation in the land use authorization(s).<br><br>Mitigation should not be an afterthought; mitigation should be considered early and throughout the NEPA analysis process (e.g., scoping, proposed action, alternatives, environmental effects). For example, for BLM-proposed public land uses, the BLM should incorporate appropriate mitigation into the proposed project's design as an integral component of the proposed action (i.e., project design features). Or, for externally proposed public land uses, the BLM should encourage applicants to propose appropriate mitigation for their public land use. | (b) (5)  . |

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| | Proactively proposed mitigation, particularly best management practices, can lead to better resource outcomes and in some cases reduce the reasonably foreseeable impacts of a public land use to below "significance" (as defined by 40 CFR 1508.27) or other potentially relevant statutory or regulatory thresholds. In conducting its analysis through the NEPA process, the BLM should include other appropriate mitigation measures as part of any other reasonable alternatives. Mitigation measures included in the proposed action and/or any other reasonable alternatives should be evaluated through the analysis of environmental effects.<br><br>Where they exist and are relevant, mitigation strategies will be used to inform the NEPA analyses for applicable proposed public land uses." | |
| 5.1 Preliminary Application Review Meetings | "At preliminary application review meetings for proposed public land uses, the BLM should discuss with potential land use authorization applicants any foreseeable and appropriate mitigation obligations, including existing mitigation obligations associated with the land use plan or previous NEPA analysis, pertinent aspects of the mitigation hierarchy (e.g., BMPs), any potential effectiveness monitoring for mitigation measures, and any existing and applicable mitigation strategies. The BLM should invite other potentially affected Federal agencies, Tribal, State and/or local governments to participate in pre-application meetings to ensure issues and concerns can be given full consideration early in the process." | |
| 5.3 Existing Mitigation Agreements | "If there are existing mitigation-related agreements, such as a programmatic agreement with a State or Tribal Historic Preservation Officer, a programmatic Fish and Wildlife Service Habitat Conservation Plan, or an approved mitigation plan for a US Army Corps of Engineers permit, the BLM should consider the terms and conditions of these agreements that pertain to a proposed public land use through the NEPA process, as appropriate." | |
| 5.6 Mitigation and Findings of No Significant Impact | "When preparing an Environmental Assessment (EA), mitigation (including compensation) can be implemented to reduce the reasonably foreseeable impacts of the proposed public land use below the threshold | (b) (5) [redacted] |

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| | of significance, and thus, an Environmental Impact Statement (EIS) would not be required. When mitigation is implemented in order to reach a FONSI, the BLM's decision document(s) must clearly identify the specific mitigation and monitoring commitments necessary to reduce the reasonably foreseeable impacts to such a level." | |
| 5.7.D. Proposed Action | "In the description of the proposed action, the BLM should describe or reference and summarize the mitigation measures (e.g., best management practices) included in the proposed action (which are also known as ameliorative design elements design features or applicant committed mitigation measures). If compensatory mitigation is proposed, the additional level of detail described in Handbook Chapter 5.6.F should be included. In this description, the BLM should reference and discuss applicable mitigation standards." | |
| 5.7.E Other Reasonable Alternatives | "For the other reasonable alternatives, if any, the BLM should include and describe appropriate mitigation, including any compensatory mitigation being considered (Handbook Chapter 5.6.F), as an integrated and detailed part of the description of the alternative. To do so may require refinement of the alternative following the completion of the impact analysis (Handbook Chapter 5.6.G). In this description, the BLM should reference and discuss applicable mitigation standards.<br><br>1. If a mitigation standard does not yet exist for a resource that is considered important, scarce, sensitive, or has a protective legal mandate, the BLM should identify and consider appropriate mitigation standards for that resource (e.g., no net loss, net benefit) in alternatives in the NEPA analysis." | (b) (5) [redacted] |
| 5.7.F Compensatory Mitigation in Proposed Action and Reasonable Alternatives | "For compensatory mitigation measures analyzed in the proposed action and/or other reasonable alternatives, the BLM should:<br><br>1. Describe the potential type of and amount of compensatory mitigation that is appropriate for mitigating the reasonably foreseeable residual effects that warrant compensatory mitigation, including description of the compensatory mitigation's | (b) (5) [redacted] |

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| | relationship to applicable mitigation standards for the impacted resources.<br><br>2. Describe the compensatory mitigation measures, sites, and mechanisms necessary for meeting the compensatory mitigation obligation, including durability, monitoring, adaptive management, and reporting requirements (Handbook Chapters: 2.5.E, 2.5.H, 2.5.I, 1.1.D, 1.1.F, and 1.1.H).<br><br>In most cases, the analysis should specifically address, in an appropriate level of detail, the compensatory mitigation measures, sites, and mechanisms. However, in some cases, it may be infeasible to identify specific mitigation details at the time of the NEPA analysis (e.g., exact projects will be determined in partnership with a mitigation fund in a post-ROD process) or illegal or otherwise unacceptable to release this information (e.g., under government-to-government consultation). In these cases, it is important to specify the anticipated compensatory mitigation measures and to describe why more specific information cannot be disclosed." | |
| 5.7.G. 3 and 4 Environmental Consequences | 3. "If compensatory mitigation is included in the proposed action or a reasonable alternative, describe how the compensatory mitigation measures will appropriately mitigate the reasonably foreseeable residual effects that warrant compensatory mitigation, at all relevant scales, and support conformance with applicable mitigation standards. If compensatory mitigation is not included for some residual effects (e.g., those residual effects are acceptable), the BLM will provide rationale for this determination in the analysis.<br><br>4. Describe any <u>remaining</u> residual effects not addressed (or not addressed entirely) by compensatory mitigation." | |
| 6.1 Mitigation in Land Use Authorizations | "The land use authorization will include each mitigation measure and the mitigation measures' required outcome (Handbook Chapter 1.1.E). The | |

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| | authorization should also include any compensatory mitigation measures' performance standards and responsible parties. The BLM will also include a description of any durability, monitoring, adaptive management, and reporting requirements. It may be useful to develop a table to communicate this information if there are numerous mitigation measures." | |
| Appendix 1. Tools for Ensuring the Durability of Compensatory Mitigation Sites | *1.5 page extension of durability section.* | (b) (5) [redacted] |
| Appendix 2. The BLM's Management of Compensatory Mitigation Funds | A 2-page description of the basic requirements for mitigation funds held by the BLM or another entity. | (b) (5) [redacted] |