

**APPENDIX 'F'**  
**Action Plans and Strategies from**  
**Local Area Planning Groups**

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NOTE: The following project descriptions have been summarized from the local area plans. This is a partial list of proposed projects that will be completed for the final draft. Projects in this section are NOT listed in priority order.

## Pinyon-Juniper Control / Sagebrush Rehabilitation Projects

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### *PINE NUT PMU*

#### **PINYON - JUNIPER TREE REMOVAL**

Risk: Optimal nesting habitat in the vicinity of the north and south leks is limited by lack of big sagebrush cover. Many of the ecological sites that support big sagebrush have become encroached with pinyon-juniper woodland over the last 100 years. This habitat type conversion from big sagebrush to woodland has a negative effect on sage grouse nesting and early brood rearing habitat by limiting the availability of desirable big sagebrush habitat in proximity to active leks.

Objective: Reestablish big sagebrush habitat for nesting and early brood-rearing on sites that con and previously did support big sagebrush vegetation.

Action: Remove pinyon-juniper trees by the most appropriate method to create a patchwork of openings of sufficient size to reestablish big sagebrush sites with herbaceous understory for nesting. Treat additional areas to reestablish a corridor of suitable habitat to reestablish connectivity between the north and south lek sites. Select areas to be treated that have the greatest potential for recovery (Phase 1 and Phase 2 encroachment areas) with the least amount of additional rehabilitation inputs.

Rationale: There is limited, if any, big sagebrush vegetation available within many miles of the active north breeding area. Sage grouse have been dislocated from previously suitable habitat and are nesting under less than optimal cover conditions in low sage brush sites.

Legal Authority: BLM Carson Field Office; Indian allotment owners; Bureau of Indian Affairs.

#### Procedural Requirements – BLM:

1. Field-verify and survey project area for species composition, pinyon-juniper encroachment phase, ecological range site and soils.
2. Identify wood biomass disposal options.
3. Comply with NEPA requirements to analyze the project and potential project alternatives
4. Schedule and implement the project.

#### Procedural Requirements – BIA:

1. Develop project descriptions that convey the objectives and need for the project
2. Coordinate, where possible, with existing pinyon-juniper removal projects on allotment lands for disease control
3. Notify all allotment owners of proposed plans and seek approval for implementation.
4. BIA Supervisor action as \_\_\_ to approve the project on Indian allotment lands.

Level of Partnership Commitment: in progress

Potential Project Funding:

1. Conservation grants
2. Project submittal under ongoing initiatives such as 'Healthy Forests' to reduce wildfire risk
3. Project coordination with ongoing biomass and energy development alternatives in Carson City.

Schedule:

2004 – Field inventories and permitting

Tribal consultation

2005 – Project implementation – Phase 1 = 5 -10,000 acres

Project monitoring

2006 – Project implementation – Phase 2 = 5-10,000 acres

Project monitoring

2007 – Project implementation – Phase 3 = 5-10,0000 acres

Project monitoring

2008-2015 – Project monitoring

Project Area Locations:

Public land bound by T 13 N to T 15 N and R 21 E to R 23 E

Public land bound by T 12 N to T 14 N and R 21 E to R 23 E

Indian Allotment Land bound by T 11 N to T 13 N and R 21 E to R 23 E

*WHITE MOUNTAINS PMU*  
**PINYON-JUNIPER EVALUATION**

Risk: Pinyon-juniper communities are expanding into sagebrush habitats in both upper and lower elevations.

Objective: Compare historical pinyon-juniper distribution with current pinyon-juniper distribution to determine the amount of encroachment that has occurred.

Action: Based on evaluation results, treat pinyon-juniper and mountain mahogany that have encroached into sagebrush to increase habitat continuity and suitability for sage grouse.

Rationale: The pinyon-juniper communities could impact the limited amount of sage grouse habitat in the eastern part of the White Mountains PMU.

Legal Authority: BLM, USFS

Procedural Requirements: Subject to NEPA regulations and evaluation by the land management agencies.

Level of Partnership Commitment: Land and wildlife management agencies with an interest or responsibility for sage grouse conservation, non-government organizations, and other interested individuals.

Potential Project Funding: Agency budgets, cooperative programs, challenge cost share grants, other grants.

Schedule:

2004-2005 - Prepare project plans: compile all existing pinyon-juniper site data; identify priority areas for treatments; complete budget planning; schedule treatments (NDOW, CFG, BLM, USFS).

2006-2010 - Implement plans.

2006-2015 - Monitor results (NDOW, CFG, BLM, USFS)

2004-2015 - Report project status at annual sage grouse conservation symposium

*DESERT CREEK PMU*  
**PINYON - JUNIPER REDUCTION**

Risk: Loss of sagebrush habitat in the Sweetwater breeding area complexes due to encroachment of pinyon-juniper

Objective: Remove pinyon-juniper overstory where it is encroaching into sagebrush habitat adjacent to the breeding area complexes. Treat approximately 3,389 acres.

Action: Remove pinyon-juniper overstory with most appropriate technique (cutting, burning, chaining, herbicide).

Rationale: Habitat in the Sweetwater Complex is a mixture of mountain big sagebrush, low sagebrush, and old crested wheatgrass seeding, with encroaching pinyon-juniper trees. Habitat has been assessed as R0, R2, R3, and R0agcr (sagebrush with crested wheatgrass). Those areas within two miles of the lek, that are classified as Phase i (few to many small trees not affecting understory with less than 11 percent canopy cover) and Phase II for removal of pinyon overstory. Treating Phase I and Phase ii is more effective than treating Phase III (tree dominance, little understory, and greater than 55 percent canopy cover). Treatment of Phase I will maintain existing habitat. Treatment of Phase II will increase the amount of habitat in the Sweetwater complex.

Legal Authority: Projects addressing this risk are within the management responsibility of the Bridgeport Ranger District, Humboldt-Toiyabe National Forest.

Procedural Requirements: NEPA compliance.

Level of Partnership Commitment:

Potential Project Funding: National Forest appropriated dollars requested for 2004 and in planning process for 2005. Partnerships to be pursued for full implementation.

Schedule:

2004 - Project Planning (USFS)

Identify specific treatment locations

Initiate budget planning

Schedule and complete heritage and biological clearances

Complete Environmental Analysis

2005 - Project implementation (USFS, partners)

2005-2015 - Project Monitoring: USFS will monitor project implementation; NDOW will monitor project effects.

Project Area Locations:

**Project Site One:** Sweetwater Complex; one mile west of Wiley Ditch #2 lek (T 8 N, R 25 E, E 1/2 Sec 15, W 1/2 14). Elevation - 7,000 to 7,200 feet asl. Mixed brush community with mountain big sagebrush, Wyoming big sagebrush, desert peach, bitterbrush. Pinyon Phase I. 960 acres.

**Project Site Two:** Between Wiley Ditch and Wiley Ditch #2 s (T 8 N, R 25E, NWSW Sec 18; T 8 N, R 24 E, NESE Sec 12). Elevation - 6,600 feet. Mixed brush with

mountain big sagebrush, Wyoming big sagebrush, desert peach, bitterbrush. Pinyon Phase I and II. 160 acres.

**Project Site Three:** Sweetwater Complex, east of Wiley Ditch #1 (T 8 N, R 25 E sec 17, eand 1/2 of west 1/2). Elevation 6,600 feet. Mixed brush wit mountain big sagebrush, low sagebrush, bitterbrush. Pinyon Phase I and II. 100 acres.

**Project Site Four:** Sweetwater Complex, south of Wiley Ditch #3 and north of Sweetwater #1 (T 8 N, R 25 E, NWSE Sec 30). Elevation 6,900 feet. Big sagebrush. Pinyon Phase I. 200 acres.

**Project Site Five:** One mile west-northwest of Sweetwater #1 (T 8 N, R 24 E, Sec 35,36). Elevation 7,200-8,400 feet. Mixed brush with mountain big sagebrush, desert peach, bitterbrush. Pinyon Phase I and II. 1,000 acres.

**Project Site Six:** On-half mile west of Sweetwater #2 (T 7 N, R 25 E, west 1/2 Sec. 6). Elevation 7,000 - 7,200 feet. Mountain big sagebrush and bitterbrush. Pinyon Phase I, II, and III. 640 acres.

**Project Site Seven:** One and one-half miles east of Sweetwater #2 (T7 N, R 26,E, SE 1/4 Sec. 4). Elevation 6,500 feet. Low sagebrush with Wyoming and mountain big sagebrush. Pinyon Phase I and II. 320 acres.

*DESERT CREEK PMU*  
**PINYON REMOVAL FROM MEADOWS**

Risk: Loss of late summer brood habitat due to encroaching pinyon pine on riparian areas

Objective: Remove encroaching pinyon trees from riparian habitat that supported wet to dry meadow vegetation.

Action: Remove pinyon overstory with most appropriate technique (cutting, burning, chaining, herbicide, etc.)

Rationale: Late summer brooding habitat is being replaced by encroaching pinyon-juniper in portions of the Desert Creek/Fales PMU. Late summer habitat consists of wet and dry meadows, springs, seeps, and riparian stream corridors. These riparian areas are important sources of succulent forbs when the surrounding upland habitat begins to desiccate in the late summer. There are numerous riparian areas at the mid-elevation of the Sweetwater and Pine Grove Mountains that have been impacted by increasing tree densities. Locations are on both National Forest and private lands.

Legal Authority: Bridgeport Ranger District Humboldt-Toiyabe National Forest; private land owners

Procedural Requirements: NEPA compliance.

Level of Partnership Commitment:

Potential Project Funding: National Forest appropriated dollars requested for FY 200x and in planning for 200x. Cost share grants are available for private land from various sources.

Schedule:

200x - Project Planning (USFS)

Identify specific treatment locations

Initiate budget planning

Schedule and complete heritage and biological clearances

Complete Environmental Analysis

200x - Project implementation (USFS, partners)

200x-20xx - Project Monitoring: USFS will monitor project implementation; NDOW will monitor project effects.

Project Locations:

**Project Site One:** Dead Ox Spring (T9 N, R 25 E, Sec 25). USFS. Elevation 7,800 feet. Pinyon Pine. 20+ acres.

**Project Site Two:** Long Doctor Spring (T 7 N, R 26 E, Sec. 4). USFS. Elevation 6,600 feet. Mixed brush with mountain big sagebrush, Wyoming big sagebrush, desert peach, bitterbrush. Pinyon Phase I and II. 20 acres.

**Project Site Three:** Upper Dalzell Canyon (T 8 N, R, 25 E, Sec 8, 17, 18. USFS and Private. Elevation 6,700 feet. Pinyon Phase I and II. 100 acres.

**Project Site Four:** Portions of Fryingpan Creek (T7N R 25 E, Sec 32,33,34). USFS and Private. Elevation 6,200-6,700 feet. Pinyon Phase I and II. 100 acres.

**Project Site Five:** Additional seep, springs, and meadow areas to be identified at a later date.

*MOUNT GRANT PMU*

**PINYON - JUNIPER REMOVAL**

Risk: Loss of sagebrush habitat in breeding habitat due to encroachment of pinyon pine

Objective: Remove pinyon pine where it is encroaching into breeding areas and to reestablish habitat connectivity between seasonal habitats.

Action: Remove trees with the most appropriate technique (cutting, burning, chaining, herbicide, etc.). Treat approximately 5,000 acres over the next 15 years.

Rationale: Diverse mixed shrub communities including mountain big sagebrush, Wyoming big sagebrush, low sagebrush, bitterbrush, serviceberry, and desert peach are becoming encroached with pinyon-juniper trees. Habitat has been assessed as R0, R1, R2, R3, and R0(agriculture). Areas within two miles of the lek are classified as Pinyon Phase I. Treatment of Phase I pinyon-juniper areas will maintain existing habitat. Treatment of Phase II areas will increase breeding habitat.

Legal Authority: Bridgeport Ranger District Humboldt-Toiyabe National Forest and private land owners.

Procedural Requirements: NEPA compliance and private landowner consent.

Level of Partnership Commitment: It is believed that the private landowners will be willing partners with the USFS and the LAPG.

Potential Project Funding: USFS annual budgets 2005-2015 as projects are developed and approved  
Nevada Wildlife Federation Grant

Schedule:

2005 - Project planning and budget planning

2006 - Complete heritage and biological clearance

2007 - Identify specific project area locations

Complete Environmental Analyses

2007-2015 - Project implementation

2007-20xx - Project monitoring.

Potential Project Locations:

**Project Site One:** China Camp Lek, approximately five miles SW of the Ninemile Ranch on FS Road 045, south to China Camp Meadow (T 6 N, R 27 E, NW 1/4 Sec 29 to SW 1/4 Sec 29). Elevation - 6,550 to 6,800 feet. Mountain big sagebrush, Wyoming big sagebrush, some herbaceous. Pinyon Phase II. 130 acres.

**Project Site Two:** China Camp Lek 2, approximately four miles from the Ninemile Ranch west to FS Road 154, 1.7 miles from the Walker River Road (T 7 N, R 27 E, SE 1/4 Sec 17). Elevation - 6,310 feet. Approximately 20 pinyon trees encroaching onto lek. 20 acres.

**Project Site Three:** Meadow south of Gregory Flats. USFS or patented land approximately one from the Aurora Mine open pit. (T 5 N, R 28 E, Sec 17). Elevation - 7,200 feet. Sagebrush and pinyon Phase II encroachment onto meadow. 10 acres.

**Project Site Four:** Chinese Camp. USFS and private land approximately???

## *BODIE HILLS PMU*

### **PINYON REMOVAL AND MANAGEMENT**

Risk: Direct habitat loss, habitat fragmentation, and habitat degradation from pinyon and/or juniper encroachment into key sage grouse habitats and adjacent non-woodland habitats. Increased potential for catastrophic fire and long-term sagebrush associated plant community type conversions.

Objective: Improve sage grouse habitat quality by treating pinyon and/or juniper encroachment into key sage grouse habitats in the Bodie PMU. Manage pinyon and juniper in the Bodie PMU to ensure long-term connectivity between sage grouse seasonal use areas and adjacent breeding populations. Reduce the potential for catastrophic fire and sagebrush associated plant community type conversions from excessive pinyon and/or juniper densities and continuous fuel conditions.

#### Actions:

1. Remove pinyon-juniper in and adjacent to currently occupied breeding habitat in the Bodie PMU using the most appropriate technique (cutting, burning, chaining, herbicide etc.) to achieve project objectives.
2. Design and implement pinyon-juniper removal projects that include a scientific research component designed to improve our knowledge and ability to effectively manage pinyon-juniper in the Bodie PMU.
3. Map and compare current pinyon-juniper extent with historic pinyon-juniper extent to assess temporal changes in pinyon-juniper distribution in the Bodie PMU.
4. Evaluate the current extent of pinyon-juniper in relation to sage grouse habitat needs, fire ecology, and sagebrush associated plant community health in the Bodie PMU.
5. Identify additional priority treatment sites and implement additional pinyon-juniper removal treatments to improve sage grouse habitat and sagebrush community health.

Rationale: The Bodie LAPG identified pinyon-juniper encroachment into currently occupied sage grouse habitats as a risk that should receive priority management attention. In addition, increased tree density and expansion into adjacent non-woodland habitat types and potential connectivity habitats is also a concern. The potential contribution of pinyon-juniper densities to large catastrophic fires and the potential for long-term plant community type conversion further accentuates this risk. Many pinyon-juniper encroached sites in the PMU provide excellent opportunities for sage grouse habitat improvement, particularly those adjacent to leks and meadows. Pinyon-juniper encroached sites that occur between known seasonal use areas or adjacent breeding populations are also good candidates for sage grouse habitat improvement projects. The Bodie LAPG identified several areas as potential priorities for treatment. The grouse also recognized a clear need to improve mapping and evaluation of pinyon-juniper habitats in relation to sage grouse needs. The role of fire and fire surrogates in addressing long-term plant community changes and reducing the potential for large catastrophic fires should also be investigated.

Legal Authority: The BLM has management authority of implementation of pinyon-juniper treatments or research projects on public lands within the PMU. The USFS has

management authority for the implement of pinyon-juniper treatments or research projects on national forest lands. Pinyon-juniper treatments or research projects on private lands are at the discretion of individual private landowners.

Procedural Requirements: The BLM and the USFS must complete appropriate environmental review prior to the implementation of any pinyon-juniper treatment or research project on public or national forest lands. Any treatment on public lands under Wilderness Study Area (WSA) designation must comply with the BLM Interim Management Policy (IMP) for WSAs. Private landowners can request the assistance of the Natural Resource conservation Service (NRCS), the California Department of Forestry and Fire Protection (CDF), or the University of California (UC) Cooperative Extension to develop and implement projects on private lands.

Level of Partnership Commitment: The BLM Bishop Field Office and the Bridgeport Ranger District Humboldt-Toiyabe National Forest were active participants and partners in development of this action plan. The Bodie LAPG expressed a keen interest in pinyon-juniper management in the PMU.

Potential Project Funding: The BLM Bishop Field Office and the Bridgeport Ranger District are responsible for identifying and securing funding for project implementation. Significant levels of funding will likely be required to successfully implement proposed projects. Where possible, all cooperators should work to identify and secure contributed funds and volunteer labor to support implementation. A variety of contributed funds are likely available to support project implementation on public and private lands in the PMU.

Schedule:

200x - Project Planning

1. Finalize project locations; define project objectives and identify proposed treatment.
2. Complete required surveys and appropriate environmental review.
3. Conduct pre-project monitoring.

200x Project Implementation

1. Secure funding and complete appropriate coordination.
2. Implement the proposed treatment.
3. Conduct any immediate post-implementation monitoring.

200x Project Monitoring and Adaptive Management

1. Monitor plant community composition and sage grouse population response
2. Review monitoring data and assess success at meeting project objectives.  
Update project as needed and complete additional treatment required to accomplish project objectives.
3. Keep partners and participants informed through the annual sage grouse conservation symposium and other appropriate means.

Project Priority Locations:

1. Lek 9 Breeding Complex (BLM)
2. Lek 10 Breeding Complex - Hunewill Hills/Summers Meadows Complex (BLM, USFS, Private).
3. Mormon Meadows (BLM, Private)

4. Rancheria Gulch (BLM)
5. Big Alkali (BLM, Private)

VYA PMU

## **JUNIPER MANAGEMENT**

### Risk:

Objective: The objective is to maintain sagebrush communities as sagebrush dominated sites.

Action: The conservation measure targets juniper invading sagebrush communities. There are currently a few small-scale projects underway and several more being planned. A large-scale juniper management plan is currently in progress and will be part of the RMP planning process. The RMP is planned for completion late in 2005.

Fire program carries out photo point and some plant ID monitoring after all fuel treatments. The main indicator of success would be the lack of juniper trees in a sagebrush community.

### Rationale:

Legal Authority: BLM

Procedural Requirements: Mechanical treatment or prescribed fire. Current planning efforts within the BLM, AMP revisions, current and projected rangeland projects.

Project level analysis will fine tune project boundaries and prescriptions, however, current site locations are mapped on a gross scale as "R3" habitats. R3 sites are generally distributed throughout the PMU.

The RMP planning process will help determine general areas of treatment, however, like ongoing project development will require site specific analysis to implement. BLM will carry out planning and implementation. Partners will be sought when available.

Costs and Potential Funding: Expensive to treat mechanically, up to \$600.00/acre. Burning less expensive but not always the best solution e.g., don't want to burn in cheatgrass areas, about \$150.00/acre.

Schedule: Projects take place as manpower, money, and seasonal access allow. Generally these actions will take place from late spring to fall depending on access and probable Limited Operating Periods (LOP's). Due to the large amount of juniper present, sites will need to be prioritized.

VYA PMU  
**JUNIPER REDUCTION**

Risk:

Objective: To reduce potential avian predator perch sites, this measure is specifically targeting large invasive juniper stands.

Action: Use mechanical treatment or prescribed fire to reduce juniper. \* Guideline 11.

Fire program carries out photo point and some plant ID monitoring after all fuel treatments.

Rationale:

Legal Authority: BLM

Procedural Requirements: Via RMP planning process and ongoing project development new projects will be implemented. BLM will carry out planning and implementation.

Costs and Potential Project Funding: Expensive to treat mechanically, up to \$600.00/acre. Burning less expensive but not always the best solution e.g., don't want to burn in cheatgrass areas, about \$150.00/acre.

Schedule: Projects take place as manpower, money, and seasonal access allow. Generally will take place from late spring to fall depending on access and probable Limited Operating Periods (LOP's).

Project Location: Grossly speaking, these acres correspond to mapped R-3 sites. R-3 acreages will be much reduced depending on RMP level planning and site specific characteristics, e.g., archeological concerns, site type, and other species needs.

Project level analysis will fine tune project boundaries and prescriptions, however, current site locations are mapped on a gross scale as "R3" habitats.

**STEPTOE/CAVE VALLEY PMU  
WILDFIRE PRE-SUPPRESSION AND HABITAT IMPROVEMENT TREATMENTS**

Risk: The lack of fire in the Bullwhack basin has allowed pinyon/juniper to encroach upon nesting and brood rearing habitats. Quality nesting habitats exist in this area of the PMU and greenstripping the habitats would greatly reduce the occurrence of a large fire eliminating these habitats. Prescribed fire would reduce the amount of pinyon/juniper encroachment taking place on these habitats.

Objectives:

1. Prescribed burns are implemented so as to create numerous small irregular sized holes or patches within the total treatment unit reducing pinyon/juniper encroachment, decadent sagebrush density and improving perennial grass and forb densities.
2. No more than 20% of individual burned holes or patches are greater than 75 acres.
3. Burn holes and patches are irregularly shaped

Action: The proposed action is to conduct prescribed fires, construct greenstrips and install temporary fencing in the Bullwhack Basin on the north end of the Cave Valley watershed. Acres of each treatment would be as follows: 1,320.68 acres of prescribed burning, 17.4 miles of greenstrips, and 3.25 miles of temporary fence. Project is intended to reduce the threat of catastrophic fire impacting the whole of the Bullwhack Basin by breaking up the continuity of the fuels. Prescribed fire treatments would create areas where vegetation is dominated by native grasses and forbs. Future additional burning in the Bullwhack Basin would likely occur to continue the process of opening up the continuous sagebrush stand and reduce the impacts of future fires.

Greenstrips would be constructed using a combination of mechanical and manual methods depending on the principal fuel type involved (e.g., areas with trees (pinyon/juniper encroachment) = mechanical +manual, areas without trees = mechanical). Greenstrips would be constructed to create 400-foot wide breaks in areas without trees and 600-foot wide breaks in areas with trees. Roadside greenstrips would be set back from the road a minimum of 50 feet to reduce the risk of noxious weeds. Green strips would be aligned with existing roads, but edges would be designed to reduce the linear nature of this type of disturbance.

Livestock grazing use would not be scheduled after June 15 on the year of the burns. Grazing use would not be scheduled in burn treated pastures for a minimum of two years following treatment or until recovery objectives are achieved. Livestock grazing control would be maintained through grazing schedule management and water management. In greenstrip treated pastures, livestock grazing would be allowed after seed-ripe the next year after treatment. Two burn blocks would be selected for prescription livestock trailing immediately following the treatment to disturb the soil surface and facilitate micro-habitat creation for plant establishment. After this initial disturbance, livestock would be actively discouraged from using the burns until recovery is achieved. One days trailing through the burns would be allowed to facilitate access to adjacent allotments entering and exiting the adjacent allotments

Rationale: Habitat in this area of the Steptoe/Cave Valley PMU is mountain big sagebrush and Wyoming sagebrush with a good understory of perennial grasses and forbs. The habitats do have decadent sagebrush and much is encroached by pinyon/juniper trees. By treating these areas with prescribed fire, additional nesting and broodrearing habitats will be available within the PMU.

Legal Authority: The proposed project is not specifically identified in the Egan Resource Management Plan, but is in conformance with the approved decisions of this plan. The project is consistent with the goals and objectives of the White Pine County Sage Grouse Conservation Plan. The project is also consistent with the White Pine County Land Use Plan.

Procedural Requirements: The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities; the project is consistent with the goals and objectives of the White Pine County Sage Grouse Conservation Plan. The project was scoped with an interdisciplinary team, NEPA analysis has been accomplished and the project would be inspected and monitored during implementation.

Potential Project Funding: The funding for the project is coming from Fuels Reduction Funds of The Bureau of Land Management fire program.

Schedule: The project will commence implementation during the spring/summer 2004.

Project Location: The project area is between T. 11 & 12N., R. 63 & 64 E in the Ely BLM field office jurisdiction in northern Cave Valley in the Bullwhack Summit area. Prescribed fire, greenstrip construction and temporary fencing will be used to complete the project.

**BUTTE VALLEY/BUCK MOUNTAIN/WHITE PINE RANGE  
PINYON - JUNIPER REDUCTION**

Risk: A lack of fire in this PMU has lead to expansion of pinyon/juniper into sagebrush habitats reducing their vigor and production.

Objectives: The main objective of this project is to increase sagebrush/perennial grass/ forb production in this part of the Gleason Creek watershed.

Action: The proposed action is to mechanically thin approximately 800 acres of rangelands in the Gleason Creek watershed. Proposed action would remove live trees down to a prescribed density of not more than ten trees per acre. This treatment would remove the encroached pinyon/juniper and release the sagebrush, perennial grass and forbs to once become productive again. The Gleason creek watershed is nesting/brood rearing habitat that has become encroached by pinyon/juniper.

Trees would be cut using a "masticator" type instrument. Resulting large chunks of wood and branches would be left on the site. Project implementation would not occur during migratory bird nesting period without necessary surveys. A pygmy rabbit survey would be conducted on a sample of potentially suitable habitat to detect the presence of this species. Seeding of the area would not be necessary. Approximately 1.53 miles of temporary fence would be constructed. No new roads would be developed. Major trails created during implementation would be rehabilitated at the conclusion of the project.

Rationale: By removing overstory pinyon and juniper in this portion of the Gleason creek watershed which is nesting/brood rearing habitat for sage grouse, additional nesting and brood rearing habitat will be come available to sage grouse.

Legal Authority: The proposed project is not specifically identified in the Egan Resource Management Plan, but is consistent with the approved decisions of this plan. The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities. The project is also consistent with the White Pine County Land Use Plan.

Procedural Requirements: The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities, The project is consistent with the goals and objectives of the White Pine County Sage grouse Conservation Plan. The project was scoped with an interdisciplinary team, NEPA analysis has been accomplished and the project will be inspected and monitored during implementation.

Potential Project Funding: The funding for the project is coming from Fuels Reduction Funds of The Bureau of Land Management fire program.

Schedule: The project will commence implementation during the spring/summer 2004.

**CAVE AND LINCOLN PMUS**  
**PINYON/JUNIPER REMOVAL NEAR LEK SITES**

Risk: Pinyon/juniper encroachment results in loss of lek sites and creates perches for predators.

Objectives:

1. Maintain or increase present populations for the short term (e.g., trend over ten years).
2. Provide favorable conditions for the expansion of Sage Grouse populations into historic range in healthy and sustainable numbers.
3. Maintain and improve existing sagebrush plant communities.
4. Where appropriate, restore dynamic sagebrush plant communities throughout each PMU.

Action:

1. Examine population viability and identify high priority sub-populations for protection in each PMU.
2. Remove pinyon/juniper trees that are invading areas within 0.5 miles of currently active strutting ground
3. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.
4. Remove pinyon/juniper trees that are invading areas within 0.5 miles of currently active strutting grounds.
5. Use all appropriate means (e.g., fire, mechanical, and chemical, etc.) to treat pinyon-juniper sites that have the potential to support sagebrush habitats.

Project Description: Remove all trees within 0.5 mile of lek site including pinyon, juniper, and other tree species with exception of riparian species.

Legal Authority: Bureau of Land Management Caliente and Schell Management Framework Plans, future Ely District Resource Management Plan

Procedural Requirements: NEPA

Potential Project Funding To be determined

Project Area Location:

Cave PMU: Gardner Ranch lek

Lincoln PMU:

1. Little Spring Valley lek;
2. ) Table Mountain lek;
3. Eightmile lek;
4. Grassy Mountain lek;
5. Fogliani Ranch lek

**CAVE AND LINCOLN PMUS  
RESTORATION OF HISTORIC SPRING SITES (E.G., CLEARING OF PINYON-  
JUNIPER)**

Risk:

Objectives: Assure that the availability of water is not a limiting factor in otherwise suitable habitat in accordance with Nevada Water Law.

Actions:

1. Cooperate with water rights owners to leave water at all spring sources for wildlife use in accord with Nevada water law.
2. Cooperate with water rights owners to restore and maintain previously available water sources where feasible.
3. Remove pinyon-juniper in vicinity of springs to improve spring flow and water availability plus improve spring outflow wetlands habitat.

Project Description: Identify spring sites with adjacent pinyon-juniper woodland. Determine land ownership, identify area appropriate for tree removal by either mechanical or prescribed fire or both. Conduct mechanical treatments and or prescribed fire to remove pinyon-juniper woodlands around springs.

1. Identify springs suitable for restoration;
2. Work with land and/or water rights owner to secure agreement to do restoration project;
3. Write plan and delineate area for restoration;
4. Conduct mechanical and/or prescribed burn tree removal plan;
5. Monitor vegetation recovery and spring flows after treatment.

Legal Authority: Bureau of Land Management Schell Management Framework Plan, future Ely District Resource Management Plan, Ely District Fire Plan. Private property owner permission and cooperation where appropriate.

Procedural Requirements: NEPA; written permission and agreement with private owner (where applicable).

Potential Project Funding: To Be Determined.

Project Area Location:

Cave PMU: At and around existing spring sites in Cave Valley PMU.

Lincoln PMU: At and around existing spring sites in Lincoln PMU.

## Wildfire Control / Sagebrush Rehabilitation Projects

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### *BODIE HILLS PMU*

#### **FIRE PROTECTION AND MANAGEMENT**

**Risks:** Direct loss or degradation of key sage grouse habitats from catastrophic wildfire in the Bodie PMU. Population disturbance or habitat degradation from the application of wildfire suppression techniques or fuels management actions that may be incompatible with sage grouse needs in the Bodie PMU. Potential long-term ecological changes to sagebrush associated plant communities in the Bodie PMU from overzealous fire suppression.

**Objectives:** Protect key sage grouse habitats in the Bodie PMU from direct loss or significant degradation resulting from catastrophic wildfire. Ensure that future wildfire suppression and fuels management actions promote the maintenance or improvement of sage grouse habitat in the Bodie PMU.

**Actions:** Develop and implement interagency fire management guidelines for the protection and management of sage grouse habitats in the Bodie PMU. Include elements that address: 1) Identification and protection of key seasonal habitats; 2) Priorities for fire suppression and compatible fire suppression techniques; 3) Priorities for fire rehabilitation and criteria for rehabilitation efforts; 4) Prescribed fire and fire surrogate treatments for fuels management and habitat improvement; 5) Fire prevention to reduce human caused starts; and 6) Identification of sagebrush associated plant communities at risk of cheatgrass conversion. These guidelines must recognize the ecological differences among sagebrush species present in the Bodie PMU, and the expected responses to fire, fire suppression techniques and fire rehabilitation efforts. Incorporate these guidelines into fire management plans, land use plans and fire related activity plans for the Bureau of Land Management, Bishop Field Office, Inyo National Forest, Toiyabe National Forest, Bridgeport Ranger District and Bodie State Historic Park.

**Rationale:** The Bodie PMU planning group identified wildfire as significant risk that should receive priority management attention. Wildfire was characterized as both a habitat and a population risk with essentially all sagebrush associated habitats in the PMU subject to some fire related risk. Though contemporary wildfire activity in the PMU has been limited, and no significant impacts to key sage grouse habitats have been documented, the potential for a large uncontrolled wildfire to significantly impact key sage grouse seasonal use areas is clear. The current abundance of late seral shrub communities and significant stands of pinyon-juniper heighten the potential risk of large fires. The presence of cheatgrass in some sagebrush associated plant communities in the PMU also adds the risk of altered fire cycles and increased cheatgrass abundance. Subtle but long-term changes in the distribution and diversity of sagebrush associated plant communities may also be occurring due to years of aggressive wildfire suppression. Finally, limited fire management direction currently exists to promote the long-term maintenance or improvement of key sage grouse habitat in the PMU. Development and implementation of the proposed interagency fire management guidelines will help ensure the long-term protection, maintenance and improvement of sage grouse habitats and populations in the Bodie PMU.

Legal Authority: Development of fire management guidelines and fire management plans for public lands and national forest lands is under management authority of the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). The California Department of Forestry and Fire Protection (CDF) is the principal authority for fire management on private and State owned wildlands in California.

Procedural Requirements: The Bureau of Land Management (BLM) and the U.S. Forest Service (USFS) must complete appropriate environmental review prior to implementation of any fire management plan or fire related activity plan. Any subsequent land use plan updates would also require appropriate environmental review.

Level of Partnership Commitment: Several existing partnerships and cooperative agreements will facilitate completion of this action. The Bureau of Land Management (BLM), Bishop Field Office and the Inyo National Forest currently operate under a unified fire command. The Humboldt-Toiyabe National Forest and California Department of Forestry (CDF) are also current partners committed to cooperative fire management in the region. Some additional coordination will be required to ensure that Bodie State Historic Park (BSHP) is an active participant in this process.

Potential Funding Sources: The Bureau of Land Management (BLM) and the U.S. Forest Service (USFS) frequently receive priority funding to complete fire management planning efforts. Targeted funding may be required to ensure completion of this priority action.

Schedule:

200x - Establish an interagency, interdisciplinary team to develop interagency fire management guidelines for the protection and management of sage grouse habitats in the Bodie PMU.  
Send proposed guidelines out for agency, peer and public review.  
Review comments and finalize guidelines.  
Complete appropriate environmental review and update applicable plans to include guidelines.  
Periodically review the guidelines for effectiveness at protecting sage grouse habitats and update as needed.

## **Other Habitat Improvement Projects**

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### *MOUNT GRANT PMU*

#### **GUZZLER INSTALLATION**

Risk:

Objective:

This project will help spread water into critical areas on Powell Mountain.

Action: The USFS and NDOW should provide a minimum of two big game guzzlers for the relatively dry mountain for use by sage grouse, antelope, and other species.

Rationale: Both of these species used these areas in recent time.

Legal Authority: USFS - project implementation  
NDOW - construction and monitoring.

Procedural Requirements: NEPA compliance

Level of Partnership Commitment:

Potential Project Funding: NDOW, USFS Bridgeport Ranger District

Schedule:

2009 - Project Planning

    Identify specific treatment locations

    Initiate budget planning

2010 - Schedule and complete heritage and biological clearances

2011 - Complete Environmental Analysis

2011 - Project implementation (USFS, partners)

2011-20xx - Project Monitoring: USFS will monitor project implementation; NDOW will monitor project effect

*MOUNT GRANT PMU*

**MEADOW REHABILITATION**

Risk: Loss of meadow habitat for sage grouse broods during the late spring and summer

Objective: Restore the meadow habitat to Proper Functioning Condition

Action: Conduct Proper Functioning Condition Analyses and determine actions necessary to restore PFC where necessary.

Rationale: Sagebrush is the dominant vegetation type in this PMU. The area has been used by OHVs resulting in damage to a few meadows. The water level in many of the meadows appears to have decreased. Many meadows are dry and becoming encroached with sagebrush. One meadow (Barrel Meadow) has a deeply incised gully that affects water flow to the lower meadow. Fences are in disrepair.

Legal Authority: Private Land Owners

Procedural Requirements:

Level of Partnership:

Potential Project Funding:

Schedule:

Project Location: T 5 N R 28 E, Sec 28,29,32 and 33

Big Meadow

Aurora Peak Meadow

Junction Meadow

Top Meadow

Barrel Meadow

Gregory Flat

Ninemile Ranch, Rough Creek Meadows and Alfalfa Pivot

*DESERT CREEK PMU*

**MAINTAIN / IMPROVE HEALTH OF EXISTING SAGEBRUSH HABITAT**

Risk: Reduction of quality and quantity of sagebrush habitat from natural succession and decadence.

Objective: Emphasize monitoring, analysis and management of sagebrush range sites for sage grouse on public lands. Implement vegetation treatments appropriate to rejuvenate decadent sagebrush sites.

Action: Inventory and assess sagebrush habitat for possible treatments to reduce the cover and density of mature and decadent sagebrush and to provide for the establishment of grasses, forbs and young sagebrush plants

Rationale: Portions of the PMU contain sagebrush vegetation that is providing low quality habitat for sage grouse

Legal Authority: Bridgeport Ranger District Humboldt-Toiyabe National Forest

Procedural Requirements: NEPA Compliance

Level of Partnership Commitment:

Potential Project Funding: National Forest Appropriate dollars requested for FY 200x and in the planning process for 200x-200x. Partnership funds to be pursued for full implementation

Schedule:

200x - Project Planning

Identify project locations

Initiate budget planning

Schedule and complete heritage and biological clearances

Complete Environmental Analyses

200x - Project Implementation

Budget for Project

Budget for Partners

200x-20xx Project Monitoring - USFS will monitor project implementation; NDOW will monitor project effects.

**BODIE HILLS PMU**  
**IMPROVED ACCESS TO WATER**

Risk: Poor water distribution may limit sage grouse summer habitat availability in portions of the Bodie PMU. Extended drought may exacerbate the affect of poor water distribution on sage grouse summer habitat availability in the Bodie PMU. Some natural springs and existing man-made water sources in the Bodie PMU do not provide sage grouse safe access to water.

Objective: Increase available sage grouse summer habitat and mitigate extended drought conditions by improving water distribution in the Bodie PMU where appropriate. Protect natural spring sources and modify existing water developments to improve sage grouse access to water.

Action: Evaluate sage grouse habitat use in relation to water distribution in the Bodie PMU. Identify potential sites to improve sage grouse access to water; and if no overriding negative effects are identified, develop artificial water sources to improve water distribution. Identify and implement measures to protect natural spring sources and to provide sage grouse safe access to existing water developments.

Rationale: Recent telemetry studies indicate that sage grouse in the Bodie PMY tend to concentrate in small areas near perennial water sources during hot, dry summers. Significant portions of the PMU are relatively dry and the availability of open water may to some extent define and limit sage grouse summer habitat in those areas. The influence of water distribution on sage grouse summer habitat quality and quantity in the Bodie PMU may be particularly acute during extended drought conditions. Additional water sources might increase the area of usable summer habitat and partially mitigate the effects of drought. Further evaluation is necessary to determine if, and where, artificial water sources would be beneficial. In addition, access to existing water sources must be safe for sage grouse.

Legal Authority: The BLM has management authority for the implementation of habitat improvement projects on public lands in the Bodie PMUY. USFS has management authority for implementation of habitat improvement projects on national forest lands in the PMU. Project implementation on private lands is at the discretion of individual private landowners.

Procedural Requirements: The BLM and USFS must complete a project plan and appropriate environmental review prior to the implementation of any habitat improvement project on public lands or National Forest lands. Project implementation of public lands under Wilderness Study Area (WSA) designation must comply with the BLM Interim Management Policy (IMO) for WSAs.

Level of Partnership Commitment: The BLM Bishop Field Office and the Eastern Sierra Chapter of Quail Unlimited (QA) are active partners committed to the restoration, improvement and development of water sources for upland game birds in the Eastern Sierra. The local QU chapter has expressed a keen interest in habitat improvement projects to benefit sage grouse in the Bodie PMU and has a proven track record of providing funding and labor to support such efforts. Private landowners and grazing

permittees participating in the "Bodie PMU planning group have also expressed an interest in partnering to improve water distribution to benefit both livestock and sage grouse.

Potential Project Funding: Funding for the implementation of water development projects is readily available from Quail Unlimited (QU) and a variety of other conservation organizations. The BLM Bishop Field Office, the Eastern Sierra Chapter of QU, and the Eastern Sierra Chapter of the California Deer Association (CDA) have been extremely successful at securing such funding over the last several years. The BLM and QU have also successfully secured funds through the National Fish and Wildlife Foundation (NFWF) "Answer the Call" program.

Schedule:

200x - Project Implementation:

1. Evaluate the expected positive and negative effects of water development on the distribution of other animals including domestic livestock and wild horses.
2. Develop guidelines for water developments to ensure that sage grouse are benefited.
3. Seek cooperative opportunities to improve livestock and sage grouse distribution by means of water development.
4. Construct guzzlers or other water developments designed for safe sage grouse access.
5. Design to require minimal maintenance and maximum longevity. If labor-intensive, consider compensation for extra effort on the part of private landowners.
6. Complete project plans and appropriate environmental review including cultural surveys and Interim Management Policy for WSA notifications if necessary.
7. Implement with the assistance of volunteer labor contributed by QU or other conservation organizations.
8. Protect natural spring sources and modify existing man-made water developments to improve sage grouse summer habitat and sage grouse access to water.
9. Ensure that fences used to protect springs and streams allow safe access to water, by means such as let-down fences, using as few wires as practical, and/or runoff outside the fence. ??
10. Retrofit all existing livestock water troughs with wildlife escape ramps.
11. Include adequate water for sage grouse in livestock water developments via overflow or grouse waterers.
12. Ensure that livestock waters to not dry up meadows.

*WHITE MOUNTAINS PMU*  
**SPRING DEVELOPMENT**

Risk: Drought occurs frequently in the rain shadow of the White Mountains and could negatively impact sage grouse populations.

Objective: Evaluate all existing spring developments occurring in potential or occupied sage grouse habitat within the White Mountain PMU. Repair or modify as necessary, in order to maintain water and riparian vegetation at the source.

Action 1: In cooperation with the water rights owners, identify water rights issues and who has authority to repair and modify existing development.

Action 2: Make repairs and modifications to water developments as necessary.

Rationale: The limited amount of rainfall in the eastern part of the White Mountain PMU, and the decreased amount of natural water sources available, could impact sage grouse breeding success, use of otherwise good habitat, and interfere with normal travel corridors. Increasing the amount of available water would allow greater distribution of the birds.

Legal Authority: Federal land management agencies can apply for water rights for wildlife use under Nevada state law.

Procedural Requirements: All proposed activities and projects that would occur on public land will be evaluated by the appropriate land management agency.

Level of Partnership Commitment: Land and wildlife management agencies who hold any interest in conserving sage grouse should be committed to providing staff and funding for appropriate projects. Any non government or private parties who hold interest in conserving sage grouse would make themselves known to agencies either through direct contact or as an interested party in public scoping opportunities.

Potential Project Funding: The projects that could occur based on the results of data collection would be funded through agency budgets, cooperative programs, challenge cost share grants, or other grants.

Schedule:

200x - Project Planning: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Compile all existing habitat data for PMU area.

Cooperatively identify priority areas for treatments.

Enter into budget planning.

Schedule treatments.

200x - Project Implementation: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Budget for treatments.

Conduct treatments.

200x - 200x Project Monitoring: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

NDOW - compile and evaluate treated area data for Nevada portion of PMU.

CDF&G - compile and evaluate treated area data for California portion of PMU.

Provide written survey narratives to all cooperating agencies.

Report accomplishment to US FWS, Reno Office.

*PINE NUT PMU*

**ROAD REALIGNMENT – MADDY ROACH SPRING**

Risk: The current function and condition of the Maddy Roach Spring is at risk of habitat conversion and becoming unsuitable as late brood rearing habitat.

Objective: Reverse the downward trend of the meadow by repairing road-caused damage, and realign the road through an upland area outside the meadow.

Action: Realign \_\_Road

Rationale: The existing road is contributing to the downward trend and at-risk condition of Maddy Roach Spring. Repairing the existing damage can be accomplished without extensive engineering or inputs and at reasonable cost. Realigning the road outside of the meadow will achieve long term improvement and maintenance of late brood habitat.

Legal Authority: Private land owner.

Procedural Requirements:

Obtain advice from professional land conservancies and Counties.

Level of Partnership Commitment:

In Progress.

Potential Project Funding: \_NRCS, private land owner, conservation funds

Schedule:

2004 - Open negotiations with private land owner

Project cost estimate

Secure funding

Design

2005 - Environmental clearance

Construction

**BUTTE VALLEY/BUCK MTN./WHITE PINE RANGE PMU  
SPRING IMPROVEMENTS**

Risk: The risk factors for lack of fire and the quality of late brood rearing habitat were rated as high (4) for this PMU because of pinyon/juniper encroachment. Water distribution was rated as moderate (3) due to pinyon/juniper expansion resulting in reduced water flows.

Objectives: Improve spring flow and water availability along with improving riparian and upland habitat.

Action: This project consists of mechanical treatments to remove pinyon and junipers trees in the vicinity of springs to improve spring flow and water availability and improve spring outflow wetlands habitat. The limbs will be removed and scattered. The boles of the trees will be removed from the site.

Rationale: Limited brood rearing by Sage Grouse occurs in these areas. Late brood rearing habitat would be improved with increased water flows, the removal of trees and expansion of treeless sagebrush habitat adjacent to riparian areas.

Legal Authority: All occur on the Humboldt National Forest. Projects are within the management responsibility of the Ely Ranger District, Humboldt-Toiyabe National Forest and will follow USFS policies and procedures for project implementation.

Procedural Requirements:

1. Schedule Heritage and Biological surveys.
2. Complete Categorical Exclusion.
3. Implement project.
4. Monitor for 2 years.

Costs and Potential Project Funding: National Forest appropriated dollars for FY 2004 and in planning process for 2005.

Schedule: Three to four spring improvement projects are scheduled for the summer of 2004 in the White Pine Mountains (Hidden Springs, Secret Springs, Horse Track Spring, Ellison Spring and Creek). Addition spring areas are proposed for 2005.

Project Area Locations: Hidden Springs, Secret Springs, Horse Track Spring, Ellison Spring and Creek

1. Hidden Springs: T.11 N., R.59 E., Sec 2, NE ¼
2. Secret Springs: T. 11 N., R. 59 E., Sec. 1, SE ¼
3. Horse Track Springs: T. 12 N. R. 59 E., Sec 23, NW ¼
4. Ellison Spring and Creek: T. 13 N., R. 58 E. Sec. 12

*STEPTOE/CAVE VALLEY PMU*  
**CRESTED WHEATGRASS SEEDING REHABILITATION FIELD TRIAL**

Risk: Habitat quality, both nesting and brood rearing is a high risk in this PMU. There are many crested wheatgrass seedings in this PMU.

Objective: The objective(s) of this project are to determine the best mechanical method to increase perennial grass and forb density in an established crested wheatgrass seeding that is being invaded with sagebrush.

Action: The proposed action would investigate whether or not one method for disturbing a crested wheatgrass seeding is effective at creating an environment for establishing forbs and native grasses.

The field trial site is in the South Steptoe Valley Watershed and is approximately 244 acres in size. The field trial would consist of mechanical disturbance of the existing crested wheatgrass seeding followed by seeding of the area. Seed mix would consist entirely of native grass and forb species. The trial area would provide a comparison of the effects of various mechanical disturbance implements within a crested wheatgrass seeding.

The project area is currently fenced into two areas; one pasture and one holding pen. The proposed action would utilize areas of the pasture and the entirety of the holding pen. Livestock grazing would be discouraged through water management within the pasture areas, and the holding pen would not be used at all for the first year, then use would be allowed for a one to two day period thereafter for the duration of the research phase of the project (approximately three years). The Permittee would be allowed one day's use in the gather pen each year in the fall after seed shatter to facilitate livestock management.

In each of the two areas, the following different implements would be used in a series of randomized plots: rangeland drill, broadcast seeding, broadcast seeding followed by land imprinter, broadcast seeding followed by Dixie harrow, and Dixie harrow followed by broadcast seeding.

Rationale: Many crested wheatgrass seedings were established in the early 1970's and are beginning to transition back to sagebrush sites as sagebrush reinvades the site. The increase in sagebrush is a desirable development for sage grouse, as many of the historical seedings were constructed within crucial sage grouse nesting and brood rearing habitat. However, substantial use of these areas by brooding sage grouse does not occur due to the lack of cover and herbaceous forage. Conducting this field trial will give land managers information on the most expedient method which to use to establish perennial grass and forbs into large seedings to be more acceptable habitat for sage grouse. In addition, many past fire rehabilitation projects utilized crested wheatgrass as a tool to inhibit invasive species, such as cheatgrass from gaining a foothold. These areas are also typically lacking in forbs and native grasses as a result of either the initial disturbance, or past grazing practices prior to initial disturbance. An effective means of bringing native grasses and forbs back to these areas is therefore a valuable detail,

which could be used to aid both public and private decision-makers in restoring ecological function of rangelands in Eastern Nevada.

Legal Authority: The proposed project is not specifically identified in the Egan Resource Management Plan, but is consistent with the approved decisions of this plan. The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities. The project is also consistent with the White Pine County Land Use Plan.

Procedural Requirements: The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities, The project is consistent with the goals and objectives of the White Pine County Sage grouse Conservation Plan. The project was scoped with an interdisciplinary team, NEPA analysis has been accomplished and the project will be inspected and monitored during implementation.

Costs and Potential Funding: The funding for the project is coming from Fuels Reduction Funds of The Bureau of Land Management fire program.

Schedule: The project will commence implementation during the spring/summer 2004.

Project Location: The project is located in south Steptoe Valley; T. 14 N., R. 64 E.

*LINCOLN PMU*  
**COOL SEASON PRESCRIBED FIRES**

Risk:

Objectives:

1. Develop an ecological understanding of sagebrush dominated plant communities and the role of disturbances or disturbance regimes in the dynamics of those systems
2. Where appropriate, restore dynamic sagebrush plant communities throughout each PMU.
3. Restore disturbance regimes, especially fire.

Actions:

1. Conduct a retrospective study of the effects of past fires and other disturbances such as seedings and chainings and describe vegetative succession in these areas.
2. Design and implement habitat research projects to identify adaptive management strategies beneficial to Sage Grouse.
3. Identify all sagebrush sites that have become dominated by pinyon-juniper and prioritize for projects.
4. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.
5. Use all appropriate means (e.g., fire, mechanical, and chemical, etc.) to treat pinyon-juniper sites that have the potential to support sagebrush habitats
6. Properly implement the Ely BLM District Managed Natural and Prescribed Fire Plan to benefit the ecological processes and systems associated with healthy sagebrush communities.
7. Identify and recommend full-suppression, managed natural, and prescribed fire areas for fire management activities in the plan area as relates to Sage Grouse habitat (across all jurisdictions, e.g., NDOW, NSP, USFS).
8. Use prescribed fire to reduce heavy fuel loads in identified areas.

Project Description: Identify areas along benches suitable for restoration using prescribed fire. In order to prepare for the fire, mechanical treatment may be appropriate to reduce fuel loads. Conduct prescribed cool season burns in areas of pinyon/juniper encroachment (mostly young trees - R3).

Legal Authority: Bureau of Land Management Caliente and Schell Management Framework Plans, future Ely District Resource Management Plan, Ely District Fire Plan.

Procedural Requirements: NEPA

Potential Project Funding: To be determined

Implementation Process:

1. Identify areas suitable for prescribed fire;
2. Identify sequence of fires to create desired mosaic;
3. Write fire prescription;
4. Conduct mechanical pre-treatment, if necessary
5. Conduct prescribed fire;
6. Monitor vegetation recovery after fire;

Project Area Locations:

1. East and West benches of Lake Valley;
2. East and West benches of Little Spring Valley;
3. West bench of Hamlin Valley

*CAVE AND LINCOLN PMUS*

**MECHANICAL TREATMENT OF SAGEBRUSH AND SUBSEQUENT SEEDING OF GRASSES AND FORBS**

Risk:

Objectives:

1. Develop an ecological understanding of sagebrush dominated plant communities and the role of disturbances or disturbance regimes in the dynamics of those systems.
2. Provide favorable conditions for the expansion of Sage Grouse populations into historic range in healthy and sustainable numbers.
3. Where appropriate restore dynamic sagebrush plant communities throughout each PMU.

Actions:

1. Design and implement habitat research projects to identify adaptive management strategies beneficial to Sage Grouse.
2. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.
3. Identify sagebrush plant communities where there is a uniform age stand of decadent sagebrush that could provide better quality habitat, and investigate methods for remedy.

Project Description: Use mechanical treatment (brush beater, chaining, drag-rail, etc. with seeding attachment) to reduce cover of decadent sagebrush and re-establish native grasses and forbs as part of the sagebrush plant community.

1. identify areas of sagebrush suitability for mechanical treatment;
2. identify pattern of treatment to create mosaic;
3. determine appropriate seed mix and availability of same;
4. conduct treatment;
5. Monitor vegetation recovery after treatment.

Legal Authority: Bureau of Land Management Caliente and Schell Management Framework Plans, future Ely District Resource Management Plan, Ely District Fire Plan.

Procedural Requirements: NEPA

Potential Project Funding: To be determined

Project Area Location(s):

Cave PMU:

1. Cave Valley bottom lands and adjacent sagebrush dominated bajadas.

Lincoln PMU:

1. Sagebrush dominated bottoms lands of Lake Valley
2. Little Spring Valley
3. Hamlin Valley
4. South Spring Valley.

*CAVE AND LINCOLN PMU*  
**SEEDING OF FORBS INTO HISTORIC CRESTED WHEAT SEEDINGS.**

Risk:

Objectives:

1. Provide favorable conditions for the expansion of Sage Grouse populations into historic range in healthy and sustainable numbers.
2. Maintain and improve existing sagebrush plant communities.
3. Where appropriate, restore dynamic sagebrush plant communities throughout each PMU.

Actions:

1. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.
2. Examine permitted grazing areas in Sage Grouse habitat and make recommendations for management, including using the CRM process.
3. Encourage re-seeding of disturbed areas (e.g., resulting from chainings, fires, etc.) with appropriate native seed mixes.
4. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.

Project Description: Project would involve various methods (aerial, drilling, etc.) of planting seeds of forbs into crested wheat seedings where sagebrush is re-invading site, but forbs are lacking.

1. Identify areas within seedings where forbs are lacking
2. Conduct mechanical or other means of seed dispersal
3. Monitor vegetation to determine effect
4. Survey areas to determine presence of Sage Grouse

Legal Authority: Bureau of Land Management

Procedural Requirements: NEPA,

Funding Source: To be determined

Project Area Location(s):

Cave PMU: Cave Valley crested wheat seedings

Lincoln PMU:

1. Lake Valley crested wheat seedings
2. Little Spring Valley crested wheat seedings

**CAVE AND LINCOLN PMUS**  
**IMPROVE AVAILABILITY OF WATER**

Risk: Limited water availability and distribution limits use of otherwise suitable habitat by Sage Grouse. (See Risk Tables Appendix 5-10)

Objectives: Provide favorable conditions for the expansion of sage grouse populations into historic range in healthy and sustainable numbers.

Ensure that the availability of water is not a limiting factor in otherwise suitable habitat in accordance with Nevada Water Law.

Actions:

1. Install water developments in areas of otherwise suitable habitat.
2. Cooperate with water rights owners to explore the possibility of using infrequently used wells as water sources for Sage Grouse.

Project Description: Installation of water catchments that collect and store precipitation for use by wildlife.

1. Location of project sites
2. Completion of NEPA requirements
3. Purchase of materials
4. Installation of development

Maintenance

Legal Authority: Bureau of Land Management Caliente and Schell Management Framework Plans, future Ely District Resource Management Plan

Procedural Requirements: NEPA

Funding Source: To be determined

Project Area Location:

Cave PMU: Cave Valley – 4 water development projects

Lincoln PMU:

1. Hamlin Valley – 4 water development projects
2. South Spring Valley – 4 water development projects
3. Lake Valley – 2 water development projects
4. Lake Valley (Patterson Wash) – Numerous wells



## Species Protection Projects

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### *PINE NUT PMU*

#### **CONSERVATION ACTION: SPECIES PROTECTION**

Risk: Currently low sage grouse population levels and marginal nesting habitat in the vicinity of the north lek complex increase the impacts of predation and decline in the sage grouse population. Losses of individuals from predation, adults and juvenile birds, have a direct impact on population viability.

Objective: Assist the sage grouse population during the breeding and early brood rearing periods to, at a minimum, maintain their current level by providing sage grouse protection from predation for the interim period until habitat improvement projects become established.

Action: The sage grouse protection project would take place on the Nevada side of the pine Nut PMU, and would be implemented across all land ownerships and jurisdictions. The project will be supervised and implemented by professional animal damage control biologists. USDA Wildlife Services (WS), the nation's leading agency in wildlife damage control to protect species of special concern, will be contracted to manage the Pine Nut project. NDOW and the Washoe Tribe Wildlife Commission will oversee the project and approve annual plans. Each year of the project, prior to initiating protection and throughout the protection season, WS will conduct predator surveys to identify target predator populations and monitor predator population trends.

WS will submit the results of this project to the Washoe Tribe Wildlife Commission and to NDOW in their annual report at the end of the protection season. NDOW will make the results available to the public in their annual Predator Management Plan. This information will be used in conjunction with ongoing sage grouse population monitoring to determine the effectiveness in stabilizing or improving sage grouse population trends.

As a pilot project, the sage grouse protection project will be implemented for an initial 5-year period. Data compiled during this pilot period will include sage grouse population trend, predator population trend (annual and seasonal), and habitat improvement success. At the end of the 5-year trial pilot period, the effectiveness of meeting the project objectives will be evaluated. If successful and necessary, the project will continue until habitat restoration objectives are met.

Rationale: The long term solution to minimizing the impacts of sage grouse predation are 1) increase the population size, and 2) provide more secure nesting and early brood-rearing habitat. However, even if the proposed habitat improvement projects are implemented immediately, there will be a time-delay in habitat rehabilitation. Realistically, it could take years and possibly decades before desirable big sagebrush habitat is reestablished on pinyon-juniper encroached sagebrush sites. During that time the sage grouse population may continue to decline as a result of adult mortality and low recruitment. Sage grouse protection during the vulnerable time of year, March through June, to reduce the exposure of birds to high levels of predation could help to maintain

or even improve their populations throughout the interim period while habitat improvement projects are being planned, implemented, and established.

Procedural Requirements: - insert information from WS here –

Legal Authority: NDOW, Washoe Tribe Wildlife Commission, BLM, private land owners.

Level of Partnership and Commitment:

In progress.

Potential Project Funding: Funding would be pursued from private wildlife interest groups, NDOW, and ...

Implementation Process: (Currently be further developed with WS and NDOW)

Write the detailed implementation and monitoring plans in conformance with other species protection projects conducted by NDOW.

Formalize proposals to NDOW and Washoe Tribe Wildlife Commission.

Contract with WS to implement the Pine Nut Sage Grouse Protection Project.

Report annual results.

Determine the need for continuing or terminating the project.

## **BODIE HILLS PMU PREDATOR AND PREDATION MONITORING**

**Risk:** Potential for predation by wild predators and/or free-roaming or feral pets to be a population-limiting factor in the Bodie PMU. (Utility poles as avian predator perches are addressed separately).

**Objective:** Gather data on predators and predation in the Bodie PMU. Initiate predator control as a management tool only if deemed necessary, feasible, and likely to be effective in stabilizing or increasing sage grouse numbers (i.e., a predator management strategy that effectively increases nest success, juvenile survival, or adult survival).

**Actions:** Standardize and coordinate compilation of observations of predators and sage grouse predation. If predation is implicated as a population-limiting factor, initiate formal studies to assess the need for, feasibility of, and projected effectiveness of predator control measures. Initiate predator control measures as per outcome of formal studies.

**Rationale:** The Bodie PMU group concurs that observations to date do not indicate predation is a population-limiting factor. Observations should continue to be gathered, with formal studies and predator control measures possibly necessitated if other factors reduce the population to a level at which it is not resilient to predation.

**Legal Authority:** Any predator control response would be legally conducted according to Federal, State and local laws by the U.S. Department of Agriculture (USDA), Animal Plant and Health Inspection Service (APHIS), Wildlife Services (WS) program. "WS is a cooperatively funded, service oriented program that provides technical assistance to requesting public and private entities" (USDA 2002). WS activities would be conducted under the direction of CDFG and in coordination with Mono County, BLM, USFWS, HTNF, INF, and affected private parties in accordance with any Cooperative Agreement or Memorandum of Understanding (MOU). Work could be conducted on both private and public lands in cooperation with Federal, State and local agencies, and private organizations and individuals. Control of free-roaming pets by enforcing existing leash laws is within the authority of Mono County.

**Procedural Requirements:** Formal studies would be observational only and would require no more than an MOU or Cooperative Agreement among involved parties and a Categorical Exclusion (CE) on public lands. Predator control would require a Cooperative Agreement or MOU with WS in order to verify the need for the requested work, and to identify the roles of WS and its cooperators (USDA 2002). Typically, according to APHIS procedures as they relate to the National Environmental Policy Act (NEPA), individual wildlife damage management actions and any related technical assistance and monitoring efforts can be afforded a Categorical Exclusion (CE) (USDA 2002).

**Level of Partnership Commitment:** All participants in the Bodie PMU planning group endorse this stepped course of action.

Potential ProjectFunding: In the event that formal studies are needed, CDFG, BLM, HTNF, and INF would seek internal funding and pursue partnerships for matching funds in the event that WS is needed to implement a predator control.

Schedule:

2004 - Continue current predator observations:

Continue telemetry study, maximizing frequency of observations to improve the chances of locating fresh kills, identifying predators, and distinguishing predation from scavenging.

Continue to gather casual predator observations from other personnel in the field including researchers, agency personnel, and livestock operators.

Provide a standardized format for recording predator observations and designate a person to collect, keep, and summarize the data.

Designate an interdisciplinary group such as the Bi-State Technical Advisory Committee (TAC) to review and summarize the data annually.

200x - If data indicate that predation may be a limiting factor, consider initiating formal predator studies, especially if the population is rendered vulnerable by sharp declines due to other causes.

TAC or similar group must concur that study is warranted.

Seek funding and complete any procedural requirements.

Contract study. Study plan should include observation of predator numbers and predator-prey interactions at all life stages from egg to adult, assessment of habitat features that influence vulnerability to predators, and estimation of predator impacts on the sage grouse population. The study should also address the cost, feasibility, likely effectiveness, and possible negative impacts of various predator control measures and of habitat measures to decrease prey vulnerability.

200x - Initiate a pilot predator control project only if studies indicate it is necessary for protection of the sage grouse population in Bodie PMU. The pilot project should be designed to assess the benefits and overall effectiveness of predator control, as well as economically viability and feasibility. Monitor subsequent predator and sage grouse populations. Discontinue predator control if it is ineffective or results in negative impacts to sage grouse or other species of concern (including predator populations if they approach unviable numbers).

## MASSACRE PMU

### AVIAN PREDATOR CONTROL

Risk: NDOW has determined that sage grouse nest success and chick survival within the Grassy Stevens area are below levels needed for population growth or maintenance (chick/hen ratio greater than or equal to 2.25). Chicks /Hen were estimated at 1.04 in 2001.

Objective: Determine if predator removal will increase production and recruitment rates of sage grouse in the Grassy Stevens Camp area within the Massacre PMU.

Actions: Wildlife Services will place baits in the field and monitor baits during the project duration. Wildlife Services will provide the NDOW with Global Positioning System (GPS) coordinates for the locations of the treated areas. Wildlife Services will provide licensed applicators. Raven densities will be monitored during the project duration using standard survey methods. Wildlife Services will conduct a post-treatment analysis of the effectiveness of the control project. Wildlife Services will provide reports of all surveys conducted to the NDOW (*Nevada Predator Management Plan Project 1*). NDOW will determine chick/hen ratio thru the collection of hunter-harvested wings annually.

Rationale: This study reflects the complexity of the predator-prey-habitat relationships that exist. Based on results to date predator control may or may not play a role in population regulation in the Grassy-Stevens Camp area. Under some conditions predation is additive and control would produce a positive response in a sage grouse population. What these conditions are still need to be determined. This study may need to be taken one step further with a greater emphasis on condition and utilization of pre-laying, nesting and early brood rearing habitat by sage grouse and other species.

Legal Authority:

Procedural Requirements:

Level of Partnership:

Potential Project Funding:

To date 86,303 dollars have been expended on this project with an average cost of 28,767 dollars per year. Money for this project has come from hunter contributions to the NDOW predator control program.

Schedule:

These studies have been conducted for the last three years from 2000 to 2003 and are scheduled to continue through 2004.

Project Location:

The project treatment was conducted in the Grassy/Hart Camp area of Washoe County with control areas on the Sheldon National Wildlife Refuge and the Lone Willow area of Humboldt County. Total size of the project area is approximately 250 square miles.

VYA PMU  
**AVIAN PREDATOR CONTROL**

Risk:

Objective: Determine if predator removal will increase production and recruitment rates of sage grouse in the Grassy Stevens Camp area within the Massacre PMU. Results from this study may be applied to the Vya PMU if needed.

Action: Research will be conducted to determine if avian predator control will improve production and recruitment rates of sage grouse in the Vya PMU.

Rationale: NDOW has determined that sage grouse nest success and chick survival within the Grassy Stevens areas are below levels needed for population growth or maintenance (chick/hen ratio greater than or equal to 2.25). Chicks /Hen were estimated at 1.04 in 2001.

This study reflects the complexity of the predator-prey-habitat relationships that exist. Based on results to date predator control may or may not play a role in population regulation in the Grassy-Stevens Camp area. Under some conditions predation is additive and control would produce a positive response in a sage grouse population. What these conditions are still need to be determined. This study may need to be taken one step further with a greater emphasis on condition and utilization of pre-laying, nesting and early brood rearing habitat by sage grouse and other species.

Legal Authority: NDOW

Procedural Requirements: Wildlife Services will place baits in the field and monitor baits during the project duration. Wildlife Services will provide the NDOW with Global Positioning System (GPS) coordinates for the locations of the treated areas. Wildlife Services will provide licensed applicators. Raven densities will be monitored during the project duration using standard survey methods. Wildlife Services will conduct a post-treatment analysis of the effectiveness of the control project. Wildlife Services will provide reports of all surveys conducted to the NDOW (*Nevada Predator Management Plan Project 1*). NDOW will determine chick/hen ratio thru the collection of hunter-harvested wings annually.

Schedule: These studies have been conducted for the last three years from 2000 to 2003 and are scheduled to continue through 2004.

Costs and Potential Project Funding: To date \$86,303 has been expended on this project with an average cost of \$28,767 year. Money for this project has come from hunter contributions to the NDOW predator control program.

Project Location: The project treatment was conducted in the Grassy/Hart Camp area of Washoe County with control areas on the Sheldon National Wildlife Refuge and the Lone Willow area of Humboldt County. Total size of the project area is approximately 250 square miles.



**CAVE AND LINCON PMUS  
EXPLORATION OF IMPACTS OF PREDATORS (INCLUDING CORVIDS) AND  
BENEFITS OF CONTROL PROJECTS.**

Risk:

Objectives: Increase knowledge of existing sage grouse populations, distribution, and use patterns, and maintain or increase present populations sage grouse for the short term (e.g., trend over ten years).

Actions:

1. Initiate research projects, which will benefit management and provide additional needed information on population/habitat dynamics.
2. Examine population viability and identify high priority sub-populations for protection in each PMU.
3. To augment recovery or management efforts, use predator control in Sage Grouse habitats where appropriate, e.g., where high numbers of predators are found, congregate, or where high predation rates are known.

Project Description: Survey areas around strutting grounds and adjacent nesting/early brood-rearing areas. Areas would be considered candidate areas for predator control if predators observed in these areas present a threat to existing sage grouse populations. Populations of sage grouse would be monitored and compared to previous years when predator control efforts were not done. Coyote control projects designed for Mule Deer are ongoing in Lincoln County at this time, which should result in some benefit for sage grouse.

1. Identify areas for control efforts.
2. Justify control efforts with scientific data (dates, numbers, type of predator, etc)
3. Propose projects through Region, Bureau, and Wildlife Commission.
4. Contract Wildlife Services to perform predator control efforts.
5. Monitor populations of Sage Grouse and predators.

Legal Authority: Nevada Department of Wildlife Predator Management Plan.

Procedural Requirements:

1. Monitor densities of predators.
2. Use licensed applicators for use of corvicides (when applicable).

Potential Project Funding: To Be Determined.

Project Area Location(s):

Cave PMU: Cave Valley; Gardner Ranch and Patterson Pass lek areas.

Lincoln PMU:

1. Patterson Wash
2. Little Spring Valley

## Policy and Management Actions

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### *WHITE MOUNTAINS PMU*

#### **PROTECTION OF EXISTING SEASONAL SAGE GROUSE RANGES**

Risk: Fragmentation, destruction, and development of sage grouse habitat will increase likelihood of continuing downward trend of sage grouse populations due to their dependence on large expanses of sagebrush/bunchgrass habitat types.

Objective: Protect occupied sage grouse seasonal ranges from fragmentation, destruction, and development.

Action 1: When possible land management agencies will prohibit activities and projects that may fragment or otherwise negatively impact sage grouse habitat, where the agencies have discretionary authority.

Action 2: Assess sagebrush habitat for possible treatment to reduce the cover and density of mature and decadent sagebrush.

Rationale: Sage grouse are often dependent on vast expanses of sagebrush/bunchgrass dominated rangeland. Identification of these ranges and their protection from fragmentation, destruction or development is critical to ensure the continued existence of sage grouse.

Legal Authority: Federal land management agencies have legal authority over activities and projects occurring on federally managed public lands. Within the White Mountain PMU, USFS land is under the legal authority of \_\_\_\_\_. BLM?

Procedural Requirements: All proposed activities and projects that would occur on public land will be evaluated by the appropriate land management agency.

Level of Partnership Commitment: The Nevada Department of Wildlife has committed to attempting to place radio collars on a minimum of five (5) adult sage grouse to aide in identification of occupied sage grouse ranges in the Esmeralda portion of the White Mountain PMU during 2004.

Other commitments are in progress from the California Fish & Game, BLM, and USFS.

Potential Project Funding:

In progress.

Schedule:

To be determined.

*DESERT CREEK PMU*  
**LIVESTOCK MANAGEMENT**

Risk: Reduction or removal of cover or forage on an annual basis. Long term reduction of cover, forage or change in species composition.

Objective: Maintain grazing management practices on National Forest allotments where current utilization levels and season of grazing are consistent with maintaining or enhancing nesting and brood habitats.

Use an adaptive management approach during drought periods to modify grazing to provide cover requirement for nesting and forage for brooding habitat.

Manage livestock grazing to maintain sage grouse use on all currently used meadows.

When possible, modify water sources to restore wet meadow and riparian habitats.

Identify locations and install water developments and guzzlers to improve summer habitat conditions.

Actions: Inventory developed water sources in sage grouse habitat to determine if they are maintaining associated wet meadows and riparian habitats. Modify water developments if needed for sage grouse habitat.

Inventory water sources in sage grouse habitat

Develop water sources for livestock if they will maintain or improve sage grouse habitat.

Rationale: Livestock grazing is occurring within the PMU. Management of livestock grazing needs to be done in such a way as to maintain or improve sage grouse habitat.

Legal Authority: Projects addressing this risk are within the management responsibility of the Bridgeport Ranger District, Humboldt-Toiyabe National Forest.

Procedural Requirements: Projects addressing this risk are within the management responsibility of the Bridgeport Ranger District, Humboldt-Toiyabe National Forest.

Level of Partnership Commitment:

Potential Project Funding: National Forest appropriated dollars requested for FY 200X and in planning process for 200X; partnerships to be pursued for full implementation.

Schedule:

2004 - Project Planning: Forest Service

Identify action locations.

Enter into budget planning.

Identify Proposed Action for treatment

Schedule and complete heritage and biological surveys

Complete Environmental Analysis.

2005 - Project Implementation Forest Service/Partners Budget for project

Budget for Partners  
2005-2006 Project Monitoring: Forest Service/NDOW/ Cal F&G/Partners Forest Service  
Monitor utilization levels.  
NDOW/ Cal F&G/ continue monitoring sage grouse populations through lek  
counts and brood counts.  
Report accomplishment to US FWS, Reno Office.

*WHITE MOUNTAINS PMU*  
**LIVESTOCK GRAZING**

Risk: Livestock that are grazing in sage grouse habitat during breeding and nesting periods, may negatively impact breeding and nesting success of the sage grouse.

Objective: Manage sagebrush ecosystems for maximum site potentials in accordance with WAFWA guidelines or locally approved standards.

Action 1: Identify ecologic site potential for all key habitats and establish appropriate management standards.

Action 2: Work with federal range permittees and willing private landowners to adjust seasons of use, if necessary.

Action 3: Provide incentives for livestock managers to alter their seasons of use, if necessary, to accommodate sage grouse breeding and nesting seasons.

Rationale: If cattle are impacting breeding and nesting success, then simple management adjustments may be made to accommodate the breeding and nesting seasons of the sage grouse.

Legal Authority: Federal land management agencies follow grazing regulations delineated in CFR 43 Group 4100.

Procedural Requirements: All proposed activities and projects that would occur on public land will be evaluated by the appropriate land management agency.

Level of Partnership Commitment: Land and wildlife management agencies that hold any interest in conserving sage grouse should be committed to providing staff and funding for appropriate projects. Any non-government or private parties who hold interest in conserving sage grouse would make themselves known to agencies either through direct contact or as an interested party in public scoping opportunities.

Potential Project Funding:  
Existing annual work plan.

Schedule:

200x - Project Planning: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Compile all existing habitat data for PMU area.

USFS and BLM consult with their affected permittees to identify options that accommodate sage grouse nesting needs and are agreeable to the livestock operator and both sides see as feasible.

200x - Project Implementation: USFS (Inyo), BLM (Tonopah)

200x - Project Monitoring: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

*PAH RAH PMU*  
**LIVESTOCK GRAZING MANAGEMENT**

Risk: Nesting and brood rearing habitats, problem areas have not been identified. The greatest risk grazing poses to sage grouse is the loss of residual grasses and forbs needed to conceal nests from predators.

Objectives: The objective is to manage grazing in a manner so that the habitat would meet current WAFWA guidelines or approach the guidelines as close as possible, limited only by the range site.

Actions: Manage for 18 cm residual herbaceous cover within the drip line of shrubs in nesting habitat.

If adequate residual herbaceous cover exists through the nesting period these actions will be successful, if adequate residual herbaceous cover does not exist through the grazing period management changes will be implemented.

Rationale: Sage grouse populations are very sensitive to the composition of the vegetative community. Nesting success is correlated to residual grass cover in nesting areas and the nutritional level of females prior to egg laying which is related to the availability of forbs. Chick survival is also related to forb and insect availability.

Legal Authority: Grazing management can be prescribed through annual authorizations and as Terms and Conditions for grazing permits.

Procedural Requirements: The CRMP states that the BLM will follow the current WAFWA guidelines. This could be implemented through grazing permits and allotment monitoring and evaluations.

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

*PAH RAH PMU*

**LIVESTOCK GRAZING FOR MAINTENANCE OF HEALTHY MEADOWS**

Risk: Studies have shown that sage grouse use will decrease in meadows and springs that are not grazed or mowed.

Objectives: The objective is to prevent the build up of tall vegetation and vegetative litter by avoiding overprotection of springs and meadows by agencies and land owners.

Actions: Livestock or mechanical methods will be employed to remove excessive vegetation if problems arise.

Rationale:

Legal Authority:

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

*MOUNT GRANT PMU*

**REMOVAL OF WILD HORSES OUTSIDE OF WILD HORSE AND BURRO TERRITORIES**

Risk: Wild Horses

Objective: Restore the meadow habitat located within the Powell Mountain Wild Horse and Burrow Territory on lands administered by the U.S. Forest Service.

Action: Conduct a wild horse gather for those horses outside of the designated Powell Mountain Wild Horse and Burro Territory.

Rationale: Removal of wild horses from areas that are outside a Wild Horse and Burro Territory. The Baldwin Lek area has 9-11 wild horses using it during the nesting and brooding season. Request that the BLM remove these horses that could be impacting the forage needed for sage grouse chicks.

Legal Authority: This project would include inter-agency corporation between the Bureau of Land Management and the US Forest Service. Horses outside of this territory are on both BLM and Forest Service administered lands.

Procedural Requirements: NEPA compliance.

Potential Project Funding: Funding for this project would be the responsibility of the BLM and US Forest Service agencies. The costs are estimated as follows:

Wild horse removal: \$1,500/ head (this includes capture, removal, adoption)  
Equipment: Trailer  
Labor: BLM and US Forest Service

Schedule:

2008 - Project Planning: Forest Service and BLM

Identify action location

Enter into budget planning

2009 - Schedule and complete heritage and biological surveys

2010 - Identify Proposed Action

Complete Environmental Analysis

2006 - 2014 Project monitoring: NDOW (2006-2014): NDOW continue monitoring sage grouse populations through lek counts and brood counts.

**BODIE HILLS PMU**  
**FERAL HORSE REMOVAL**

Risk: Habitat degradation and population disturbance by feral horses in the Bodie PMU.

Objective: No feral horses in the Bodie PMU. Maintain horses at Appropriate Management Level (AML) in the adjacent Powell Mountain Wild Horse Territory (WHT) in the Mount Grant PMU.

Actions: Remove all feral horses from the Bodie PMU and control horse numbers in the adjacent Powell Mountain WHT.

Rationale: Feral horses are encroaching into the Bodie PMU from the adjacent Powell Mountain WHT. There is no designated Herd Management Area (HMA) within the Bodie PMU, and all horses in the PMU are drift from the Powell Mountain WHT. Horse numbers have been above the established AML in the Powell Mountain WHT for many years. The best available information indicates that feral horse numbers and range are increasing in the Bodie PMU. Horses have been observed in key sage grouse use areas and key sage grouse habitat types in the PMU over the past several years. The Bureau of Land Management (BLM) has a legal obligation to remove horses outside of established HMAs. The United States Forest Service (USFS) has a legal obligation to manage horse numbers within the Powell Mountain WHT at AML.

Legal Authority: Horse removal is under the management authority of the USFS and the BLM.

Procedural Requirements: The USFS and the BLM must complete a capture plan and supporting Environmental Assessment (EA) prior to any capture and removal effort.

Level of Partnership Commitment: No objection to horse removal has been raised during the Bodie PMU planning process. There is no designated HMA within the Bodie PMU and BLM policy calls for no horses on public lands outside of established HMAs. The USFS is committed to maintaining horses in the Powell Mountain WHT at AML. Private landowners in the Bodie PMU concur that horse removal is beneficial.

Potential Project Funding: Horse removal is funded collaboratively by the USFS and BLM. Additional out-year funding will be required to implement future captures.

Schedule:

200x - Develop capture plans and supporting Environmental Assessments to capture and remove horses from the Powell Mountain WHT.

Gather all feral horses in the Bodie PMU.

Remove horses from the Powell Mountain WHT as needed to maintain the herd at the established AML.

200x - 200x Continue to monitor the horse population and remain watchful for any further encroachment into the Bodie PMU.

## *WHITE MOUNTAINS PMU*

### **WILD HORSES**

Risk: Improper management of wild horses may result in degradation of sage grouse habitat.

Objective 1: Ensure appropriate management levels (AML) in existing herd management areas (HMAs) and wild horse territories (WHTs) where sage grouse occur are such that wild horses do not negatively impact sage grouse habitat.

Objective 2: Do not allow wild horse populations to exceed AML in existing HMAs and WHTs.

Action 1: Conduct a wild horse gather for those horses outside of existing HMAs and WHTs.

Action 2: Conduct aerial censuses in HMAs where sage grouse are known to occur to determine wild horse population levels.

Action 3: Conduct wild horse gathers if populations are over AML.

Action 4: If it is determined that sage grouse habitat is being negatively impacted by wild horses within an HMA or WHT, appropriate action will be taken by the appropriate land management agency to adjust the AML.

Rationale: Substantial trailing was observed in Trail Canyon in 2002 on slopes and ridgelines that may suggest the herbaceous component of the sagebrush stands was being impacted. Wild horses and/or burros may negatively impact sage grouse/sagebrush and riparian habitats by excessive use if their populations are not managed appropriately.

Legal Authority: This project would include interagency cooperation between the Bureau of Land Management and the US Forest Service.

Procedural Requirements: NEPA would have to be conducted for this project by the US Forest Service and/or BLM.

Potential Project Funding: Funding for this project would be the responsibility of the BLM and US Forest Service.

#### Schedule:

200x - Project Planning: BLM and USFS

Request funds to conduct aerial census to determine population numbers, distribution, and range condition.

200x - Project Implementation: BLM and USFS

Conduct aerial census of project area or HMA.

If numbers are close to AML or over AML, request to be placed on the gather schedule.

Gather wild horses to appropriate levels.

200x - 200x - Project Monitoring: BLM and USFS

Monitor area for population growth, any resource damage, and sage grouse presence.

*PAH RAH PMU*  
**WILD AND FERAL HORSE MANAGEMENT**

Risk: Problem areas have not been identified. The greatest risk horse grazing poses to sage grouse is the loss of residual grasses and forbs needed to conceal nests from predators.

Objectives: The objective is to manage grazing in a manner so that the habitat would meet current WAFWA guidelines or approach the guidelines as close as possible, limited only by the range site.

Actions: Future grazing management levels will be adjusted so that sage grouse habitat will meet current WAFWA guidelines or as close as range site potential will allow.

Rationale: Sage grouse populations are very sensitive to the composition of the vegetative community. Nesting success is correlated to residual grass cover in nesting areas and the nutritional level of females prior to egg laying which is related to the availability of forbs. Chick survival is also related to forb and insect availability.

Legal Authority: The CRMP states that the BLM will follow the current WAFWA guidelines. This could be implemented through herd management area plans, monitoring, evaluations and removals.

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

**BODIE HILLS PMU**  
**LICENSED HUNTING MANAGEMENT**

Risk: Direct mortality of sage grouse from licensed hunting in the Bodie PMU.

Objectives: Ensure that licensed hunting does not adversely affect sage grouse populations in the Bodie PMU. Maintain the current conservative approach to managing sage grouse harvest levels in the Bodie PMU.

Actions:

1. Develop and implement a comprehensive harvest management strategy for licensed sage grouse hunting in the Bodie PMU.
2. Maintain a conservative approach to managing harvest levels through the current limited-quota permit system.
3. Identify population thresholds for season closures.
4. Incorporate population trend data into permit allocation decisions.
5. Modify hunt area boundaries to more accurately reflect breeding populations or to protect small or at risk sub-populations.
6. Adjust season dates as necessary to moderate disproportional harvest of females and broods on water sources.
7. Improve hunter feedback requirements to facilitate data collection opportunities.
8. Coordinate and standardize harvest management strategies with the Nevada Department of Wildlife (NDOW) to ensure that similar limited-quota harvest methods are adopted and employed for any licensed hunting within the Bi-State Planning Area.
9. Re-evaluate this comprehensive harvest management strategy annually and update as needed using an adaptive management approach.

Rationale: The California Department of Fish and Game (CDFG) currently use a limited-quota permit system for licensed sage grouse hunting in the Bodie PMU. This permit system is effective because it eliminates the potential for over harvest due to weather and other influences. Additionally, the current system employs a mail-in hunter reporting system that provides wing data necessary for evaluating harvest and production trends. It is important that the CDFG develop a comprehensive harvest management strategy for sage grouse in the Bodie PMU. This plan should specify criteria for making harvest management decisions based on breeding population extent, population trend, annual hunter success and weather influences. Additionally, the plan should specify hunter reporting requirements and how this data will be used to evaluate harvest and production trends. Most importantly, the plan should be coordinated with the Nevada Department of Wildlife (NDOW) to ensure that similar limited-quota harvest strategies are adopted and implemented for any licensed hunting within the Bi-State Planning Area. Finally, the plan should be reviewed annually and updated as needed using an adaptive management approach.

Legal Authority: All actions addressing this risk are under the management authority of the California Department of Fish and Game (CDFG).

Procedural Requirements: The California Department of Fish and Game (CDFG) will develop a formal harvest management plan for sage grouse in the Bodie PMU.

Level of Partnership Commitment: The California Department of Fish and Game (CDFG) is committed to improving all aspects of harvest management within the Bodie PMU. The Bodie PMU planning group expressed a clear desire to improve upon existing hunting management where possible.

Potential Project Funding: The California Department of Fish and Game (CDFG) will fund and develop a Sage Grouse Harvest Management Plan for the Bodie PMU.

Schedule:

1. Review existing harvest management actions, population trend data and other information relevant to sage grouse harvest management in the Bodie PMU.
2. Develop a Sage Grouse Harvest Management Plan for the Bodie PMU.
3. Implement the harvest management plan.
4. Annually review and, if necessary, update the harvest management plan based on the most current population trend, hunter harvest data and other information relevant to sage grouse harvest management in the Bodie PMU.

## *MASSACRE PMU*

### **HARVEST**

#### Risk:

Objective: Keep harvest levels below 10 percent of the fall population estimate as recommended by WAFWA guidelines.

Action: NDOW will generate population estimates and collect harvest data through hunter-harvested wings and 10 percent questionnaire data. This information will be used to determine harvest percentages and make recommendations to the Nevada Wildlife Commission on season lengths, bag limits and or the need for a permit system. Based upon the results of these investigations changes in harvest strategies will be recommended to the Nevada Wildlife Commission as needed.

Rationale: It has been determined that harvest levels above 10 percent of fall population numbers can cause additive mortality to sage grouse populations.

Legal Authority: NDOW

#### Procedural Requirements:

Information will be collected and analyzed for the Massacre PMU.

#### Schedule:

These investigations will be completed on both an annual and biannual basis.

*VYA PMU*  
**HARVEST**

Risk: It has been determined that harvest levels above 10 percent of fall population numbers can cause additive mortality to sage grouse populations.

Objective: Keep harvest levels below 10 percent of the fall population estimate as recommended by WAFWA guidelines. Based upon the results of these investigations changes in harvest strategies will be recommended to the Nevada Wildlife Commission as needed.

Action: NDOW will generate population estimates and collect harvest data through hunter-harvested wings and 10 percent questionnaire data. This information will be used to determine harvest percentages and make recommendations to the Nevada Wildlife Commission on season lengths, bag limits and or the need for a permit system.

Rationale:

Legal Authority: NDOW

Procedural Requirements:

Schedule: These investigations will be completed on both an annual and biannual basis.

*PAH RAH PMU*  
**ILLEGAL HARVEST PREVENTION**

Risk:

Objectives: Determine if illegal take of sage grouse is occurring at a frequency that would negatively impact overall sage grouse numbers in this PMU.

Actions: Nevada Department of Wildlife law enforcement officers will conduct patrols in the Pah Rah Virginia PMU to determine the extent of illegal harvest and Pyramid Lake Tribal Rangers will enforce laws and regulations on the Pyramid Lake Reservation.

NDOW will generate population estimates using lek counts and brood survey data. This information along with an estimate of illegally harvested birds will be used to determine harvest percentages of sage grouse in the Pah Rah Virginia PMU. If an analysis of this information suggests that illegal harvest is unacceptably high NDOW will increase law enforcement patrols within the Pah Rah Virginia PMU.

If results from these investigations show that poaching levels are high enough to impact population levels then NDOW will increase law enforcement patrols in areas where the poaching is occurring.

Rationale: Hunting seasons in this unit have been closed since 2000 and will continue to remain closed because of low bird numbers. However, this sage grouse population exists in close proximity to a large urban center with plenty of opportunity for illegal take to occur. It has been determined that harvest levels above 10 percent of fall population numbers can cause additive mortality to sage grouse populations.

Legal Authority: NDOW

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

*VYA PMU*

**LAW ENFORCEMENT TO DETERMINE THE EXTENT OF ILLEGAL HARVEST.**

Risk:

Objective: Keep harvest levels below 10 percent of the fall population estimate as recommended by WAFWA guidelines.

Action: NDOW will generate population estimates and collect harvest data through hunter-harvested wings and 10 percent questionnaire data. This information along with an estimate of illegally harvested birds will be used to determine harvest percentages of sage grouse in the Vya PMU. If an analysis of this information suggests that illegal harvest is unacceptably high NDOW will increase law enforcement patrols within the Vya PMU and or recommend a change in seasons and bag limits to the Nevada Wildlife Commission. If results from these investigations show that poaching levels are high enough to impact population levels then NDOW will increase law enforcement patrols in areas where the poaching is occurring or recommend changes in harvest strategies.

Rationale: It has been determined that harvest levels above 10 percent of fall population numbers can cause additive mortality to sage grouse populations.

Legal Authority:

Procedural Requirements:

Schedule: These investigations will be completed on both an annual and biannual basis.

*MASSACRE PMU*  
**LAW ENFORCEMENT**

Risk:

Objective: Keep harvest levels below 10 percent of the fall population estimate as recommended by WAFWA guidelines.

Action: NDOW will generate population estimates and collect harvest data through hunter-harvested wings and 10 percent questionnaire data. This information along with an estimate of illegally harvested birds will be used to determine harvest percentages of sage grouse in the Massacre PMU. If an analysis of this information suggests that illegal harvest is unacceptably high NDOW will increase law enforcement patrols within the Massacre PMU and or recommend a change in seasons and bag limits to the Nevada Wildlife Commission.

Rationale: It has been determined that harvest levels above 10 percent of fall population numbers can cause additive mortality to sage grouse populations.

Legal Authority:

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

These investigations will be completed on both an annual and biannual basis.

Project Location:

Information will be collected and analyzed for the Massacre PMU.

*DESERT CREEK PMU*  
**LIMITED PUBLIC ACCESS**

Risk: Disturbance of the birds during the breeding and nesting season may be reducing reproduction success.

Objectives: Limit public access to lek sites during the breeding and nesting season to avoid disturbance by humans.

Establish wildlife-viewing points for the public at safe distances from the leks and develop educational programs and materials to inform people about the problems caused by human disturbance.

Limit the disturbance in critical winter habitats.

Action 1: Close public access to the Desert Creek lek sites during breeding and nesting season.

Action 2: Establish a wildlife viewing area for the Desert Creek Lek with educational information.

Action 3: Identify winter use areas of sage grouse to determine if there is a conflict with winter recreational uses.

Rationale: By reducing possible disturbance to the birds during breeding and nesting season, reproduction success may improve.

Legal Authority: Projects addressing this risk are within the management responsibility of the Bridgeport Ranger District, Humboldt-Toiyabe National Forest. Highway Kiosk USFS, NDOT and Lyon County. Monitoring sage grouse and recreational activities would include NDOW, CFG and USFS.

Procedural Requirements: NEPA.

Level of Partnership Commitment:

Potential Project Funding: National Forest appropriated dollars requested for FY 200X and in planning process for 200X; partnerships to be pursued for full implementation.

Schedule:

200x - Project Planning: Forest Service

Identify action locations.

Enter into budget planning.

Complete Environmental Analysis.

200x - Project Implementation Forest Service/Partners Budget for project

Budget for Partners

200x - Project Monitoring: Forest Service/NDOW/ Partners

Forest Service monitors implementation for consistency with the proposed action.

NDOW and CFG continues monitoring sage grouse populations through lek counts for changes in numbers of males visiting leks.

Report accomplishment to US FWS, Reno Office.

Project Area Locations:

**1. Project Site One:** Desert Creek Lek Closure – March 1 to May 30.

Acres: 1280 acres

Other Existing Uses:

Grazing: Cattle, winter use

Deer summer/transitory range

**2. Project Site Two:** Desert Creek Kiosk and Viewing Area

Location: Along Hwy 338 across from Lek areas.

*WHITE MOUNTAINS PMU*  
**HUMAN DISTURBANCE**

Risk: Many types of human disturbance such as recreation, road construction, and fences can potentially negatively impact sage grouse populations or habitat.

Objective 1: Minimize recreation impacts to existing sage grouse activities and habitat.

Action 1: Evaluate areas for seasonal closures to known sage grouse use areas during strutting and nesting seasons between February and May.

Action 2: Where land and wildlife management agencies have discretionary authority and determine it to be prudent and necessary, areas of critical sage grouse habitat will be seasonally closed to recreational use.

Objective 2: Minimize impacts due to new road construction or creation.

Action 1: Where land management agencies have discretionary authority, no new two-track or bladed roads will be allowed in sage grouse habitat.

Objective 3: Minimize impacts to sage grouse from fences as perch sites for avian predators.

Action 1: Land management agencies will identify all fences occurring within known occupied or potential sage grouse habitat.

Action 2: By 2005, determine if any fences near known occupied or potential sage grouse habitat contribute to sage grouse mortality directly or by providing perch sites for avian predators.

Action 3: When and where necessary, land management agencies will modify fences with nixelite or other similar devices to make them less predator friendly to eliminate mortality potential.

Action 4: Any new fence construction will be made grouse friendly.

Rationale: Human caused disturbances may be interfering with breeding and nesting success of sage grouse. New road development and OHV use may degrade existing or potential habitats.

Legal Authority: Federal land management agencies work under the authority of CFR.

Procedural Requirements: All proposed activities and projects that would occur on public land will be evaluated by the appropriate land management agency.

Level of Partnership Commitment: Land and wildlife management agencies should be committed to providing staff and funding for appropriate projects. Any non-government or private parties who hold interest in conserving sage grouse would make themselves known to agencies either through direct contact or as an interested party in public scoping opportunities.

Potential Project Funding: The projects that could occur based on the results of data collection would be funded through agency budgets, cooperative programs, challenge cost share grants, or other grants. In addition, departments of transportation may

Schedule:

200x - Project Planning: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Compile all existing habitat data for PMU area.

Cooperatively identify priority areas.

Enter into budget planning.

Schedule plans and events.

200x - Project Implementation: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Budget for plans and events.

Conduct treatments.

200x - 200x Project Monitoring: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

NDOW - compile and evaluate treated area data for Nevada portion of PMU.

CDF&G - compile and evaluate treated area data for California portion of PMU.

Provide written survey narratives to all cooperating agencies.

Report accomplishment to US FWS, Reno Office.

VYA PMU

## **LIVESTOCK MANAGEMENT**

### Risk:

Objective: Objective of conservation measure is to protect brood rearing areas e.g., riparian areas

Action: Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d). No new roads in riparian areas, where a problem consider relocating. \*Guideline 16 for utilization levels.

Strategy success could be measured by comparing sites to Rangeland Health Standards i.e., are standards being met. Long term photo-points, "green-line" transects and stream cross-sections would also be useful in tracking changes.

Rationale: The conservation measure is targeting concentrated use/impacts in riparian areas that results in upland vegetation encroachment. The areas affected are relatively small and therefore difficult to map separate from adjacent uplands. Areas detrimentally affected by grazing can easily be "picked out" by signs such as; down cutting of on riparian areas, invasion of upland species onto wet meadow habitats, and areas of severe wallowing leading to bare ground. In addition these could be picked out via Rangeland Health Assessments (RHA's) or Riparian Functional Assessments (RFA's). No roads are currently under review for relocation.

Legal Authority: BLM

Procedural Requirements: Areas will be identified by all field staff, change in grazing operation will take place via the range management specialist changing the Allotment Management Plan (AMP). If the BLM finds that an area is not meeting Standards set forth within the Rangeland Health Standards, the problem must be taken care of before the next grazing season.

Costs and Potential Project Funding: Unknown but may be more expensive for the livestock operator (costs to move/drive cattle between pastures) than the Bureau (BLM), really depends on each situation. BLM would incur varying costs depending on the type of actions (EA's, NEPA, revised AMP's) that would be needed in each situation.

Schedule: Timing of action based on site characteristics and livestock operation. Action could be for example institution of a rest or rest/rotation cycle on a specified allotment, or a reduction of cattle in a specified area (moving around cattle among more pastures or in a different sequence).

Project Locations: In particular to riparian area/springs in need of fencing or change in management, some examples are; springs between Toney Ranch and Glenco Springs, springs/meadows associated with Bald Mountain Canyon, areas around Mosquito Lake (at least northwest to northeast). Many sites are small and found on a sporadic basis or a problem takes place for a few years that changes a functional site to a non-functional one.

VYA PMU  
**GRAZING MANAGEMENT**

Risk:

Objective: Objective is to keep horses and livestock from taking so much forage as to preclude good nesting habitat. Cannot determine acreage of exclusion from year to year, since animals constantly moving (horses) or being moved (cattle).

Action: Temporary livestock exclusion (rest), change in livestock and horse use period or intensity of use, changes in salting or watering use areas. \*Standard 5 for biodiversity, Guidelines 5, 8, 9,11,16.

Rationale:

Legal Authority: BLM

Procedural Requirements: Horses will be removed by the BLM according to set AML's for each horse management unit. Livestock would be moved in accordance with Rangeland Health Standards.

Strategy success could be measured by comparing sites to Rangeland Health Standards i.e., are standards being met? Long term photo-points, "green-line" transects and stream cross-sections would also be useful in tracking changes.

Costs and Potential Project Funding: Horse gathers require helicopters (650.00/hour plus ferrying charges) and lots of manpower to set up traps, corrals, etc. A rough estimate based on a 200 head gather is \$65,000.00.

Costs to move cattle are more difficult to estimate but may be more expensive for the livestock operator (costs to move/drive cattle between pastures) than the Bureau (BLM), really depends on each situation. BLM would incur varying costs depending on the type of actions (EA's, NEPA, revised AMP's) that would be needed in each situation.

Schedule: Timing of action based on site characteristics and livestock operation. Action could be for example institution of a rest or rest/rotation cycle on a specified allotment, or a reduction of cattle in a specified area (moving around cattle among more pastures or in a different sequence).

Project Location: Sites vary year to year for livestock. Horses are gathered as determined necessary to stay within AML's. AML's are re-evaluated periodically as funding and staff time allow.

VYA PMU  
**LIVESTOCK GRAZING**

Risk:

Objective: Objective of conservation measure is to protect areas with a history of long-term over-utilization, these may include upland and riparian areas.

Action: Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d). \* Standard 4 for Riparian and Wetland sites, and Standard 5 for Biodiversity, Guidelines 4, 8, 9, 16.

Strategy success could be measured by comparing sites to Rangeland Health Standards i.e., are standards being met. Long term photo-points, "green-line" transects and stream cross-sections would also be useful in tracking changes.

Rationale

Legal Authority: BLM

Procedural Requirements: Areas will be identified by all field staff, change in grazing operation will take place via the range management specialist changing the Allotment Management Plan (AMP). If the BLM finds that an area is not meeting Standards set forth within the Rangeland Health Standards, the problem must be taken care of before the next grazing season.

Costs and Potential Project Funding: Unknown but may be more expensive for the livestock operator (costs to move/drive cattle between pastures) than the Bureau (BLM), really depends on each situation. BLM would incur varying costs depending on the type of actions (EA's, NEPA, revised AMP's) that would be needed in each situation.

Schedule: Timing of action based on site characteristics and livestock operation. Action could be for example institution of a rest or rest/rotation cycle on a specified allotment, or a reduction of cattle in a specified area (moving around cattle among more pastures or in a different sequence).

Project Locations: Areas showing long-term over-utilization are those sites that have been consistently used heavily, for extended periods of time, annually. These areas are frequently along riparian corridors and around dependable stock water sources.

At this point, it is unknown exactly how many acres are involved but these would correspond to a mix of R-2 and R-4 sites. Areas detrimentally affected by grazing can easily be "picked out" by signs such as; down cutting of on riparian areas, invasion of upland species onto wet meadow habitats, areas of severe wallowing leading to bare ground, and areas that do not have the appropriate plant variety and vigor they should have. In addition these could be picked out via Rangeland Health Assessments (RHA's) or Riparian Functional Assessments (RFA's).

***STEPTOE/CAVE VALLEY, BUTTE/BUCK MTN/WHITE PINE RANGE, QUINN, SPRING/SNAKE VALLEY, AND SCHELL RANGE/ ANTELOPE VALLEY PMUS  
GRAZING ALLOTMENT MANAGEMENT PLAN REVIEW AND UPDATE***

Risk: Range standards will be updated to provide for sage grouse.

Objectives: Evaluate the grazing allotments on the district and develop revised Allotment Management Plans.

Action: Update Allotment Management Plans with sage grouse considerations.

Rationale: Some Allotment Management Plans have not been revised in many years. This is an attempt to bring all plans up to date.

Legal Authority: All of the allotments occur on National Forest System Lands. Allotments are within the management responsibility of the Ely Ranger District, Humboldt-Toiyabe national Forest and will follow USFS policies and procedures.

Costs and Potential Project Funding: U.S. Forest service – subject to funding approval.

Schedule: Beginning in 2005 the Ely Ranger District will start work on Environmental Impact Statements to review all the range allotments on the district.

Project Locations: The field work for the following allotments in the White Pine and Grant-Quinn Ranges will start in 2005 and an EIS completed in 2007.

White Pine Range - Illipah, Treasure Hill, Blackrock, Tom Plain, Ellison Basin, and Currant Creek Allotments.

Grant-Quinn Ranges - Irwin Canyon, Troy Peak, Hooper Canyon, Cherry Creek, Big Creek, and Pine Creek/Quinn Canyon Allotments.

The field work for the following allotments in the Schell Creek, Mount Moriah, South Snake Ranges, and Ward Mountain will start in 2006 and an EIS completed in 2008.

Schell Creek Range - Seigel Creek, Queen Springs, Ruby-Mattier, Fitzhugh, Muncy Creek, Second Creek, Timber Creek, Piermont, McCoy Creek, Berry Creek, Taft Creek, Cleve Creek, Duck Creek, Boneyard, Steptoe, and Cooper Wash.

North Snake Range– Ryegrass and Silver Creek.

South Snake Range - Strawberry Creek, Shingle Creek, and Murphy Wash.

Ward Mountain - West Ward, East Ward, and Terrace.

*CAVE AND LINCOLN PMUS*

**REACH AND MAINTAIN AML'S IN HERD MANAGEMENT AREAS AND REMOVE ALL WILD HORSES NOT IN HERD MANAGEMENT AREAS.**

Risk: Wild horse numbers are above AML at present. Excessive numbers of wild horses cause habitat degradation.

Objectives: Maintain and improve existing sagebrush plant communities.

Action: Examine use by wild horses in Sage Grouse habitat and make recommendations for management, including using the CRM process. Reduce wild horse numbers where they are causing damage to sage grouse or sage grouse habitat.

1. Explore the role of herbivores in affecting sagebrush ecosystem health.
2. Develop alternative grazing areas to draw grazing animals away from Sage Grouse leks and nesting habitats.
3. Identify and reduce the detrimental effects of inappropriate grazing on Sage Grouse habitats at critical times.
4. Examine use by wild horses in Sage Grouse habitat and make recommendations for management, including using the CRM process.1.2.4  
Explore the role of herbivores affecting sagebrush ecosystem health.

Legal Authority: Bureau of Land Management Caliente and Schell Management Framework Plans, future Ely District Resource Management Plan.

Procedural Requirements: Wild Horse and Burro Act, NEPA

Potential Project Funding: To be determined

Project Area Location: Areas of or adjacent to sage grouse habitat within Lincoln County.

**PAH RAH - VIRGINIA PMUS  
WILDFIRE SUPPRESSION**

Risk: The Pah Rah PMU is particularly vulnerable to fire and subsequent invasion by cheat grass and other invasive annuals due to the low precipitation. All sagebrush habitats within these PMUs will receive full suppression. If suppression resources are scarce nesting and early brood rearing habits will receive first priority. A resource advisor will be assigned to all fires in sage grouse habitat in order to convey wildlife habitat concerns to the Incident Commander or Incident Command Team.

Objectives: Minimize loss of sagebrush habitat.

Action: Sage grouse habitat will be categorized as full suppression zones by the BLM. The Phase 1 Fire Management Plan for the Carson City Field Office identified all sage grouse habitat for full suppression. Specifically for the Pah Rah and Virginia PMU map units 31 and 32 are category C, which identifies fire as playing a role in the ecosystem, however, sage grouse habitat within these map units will receive full suppression. The remainder of these PMUs, are within category B areas which will receive full suppression.

If ignitions can be contained to a few acres the action will continue, if large fires result fire breaks and green striping and other measures would be considered.

Rationale: Sage grouse habitat has been identified as full suppression, if an ignition occurs the objective will be to suppress the fire as quickly as possible, setting a goal of limiting the size of burns is not practical in full suppression zones. The objective will be to limit burns to very small areas, however, if multiple ignitions occur within the Field Office area or suppression resource are diverted to large fires outside of the Field Office full suppression may not occur.

Legal Authority: Bureau of Land Management Caliente

Procedural Requirements:

Potential Project Funding: NA

Schedule:

*PAH RAH PMU*  
**LAND USE PLANNING**

Risk: Much home development and associated activities have taken place and are taking place in and near these PMUs.

Objectives: To protect sage grouse habitat from human development activities, including minimizing the impact of towers and transmission lines through or near sage grouse habitat.

Actions: Limit new transmission lines and other structures which can be used as a perch or nesting site by raptors or ravens in or within 3.3 km of sage grouse habitat. If lines and towers cannot be placed  $\geq$  3.3 km from sage grouse habitat and if lines cannot be buried then anti-perching devices will be required on all towers in or within 3.3 km of sage grouse habitat. BLM can reject requests to construct new transmission lines through or near sage grouse habitat.

Limit urban expansion into and near sage grouse habitat. Limit loss of riparian habitat. BLM should identify and acquire either easements or purchase or trade for private lands in and near sage grouse habitat. Easements or acquisition of important riparian areas should be pursued.

To protect the Spanish Flat lek a conservation easement or acquisition should be perused for the private lands in (T19E; R25N; Sections 18,19, 24 and 20. The private lands under and around recently discovered lek in the western Pah Rah range, should be acquired along with other parcels in the area (T21E; R21N; Sections 11 – 35 and T 21E; R22N; Sections 7, 13-23, 25-30, 31, 33, 34). Priority sections for acquisition or conservation easements are T 21 N; R 22 E; Sec 21, 23, 25, 26, 27, T 22 N; R 22 E; Sec 2, 3, 10, 11, 14, 24, W1/2 25, 26, R0 and lands near leks.

Rationale: Due to the relatively close proximity of these PMUs to Reno many human activities have and are expected to adversely impact sage grouse habitat, especially development. For the Pah Rah PMU urban development is the greatest risk facing the population, once homes and other infrastructure are constructed the habitat is essentially lost for the foreseeable future.

These conservation actions will be successful if leks are protected, and birds using the lek in the Pah Rahs have access to the rest of their habitat, and if lek attendance increases. If new transmission lines are placed more than 3.2 km for sage grouse habitat, if important riparian areas are maintained and urban expansion is prevented from encroaching on the remaining habitat.

Legal Authority:

Procedural Requirements:

Level of Partnership Commitment:

*PAH RAH PMU*  
**RIPARIAN AREA MANAGEMENT**

Risk: Roads, over grazing by livestock, wild horses can result in the loss of vegetation and trampling of springs and meadows and can affect the hydrology.

Problem areas have not been identified. As areas are identified corrective actions will be taken.

Objectives: The objective is to manage springs and meadows in a manner that promotes and maintains proper functioning conditions, hydrology land form and vegetation composition.

Actions: Maintain proper functioning condition, hydrology land form and vegetation composition, i.e. avoid head cutting, loss of vegetation and encroachment of sagebrush in and around springs and meadows.

Rationale: Sage grouse require proper functioning springs and meadows for food and water.

Legal Authority: The CRMP states that the BLM will follow the current WAFWA guidelines. This could be implemented through Herd Management Area Plans and grazing decisions through monitoring, evaluations and removals. Roads adversely impacting springs and meadows on public lands can be realigned to avoid sensitive areas. NDOW can work with private land owners to encourage realignment of private roads.

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

*PAH RAH PMU*  
**OHV MANAGEMENT**

Risk: The lek near Spanish Flat is usually inaccessible from public land during the leking period and the private land owner controls access. The lek located in the Pah Rah PMU (T21N;R21E;Sec 13) along a named street will be more impacted by residential development and associated activities than OHV use.

Objectives: Prevent disturbance to sage grouse behavior and degradation of habitat.

Actions: If new leks are discovered and OHV use is a problem seasonal closures of roads on public lands will be initiated.

The vast majority of these PMUs are designated as Limited OHV Use which limits use to existing roads and trails.

BLM will enforce existing designations and seasonally close areas on public land if necessary.

Rationale: If seasonal road closures are successful in minimizing disturbance they will be applied where needed.

Legal Authority: Seasonal road closures can be implemented by the BLM on public lands, the Pyramid Tribe has closed most of the Reservation to OHV use and Private land owners would be responsible for controlling access on their land

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule: Road closures will be conducted as necessary. February through June would likely be the most critical. However, if the birds congregate in other areas and OHV use is identified as a disturbance seasonal road closures can be initiated.

## Conservation Agreements

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### *PINE NUT PMU*

#### **CONSERVATION AGREEMENTS FOR LATE BROOD HABITAT AND CRITICAL CORRIDORS**

Risk: The majority of the active late brood habitat, particularly in the vicinity of the south lek area, is private land or private Indian allotment land. The perpetuity of these critical habitat areas depends upon protecting these lands from future urban development. The connectivity between the Pine Nut PMU and the Desert Creek PMU to the south is also in potential jeopardy if urban development continues in critical linkage areas.

Objective: Secure conservation agreements with property owners that will protect the existing habitat values that are critical to sage grouse for the late summer brood period, and areas that will preserve the connectivity between the Pine Nut and Desert Creek PMUs.

Action: Secure conservation easements to maintain existing habitat values that are critical to sage grouse for the late summer brood period including private land along Pine Nut and Buckeye Creeks, and private Indian allotment lands in the Double Springs area.

Secure conservation easements in areas that will preserve the connectivity between the Pine Nut and Desert Creek PMUs. These may include private Indian allotment lands in the Double Springs area and private land from the Walker River, north to Jacks Wright Summit and Buckeye Creek.

Rationale: Urban development is progressing at a rapid pace in all locations surrounding the Pine Nut PMU – Johnson Lane, Fish Springs, Topaz Ranch Estates, Wellington, Smith Valley, Dayton, and Carson City. Private land values are escalating and the potential for subdivisions and residential development is increasing. The long term viability of sage grouse in the Pine Nut PMU depends upon maintaining viable late brood habitat.

Long-term viability of the Mono/Lyon population may depend upon preserving connectivity between the Pine Nut and Desert Creek PMUs.

Legal Authority: BLM, land conservancies private land owners,...

#### Procedural Requirements:

Level of Partnership Commitment: (in progress)

USFWS Conservation Agreements with Assurances:

Douglas County

Lyon County

Carson City

Potential Project Funding: Private wildlife interest groups, USFWS, BLM, NRCS  
Funding opportunities will be identified to coordinate with ongoing, funded programs such as the Healthy Forest Initiative and biomass- energy development initiatives.

Schedule:

Pursue willing parties who are interested in long-term sage grouse conservation including private landowners and administrative agencies.

Pursue funding for Conservation Easements.

Negotiate agreements or transactions with private land owners to provide assurances that private property with critical habitat values are not developed or degraded.

## Education and Outreach Projects

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### *DESERT CREEK PMU*

#### **HABITAT MAINTENANCE / IMPROVEMENT OF PRIVATE LANDS**

Risk: Private lands in the Wheeler Flat and Burcham Flat areas in California and the Desert Creek, Sweetwater, and Antelope Valley areas in California and Nevada are under current or future threat of development.

Objective: Maintain existing habitat on private lands and provide opportunity to improve habitat on private lands.

Action: Provide information, education and funding to maintain and improve existing sage grouse habitat on private lands.

Rationale: Residential development may reduce habitat resulting in risks to habitat quantity and fragmentation.

Legal Authority: Projects addressing this risk are within the management responsibility of California Fish and Game and Nevada Department of Wildlife; and Mono, Douglas and Lyon County Governments.

Procedural Requirements: Dependent on program.

Level of Partnership Commitment: High

Potential Project Funding: Various private, state and federal programs.

#### Schedule:

2004 – Identify existing land owners; NDOW and CFG

Develop a map of private lands with critical habitat concerns

Provide information on partnerships and funding programs for habitat management and improvement on private land. Conduct workshops for private landowners on management techniques that can be used to maintain or enhance sagebrush habitats; NDOW, CFG, BiState Partners

2004 – 2005 Establish partnerships with private landowners and determine their interest in sage grouse conservation. Provide habitat assessments on private lands to identify management opportunities for interested land owners; NDOW, CFG, NRCS.

2005-2006 Develop habitat improvement/management plans on private lands

Acquire funding

Implement projects/actions

2005-2006 Identify, propose and initiate conservation easements, short and long-term, land exchanges or land acquisitions for private lands that are under current or future threat of development.

2004 – 2015 Support zoning that will maintain, enhance, or preserve critical sage grouse habitat when local planning is initiated.

2004- 2015 Project monitoring

Monitor sage grouse populations

Report findings and accomplishments to USFWS

*DESERT CREEK PMU*

**HABITAT MAINTENANCE / IMPROVEMENT OF PRIVATE FARM AND RANGLAND**

Risk: Private sagebrush lands in the Desert Creek, Sweetwater, and Antelope Valley areas in California and Nevada are under current or future threat of conversion to agriculture.

Objective: Maintain existing habitat on private lands and provide opportunity to improve habitat on private lands.

Action: Provide information, education and funding to maintain and improve existing sage grouse habitat on private lands.

Rationale: Private rangeland conversion to agriculture risks sage grouse habitat quality, quantity and populations.

Legal Authority: Projects addressing this risk are within the management responsibility of California Fish and Game and Nevada Department of Wildlife; Mono, Douglas and Lyon County governments.

Procedural Requirements: Dependent upon program.

Level of Partnership: High

Potential Project Funding: Various private, state and federal programs

Schedule:

2004 – Identify existing land owners; NDOW and CFG

Develop a map of private lands with critical habitat concerns

Provide information on partnerships and funding programs for habitat management and improvement on private land. Conduct workshops for private landowners on management techniques that can be used to maintain or enhance sagebrush habitats; NDOW, CFG, BiState Partners

2004 – 2005 Establish partnerships with private landowners and determine their interest in sage grouse conservation. Provide habitat assessments on private lands to identify management opportunities for interested land owners; NDOW, CFG, NRCS.

2005-2006 Develop habitat improvement/management plans on private lands

Acquire funding

Implement projects/actions

2005-2006 Identify, propose and initiate conservation easements, short and long-term, land exchanges or land acquisitions for private lands that are under current or future threat of development.

2004–2015 Support zoning that will maintain, enhance, or preserve critical sage grouse habitat when local planning is initiated.

2004- 2015 Project monitoring

Monitor sage grouse populations

*BODIE HILLS PMU*  
**PET CONTROL**

Action: Seek enforcement of existing Mono County regulations to control free-roaming pets in areas of concern if problems with predation or undue disturbance become apparent.

*BODIE HILLS PMU*  
**ILLEGAL DUMPING**

Action: Educate authorities responsible for trash management regarding the importance of continuing to keep all trash contained and keeping dump fees reasonable to deter illegal dumping, in order to minimize proliferation of ravens, gulls, bears, coyotes, and other predators.

*MOUNT GRANT PMU*

**EDUCATIONAL PROGRAMS FOR OHV AND RECREATIONAL USERS**

Risk: OHV use within the PMU is causing habitat damage to some meadows.

Objective: Educate private landowners of road damage and repair to improve these areas. Educate OHV users and recreationists of the importance of maintaining sage grouse habitat within this area, and that they should remain on the designated routes.

Action: Education programs can be run by both NDOW and the US Forest Service. Private property programs can be given by NRCS and the FWS on the importance of maintaining and improving sage grouse habitat on their lands.

Rationale: By educating both the public and private landowners you can increase the awareness of maintaining critical habitat for sage grouse.

Legal Authority: NDOW, US Forest Service, NRCS and FWS all can play a part in this project.

Procedural Requirements: Education programs will have to be organized with co-operation with all agencies involved.

Potential Project Funding: Funding may come from many different sources and all will be considered when implementing this project.

Schedule:

2006 - Project planning

2007 - Project implementation

2007-2010 - Project monitoring: Forest Service/NDOW: NDOW continue monitoring sage grouse populations through lek counts and brood counts. Report accomplishment to US FWS, Reno Office.

*PAH RAH PMU*  
**CONTROLLED ACCESS TO LEKS**

Risk: Abandonment of leks can result from human disturbance.

Objectives: Prevent abandonment of leks by sage grouse.

Actions: NDOW can work with private land owners to encourage restriction of access. The BLM can investigate acquiring easements or the exchange or perches of property where leks are found. If leks are discovered on public lands the BLM can implement seasonal closures if problems are detected.

Rationale: If disturbances to leking birds are minimized the actions will be successful, if disturbances continue greater effort will be required.

Legal Authority:

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule:

## Monitoring and Research Projects

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### *WHITE MOUNTAINS PMU*

#### **IDENTIFY HABITAT IMPROVEMENT PROJECTS THROUGHOUT OCCUPIED SEASONAL SAGE GROUSE RANGES**

Risk: Suitable sagebrush habitat is limited within much of the White Mountain PMU. In many areas sagebrush habitat is being lost to Pinyon/Juniper encroachment and loss of productivity of sagebrush. Loss of this sagebrush habitat threatens the continued existence of sage grouse in some portions of the PMU.

Objective: Increase quality and availability of suitable sagebrush habitat.

Action 1: Design treatments based on individual site potentials using the most current information possible.

Action 2: When necessary, utilize test plot methodology to identify the most effective treatment methods for an area.

Rationale: The limited amount of suitable sage grouse habitat in some portions of the White Mountain PMU makes it critical that existing areas are not lost and are returned to good quality where necessary. Upon collection of data, these projects can be considered more thoroughly.

Legal Authority: Federal land management agencies have legal authority over activities and projects occurring on federally managed public lands.

Procedural Requirements: All proposed activities and projects that would occur on public land will be evaluated by the appropriate land management agency.

Level of Partnership Commitment: Land and wildlife management agencies who hold any interest in conserving sage grouse should be committed to providing staff and funding for appropriate projects. Any non government or private parties who hold interest in conserving sage grouse would make themselves known to agencies either through direct contact or as an interested party in public scoping opportunities.

Potential Project Funding: The projects that could occur based on the results of data collection would be funded through agency budgets, cooperative programs, challenge cost share grants, or other grants.

#### Schedule:

200x - Project Planning: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Compile all existing habitat data for PMU area.

Cooperatively identify priority areas for treatments.

Enter into budget planning.

Schedule treatments.

200x - Project Implementation: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)

Budget for treatments.

Conduct treatments.  
200x-200x Project Monitoring: NDOW, CDF&G, USFS (Inyo), BLM (Tonopah)  
NDOW - compile and evaluate treated area data for Nevada portion of PMU.  
CDF&G - compile and evaluate treated area data for California portion of PMU.  
Provide written survey narratives to all cooperating agencies.  
Report accomplishment to US FWS, Reno Office.

*WHITE MOUNTAINS PMU*

**NOXIOUS WEED MANAGEMENT**

Risk: Noxious weeds can replace native plant communities and riparian areas upon which sage grouse may depend.

Objective: Review management activities that may contribute to the spread of noxious species to determine if additional management measures are necessary to minimize weed infestations and spread rate.

Action 1: As scientific knowledge increases, continually review and update management measures to reduce threat of noxious weed invasion.

Action 2: Conduct a weed assessment of the PMU.

*PAH RAH PMU*

**BIRD MOVEMENT AND USE AREAS, GENETIC COMPOSITION, NUTRITION AND POPULATION VIABILITY**

Risk:

Objective: Keep harvest levels below 10 percent of the fall population estimate as recommended by WAFWA guidelines.

Action: Capture and radio collar sage grouse in this population management unit to determine bird movement and use areas, genetic composition, nutrition and population viability.

Rationale: Very little is known about sage grouse in this PMU. The delineation of seasonal use areas through the follow-up of radio collared birds will greatly increase our knowledge of sage grouse in this area. No genetic testing has been completed for this population. Blood samples will be taken during the capture to determine if this population of sage grouse is similar to larger populations to the north or is more closely aligned to the BiState- Mono population to the south. Little is known about bird health in this area. If research on the Sheldon indicates that there are management actions that will improve bird health then this information can be applied to future conservation action in this PMU.

Legal Authority: NDOW

Procedural Requirements: NDOW will capture and radio collar sage grouse in this PMU over the next five years and conduct follow on those birds from both the ground and air to determine use areas and habitat needs. Whenever, birds are captured blood samples will be collected and analyzed for genetic and nutritional parameters.

Costs and Potential Project Funding: Costs include 6,000 dollars for radio collars, 36,000 dollars for fixed wing flight time and an estimated 50,000 dollars for labor and equipment costs.

Schedule: Birds will be captured from two known leks during March and April and if possible from summer use areas during July and August. Captures and radio collaring will occur as time and money allow over the next five years in order to gain the necessary amount of data from radio collared birds.

*PAH RAH PMU*

**BIRD MOVEMENT AND USE AREAS, GENETIC COMPOSITION, NUTRITION AND POPULATION VIABILITY**

Risk:

Objective: Keep harvest levels below 10 percent of the fall population estimate as recommended by WAFWA guidelines.

Action: Capture and radio collar sage grouse in this population management unit to determine bird movement and use areas, genetic composition, nutrition and population viability.

Rationale: Very little is known about sage grouse in this PMU. The delineation of seasonal use areas through the follow-up of radio collared birds will greatly increase our knowledge of sage grouse in this area. No genetic testing has been completed for this population. Blood samples will be taken during the capture to determine if this population of sage grouse is similar to larger populations to the north or is more closely aligned to the BiState- Mono population to the south. Little is known about bird health in this area. If research on the Sheldon indicates that there are management actions that will improve bird health then this information can be applied to future conservation action in this PMU.

Legal Authority: NDOW

Procedural Requirements: NDOW will capture and radio collar sage grouse in this PMU over the next five years and conduct follow on those birds from both the ground and air to determine use areas and habitat needs. Whenever, birds are captured blood samples will be collected and analyzed for genetic and nutritional parameters.

Costs and Potential Project Funding: Costs include 6,000 dollars for radio collars, 36,000 dollars for fixed wing flight time and an estimated 50,000 dollars for labor and equipment costs.

Schedule: Birds will be captured from two known leks during March and April and if possible from summer use areas during July and August. Captures and radio collaring will occur as time and money allow over the next five years in order to gain the necessary amount of data from radio collared birds.

VYA PMU

**EXTRAPOLATION OF SHELDON RESEARCH**

Risk:

Objective: NDOW will utilize results from the Sheldon NWR as a benchmark for what is achievable in terms of grouse health in northwestern Nevada. Based upon the results of these investigations changes in management actions will be recommended for the Vya PMU. Objectives of the ongoing work in the Sheldon include:

1. Determine relationships between condition of the hen during the pre-laying period, weight of chicks at hatching and chick survival.
2. Determine relationships between brood-rearing habitat components and habitat characteristics within cover types and chick survival.
3. Determine what factors are important in regulating chick survival and ultimately sage grouse populations by comparison of health and reproductive parameters, habitat components and chick survival rates among 3 areas within similar cover types but different management practices and levels of grouse productivity. Extrapolate data from Sheldon study to Vya PMU.

Action: Extrapolate the results from the adjacent Sheldon PMU to determine if bird health is a problem affecting sage grouse within Vya PMU.

Rationale: Little is known about bird health in the Vya PMU. If research on the Sheldon indicates that there are management actions that will improve bird health this information can be used as future conservation actions in the Vya PMU.

Legal Authority: NDOW

Procedural Requirements:

Schedule: These investigations will be completed on an annual basis.

*VYA PMU*  
**POPULATION ESTIMATES**

Risk:

Objective: Use aerial survey techniques to inventory leks in the Vya PMU and establish 10 trend leks by 2008 to be surveyed on an annual basis to generate a minimum spring breeding estimate.

Action: The Nevada Department of Wildlife will conduct intensive aerial lek surveys using rotary aircraft to determine total active leks and the number of birds utilizing these breeding grounds.

Rationale: Current population estimates based on lek counts indicate a spring breeding population of 1,500 to 2,000 birds. These estimates are currently based on ground counts, which have been highly variable, from year to year. Accurate population estimates are necessary for harvest programs and as a reflection of habitat trends. Minimum spring population estimates will allow the NDOW and the Wildlife Commission to maintain harvest at or below 10% of the population, which meets WAFWA guidelines. These population estimates will enable State and Federal Agencies to assess population status and trend.

Legal Authority: NDOW

Procedural Requirements: NDOW will utilize the same methodology that has been in place on the Sheldon since 1994. A minimum breeding population estimate will be established using formulas currently accepted by the scientific community.

The entire PMU will be surveyed for lek attendance. There are currently 17 leks identified within the Vya PMU of which 11 have been identified as active, 3 as unknown, and 3 as historic. Active leks will be given first priority when surveying, unknown, and historic status leks will be surveyed if time allows. As flights are taking place, if new leks are discovered a Universal Transverse Mercator (UTM) location will be taken, a place name will be assigned, and the number of birds observed will be recorded. In addition, any substantial notes or comments will also be recorded.

Schedule: These surveys will have to be conducted on an annual basis beginning in 2005 and will be as close to the same dates as possible for each consecutive year.

## VYA PMU

### POPULATION DEMOGRAPHICS AND HARVEST COMPOSITION

#### Risk:

Objective: Determine the productivity levels and the sex and age of harvested sage grouse in the Vya PMU.

Action: Nevada Department of Wildlife will collect wing composition data to determine production and harvest composition.

Rationale: Productivity levels will be used to generate fall population estimates and to determine if other actions implemented within this plan are having a positive effect on recruitment rates of sage grouse in this PMU. Sex and age data will be used to determine harvest effects on specific segments of the population. Changes in season timing and or bag limits can be implemented if these data show that current harvest actions are impacting bird numbers. This action provides the best measure of population health regarding nesting success and chick survival.

Results from wing composition data regarding female/male harvest, nest success and chicks per hen estimates will be compared to WAFWA guidelines where applicable. If those values are not meeting guidelines that would sustain a healthy sage grouse population, then changes in harvest strategies will be recommended to the Nevada Wildlife Commission.

Legal Authority: NDOW

Procedural Requirements: NDOW will place wing collection barrels at locations throughout the Vya PMU. Harvested wings will be analyzed on an annual basis by NDOW biologists. Information on sex, age and production will be recorded and used to determine whether or not the conservation actions of this plan are addressing the risks outlined for the Vya PMU.

#### Schedule:

These investigations will be completed on both an annual and biannual basis.

VYA PMU  
**LEK MONITORING**

Risk:

Objective: To track population trends and find “new” leks.

Action: Continue to annually, monitor bird numbers on leks.

Rationale: Recent surveys have detected between one and two “new” leks every year, and several more sites are thought to exist. Currently there are approximately fifteen leks within the Nevada portion of the PMU..

Legal Authority:

Procedural Requirements: Both aerial (on a limited basis due to costs) and ground surveys will be carried out. Surveys will be conducted by both NDOW and the BLM. Surveys can be limited by weather, access, and timing constraints but realistically also by funding.

Costs and Potential Project Funding: Aerial surveys have generally run about \$5,000.00 per year and covered only about 2/3 of leks only once. To fully cover all leks aerially would run upwards of \$20,000.00 per year while not providing the accuracy that ground surveys have. Ground surveys are limited locally by weather conditions and would end up costing much more to survey the same number of lek sites.

Schedule: Surveys generally take place from late March to early May. While leks should be visited several times every year, generally staffing (funding) and weather conditions (snow and mud) preclude this.

Project Locations: Leks are mapped throughout the PMU with concentrations in the northwest (California) and southeastern portions of the PMU. New leks will be surveyed along with historic ones, depending on funding level and access.

VYA PMU

## **HABITAT EVALUATION**

### Risk:

Objective: The objective of this approach is to reach a better understanding of which areas/micro-habitats that sage-grouse are using locally throughout the year.

Action: Work with California Department of Fish and Game to better use local radio telemetry information to evaluate habitat use within the PMU.

### Rationale:

### Legal Authority:

Procedural Requirements: Information must be entered into local GIS to compare site use with mapped habitats.

Successful if data is useable in planning process (both RMP level and ongoing projects).

Cost an Potential Project Funding: Depending on the format of the information, this would require one technician and one biologist. Costs should be no more than \$5,000.00.

Schedule: Considering the current RMP planning process, this action should take place as soon as possible.

**BUTTE VALLEY/BUCK MTN/WHITE PINE RANGE PMU  
HABITAT IMPROVEMENT RESEARCH**

Risk: The risk factors for lack of fire and the quality of late brood rearing habitat was rated as high (4) for this PMU because of pinyon/juniper encroachment. The area is approximately eight miles from a known lek.

Objectives: Develop a comprehensive experiment that will evaluate the effects of fire, fire surrogate, and restoration treatments intended to improve the ecological condition of sagebrush communities.

Action: Currant Creek Research Study – this study is to Areas within Oregon, Idaho, Nevada, and Utah will be studied. The project would be a research project with the Rocky Mountain Research Station with Dr. Robin Tausch.

The project area will cover 1,000 acres. Several treatments will be used in paired plots. One plot will have mechanical treatment with one half seeded and the other not seeded. One plot will receive prescribe fire with one half seeded and the other half not seeded.

Rationale: To restore the sagebrush habitat that has been encroached upon by pinyon-juniper.

Legal Authority: The project area occurs on the Humboldt National Forest. Projects are within the management responsibility of the Ely Ranger District, Humboldt-Toiyabe national Forest and will follow USFS policies and procedures for project implementation.

Procedural Requirements:

1. Chose site and write Categorical Exclusion for a Research Project in 2004.
2. Set up plots and do before project monitoring in 2005.
3. Project implementation in 2006.
4. Post project monitoring would begin in 2007.

Cost and Potential Project Funding:

1. Rocky Mountain Research Station - before and after monitoring.
2. Project implementation - U.S. Forest Service – subject to funding approval.

Schedule: It is planned to implement this project in 2006.

Project Area Location: The Currant Creek area is within the White Pine Mountains, east of the Currant Creek Wilderness Area.

**STEPTOE/ CAVE VALLEY & BUTTE VALLEY/BUCK MOUNTAIN/WHITE PINE RANGE PMUS  
PINYON-JUNIPER HABITAT TREATMENT TRIALS**

Risk: Pinyon/juniper encroachment as well as decadent non productive sagebrush was identified in both PMU’s as reducing the quality and quantity of habitat available for grouse.

Objectives: Reduce pinyon/juniper in sagebrush/perennial grass sites and determine which methodology is most efficient at rejuvenating decadent non-productive sagebrush/perennial grass sites.

Description of the Conservation Action: The proposed action is to construct fuel breaks using mechanical methods in two areas totaling approximately 870 acres, and construct temporary fence totaling 4.4 miles. One project area is located in the South Steptoe Valley Watershed, and the other project area is located in the Jakes Wash Watershed unit of the North White River Valley. Both project areas are within Condition Class 3 and Fire Regime group III.

The two project areas are divided into three treatment sites. Site 1 is a Wyoming big sagebrush stand in the South Steptoe Valley Watershed and comprises approximately 174.2 acres within three soil mapping units (SMU). Sites 2 and 3 are both located within the Jakes Wash Watershed unit of the North White River Valley. Site 2 is a Wyoming sagebrush community and comprises approximately 615.3 acres within three SMUs. Site 3 is a pinyon/juniper encroached Wyoming sagebrush alluvial fan and comprises approximately 79.1 acres within two SMUs. The following are the approximate acreages by SMU for each of the treatment sites

Site #	Soil Mapping Unit Numbers						
	282	1141	1282	1340	334	283	1493
1	50	107.3	16.9				
2				140	371.8	103.5	
3					50	29.1	

Sites 1 and 2 would be treated using a land imprinter while treatment site 3 would be prescribed burned.

Within Sites 1 and 2, several smaller study plots would be established. Within these study plots, a variety of randomized mechanical treatment techniques would be replicated. The following different treatments would be used in the randomized study plots: rangeland drill, broadcast seeding, broadcast seeding followed by land imprinter, broadcast seeding followed by Dixie harrow, and Dixie harrow followed by broadcast seeding.

The study plots would allow for a direct comparison of selected treatment combinations to the principal land imprinter treatment (land imprinter). Each of the mechanical

treatment areas would be partially fenced to provide for a comparison of effects of treatments with and without livestock grazing. Livestock use in the “grazed” side would not be specifically scheduled for grazing use for three years or until resource objectives are achieved. Livestock operator would be instructed to avoid the area through passive techniques such as water management. Some livestock use would be expected as animals drift in and out of the treatments. If utilization by livestock proves unmanageable, additional fencing would be constructed totaling an additional 3 miles approximately.

Seeding treatment would utilize only native species of grasses and forbs. Within the overall project areas, not all of the treatment areas would be treated. A mosaic pattern of treated and untreated vegetation would be left to reduce visual impacts. All treatment areas would be monitored over time to measure results for comparison of different treatments and baseline surveys of pre-treatment vegetation parameters would be conducted.

Site 3 would be prescribed burned after the mechanical treatment of the adjacent site is completed. Following burning, the site would be broadcast seeded. Burning would occur during periods when environmental conditions would facilitate safe operations and achievement of objectives. Limited site prep to include hand cutting of trees along the north and east sides of the block would be necessary.

Fences would be designed to wildlife specifications and would remain in place for a minimum of five years after construction.

Target for implementation would be for all treatments to be completed within the same calendar year. Fencing would be scheduled immediately after all treatments are complete. Livestock permittee would be assigned maintenance of the fences .

Rationale: By removing overstory pinyon and juniper and treating decadent sagebrush in these areas of the PMUs, additional nesting/brood rearing habitat for sage grouse would become available.

Legal Authority: The proposed project is not specifically identified in the Egan Resource Management Plan, but is consistent with the approved decisions of this plan. The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities. The project is also consistent with the White Pine County Land Use Plan.

Procedural Requirements: The proposed action was designed in conformance with all Bureau standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities, The project is consistent with the goals and objectives of the White Pine County Sage grouse Conservation Plan. The project was scoped with an interdisciplinary team, NEPA analysis has been accomplished and the project will be inspected and monitored during implementation.

Potential Project Funding: The funding for the project is coming from Fuels Reduction Funds of The Bureau of Land Management fire program.

Schedule: Implementation of the project would be in the summer/fall 2004. Target for implementation would be for all treatments to be completed within the same calendar year. Fencing would be scheduled immediately after all treatments are complete. Livestock permittee would be assigned maintenance of the fences .

Project Location: The project in Steptoe Valley is located in T. 13 N., R. 62 E. The projects in the Butte Valley, Buck Mountain White Pine Range PMU are located at T. 12 N., R. 62 E.

*CAVE AND LINCOLN PMUS*  
**CONVERSION OF PINYON/JUNIPER TO HISTORIC SAGEBRUSH GRASSLAND**

Risk: Pinyon/Juniper encroachment reduces quality and quantity of available habitat.

Objectives:

1. Develop an ecological understanding of sagebrush dominated plant communities and the role of disturbances or disturbance regimes in the dynamics of those systems.
2. Provide favorable conditions for the expansion of Sage Grouse populations into historic range in healthy and sustainable numbers.
3. Maintain and improve existing sagebrush plant communities.
4. Where appropriate, restore dynamic sagebrush plant communities throughout each PMU.
5. Restore disturbance regimes, especially fire.

Actions:

1. Conduct a retrospective study of the effects of past fires and other disturbances such as seedings and chainings and describe vegetative succession in these areas.
2. Design and implement habitat research projects to identify adaptive management strategies beneficial to Sage Grouse. Identify all sagebrush communities that are now dominated by pinyon-juniper or where pinyon-juniper is becoming established and prioritize for projects.
3. Identify all sagebrush communities that are now dominated by pinyon-juniper or where pinyon-juniper is becoming established and prioritize for projects.
4. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.
5. Use prescribed fire to reduce heavy fuel loads in late seral stage P-J and sagebrush communities.
6. Develop new grazing areas to draw grazing ungulates away from Sage Grouse leks and nesting habitats at critical times.
7. Remove pinyon/juniper trees that are invading areas within 0.5 miles of currently active strutting grounds.
8. Identify all sagebrush sites that have become dominated by pinyon-juniper and prioritize for projects.
9. Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups.
10. Use all appropriate means (e.g., fire, mechanical, and chemical, etc.) to treat pinyon-juniper sites that have the potential to support sagebrush habitats.

Project Description: Remove large areas of pinyon/juniper from sites dominated by such and seed with appropriate grass/brush mixtures to reach desired plant community. Convert sites that are transitioning, or have transitioned to pinyon/juniper dominated sites back into sagebrush grassland sites.

1. Work with land management agencies to develop a let-burn policy
2. Modify fire plans as needed to facilitate a natural fire regime
3. Coordinate actions with Cool Season Burns
4. Identify areas suitable for prescribed fire;
5. Identify sequence of fires to create desired mosaic;
6. Write fire prescription;
7. Conduct mechanical pre-treatment, if necessary
8. Conduct prescribed fire;
9. Where possible, rail burnt trees to reduce perches and aid vegetative recovery
10. Monitor vegetation recovery after fire;

Legal Authority: Bureau of Land Management Caliente and Schell Management Framework Plans, future Ely District Resource Management Plan, Ely District Fire Plan.

Procedural Requirements: NEPA, BLM permitting

Potential Project Funding: To Be Determined.

Project Locations:

Cave PMU: East and West benches of northern Cave Valley

Lincoln PMU:

1. West side of Hamlin Valley
2. East side of Mount Grafton
3. East and West benches of Little Spring Valley
4. East and West benches of Patterson Wash
5. East and West benches of Lake Valley
6. East Slope and benches of White Rock Range
7. North Slope and benches of Wilson Creek Range
8. E and W benches of Fortification Range.

**QUINN, LINCOLN AND CAVE PMUS  
SURVEY TO DETERMINE LOCATION AND ABUNDANCE OF SAGE GROUSE AND  
AVAILABILITY OF SUITABLE HABITAT.**

Risk:

Objectives: Increase knowledge of existing Sage Grouse populations, distribution, and use patterns.

Actions: Expand and evaluate program to monitor populations of Sage Grouse in order to make recommendations for management through lek counts, brood surveys, trapping and marking, and wing collection in hunting areas.

1. Use radio telemetry to identify seasonal use areas and migratory/non-migratory birds.
2. Initiate research projects, which will benefit management and provide additional needed information on population/habitat dynamics.
3. Design and coordinate a survey program for leks and late brooding areas, which will provide scientifically sound data tailored for each PMU.

Project Description: Determine the approximate number and age/sex distribution of Sage Grouse in the PMU and the location, extent, and condition of various habitat types required by Sage Grouse on a year-long basis. Conduct surveys using most efficient and practical techniques. Determination of limiting factors (including availability of riparian grasslands) to survival of Sage Grouse.

Legal Authority: NDOW, BLM Schell Management Framework Plans, and future Ely District Resource Management Plan.

Procedural Requirements: NDOW approval of Sage Grouse survey protocol.

Potential Project Funding: NDOW currently performs annual lek counts and Summer surveys. Additional surveys may be needed.

Project Area Location(s):

Quinn PMU:

1. White River Valley
2. Garden Valley
3. Coal Valley
4. Railroad Valley
5. Upper Cherry Creek drainage, North of Troy Peak, Upper Pine Creek drainage; other areas of suitable habitat within the Grant/Quinn Range.

Lincoln PMU:

1. Lake Valley
2. Little Spring Valley
3. Hamlin Valley
4. All areas with significant areas of sagebrush.

Cave PMU:

1. Cave Valley

*PAH RAH PMU*

**CONVERSION OF SITES DOMINATED BY NON-NATIVE ANNUAL PLANTS TO NATIVE PLANT COMMUNITIES.**

Risk: Much habitat has been lost in the Pah Rah PMU through the invasion of nonnative weedy species. The BLM, ARS, UNR and others have been involved with research in the Pah Rah Range to restore native plant communities currently dominated by exotic annual grasses, though, no practical method has been found.

Objectives: Further research is needed to find practical methodologies which could convert large areas dominated by non-native annuals back to a native plant community.

Actions: As methodologies are developed, they will be applied to areas within the PMUs.

Rationale: The BLM, ARS, UNR and others have been involved with research in the Pah Rah Range to restore native plant communities currently dominated by exotic annual grasses, though, no practical method has been found.

Legal Authority: Since most of these PMUs are public land the BLM would take the lead, though funding may be a problem even if methodologies are developed.

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding:

Schedule: As methodologies and funding become available reclamation would proceed.

*PAH RAH PMU*  
**IMPROVE POPULATION ESTIMATES**

Risk:

Objectives: Data gathered from these surveys will allow department biologists to generate a minimum spring breeding population estimate. These population estimates will enable NDOW, other Federal Agencies and the public to assess population status and trend of sage grouse in this PMU.

Actions: The Nevada Department of Wildlife will conduct lek surveys using accepted methodology to determine the number of birds using breeding grounds in this PMU. These counts may be carried out using volunteers or by NDOW biologists from the ground or air. All counts will be conducted under direction of NDOW biologists. NDOW will also utilize aerial surveys to search for new grounds as time and money allows. A minimum spring breeding population estimate will be established using formulas currently accepted by the scientific community.

Rationale: Only two active leks are known to exist in this PMU. Sage grouse numbers are quite low with a 2003 spring breeding population estimate of 400 to 500 birds. Loss of sage grouse habitat to wildfires and urbanization has been and will continue to be a problem in this PMU. Lek surveys done on an annual basis using accepted methodology will produce population estimates that can be used to determine the status and trend of sage grouse in these two mountain ranges.

Legal Authority: Coordination between NDOW and the Pyramid Lake Indian Tribe will take place in order to facilitate lek searches on tribal lands in the Pah Rah, Virginia and the Lake Ranges.

Procedural Requirements:

Level of Partnership Commitment:

Potential Project Funding: Estimated costs of this project include approximately \$1,000 for salaries, \$100 for travel expenses and \$1,800 for helicopter time if an aerial search for new leks is conducted.

Schedule: These surveys will be completed during March and April each year. These surveys will be completed on an annual basis as close to the same dates as possible for each consecutive year.

## *PAH RAH PMU*

### **HABITAT DELINEATION THROUGH RADIO TELEMETRY MONITORING**

#### Risk:

Objectives: Capture and radio collar sage grouse in this population management unit to determine bird movement and use areas, genetic composition, nutrition and population viability.

Actions: NDOW will capture and radio collar sage grouse in this PMU over the next five years and conduct follow on those birds from both the ground and air to determine use areas and habitat needs. Whenever, birds are captured blood samples will be collected and analyzed for genetic and nutritional parameters.

Birds will be captured from two known leks during March and April and if possible from summer use areas during July and August. Captures and radio collaring will occur as time and money allow over the next five years in order to gain the necessary amount of data from radio collared birds.

Rationale: Very little is known about sage grouse in this PMU. The delineation of seasonal use areas through the follow-up of radio collared birds will greatly increase our knowledge of sage grouse in this area. No genetic testing has been completed for this population. Blood samples will be taken during the capture to determine if this population of sage grouse is similar to larger populations to the north or is more closely aligned to the BiState- Mono population to the south. Little is known about bird health in this area. If research on the Sheldon indicates that there are management actions that will improve bird health then this information can be applied to future conservation action in this PMU.

Information from the follow-up of radio collared birds in this PMU will be used to guide future management of sage grouse and help develop future conservation actions needed to address risks to this population.

#### Legal Authority:

#### Procedural Requirements:

#### Level of Partnership Commitment:

Potential Project Funding: Costs include 6,000 dollars for radio collars, 36,000 dollars for fixed wing flight time and an estimated 50,000 dollars for labor and equipment costs.