V. Conservation Strategy Report for Action Year 2009

One of the main purposes of this Plan is to provide a framework of strategies and associated actions that can be implemented to abate threats, address information gaps, and guide monitoring efforts. Strategies and actions listed below (the order is irrelevant) were developed by CoCARM partners. Several other documents and publications provide recommendations and guidelines for management of sage-grouse populations and their habitats, many of which were reviewed in the Introduction of this Plan. Strategies developed by CoCARM are designed to be specific to the local area while taking into consideration the guidelines at a rangewide level.

Implementation of strategies and actions is strictly voluntary on the part of CoCARM partners. Despite this, we have designated for each strategy the public and private partners who might be involved in implementation. Designation does not imply responsibility or commitment of resources of any sort to implementing, initiating, or completing any actions; however, it does provide a framework of resources and expertise.

A. Strategies and Actions

1. **Strategy:** Reduce threat of predators on sage-grouse over ten-year period.
   - 1.1 **Action:** Determine predator community composition and depredation rate.
   - 1.2 **Action:** Avoid creating or improving raptor-nesting habitat in sage-grouse habitat. Remove raptor perches when possible.
   - 1.3 **Action:** Determine brood-rearing success in each focus area annually.
   - 1.4 **Action:** Enlist Wildlife Services to reduce population numbers of problematic predator species.
   - 1.5 **Action:** Support current predator management efforts by other groups or agencies in the focus areas.
     Predator control will begin in the Alton Sink/Valley area with the upcoming mining activity in the area.

   Partners: USU EXT, UDWR, WS, land developers
   Threats Addressed: Enhanced native and domestic predators
   Aspects of Sage-grouse Ecology Addressed: Reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-rearing habitat quality, reduced connectivity of seasonal habitat types, reduced connectivity of populations and sub-populations, reduced population size

2. **Strategy:** Improve age distribution of plants within sagebrush-steppe communities by 2016.
   - 2.1 **Action:** Identify and prioritize target areas needing improvement.
     Each year, all projects are presented to Utah Partners for Conservation Development. Partners of SWARM present their projects to the group for approval before presenting them to UPCD. Thus all projects meet with the approval of SWARM and the southern region.
   - 2.2 **Action:** Coordinate among agencies and landowners to fund implementation of projects and monitoring.
   - 2.3 **Action:** Monitor the response of sage-grouse to changing habitat conditions.

   Partners: USU EXT, UDWR, USFS, BLM, SITLA, NRCS
   Threats Addressed: Invasive/ali en vegetation species, fire and vegetation management, dramatic weather events

Aspects of Sage-grouse Ecology Addressed: Reduced connectivity of seasonal habitat types, reduced connectivity of populations and sub-populations, reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-rearing habitat quality

3. **Strategy:** Improve water availability and riparian habitat in brood-rearing habitat by 2016.
   - 3.1 **Action:** Survey and evaluate current water sources and needs.
   - 3.2 **Action:** Partner with watershed specialists to identify new water sources.
   - 3.3 **Action:** Consider new water developments that are multi-use and multi-purpose.
     - *NRCS has addressed new water developments in the EQUIP and WHIP grants it has worked on this year. This includes installing new pipeline and modifying old lines to create wet meadows for grouse during the course of other vegetation treatment projects.*
     - *FS and UDWR are considering new guzzlers in the Panguitch Valley area.*
   - 3.4 **Action:** Coordinate with private landowners to protect current water availability that benefits brood-rearing habitat.

   Partners: NRCS, BLM, UDWR, USFS, landowners, interest groups
   Threats Addressed: Concentrated wildlife and/or livestock use, dramatic weather events, alternative land uses (mining, wind power, water development)
   Aspects of Sage-grouse Ecology Addressed: Population distribution, reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-rearing habitat quality, reduced connectivity of seasonal habitat types, reduced connectivity of populations and sub-populations

4. **Strategy:** Increase participation of public and private landowners within the Resource Area.
   - 4.1 **Action:** Develop partnerships with landowners and interest groups to increase visibility of sage-grouse management.
     CCARM continues to work actively with the local landowners and industry personnel in the CCARM focus areas.
     - 4.1.1 **Action step:** Identify regional groups and their contact person.
   - 4.2 **Action:** Develop fact sheet to distribute to special interest groups.
   - 4.3 **Action:** Support partnership efforts for special designations that promote sage-grouse habitat.
   - 4.4 **Action:** Host open houses, field tours, and presentations.
     This year, CCARM hosted an open house to discuss the latest information on grouse from the UDWR.
     CCARM created 3 billboards explaining grouse habitat and natural history to post at trailheads.
   - 4.5 **Action:** Distribute annual reports to local management agencies, county commissioners, and other interested parties.
   - 4.6 **Action:** Proactively seek partnerships when developing new projects.

   Partners: USU EXT, NRCS
   Threats Addressed: Recreational use, development of roads or utilities, lack of communication among public parties, alternative land uses (mining, wind power, water development)
   Aspects of Sage-grouse Ecology Addressed: Reduced population size, population distribution, reduced lek habitat quality, reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-rearing habitat quality, reduced winter habitat quality, reduced

connectivity of seasonal habitat types, reduced connectivity of populations and sub-populations.

5. **Strategy:** Locate and monitor new active lek sites within the Resource Area.
   5.1 **Action:** Survey landowners and land users to determine extent of sage-grouse distribution.
   CCARM continues to search for new leks, or investigate historic leks.
   5.2 **Action:** Investigate possible new lek sites based on local reports.
   Local BLM employees noticed grouse in a newly treated area. Biologists have investigated the site, but it does not appear to be a lek. However it does appear to be summer habitat.
   5.3 **Action:** Survey for new lek sites during lek counts and survey historic sites for new activity.
   5.4 **Action:** Rejuvenate historic lek site habitat for potential re-use.
   Partners: USU EXT, UDWR, NRCS, local landowners
   Threats Addressed: Recreational use, invasive/alien vegetation species, concentrated wildlife and/or livestock use, alternative land uses (mining, wind power, water development), dramatic weather events.
   Aspects of Sage-grouse Ecology Addressed: Reduced lek habitat quality, reduced population size, population distribution, reduced connectivity of populations and sub-populations

6. **Strategy:** Increase sage-grouse populations using direct management in Resource Area by 2016.
   6.1 **Action:** Evaluate potential of translocation to supplement local populations.
   6.2 **Action:** Support and encourage prevention of illegal harvest of sage-grouse.
   Partners: UDWR, USU EXT
   Threats Addressed: Dramatic weather events, enhanced native and domestic predators
   Aspects of Sage-grouse Ecology Addressed: Reduced population size, population distribution, reduced connectivity of populations and sub-populations

7. **Strategy:** Minimize affects of new land developments and/or recreational uses on sage-grouse populations. This is something that we really need to work on. We haven't done much with this strategy this year. WORK WITH SITLA
   7.1 **Action:** Provide consultations and recommendations for new land developments and/or recreational uses.
   Action: Regularly discuss new developments and alternative land uses in management agencies at local working group meetings.
   7.2 **Action:** Identify and maintain a list of contact people involved in land and recreational developments.
   7.3 **Action:** Involve local county and city planning commissions in meetings.
   Partners: USU EXT, BLM, UDWR, USFS, SITLA, county commissioners, local landowners
   Threats Addressed: Recreational use, development of roads or utilities, alternative land uses (mining, wind power, water development), lack of communication among public parties
   Aspects of Sage-grouse Ecology Addressed: Reduced population size, reduced lek habitat quality, reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-

rearing habitat quality, reduced winter habitat quality, reduced connectivity of populations and sub-populations, reduced connectivity of seasonal habitat types

8. **Strategy:** Reduce impacts of concentrated wildlife or livestock use of sage-grouse winter and brood-rearing habitat by 2016.
   8.1 **Action:** Identify and prioritize target areas needing improvement.
   8.2 **Action:** Implement habitat improvements and direct management actions to improve distribution of problem animal communities.
   CoCarm participating agencies are actively trying to improve water sources. By improving water sources, they intend to improve distribution.
   UDWR is proposing/planning to remove a portion of the pronghorn population, which may alleviate some pressure on the resourcres.

   Partners: BLM, NRCS, USU EXT, UDWR, local landowners
   Threats Addressed: Concentrated wildlife and/or livestock use
   Aspects of Sage-grouse Ecology Addressed: Reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-rearing habitat quality, reduced winter habitat quality

9. **Strategy:** Reduce threat of invasive/unwanted plant species in sage-grouse habitat by 2016.
   9.1 **Action:** Remove juniper and pinyon pines from brood-rearing habitat.
   UDWR/BLM/USFS/UACD have focused their efforts on projects to address this action through the UPCD process.
   9.2 **Action:** Reduce abundance of unwanted and/or invasive plant species.
      9.2.1 **Action step:** Re-seed area after land disturbance such as mechanical treatments, fire, and human development.
         - *This is a standard practice for BLM/USFS/UDWR.*

      9.2.2 **Action step:** Use dedicated hunters to help with re-seeding and rehabilitation efforts.
         - *CoCARM region often uses dedicated hunters to help with their restoration efforts. Several projects are planned this year to utilize dedicated hunters.*

   9.3 **Action:** Evaluate and use chemical applications where appropriate to restore habitat dominated by cheatgrass and/or noxious weeds.
   9.4 **Action:** Evaluate the feasibility of using fire as a tool in areas where cheatgrass has been established or is prone to establish.

   Partners: UDWR, BLM, USFS, interest groups
   Threats Addressed: Fire and vegetation management, invasive/alien vegetation species
   Aspects of Sage-grouse Ecology Addressed: Reduced nesting/early brood-rearing habitat quality, reduced summer/late brood-rearing habitat quality, reduced connectivity of populations and sub-populations

B. Priority Evaluation

In order to help prioritize strategies, actions, and most effectively allocate resources, we have assigned a rank of "low," "medium," "high," or "very high" to each threat with regards to its contribution to reduction in population health or habitat condition (Table 4). Again, given the stipulations regarding a lack of empirical, locally based information in many cases, these rankings are based on the best information available to us and our implicit, experiential knowledge of the Resource Area. Ranking definitions are based on The Nature Conservancy's Conservation Action Planning process (TNC 2005). Rankings are provided to help highlight potential priorities for subsequent strategies and actions.

CoCARM partners and others can use the rankings in Table 4, combined with the strategies and actions listed above, to prioritize implementation and direct resources to efficiently and effectively abate threats, and maintain and improve sage-grouse populations and their habitats in the Resource Area.

Table 4. Relative importance/contribution of individual threats to reducing or degrading aspects of sage-grouse populations in the CoCARM Resource Area. Threats are described in the "Threat Analysis" section of this Plan. Ranks are defined according to TNC (2005).

	Aspects of Sage-grouse population in the CoCARM Resource Area							
Threat	Reduced Population Size	Population Distribution	Reduced Lek Habitat Quality	Reduced Nesting/Early Brood-rearing Habitat Quality	Reduced Summer/Late Brood-rearing Habitat Quality	Reduced Winter Habitat Quality	Reduced Connectivity of Seasonal Habitat Types	Reduced Connectivity of Populations & Sub-populations
Enhanced native and domestic predators	High	Low	Low	High	High	Medium	High	High
Recreational use	Medium	Medium	Medium	High	High	High	Medium	Medium
Invasive/alien vegetation species	High	High	Medium	Very High	High	Medium	High	High
Concentrated wildlife and/or livestock use	High	Medium	Medium	High	High	Medium	Medium	Medium
Fire and Vegetation Management	High	Medium	Medium	High	High	High	High	High
Development of roads or utilities	High	Medium	Low	Very High	High	High	High	High
Lack of communication among public parties	Medium	Medium	Low	High	Medium	Medium	Medium	Medium
Diseases and parasites	Medium	Medium	Low	Medium	Medium	Medium	High	High
Alternative Land Uses (mining, wind	High	High	Medium	High	High	High	High	High

power, water development)								
Dramatic Weather Events	High	Medium	Medium	High	High	High	High	High