UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
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Instruction Memorandum No. 2012-043
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To: All Field Office Officials

From: Director

Subject: Greater Sage-Grouse Interim Management Policies and Procedures

Program Areas: All Programs.

Purpose: This Instruction Memorandum (IM) provides interim conservation policies and procedures to the Bureau of Land Management (BLM) field officials to be applied to ongoing and proposed authorizations and activities that affect the Greater Sage-Grouse *(Centrocercus urophasianus)* and its habitat. This direction ensures that interim conservation policies and procedures are implemented when field offices authorize or carry out activities on public land while the BLM develops and decides how to best incorporate long-term conservation measures for Greater Sage-Grouse into applicable Land Use Plans (LUP). This direction promotes sustainable Greater Sage-Grouse populations and conservation of its habitat while not closing any future options before the planning process can be completed.

This IM supplements the direction for Greater Sage-Grouse contained in Washington Office (WO) IM 2010-071 (*Gunnison and Greater Sage-Grouse Management Considerations for Energy Development*) and is consistent with WO-IM-2011-138 (*Sage-Grouse Conservation Related to Wildland Fire and Fuels Management*). The Gunnison Sage-Grouse, bi-state distinct population segment in California and Nevada, and the Washington State distinct population segment are not covered by this IM and will be addressed through other policies and planning efforts. WO-IM-2010-071 remains applicable to the Gunnison Sage-Grouse.

The 2010 U.S. Fish and Wildlife Service (FWS) findings on petitions to list the Greater Sage-Grouse (petition decision) (75 FR 13910 – 14014; 03/23/2010) identified habitat conversion and fragmentation from wildfire, invasive plants, energy and infrastructure development, urbanization, and agricultural conversion as the primary threats to the species throughout its range. Through this IM, the BLM is providing interim conservation policies and procedures across multiple programs, in order of threat magnitude, while the BLM considers amendments or revisions to LUPs. Maintaining and restoring high quality habitat for the Greater Sage-Grouse is consistent with the BLM multiple-use and sustained-yield management direction of the Federal Land Policy and Management Act.

Policy/Action: As summarized in the BLM's National Strategy, emphasis for protecting and managing Greater Sage-Grouse habitat incorporates the following principles:

1) Protection of unfragmented habitats;
2) Minimization of habitat loss and fragmentation; and
3) Management of habitats to maintain, enhance, or restore conditions that meet Greater Sage-Grouse life history needs.

To provide guidance to field offices about how to promote these principles, this IM transmits policies and procedures that apply to ongoing and proposed BLM actions, including use authorizations, within Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH). PPH comprises areas that have been identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations. These areas would include breeding, late brood-rearing, and winter concentration areas. These areas have been identified by the BLM in coordination with respective state wildlife agencies. PGH comprises areas of occupied seasonal or year-round habitat outside of priority habitat. These areas have been identified by the BLM in coordination with respective state wildlife agencies.

The policies and procedures identified in this IM are designed to minimize habitat loss in PPH and PGH and will advance the BLM's objectives to maintain or restore habitat to desired conditions by ensuring that field offices analyze and document impacts to PPH and PGH and coordinate with states and the Fish and Wildlife Service when issuing the decisions described below. These policies and procedures are in addition to and do not replace more protective measures in existing LUPs. The direction in this IM is time-limited: for each planning area where Greater Sage-Grouse occur, the conservation policies and procedures described in this IM will be applied until the BLM makes decisions through the land use planning process. All such LUP decisions are expected to be completed by the end of 2014. The BLM field offices do not need to apply the conservation policies and procedures described in this IM in areas in which (1) a state and/or local regulatory mechanism has been developed for the conservation of the Greater Sage-Grouse in coordination and concurrence with the FWS (including the Wyoming Governor's Executive Order 2011-5, Greater Sage-Grouse Core Area Protection); and (2) the state sage-grouse plan has subsequently been adopted by the BLM through the issuance of a state-level BLM IM. If BLM programs are not addressed in the adopted state Greater Sage-Grouse plan then program direction will default to the policies and procedures set forth in this WO IM.

PPH and PGH data and maps have been developed through a collaborative effort between the BLM and the respective state wildlife agencies and are stored at the National Operations Center (NOC). These science-based maps were developed using the best available data and may change as new information becomes available. Such changes would be science-based and coordinated with the state wildlife agencies so that the resulting delineation of PPH and PGH provides for sustainable populations. In those instances where the BLM state offices have not completed this delineation, the Breeding Bird Density maps developed by Doherty 2010[1] will be used. The NOC will establish the process for updating files to include the latest PPH and PGH delineations for each state. This information will assist in applying the interim conservation policies and procedures identified in Sections I and II below. As LUPs are amended or revised, the BLM state offices will be responsible for coordinating with the NOC to use the newest delineation of PPH and PGH. BLM staff may access the PPH and PGH data, using the following link: \\blm\dfs\loc\EGIS\OC\Wildlife\Transfers\GREATER_SAGE_GROUSE_GIS_DATA. Non-BLM personnel, may access these maps through the respective state wildlife agency.

The BLM will continue to work with its partners including the Western Association of Fish and Wildlife Agencies (WAFWA), FWS, U.S. Geological Survey (USGS), Natural Resource Conservation Service (NRCS), U.S. Forest Service (USFS), and the Farm Services Agency (FSA) within the framework of the Sagebrush Memorandum of Understanding (2008) and the WAFWA *Greater Sage-Grouse Comprehensive Conservation Strategy* (2006).

I. Interim Conservation Policies and Procedures for "Preliminary Priority Habitat"

Through these policies and procedures, you should seek to maintain, enhance, or restore conditions for Greater Sage-Grouse and its habitat. These policies and procedures apply to PPH only. Separate policies and procedures for PGH are provided in Section II of this IM.

Integrated Vegetation Management

Proposed Authorizations/Activities

- Evaluate land treatments (including Greater Sage-Grouse habitat treatments) in a landscape-scale context to address habitat fragmentation, effective patch size, invasive species presence, and protection of intact sagebrush communities. Coordinate land treatments with adjacent land owners to avoid any unintended negative landscape effects to Greater Sage-Grouse.
- When designing vegetation treatments, reference Ecological Site Descriptions (ESD), where available; the BLM *Integrated Vegetation Management Handbook* (H-1740-2); and a white paper developed by the Western Association of Fish and Wildlife Agencies entitled, *Prescribed Fire as a Management Tool in Xeric Sagebrush Ecosystems: Is it Worth the Risk to Sage-Grouse?.*
- Coordinate, plan, design, and implement vegetation treatments (e.g., pinyon/juniper removal, fuels treatments, green stripping) and associated effectiveness monitoring between Resources, Fuels Management, Emergency Stabilization, and Burned Area Rehabilitation programs to:
    - Promote the maintenance of large intact sagebrush communities;
    - Limit the expansion or dominance of invasive species, including cheatgrass;
    - Maintain or improve soil site stability, hydrologic function, and biological integrity; and
    - Enhance the native plant community, including the native shrub reference state in the *State and Transition Model*, with appropriate shrub, grass, and forb composition identified in the applicable ESD where available.
- When conducting National Environment Policy Act (NEPA) analysis for vegetation treatments, document your analysis of (1) short- and long-term objectives and (2) direct, indirect, and cumulative effects of treatment types on Greater Sage-Grouse and its habitat.
- Pursue short-term objectives that include maintaining soil stability and hydrologic function of the disturbed site so a resilient plant community can be established.
- Pursue a long-term objective to maintain resilient native plant communities. Choose native plant species outlined in ESDs, where available, to revegetate sites. If the commercial supply of appropriate native seed/plants is limited, work with the BLM Native Plant Materials Development Program (NPMDP) through your respective State Office Plant Conservation Program Lead. It is a primary objective of the NPMDP to ensure native plants used by Greater Sage-Grouse are being collected and developed into commercially viable crops. If currently available supplies are limited, use the materials that provide the greatest benefit for Greater Sage-Grouse. When necessary, analyze the use of non-native species that do not impede long-term reestablishment goals of native plant communities and Greater Sage-Grouse habitat.
- Meet vegetation management objectives that have been set for seeding projects prior to returning the area to authorized uses, specifically livestock grazing. This generally takes a minimum of two growing seasons (see Handbook H-1742, *Emergency Fire Rehabilitation Handbook*). When treating invasive species, use the standard operating procedures and best management practices outlined in the *2007 Vegetation Treatments Using Herbicides on BLM Lands in 17 States Environmental Impact Statement* and applicable practices found in its accompanying *Biological Assessment.*
- Where pinyon and juniper trees are encroaching on sagebrush plant communities, design treatments to increase cover of sagebrush and/or understory to (1) improve habitat for Greater Sage-Grouse; and (2) minimize avian predator perches and predation opportunities on Greater Sage-Grouse.
- Implement management actions, where appropriate, to improve degraded Greater Sage-Grouse habitats that have become encroached upon by shrubland or woodland species.
- Identify opportunities for prescribed fire; including where prescribed fire has been identified as the most appropriate tool to meet fuels management objectives and Greater Sage-Grouse conservation objectives, and the potential expansion or dominance of invasive species has been determined to be minimal through an invasive species risk determination for the treatment project (see BLM Manual Section 9015). Before using prescribed fire, field offices must analyze the potential expansion or dominance of invasive species as a result of this treatment.

Wildfire Emergency Stabilization and Burned Area Rehabilitation

Both Ongoing and Proposed Authorizations/Activities

- In Emergency Stabilization and Burned Area Rehabilitation plans, prioritize re-vegetation projects to (1) maintain and enhance unburned intact sagebrush habitat when at risk from adjacent threats; (2) stabilize soils; (3) reestablish hydrologic function; (4) maintain and enhance biological integrity; (5) promote plant resiliency; (6) limit expansion or dominance or invasive species; and (7) reestablish native species.
- Increase post-fire activities through the use of integrated funding opportunities with other resource programs and partners.
- In areas burned within the past 5 years, ensure that effectiveness monitoring outlined in post-fire stabilization and rehabilitation plans continues and report the results as outlined in WO-IM-2010-195. Post-fire stabilization and rehabilitation monitoring should continue until post-fire objectives are met.

Wildfire Suppression and Fuels Management

Ongoing Authorizations/Activities

- Threatened, endangered, and sensitive species (including sage-grouse) and associated habitats will continue to be a high natural resource priority for National and Geographic Multi-Agency Coordination Groups, whose purpose is to manage and prioritize wildland fire operations on a national and geographic area scope when fire management resource shortages are probable.
- Greater Sage-Grouse protection and habitat enhancement is a high priority for the fire management program. A full range of fire management activities and options will be utilized to sustain healthy ecosystems (including Greater Sage-Grouse habitats) within acceptable risk levels. Local agency administrators and resource advisors will convey protection priorities to incident commanders.
- Comply with the policies established in WO-IM-2011-138 (Sage-Grouse Conservation Related to Wildland Fire and Fuels Management) or successor guidance, regarding suppression operations and fuels management activities.
- Identify opportunities for prescribed fire; including where prescribed fire has been identified as the most appropriate tool to meet fuels management objectives and Greater Sage-Grouse conservation objectives, and the potential expansion or dominance of invasive species has been determined to be minimal through an invasive species risk determination for the treatment project (see BLM Manual Section 9015). Before using prescribed fire, field offices must analyze the potential expansion or dominance of invasive species as a result of this treatment.

Rights-of-Way (ROW) (e.g., Renewable Energy Projects, Roads, Powerlines, Pipelines)

Existing Authorized ROW (i.e., permit has been issued and the project may have been constructed)

- Where Greater Sage-Grouse conservation opportunities exist, BLM field offices should work in cooperation with rights-of-way (ROW) holders to conduct maintenance and operation activities, authorized under an approved ROW grant, to avoid and minimize effects on Greater Sage-Grouse and its habitat.
- When renewing or amending ROWs, assess the impacts of ongoing use of the ROW to Greater Sage-Grouse habitat and minimize such impacts to the extent allowed by law.

Pending and Future ROW Applications (i.e., permit application has not been received or has been received and is being processed)

- If the BLM has issued or, within 90 days of the issuance of this Instruction Memorandum, the BLM issues a Draft EIS (DEIS) or a Finding of No Significant Impact (FONSI)) (i.e., permit application has been received and is currently being analyzed through an EIS or EA)

  - Work with applicants to minimize habitat loss, fragmentation, and direct and indirect effects to Greater Sage-Grouse and its habitat.
  - Determine, in coordination with the respective state wildlife agency, whether the proposed ROW would likely have more than minor adverse effects to Greater Sage-Grouse and its habitat. If the proposed ROW would likely have more than minor adverse effects, then implement the policies and procedures set forth in the section immediately below ("All Other Pending and Future Applications").

- All Other Pending and Future Proposed Applications

  - Conduct pre-application meetings for all new ROW proposals consistent with the ROW regulations (43 CFR 2804.10) and consistent with current renewable energy ROW policy guidance (WO-IM-2011-061, issued February 7, 2011).
  - For pending applications, assess the impact of the proposed ROW on Greater Sage-Grouse and its habitat, and implement the following:

    - Ensure that reasonable alternatives for siting the ROW outside of the PPH or within a BLMâ€designated utility corridor are considered and analyzed in the NEPA document.
    - Identify technically feasible best management practices, conditions, etc. (e.g., siting, burying powerlines) that may be implemented in order to eliminate or minimize impacts.

  - For ROWs where the total project disturbance from the ROW and any connected action is less than 1 linear mile, or 2 acres of disturbance, develop mitigation measures related to construction, maintenance, operation, and reclamation activities that, as determined in cooperation with the respective state wildlife agency, would cumulatively maintain or enhance Greater Sage-Grouse habitat.
  - For ROW applications where the total project disturbance from the ROW and any connected action is greater than 1 linear mile or 2 acres of disturbance, it is BLM policy that where a field office determines that it is appropriate to authorize a ROW, the following process must be followed:

    - The BLM will document the reasons for its determination and require the ROW holder to implement measures to minimize impacts to sage-grouse habitat.
    - In addition to considering opportunities for onsite mitigation, the BLM will, to the extent possible, cooperate with project proponents to develop and consider implementing appropriate offsite mitigation that the BLM, coordinating with the respective state wildlife agency, determines would avoid or minimize habitat and population-level effects (Refer to WO-IM-2008-204, Off-Site Mitigation). When developing such mitigation, the BLM should consider compensating for the short-term and long-term direct and indirect loss of Greater Sage-Grouse and its habitat.
    - Unless the BLM determines, in coordination with the respective state wildlife agency, that the proposed ROW and mitigation measures would cumulatively maintain or enhance Greater Sage-Grouse habitat, the proposed ROW decision must be forwarded to the appropriate BLM State Director, State Wildlife Agency Director, and FWS representative for their review. If this group is unable to agree on the appropriate mitigation for the proposed ROW, then the proposed decision must be forwarded to the Greater Sage-Grouse National Policy Team with the addition of the State Wildlife Agency Director, when appropriate, for its review. If the National Policy Team and the State Wildlife Agency Director are unable to agree on the appropriate mitigation for the proposed ROW, the National Policy Team will coordinate with and brief the BLM Director for a final decision in absence of consensus.

  - Field offices retain the discretion to reject or deny a ROW application, where appropriate, or defer making a final decision on an application until the completion of the LUP process described in the *National Greater Sage-Grouse Planning Strategy* for the affected area.

Leasable Minerals (Energy and Non-energy)

Proposed Leasing (i.e., a lease has not been issued and, therefore, no valid existing rights have been established)

- Solid Mineral Leasing (Coal, Oil Shale, and Non-energy)

  Assess the impact to Greater Sage-Grouse and its habitat, and implement the following:

  - If the BLM has issued or, within 90 days of the issuance of this Instruction Memorandum, the BLM issues a DEIS or a FONSI:

    - Work in cooperation with applicants to minimize habitat loss, fragmentation, and direct and indirect effects to Greater Sage-Grouse and its habitat.
      Determine, in coordination with the respective state wildlife agency, whether the proposed leasing decision would likely have more than minor adverse effects to Greater Sage-Grouse and its habitat. If the proposed leasing decision would likely have more than minor adverse effects, then implement the policies and procedures set forth in the section immediately below ("All Other Proposed Solid Mineral Leasing").

  - All Other Proposed Solid Mineral Leasing

    It is BLM policy that where a field office determines that it is appropriate to authorize a proposed leasing decision, the following process must be followed:

    - The BLM will document the reasons for its determination and implement measures to minimize impacts to sage-grouse habitat.
    - In addition to considering opportunities for onsite mitigation, the BLM will consider whether it is appropriate to condition the lease with a requirement for offsite mitigation that the BLM, coordinating with the respective state wildlife agency, determines would avoid or minimize habitat and population-level effects (refer to WO-IM-2008-204, Off-Site Mitigation).
    - Unless the BLM determines, in coordination with their respective state wildlife agency, that the proposed lease and mitigation measures would cumulatively maintain or enhance Greater Sage-Grouse habitat, the proposed lease must be forwarded to the appropriate BLM State Director, State Wildlife Agency Director, and FWS representative for their review. If this group is unable to agree on the appropriate mitigation for the proposed lease, then the proposed decision must be forwarded to Greater Sage-Grouse National Policy Team with the addition of the State Wildlife Agency Director, when appropriate, for its review. If the National Policy and the State Wildlife Agency Director are unable to agree on the appropriate mitigation for the proposed lease, the National Policy Team will coordinate with and brief the BLM Director for a final decision in absence of consensus.
    - Exception: New leases may be issued for mine expansion provided the mines will undergo concurrent surface mine reclamation and will result in minimal additional surface disturbance adjacent to an existing operation.

  - Field offices retain the discretion to not move forward with a nomination, or defer making a final decision on a leasing nomination until the completion of the LUP process described in the National Greater Sage-Grouse Planning Strategy for the affected area.

- Fluid Mineral Leasing (i.e., oil, gas, and geothermal)

  - It is BLM policy that where a field office determines that it is appropriate to authorize a proposed leasing decision, the following process must be followed:

    - The BLM will document the reasons for its determination and require the lessee to implement measures to minimize impacts to sage-grouse

habitat.
- In addition to considering opportunities for onsite mitigation, the BLM will consider whether it is appropriate to condition the lease with a requirement for offsite mitigation that the BLM, coordinating with the respective state wildlife agency, determines would avoid or minimize habitat and population-level effects (refer to WO-IM-2008-204, Off-Site Mitigation).
- Unless the BLM determines, in coordination with the respective state wildlife agency, that the proposed lease and mitigation measures would cumulatively maintain or enhance Greater Sage-Grouse habitat, the proposed lease decision must be forwarded to the appropriate BLM State Director, State Wildlife Agency Director, and FWS representative for their review. If this group is unable to agree on the appropriate mitigation for the proposed lease, then the proposed decision must be forwarded to the Greater Sage-Grouse National Policy Team with the addition of the State Wildlife Agency Director, when appropriate, for its review. If the National Policy Team and the State Wildlife Agency Director are unable to agree on the appropriate mitigation for the proposed lease, the National Policy Team will coordinate with and brief the BLM Director for a final decision in absence of consensus.
- Exception: Where drainage is likely or the lands are designated as No Surface Occupancy (NSO) in the existing LUP, the BLM may issue new leases with an NSO stipulation. The NSO stipulation will also have appropriate exception, waiver, and modification criteria. **Note:** A Controlled Surface Use stipulation is not an appropriate substitution for an NSO stipulation.

o Field offices retain the discretion to not move forward with a nomination or defer making a final decision on a leasing decision until the completion of the LUP process described in the *National Greater Sage-Grouse Planning Strategy* for the affected area.

Authorizations on Existing Leases (i.e., the lease has been issued and valid existing rights have been established)

- Existing Authorizations (i.e., a permit has been issued)

  o Where Greater Sage-Grouse conservation opportunities exist, work in cooperation with operators to minimize habitat loss, fragmentation, and direct and indirect effects to Greater Sage-Grouse and its habitat.
  o Fluid Minerals: Issue Written Orders of the Authorized Officer (43 CFR 3161.2) requiring reasonable protective measures consistent with the lease terms where necessary to avoid or minimize effects to Greater Sage-Grouse populations and its habitat.

- Proposed Pending Authorizations (i.e., permit application has not been received or has been received and is being processed)
  - o If the BLM has issued or, within 90 days of the issuance of this Instruction Memorandum, the BLM issues a DEIS or a FONSI:
    - Work in cooperation with applicants to minimize habitat loss, fragmentation, and direct and indirect effects to Greater Sage-Grouse and its habitat.
      - Determine, in coordination with the respective state wildlife agency, whether the proposed authorization would likely have more than minor adverse effects to Greater Sage-Grouse and its habitat. If the proposed authorization would likely have more than minor adverse effects, then implement the policies and procedures set forth in the section immediately below ("All Other Proposed Authorizations").

  o All Other Proposed Authorizations
  It is BLM policy that where a field office determines that it is appropriate to issue a proposed authorization, the following process must be followed:

  - o Where the BLM has not issued a permit for development, design future conditions or restrictions to minimize adverse effects to Greater Sage-grouse and its habitat (e.g., Best Management Practices (BMP), noise limitations, seasonal restrictions, minimization of habitat fragmentation, improved reclamation standards, proper siting/designing infrastructure, restoring habitat) prior to permit approval. These measures may be in addition to and more protective or restrictive than the stipulations and restrictions identified in approved LUPs, when reasonable (43 CFR 3101.1-2), supported by science, and analyzed through the NEPA process.
    Fluid Minerals: Consider suspending non-producing leases in instances where mitigation would not adequately protect the integrity of Greater Sage-Grouse habitat until the BLM amends or revises the LUPs. Consistently apply protective measures to split estate lands.
  - o In areas where Greater Sage-Grouse populations have been substantially diminished, and where few birds remain, include actions in the authorization (e.g., siting/designing infrastructure, hastened habitat restoration) that will minimize habitat loss and promote restoration of habitat when development activities cease.
  - o In addition to considering opportunities for onsite mitigation, the BLM will, to the extent possible, cooperate with project proponents to develop and consider implementing appropriate offsite mitigation that the BLM, coordinating with the respective state wildlife agency, determines would avoid or minimize habitat and population-level effects (refer to WO-IM-2008-204, Off-Site Mitigation). When developing such mitigation, the BLM should consider compensating for the short-term and long-term direct and indirect loss of Greater Sage-Grouse and its habitat.
  - o For geophysical exploration activities, include seasonal timing limitations and BMPs as permit conditions of approval to eliminate or minimize surface-disturbing and disruptive activities within nesting and brood-rearing habitat and winter concentration areas.
  - o Fluid Minerals: Ensure authorizations under Onshore Oil and Gas Order No. 7 (Disposal of Produced Water) consider the potential impacts to Greater Sage-Grouse from West Nile virus and develop appropriate mitigation measures.

Grazing Permit/Leases Issuance/Grazing Management

Grazing can have localized adverse effects on Greater Sage-Grouse habitat depending on the condition of the habitat and the grazing practices used. Depending on design and application, grazing practices can also be used as a tool to protect intact sagebrush habitat and increase habitat extent and continuity which is beneficial to Greater Sage-Grouse and its habitat. Given the potential financial constraints in addressing the primary threats identified by the FWS, enhanced management of livestock grazing may be the most cost-effective opportunity in many instances to improve Greater Sage-Grouse habitat on public lands.

To promote grazing practices that will protect PPH and minimize adverse effects on Greater Sage-Grouse and its habitat, the BLM will implement the following:

Ongoing Authorization Activities

- If periods of drought occur, where appropriate evaluate the season of use and stocking rate and adjust through coordination and annual billings processes.
- Continue to coordinate with other Federal agencies, state agencies, and non-Federal partners. Leverage funding to implement habitat projects and implement the recent Memorandum of Understanding between the BLM, NRCS, FWS, and USFS for enhancing PPH through grazing practices.
- Continue to prioritize use supervision and effectiveness monitoring of grazing activities to ensure compliance with permit conditions and that progress is being made on achieving land health standards.
- Continue to evaluate existing range improvements (e.g., fences, watering facilities) associated with grazing management operations for impacts on Greater Sage-Grouse and its habitat.

Proposed Authorizations/Activities – Permit/Lease Renewal/Issuance

- When several small or isolated allotments occur within a watershed or delineated geographic area, strive to evaluate all of the allotments together. Prioritize this larger geographic area against other PPH areas for processing permits/leases for renewal.
- Coordinate BMPs and vegetative objectives with NRCS for consistent application across jurisdictions where the BLM and NRCS have the greatest opportunities to benefit Greater Sage-Grouse, particularly as it applies to the NRCS's National Sage-Grouse Initiative (http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/farmbill/initiatives/?&cid=steldevb1027671).
- Pursue opportunities to incorporate multiple allotments under a single management plan/strategy where incorporation would result in enhancing Greater Sage-Grouse populations or its habitat as determined in coordination with respective state wildlife agency.
- Where current livestock grazing management has been identified as a causal factor in not meeting Land Health Standards (43 CFR 4180), use the process in WO-IM-2009-007, Process for Evaluating Status of Land Health and Making Determinations of Causal Factors When Land Health Standards Are Not Achieved, to identify appropriate actions.
- Evaluate progress towards meeting standards that may affect Greater Sage-Grouse or its habitat prior to authorizing grazing on an allotment that was

not achieving land health standards in the last renewal cycle, and livestock was a significant causal factor. Where available, use current monitoring data to identify any trends (e.g., progress) toward meeting the standards. Where monitoring data are not available or inadequate to determine whether progress is being made toward achieving Land Health Standards, an interdisciplinary team should be deployed as practicable to conduct a new land health assessment. The NEPA analysis for the permit/lease renewal must address a range of reasonable alternatives including alternatives that improve Greater Sage-Grouse habitat.

- If livestock grazing was the cause of not achieving land health standards that have potential to impact Greater Sage-Grouse or its habitat in the last permit renewal cycle, an interdisciplinary team should be deployed as practicable to conduct a new land health evaluation to determine if the allotment is making progress and if livestock grazing remains a casual factor.
- Plan and authorize livestock grazing and associated range improvement projects on BLM lands in a way that maintains and/or improves Greater Sage-Grouse and its habitat. Analyze through a reasonable range of alternatives any direct, indirect, and cumulative effects of grazing on Greater Sage-Grouse and its habitats through the NEPA process:
  - Incorporate available site information collected using the *Sage-Grouse Habitat Assessment Framework**[2]*** when evaluating existing resource condition and developing resource solutions,
  - Incorporate management practices that will provide for adequate residual plant cover (e.g., residual grass height) and diversity in the understories of sagebrush plant communities as part of viable alternatives. When addressing residual cover and species diversity, refer to the ESD and "*State and Transition Model*," where they are available, to guide the analysis.
  - Evaluate and implement grazing practices that promote the growth and persistence of native shrubs, grasses, and forbs. Grazing practices include kind and numbers of livestock, distribution, seasons of use, and livestock management practices needed to meet both livestock management and Greater Sage-Grouse habitat objectives.
  - Evaluate the potential risk to Greater Sage-Grouse and its habitats from existing structural range improvements. Address those structural range improvements identified as posing a risk during the renewal process.
  - Balance grazing between riparian habitats and upland habitats to promote the production and availability of beneficial forbs to Greater Sage-Grouse in meadows, mesic habitats, and riparian pastures for Greater Sage-Grouse use during nesting and brood-rearing while maintaining upland conditions and functions. Consider changes to season-of-use in riparian/wetland areas before or after the summer growing season.
- To ensure that the NEPA analysis for permit/lease renewal has a range of reasonable alternatives:
  - Include at least one alternative that would implement a deferred or rest-rotation grazing system, if one is not already in place and the size of the allotment warrants it.
  - Include a reasonable range of alternatives (e.g., no grazing or a significantly reduced grazing alternative, current grazing alternative, increased grazing alternative, etc.) to compare the impacts of livestock grazing on Greater Sage-Grouse habitat and land health from the proposed action.
  - If land treatments and/or range improvements are the primary action for achieving land health standards for Greater Sage-Grouse habitat maintenance or enhancement, clearly display the effects of such actions in the alternatives analyzed.

Fences (Applicable to all programs)

- Evaluate the need for proposed fences, especially those within 1.25 miles[3] of leks that have been active within the past 5 years and in movement corridors between leks and roost locations. Consider deferring fence construction unless the objective is to benefit Greater Sage-Grouse habitat, improve land health, promote successful reclamation, protect human health and safety, or provide resource protection. If the BLM authorizes a new fence, then, where appropriate, apply mitigation (e.g., proper siting, marking, post and pole construction) to minimize or eliminate potential impacts to Greater Sage-Grouse as determined in cooperation with the respective state wildlife agency.
- To improve visibility, mark existing fences that have been identified as a collision risk. Prioritizing fences within 1.25 miles[3] of a lek, fences posing higher risks to Greater Sage-Grouse include those:
  - On flat topography;
  - Where spans exceed 12 feet between T-posts;
  - Without wooden posts; or
  - Where fence densities exceed 1.6 miles of fence per section (640 acres).[3]

Water Developments (applicable to all programs)

Proposed Authorizations/Activities

- NEPA analysis for all new water developments must assess impacts to Greater Sage-Grouse and its habitat.
- Install escape ramps and a mechanism such as a float or shut-off valve to control the flow of water in tanks and troughs.
- Design structures in a manner that minimizes potential for production of mosquitoes which may carry West Nile virus.

Special Recreation Permits

Ongoing Authorization/Activities

- Work with permittees to avoid or minimize effects to Greater Sage-Grouse and its habitat.
- Evaluate existing Special Recreation Permits (SRP) for adverse effects to Greater Sage-Grouse and modify or cancel the permit, as appropriate, to avoid or minimize effects of habitat alterations or other physical disturbances to Greater Sage-Grouse (e.g., breeding, brood-rearing, migration patterns, or winter survival).
- Implement any necessary habitat restoration activities after SRP events. Restoration activities must be consistent with Greater Sage-Grouse habitat objectives as determined by the BLM field office in collaboration with the respective state wildlife agency.

Proposed Authorizations/Activities

- Work with permit applicants to avoid impacts to Greater Sage-Grouse and its habitat.
- It is BLM policy that where a field office determines that it is appropriate to authorize a proposed special recreation permit, the following process must be followed:
  - The BLM will document the reasons for its determination and require the permitee to implement measures to minimize impacts to sage-grouse habitat.
  - In addition to considering opportunities for onsite mitigation, the BLM will consider whether it is appropriate to condition the permit with a requirement for offsite mitigation that the BLM, coordinating with the respective state wildlife agency, determines would avoid or minimize habitat and population-level effects (refer to WO-IM-2008-204, Off-Site Mitigation).
  - Unless the BLM determines, in coordination with the respective state wildlife agency, that the proposed permit and mitigation measures would cumulatively maintain or enhance Greater Sage-Grouse habitat, the proposed special recreation permit decision must be forwarded to the appropriate BLM State Director, State Wildlife Agency Director, and FWS representative for their review. If this group is unable to agree on the appropriate mitigation for the proposed special recreation permit, then the proposed decision must be forwarded to the Greater Sage-Grouse National Policy Team with the addition of the State Wildlife Agency Director, when appropriate, for its review. If the National Policy Team and the State Wildlife Agency Director are unable to agree on the appropriate mitigation for the proposed special recreation permit, the National Policy Team will coordinate with and brief the BLM Director for a final decision in absence of consensus.

- Field offices retain the discretion to not move forward with a special recreation permit application or defer making a final decision on a special recreation permit decision until the completion of the LUP process described in the *National Greater Sage-Grouse Planning Strategy* for the affected area.

Recreation Sites

- Use conservation measures to avoid impacts to Greater Sage-Grouse at existing recreation sites.
- Consider closing recreational sites either seasonally or permanently and restricting traffic to avoid or minimize effects of habitat alterations or other physical disturbances to Greater Sage-Grouse (e.g., breeding, brood-rearing, migration patterns, or winter survival).

Travel Management

Ongoing Authorizations/Activities

- Evaluate authorizations and use and implement seasonal road/primitive road/trail restrictions if continued use would result in habitat alterations or other physical disturbances that impair life history functions of the Greater Sage-Grouse, such as breeding, brood-rearing, migration patterns, or winter survival, as appropriate.
- Place a high priority on closing and reclaiming unauthorized motor vehicle routes.
- Limit and enforce motorized vehicle use to existing or designated roads, primitive roads, and trails and seasons of use to prevent habitat loss or other physical disturbance that impair life history functions of the Greater Sage-Grouse, such as breeding, migration patterns, or winter survival.

Proposed Authorizations/Activities

- Route construction should be limited to realignments of existing or designated routes to enhance other resources only if that realignment conserves or enhances sage-grouse habitat. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then any new road constructed will be built to the absolute minimum standard necessary. No improvement to existing routes will occur that would change route category (i.e., road, primitive road, or trail) or enhance capacity.

Locatable Minerals

Ongoing Authorizations/Activities (i.e., existing operations conducted under a Notice or a Plan of Operations)

- Request that holders of Notices and Plans of Operation modify their operations to avoid or minimize adverse effects on Greater Sage-Grouse and its habitat. Operators must be informed in the request that compliance is not mandatory.

Proposed Authorizations/Activities (i.e., new Notices or Plans of Operation)

- Require that new notices and plans of operation include measures to avoid or minimize adverse effects to Greater Sage-Grouse populations and its habitat. Ensure that new notices and plans of operation comply with the requirements in 43 CFR 3809 to prevent unnecessary or undue degradation. Such compliance may assist in avoiding or minimizing adverse effects to Greater Sage-Grouse populations and habitat.

Salable Minerals

Ongoing Authorizations/Activities (i.e., an authorization has been issued)

- Where valid existing rights exist, work with the holders of authorizations to develop actions such as siting/design of infrastructure, timing of operations, or reclamation standards that will avoid or minimize effects to Greater Sage-Grouse populations and its habitat.

Proposed Authorizations/Activities

- If the BLM has issued or, within 90 days of the issuance of this Instruction Memorandum, the BLM issues a DEIS or a FONSI:

  - Work with applicants to minimize habitat loss, fragmentation, and direct and indirect effects to Greater Sage-Grouse and its habitat.
  - Determine, in coordination with the respective state wildlife agency, whether the proposed authorization would likely have more than minor adverse effects to Greater Sage-Grouse and its habitat. If the proposed authorization would likely have more than minor adverse effects, then implement the policies and procedures set forth in the section immediately below ("All Other Proposed Authorizations/Activities").

- All Other Proposed Authorizations/Activities

  It is BLM policy that where a field office determines that it is appropriate to issue an authorization, the following process must be followed:

  - The BLM will document the reasons for its determination and implement measures to minimize impacts to sage-grouse habitat.
  - In addition to considering opportunities for onsite mitigation, the BLM will, to the extent possible, cooperate with project proponents to develop and consider implementing appropriate offsite mitigation that the BLM, coordinating with the respective state wildlife agency, determines would avoid or minimize habitat and population-level effects (refer to WO-IM-2008-204, Off-Site Mitigation). When developing such mitigation, the BLM should consider compensating for the short-term and long-term direct and indirect loss of Greater Sage-Grouse and its habitat.
  - Unless the BLM determines, in coordination with the respective state wildlife agency, that the proposed plt and mitigation measures would cumulatively maintain or enhance Greater Sage-Grouse habitat, the proposed plt authorization decision must be forwarded to the appropriate BLM State Director, State Wildlife Agency Director, and FWS representative for their review. If this group is unable to agree on the appropriate mitigation for the proposed authorization, then the proposed decision must be forwarded to the Greater Sage-Grouse National Policy Team with the addition of the State Wildlife Agency Director, when appropriate, for its review. If the National Policy Team and the State Wildlife Agency Director are unable to agree on the appropriate mitigation for the proposed authorization, the National Policy Team will coordinate with and brief the BLM Director for a final decision in absence of consensus.
  - Exception- Pit Expansion Only: New permits may be issued for plt expansion, provided there are no adverse effects on Greater Sage-Grouse and its habitat.

- Field offices retain the discretion to not move forward with an authorization, where appropriate, or defer making a final decision on regarding an authorization until the completion of the LUP process described in the *National Greater Sage-Grouse Planning Strategy* for the affected area.

Grasshopper and Mormon Cric et Control and Management

Proposed Authorizations/Activities

- If grasshopper control is proposed, the NEPA analysis must address impacts on Greater Sage-Grouse and its habitat.
- Continue to implement WO-IM-2010-084, Grasshopper and Mormon Cricket Treatments within Sage-grouse Habitat, and reference WY-IM-2010-12, Greater Sage-Grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands including the Federal Mineral Estate, for grasshopper or Mormon cricket control.
- Coordinate with local Animal and Plant Health Inspection Service (APHIS) personnel and state wildlife agencies concerning treatments in Greater Sage-Grouse habitat.
- Management actions and operating procedures may include, but are not limited, to the following:

  o Evaluate and restrict or modify treatment methods and timing of use or other mitigation.
  o Avoid spraying treatment areas in May and June (or as appropriate to local circumstances) to provide insect availability for early development of Greater Sage-Grouse chicks.
  o Application timing should be implemented to reduce disturbance and impacts to Greater Sage-Grouse.
  o Use approved chemicals with the lowest toxicity to Greater Sage-Grouse that still provide effective control of grasshopper and Mormon cricket. Coordinate with APHIS to determine the approved chemical with the lowest toxicity.
  o Evaluate the appropriate percentages of Environmental Protection Agency (EPA) allowable chemical rates and the pros and cons of available chemical use, in coordination with state wildlife agencies, FWS, and APHIS.
  o Use *Carbaryl* only when necessary to treat large grasshopper and Mormon cricket populations late in the season. APHIS will coordinate the use with the respective BLM state office prior to any application.
  o Implement effectiveness monitoring, if warranted.

Wild Horse and Burro Management

Ongoing Authorizations/Activities

- Manage wild horse and burro population levels within established Appropriate Management Levels (AML).
- Wild Horse Herd Management Areas will receive priority for removal of excess horses.
- Wild horses and burros remaining in Herd Management Areas where the AML has been established as zero will receive priority for removal.
- When developing overall workload priorities for the upcoming year, prioritize horse gathers except where removals are necessary in non-PPH to prevent catastrophic herd health and ecological impacts.

Realty Actions (e.g., Land E changes, Transfers, and Sales)

It is BLM policy that where a field office determines that it is appropriate to implement a public land disposal action, the following process must be followed:

- The BLM will document the reasons for its determination and implement measures to minimize impacts to sage-grouse habitat. Unless the BLM determines, in coordination with the respective state wildlife agency, that the proposed land disposal action would cumulatively maintain or enhance Greater Sage-Grouse habitat, the proposed land disposal action must be forwarded to the appropriate BLM State Director, State Wildlife Agency Director, and FWS representative for their review. If this group is unable to agree on the appropriate mitigation for the proposed land disposal action, then the proposed decision must be forwarded to the Greater Sage-Grouse National Policy Team with the addition of the State Wildlife Agency Director, when appropriate, for its review. If the National Policy Team and the State Wildlife Agency Director are unable to agree on the appropriate mitigation for the proposed land disposal action, the National Policy Team will coordinate with and brief the BLM Director for a final decision in absence of consensus.
- Exception: Those land disposal actions (e.g., the BLM's acceptance of an Application for Land for Recreation and Public Purposes, Publication of a Federal Register Notice of Realty Action, Execution of an Agreement to Initiate an Exchange, the BLM's acceptance of a State Application for Selection) initiated prior to or if the BLM is within 90 days of the issuance of a DEIS or FONSI for a land disposal action following the date of this IM.

Vegetation and Resource Monitoring

Ongoing Authorizations/Activities

- Continue to coordinate with NRCS and its contractors to implement the BLM *Landscape Monitoring Framework Pro ect* developed under the *Assessment Inventory and Monitoring Strategy* to assess the condition of public lands including PPH at a landscape level.
- Continue to work with livestock grazing permittees/lessees to collect specific kinds of monitoring information on their allotments to supplement monitoring information collected by the BLM (refer to WO-IB-2010-015, Grazing Permittee - Joint Cooperative Monitoring, for additional information).
- Until further direction is provided, and within the range of the Greater Sage-Grouse, the Wildlife Program (1110) will collect, consolidate, and report the following annually to the Division of Fish and Wildlife Conservation (WO-230):

  o Miles, acres, and/or number of structures (e.g., fences, water developments, well pads, gravel pits, roads) removed, installed, relocated, decommissioned, modified, or mitigated to benefit Greater Sage-Grouse and its habitat;
  o Number of BLM use authorizations issued or deferred and the associated acres where changes in management were implemented to benefit Greater Sage-Grouse and its habitat;
  o Acres where the BLM implemented changes in use in order to improve habitat for the Greater Sage-Grouse in cooperation with other Federal or state agencies;
  o Acres of habitat altered by wildland fire, acres treated after fire, and acres not treated after fire that were in need of treatment;
  o Acres of habitat altered by fuels treatment projects and how those treatments affected habitat;
  o Acres of vegetation treated to benefit Greater Sage-Grouse habitat; and
  o Number of allotments assessed for land health standards and the associated acres, according to Table 7A of the *Rangeland Inventory Evaluation and Monitoring Report*.

Proposed Authorizations/Activities

- New activity plans and/or project plans must include clear objectives to benefit Greater Sage-Grouse habitat and vegetative resource conditions. Base these vegetative objectives on (1) the native shrub reference state as shown in the *State and Transition Model* outlined in the applicable ESD, where available; (2) published scientific habitat guidelines for specific areas; and (3) local sage-grouse working group recommendations.
- Monitor activities and projects using the BLM core indicators and protocols (see the BLM *Assessment Inventory and Monitoring Strategy*) to ensure that the objectives are being met. Supplement data collection, as necessary, with other programmatic information for the site to demonstrate that objectives are being met.
- Complete habitat inventories/assessments using the *Sage-Grouse Habitat Assessment Frameworkin* a timely manner so that data are available for consideration in livestock grazing permit renewals and other management decisions.
-

II. Interim Conservation Policies and Procedures for "Preliminary General Habitat"

The intent of these interim conservation policies and procedures in PGH is to reduce and mitigate adverse effects on Greater Sage-Grouse and its habitat to the

extent practical. These policies and procedures differ from those applied to PPH.

- When approving uses and authorizations, consider and analyze management measures that would reduce direct, indirect, and cumulative adverse effects on Greater Sage-Grouse and its habitat. For example, consider alternatives that would increase buffer distances around active leks and timing restrictions within existing LUPs as needed to further reduce adverse effects on Greater Sage-Grouse and its habitat.
- Consider deferring authorizations in PGH where appropriate, depending on local characteristics, new science and/or data (e.g., migratory corridors or habitat between PPH), and relative habitat importance if authorizations could result in Greater Sage-Grouse population loss in PPH.
- Consider offsite mitigation measures in collaboration with state wildlife agencies and project proponents when authorizing activities.
- Evaluate and address anticipated fence collision risks within 1.25 miles[3] of leks and other seasonal habitats. Where NEPA analysis suggests that a deviation from this distance is warranted, modifications of this distance are acceptable.

Timeframe: This IM is effective immediately and will remain in effect until the BLM completes the LUP process described in the *National Greater Sage-Grouse Planning Strategy*.

Budget Impact: This IM will result in additional costs for coordination, NEPA review, planning, implementation, and monitoring.

Bac ground: In March 2010, the FWS published its petition decision for the Greater Sage-Grouse as "Warranted but Precluded." Inadequacy of regulatory mechanisms was identified as one of the major factors in the FWS's finding on Greater Sage-Grouse. The FWS has identified the principal regulatory mechanism for the BLM as protective measures embedded in LUPs. The BLM is identifying sage-grouse conservation measures for consideration through the planning process, with a target decision date of September 2014. The goal is to conserve habitat necessary to sustain Greater Sage-Grouse populations and reduce the likelihood of listing under the Endangered Species Act.

In July 2011, the BLM announced the *National Greater Sage-Grouse Planning Strategy* which provides a framework for establishing adequate regulatory mechanisms (conservation measures) in applicable BLM LUPs throughout the range of the Greater Sage-Grouse.

Manual/Handboo Sections Affected: None.

Coordination: This IM was coordinated with the Office of National Landscape Conservation System and Community Partnership (WO-400), Assistant Director, Renewable Resources and Planning (WO-200), Minerals and Realty Management (WO-300), Fire and Aviation (FA-100), BLM state offices, FWS, and state wildlife agencies.

Contact: State Directors may direct any questions or concerns to Edwin Roberson, Assistant Director, Renewable Resources and Planning (WO-200), at 202-208-4896 or eroberso@blm.gov, and Michael D. Nedd, Assistant Director, Minerals and Realty Management (WO-300), at 202-208-4201 or mnedd@blm.gov.

Signed by:
Mike Pool
Acting, Director

Authenticated by:
Ambyr Fowler
Division of IRM Governance, WO- 560

1 Attachment
1-Definitions (2 pp)

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[1] Doherty, K. E., J.D. Tack, J.S. Evans and D. E. Naugle. 2010. Mapping breeding densities of Greater Sage-Grouse: A tool for range-wide conservation planning. BLM Completion Report: Interagency Agreement # L10PG00911.

[2]Stiver, S.J., E.T Rinkes, AND D.E. Naugle. 2010. Sage-grouse Habitat Assessment Framework. U.S. Bureau of Land Management. Unpublished Report. U.S. Bureau of Land Management, Idaho State Office, Boise, Idaho.

[3] Stevens, B.S. 2011. Impacts of Fences on Greater Sage-Grouse in Idaho: Collision, Mitigation, and Spatial Ecology (Master's Thesis). University of Idaho, Moscow, Idaho.

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State of Nevada Assembly

October 25th 2011

DEAR READER: the purpose of this paper is to help dispel the too often highly romanticized myths passing as history about early Nevada, and to provide an historical prospective about a bird species very likely to soon be placed on the endangered species list, the Sage Grouse. As an example of such mythmaking, the following is a quote from the book "Birds of the Great Basin" by Fred A. Ryser, Jr.

"The West was settled to the detriment of the Sage Grouse. Ranches, farms, towns, cities, roads, and other human developments were centered in the sagebrush zone...Springs, seepage areas, small streams, and wet meadows were often severely damaged by livestock and human usage...The Sage Grouse decreased in number and disappeared from parts of its former range; by the 1930's it was in serious difficulty...Since then it has made a comeback somewhat, as the abuse of public lands by livestock has been alleviated a bit."

This of course assumes high Grouse populations prior to the arrival of white man. As I will document in the future, Ryser and his fellow mythmakers have it backwards: Sage Grouse *thrived after the introduction of livestock and domestic agricultural practices.* They have declined in tandem with the Federal government's practice of systematically removing livestock and ranches from the public domain.

SUMMARY: As shown in part one, observations and sightings of Sage Grouse in early Nevada as recorded by the first explorers are nearly non-existent. As an additional sampling of Sage Grouse abundance or scarcity, I have recorded all of the journal references to Indian diet which as you will read are extensive and often highly detailed. Out of 65 references to diet, only a single case, by Odgen, of "sparingly scattered pheasants" in one location is the lone reference to Sage Grouse use as a food source by Indians.

By count I have broken down the Indian diet by frequency of occurrence as recorded by the explorers. First: plants, seeds and roots (22 times); second: rodents (14 times); third: fish (12 times); fourth: rabbits (7 times); fifth: reptiles (4 times); sixth: ducks (3 times) and insects (3 times); seventh: antelope (2 times), and sage grouse, (once).

Common sense would dictate a bird as large as a Sage Grouse, approximately the size of a domestic chicken, if present in any quantity, would have been a frequent and highly desirable food source. Their almost complete absence suggests they were uncommon, even rare, in pre-Caucasian Nevada. If Sage Grouse were abundant before white man's arrival, as some revisionists, the mythmakers, have alleged, where is the

evidence? Why nearly no mention by the explorers? Why only a single reference to the natives eating them?

As I will detail in a future paper, Sage Grouse became remarkably abundant within a couple of decades following the introduction of livestock and widespread agriculture. Ironically, livestock is supposedly one of the primary reasons for their alleged decline later – a premise entirely questionable especially for the Great Basin. Indeed, their period of greatest abundance corresponds closely with the period of early Nevada history when grazing was entirely unregulated.

I have also included all references to birds in general by the early explorers. Several of them were keen observers of the wildlife they saw. I do this to demonstrate that the absence of observations and the dearth of references about Sage Grouse are due to not seeing any, rather than simply ignoring bird life in general.

JEDEDIAH SMITH – 1827

June 1, 1827, [At south end of Walker Lake] "As I was near the southern extremity of the lake…I went on a little further where there was several families encamped. They were fishing with nets very neatly made with fine meshes."

June 10, [Near Belmont] "Having crossed two ranges of hills after dark I discovered a fire and steered toward it – and found an Indian squaw and 2 children who were of course much frightened. They appeared to be travelers having with them some water which they divided with us. I then for the first time saw scorpions prepared to eat."

June 12, "In the course of the day I killed a hare. I mention this for in this country game is so scarce and wild it is a most hopeless task to kill anything."

June 18, "…I fell in with some Indians 14 in number. The Indians gave me two small ground squirrels which we found somewhat better than horse meat. They likewise showed me a kind of water rush which they ate."

June 20, "After encamping some Indians came to me. They gave me some squirrels…"

June 21, "All the Indians I have seen since leaving the [Walker] lake had been the same unintelligent kind of beings. Nearly naked having at most a scanty robe formed from the skin of the hare particular to this plain which is cut into narrow strips and interwoven with a kind of twine or cord made apparently from wild flax or hemp. They form a connecting link between the animal and intellectual creation and quite in keeping with the country in which they are located."

PETER OGDEN – 1828 &1829

Nov. 4, 1828 - (near Orvada) "Indians are most numerous in this part of the country and their chief subsistence appears to be grass, roots and water fowl."

Nov. 13, 1828 – "Six Indians paid us a visit, traded three beaver skins, at least the part of them. On inquiring what they had done with the remainder of the skins they pointed to their shoes and on examination I found they were all made of the skins of beaver…I apprehend if the river is not deep we shall find them scarce, as the natives in shallow water find no great trouble in destroying them."

Nov. 19, 1828 – "As usual the banks of the river lined with Indian villages, at present all deserted…in the afternoon upwards of 150 Indians paid us a visit, poor miserable looking wretches with scarcely any covering, and the greater part without bows or arrows or any weapon of defense. The only thing I could observe that does them credit their being fat and in good condition."

Dec. 16, 1828 – "...descending into the plain, we discovered three tents of Indians. We could only procure one dog to add to our provisions; these poor creatures were men, women and children with the exception of small hare skin blankets entirely naked...their stock of provisions appears to be the reverse of plentiful, and consists of grass which our horses can ill spare them and a few pheasants and hares which are scattered sparingly on the hills we crossed over."
NOTE: *This is the only reference to Sage Grouse as a source of food for Indians in all of the explorer journals.* I am assuming the "pheasants" he mentions were Sage Grouse.
April 3, 1829 – "I presumed we traveled this day no less than 30 miles and I may truly add over a most barren country, and with the exception of one hare, not a bird or an animal did I see."
April 9, 1829 – "We had not traveled more than eight miles when we reached unknown river [Humboldt] and on reaching it found thirty Indians employed in fishing salmon trout, about eight inches in length, remarkably fine. They gave us all they had, about 15.
June 2, 1829 – "As far as I could observe their [the Indians near the Humboldt sink] sole subsistence, particularly those in the upper quarter, appears to be fish of a small kind, strongly resembling carp; they also collect a quantity of water rushes which they dry and lay by for winter. To this may be added a few hares; the latter appear scarce. The above forms their total support, as for roots the country does not yield any."
June 9, 1829 – "We came...on a party of Indians...these poor wretches were going on the plains, to many it will appear almost incredible that human beings can live on grass, but it is a fact, this now the fourth time in different places I have seen them[subsisting on grass]. In regard to their food one advantage they have in having abundance; it would require I presume many years to reconcile my trappers to such food."

BIRDS June 1, 1829 – "...in wild fowl, although the country is well adapted for them, not over numerous. Pelicans are the reverse...As for birds they are numerous and among the number the whip-poor-will, the first I have seen on the west side of the mountains..." [Near Humboldt sink].

JOHN CHARLES FREMONT – 1843, 1844, 1845

General report, written in 1847, under chapter "Great Basin": "But few Indians are found, and those in the lowest state of human existence...except about the lakes stocked with fish, which become the property and resort of a small tribe."
Nov. 1845 "Traveling along the foot of a mountain...we discovered a light smoke rising from a ravine, and riding quietly up, found a single Indian standing before a sage brush fire over which was hanging a small earthen pot, filled with sagebrush squirrels. Another bunch of squirrels lay near it and close by were his bow and arrows. He was...naked as a worm."
Nov. 1845 "We had made our supper on the antelope [Kit Carson killed] and were lying around the fire[at night]...Carson was lying on his back with his pipe in his mouth, his hands under his head and his feet to the fire, suddenly exclaimed, half rising and pointing to the other side of the fire, "Good God! Look there!" In the blaze of the fire, peering over her skinny, crooked hands, which shaded her eyes from the glare, was standing an old woman apparently eighty years of age, nearly naked, her grizzly hair hanging down over her face and shoulders. She had thought it a camp of her own people and had already begun to talk and gesticulate, when her open mouth was paralyzed with fright, as she saw the faces of the whites...hunger and cold soon dispelled fear and she made us understand that she had been left by her people at the spring to die, because

she was very old and could gather no more seeds and was no longer any good for anything. We gave her immediately about a quarter of the antelope." [East slope of Toiyabe Range].
"In this region [the Great Basin] the condition of the Indian is nearly akin to that of the lower animals. Here they are really *wild men.* (Emphasis Fremont's). In this wild state the Indian lives to get food. This is his business. In the Great Basin, where nearly naked he traveled on foot and lived in the sage brush, I found him in the most elementary form...the occupation of the women was in gleaning from the earth everything of vegetable or insect life; the occupation of the men was to kill every animal they could for food..."
Dec. 28, 1843 – "...we found two huts, open at the top and loosely built of sage...eight or ten appeared to live together, under the same little shelter; and they seemed to have no other subsistence than the roots or seeds they might have stored up, and the hares which live in the sage...Herding together among bushes, and crouched almost naked over a little sage fire, using their instinct only to procure food, they may be considered, among human beings, the nearest approach to the mere animal creation." [Near High Rock Canyon, Washoe County]
Jan. 15, 1844 – "An Indian brought in a large fish to trade, which we had the inexpressible satisfaction to find was a salmon trout; we gathered around him eagerly. The Indians were amused at our delight, and immediately brought in numbers...they were of extraordinary size...generally from two to four feet in length. They doubtless form the subsistence of these people, who hold the fishery in exclusive possession. These Indians were fat, and appeared to live an easy and happy life. I remarked that one of them [the Indians in possession of the fishery] gave a fish to the Indian we had first seen, which he carried to his family. To them it was probably a feast; being of the Digger tribe, and having no share in the fishery, living generally on seeds and roots." (Mouth of the Truckee at Nixon, Pyramid Lake.)
Jan. 16, 1844 – "We saw a number of dams which the Indians had constructed to catch fish." [On the Truckee by Nixon].
Jan. 24, 1844 – "He [an older Indian] brought with him in a little skin bag a few pounds of the seeds of a pine tree, which today we saw for the first time [Pinion Pine]. We followed the river for only a short distance...the Indian made us comprehend (a dam) had been built to catch salmon trout."
Jan. 25, 1844 – "A party of 12 Indians came down from the mountains to trade pine nuts...These seemed now to be the staple of the country...we ascended a long ridge...where the Indians had waylaid and killed an antelope."
Jan. 29, 1844 – "The Indians informed us that at certain seasons they have fish in their waters...for the remainder of the year they live upon the pine nuts...At present, they were presented to us as a whole people living upon this simple vegetable." (Walker River near California State line).
Jan. 31, 1844 – "We had scarcely lighted our fires, when the camp was crowded with nearly naked Indians; some of them were furnished with long nets in addition to bows, and appeared to have been out on the sage hills to hunt rabbits. These nets were perhaps 30 to 40 feet long...made from a kind of wild hemp. Indians brought in 2 or 3 rabbits, which were purchased from them." [Near Topaz Lake].

BIRDS – General report, under the chapter "Great Basin" written in 1847: "Sterility...is the absolute characteristic of the valleys between the mountains – no wood, no water, no grass; the gloomy Artemisia the prevailing shrub – no animals, except the hares, which shelter in these

shrubs, and the fleet and timid antelope...No birds are seen on the plains, and few on the mountains."

EDWARD KERN – 1845

Dec.8, 1845 (at Walker Lake). "The Indians are of a much lower grade than any I have yet seen. They are however very friendly. I visited some of their huts near the mouth of the river. They had some very pretty decoy ducks, made from the skin of those birds, neatly stretched over a bulrush float. There were 4 or 5 old women hovering over a fire of a few willow twigs of six or eight inches in length. I thought if the personification of witches ever existed, these were of them. Their withered bodies, almost entirely naked and emaciated, their faces smeared with dirt and tar [pitch], the dull, idiotic stare of their eyes, trembling from cold and dread of our intentions towards them, rendered them to me the most pitiable objects I had ever seen. A couple of children, nestled close to the fire, showed more the signs of wonder in their countenances than fear. Some of the children, notwithstanding the hardships of their lives, only dependent on grass seeds and the few fish they can catch, any large game being unknown hereabouts, have really lively and interesting countenances; but the expression leaves them with youth; their future, being one of continued privation, soon dulls the light of the eye..."
Dec. 14, 1845 – "The boys brought in some roots they found near a couple of Indian huts...The root was some water plant of good flavor. They were plaited together in ropes, something after the manner of doing up onions at home."

CAPTAIN JAMES SIMPSON – 1859

"These Indians [Goshoots] live in a barren and, in winter, on account of its altitude, a cold climate, and the consequence is that they are obliged to live entirely on rabbits, rats, lizards, snakes, insects, rushes, roots, grass seeds, etc. They are more filthy than beasts, and live in habitations which, summer and winter, are nothing more than circular enclosures about three feet high, made of the...sagebrush...serve only to break off the wind. Anything like an enclosed lodge or wick-e-up of any sort I did not see among them. Their dress, winter and summer, is a rabbit skin tunic or cape, which comes down just below the knee...we found along our routine a number of the Digger tribe, who said they were of Sho-Sho-Nee origin...like the Goshoot, are of a low type and live and dress in the same way."
"The Washoes...are destitute of all the necessaries to make life even desirable. They are peaceable, but indolent. In the summer they wander around the shores of Lake Bigler [Tahoe] principally subsisting on the fish found in it. In the winter they lay about in the Artemisia...subsisting on a little grass seed."
"...an Indian came in from his days hunt. His largest game was the rat, of which he had a number stuck around under the string of his waist. These were soon put by the old woman on the fire, and the hair scorched; this done, she rubbed off the crisped hair...pulled out the entrails. From these, pressing out the offal, she threw the animal, entrails and all, into the pot. The rats are caught by a deadfall of a heavy stone."
"I noticed a species of the food they eat, and which is cake from seeds and roots which they get in the bottoms. I tasted it, but it looking precisely like a cake of cattle-ordure, and having anything but an agreeable taste, I soon disgorged it... These Indians appear in worse condition than the meanest of the animal creation. Their garment is only a rabbit skin cape, and the children go naked...At camp the feast we gave them made them fairly laugh for joy. Near our

camp I visited one of their dens or wick-e-ups...The offal around, and in a few feet of it, was so offensive as to cause my stomach to retch and cause a hasty retreat. Mr. Bean told me the truth when he spoke of the immense piles of feces voided by these Indians, about their habitations, caused doubtless by the vegetable, innutritious character of the food."

"I noticed the women carrying on their backs monstrous willow baskets filled with a sort of carrot root, which they dig in the marsh, and cacti, both of which they use for food."

"A great deal of game, such as antelope and aquatic fowl, is said to abound in this region [Ruby Valley] and deer and mountain sheep are also seen."

"Pass places where the Indians have dammed up the rills to cause them to flood the habitations or holes of badger, gophers, rats, etc, and thus they secure them for their flesh and skins."

"There are three of these Indians...they are very talkative and lively. Eat rats, lizards, grass seed, etc, like the Go-shoots. The guide says he saw them, after throwing the rats in the fire, and thus roasting them, eat them, entrails and all, the children in particular being very fond of the juices...the old man represents that a number of his people died last winter from starvation and cold."

"Some 15 or 20 Diggers have come into camp. They are the most lively, jocose Indians I have seen...say two rats make a meal. Like rabbits better than rats, and antelope better than either, but cannot get the latter."

"An old Digger has visited our camp...I asked him if his country was a good one. He said it was. I asked him why. Because, he said, it had a great many rats."

"Some Digger Indians he met had kindly offered him three fat rats, but as they had been roasted with entrails and offal unremoved, he said he did not feel hungry enough to accept their generous hospitality."

"On reaching our camping place, which I called the Middle Gate, saw a naked Indian stretched out on the rocks...I counted 27 rats and one lizard lying about him, which he had killed for food."

"Carson Lake...Curlew, pelican, and ducks and other aquatic birds frequent the locality, and the lake is filled with fish. A number of Pi-utes, some two dozen, live near our camp, and I notice they have piles of fish lying about drying, principally chubs and millet. They catch them with a seine...their habitation consists of flimsy sheds, made of rushes...the decoy ducks they use on the lake to attract the live ducks are perfect in form and fabric, and I have obtained a couple for the Smithsonian Institute."

"Some Pi-utes from Walker's Lake have come into camp to sell or trade salmon-trout...the largest they have weighs about 20 pounds."

"There are several families of Pi-utes at this Middle Gate, collecting grass seed, which they separate from the husks by first rubbing the hands lightly under stones and then winnow, by throwing it up in the wind. Afterward they convert it into a flour by rubbing it by the hand between stones. I notice they use a variety of seeds in making flour."

BIRDS – "Along the valley...a stream runs...curlew ducks and other aquatic birds frequent it." [Steptoe Valley].

"Sand hill cranes, Curlews and other marsh birds abound in the valley and antelopes are seen in the distance."[Ruby Valley]

"Many signs of sage hen and antelope in the valley." [Kobah Valley]

"...coupled with the bright, bracing morning air, and, at times, twittering of birds, make our morning departure from camp very pleasing."

"In consequence of the number of swallows which build their nests in its walls, I call it Swallow Canyon." [Devil's Gate, Eureka]
"...are groves of tall cedars, birds frequent these groves, and make the air resonant with their music."
"The twittering of the birds we found here also more resonant and delightful than in any other locality. There is a bird in the mountains a little larger than the Jay, and of a deeper blue color that utters an impudent screaming note..."

CONCLUSION: Sage grouse were uncommon before white man arrived in the Great Basin. Populations today still exceed what was found here upon white contact. Listing them as "endangered" when they are probably returning to their historical low levels is unjustified.