

Parker Mountain Adaptive Resource Management (PARM) Local Sage-grouse Working Group

The Parker Mountain Adaptive Resource Management Plan (PARM) Sage-grouse Local Working Group was organized in 1997. PARM is facilitated by Mr. Todd Black. The PARM consists of state and federal agency personnel, representatives from local government, non-profit organizations, academic institutions, private industry, and private individuals. At that time the group met quarterly to discuss the status of sage-grouse on Parker Mountain. The first decision the group made was to radio-collar hens to determine nesting ecology, habitat use, and reproduction. After a two year study, the group learned that nesting and brood success was low and this was probably related to poor nesting and brooding rearing cover. The PARM obtained a NRCS Wildlife Habitat Incentive Program cost-share challenge grant. PARM used these funds to implement and evaluate two mechanical methods and one chemical method to reduce sagebrush canopy cover as a means of increasing grass and forb cover. The success of these management experiments set the stage for PARM to design and implement other conservation actions. After 13 years of research, USU and PARM have scaled back the research effort. The research has resulted in major contributions to the management of sage-grouse in the area. This research was made possible because of financial and in-kind contribution. A cooperative agreement with the USFS provided housing at the refurbished Teasdale Ranger Station for graduate students and technicians for several years. A history of PARM actions, annual reports, meeting minutes, and their conservation plan can be found on-line at <http://utahcbcp.org/files/uploads/parm/PARMfnl-10-06-web.pdf>

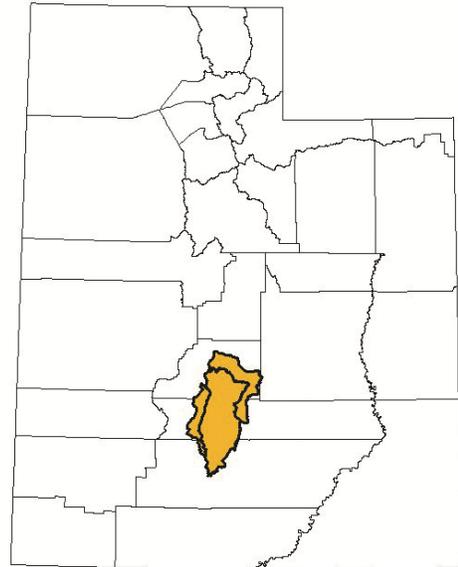


Figure 6. The Parker Mountain Adaptive Resource Management (PARM) Sage-grouse Local Working Group Conservation Area consists of 1,789,644 acres located in south-central Utah.

Conservation Strategies and Actions: 2010-2011 Accomplishments

1. Strategy: By 2011, assess PJ stands in the Fish Lake subunit.

1.1. Action: As a PARM group revisit and make recommendations to treat as needed on PJ sites (North Mytoge Mountain and North of the Fish Lake turn off).

In 2010 SITLA engaged volunteers to thin PJ in the Sand Ledges area. USFS conducted PJ removal using lop scatter pile and burn on in the Horse Valley/Cedar Creek area. BLM did (1500 acres) PJ bullhog removal south of Greenwich, west side of Highway 62.

BLM has previously Dixie harrowed multiple areas north of the fish lake turn and south west and north of Hwy 24 off to remove encroaching PJ to improve connectivity of habitat to other sites on the north end of the resource area.

2. Strategy: By 2011, make an assessment of non-desirable/invasive vegetation in sage-grouse habitats.

2.1. Action: Review and monitor all vegetation sampling by all partners, and more specifically with UDWR range trend data.

See UDWR range trend data—making sure cheatgrass is not moving up the mountain and into areas occupied by sage-grouse. For more information see <http://wildlife.utah.gov/range/pdf/Archive%20Reports/2008%20Vol%201%20Southern%20Region.pdf>

2.2. Action: Avoid using fire in sage-grouse habitats prone to invasion by cheatgrass or other non-desirable species.

No fires were used in areas prone to cheatgrass invasion.

2.3. Action: Evaluate all wildfires and prescribed burns and reseed with forage kochia or other fire-resistant species where appropriate to prevent establishment of cheatgrass.

No wildfires in 2010/11

2.4. Action: Identify areas where undesirable vegetation is encroaching on sage-grouse habitat.

Halogeton encroachment has been reported around the Moroni Peak area. USFS is reporting more cheatgrass along road side along the Pine Creek area and is monitoring its status.

2.5. Action: Treat areas where undesirable vegetation has become, or is at risk of becoming, a factor in sage-grouse habitat loss or fragmentation.

Wayne County sprays halogeton just west of Loa up to the land fill in sage-grouse wintering areas.

2.6. Action: Work with existing weed management programs to control noxious weeds in the Resource Area.

See above 2.4/2.5.

2.7. Action: Identify large areas of introduced plant species that are not meeting sage-grouse habitat needs and reseed with native species where appropriate.

PARM identified the Terza flat areas a possible sites but none of the seeds germinated likely to drought and existing soil conditions.

2.8. Action: Identify areas where pinyon or juniper trees are encroaching on good quality sagebrush habitat and treat as needed.

See above. Cedar Grove PJ sites are starting to expand and PARM has concerns with this.

Work with SITLA to address issue. BLM continue working south grass valley on the east side of Highway 62 (angle area).

2.9. Action: Manage fire, transportation, and vegetation treatments to minimize undesirable vegetation where possible.

Both Dixie and Fishlake National Forest Service Districts are working on travel plans to address transportation issues and are anticipated to be completed in 2012.

3. Strategy: By 2011, complete an assessment on the condition of available water sources and identify potential new water improvement/development projects.

No action taken on this action item to date.

3.1. Action: Manage vegetation and artificial structures to increase water-holding capabilities of likely habitat.

SITLA and Parker Grazing Association are working for new pond between Jakes Knoll and Flossy Lake. USFS re-fenced areas around 3 ponds (Antelope Springs, Big Lake, and Dark Valley Pond).

3.2. Action: Install catchment structures to slow run-off, hold water, and eventually raise water tables.

No action take in 2010 see above for 2011 plans. BLM and Seven Mile Grazing Association re-bentonite/seal ponds in the Mytoge Allotment.

3.3. Action: Modify or adapt pipelines or developed springs to create small wet areas. *Antelope Springs, Big Springs, and Dark Valley Pond see above.*

3.4. Action: Locate projects to minimize potential loss of water table associated with wet meadows.

No projects were conducted in areas where this was a concern.

3.5. Action: Identify key elements of various water projects by developing partners to work cooperatively to maintain existing water sources.

See above...3.2.

4. Strategy: By 2011, identify key public, SITLA, and private lands in the Resource Area (specific locations to be selected) that are managed so as to conserve/improve sage-grouse nesting habitat.

4.1. Action: Encourage use of PARM defined conditions for state and federal lands to influence management actions to move toward improved conditions for sage-grouse.

Accomplished through PARM LWG meetings and WRI. USU is compiling data to develop nesting, brood-rearing habitat, and winter habitat models. This research should be completed in 2012.

4.2. Action: Support partner efforts that manage sage-grouse nesting habitat on public, SITLA, and private lands.

See above USU is compiling data to show nesting, brood-rearing habitat, and winter habitat models. The winter and brood-rearing models are projected to be complete in 2012.

4.3. Action: Use available grouse and brood telemetry data to identify key nesting habitat areas within the Parker Mountain subunit.

Work continues by SITLA, USFS, USU, and UDWR through 2010. See above. USU is compiling data to show nesting, brood-rearing habitat, and winter habitat models. Winter and brood-rearing habitat models will be completed in 2012.

4.4. Action: Pursue habitat improvement projects (to meet PARM defined conditions) on SITLA lands in areas used by sage-grouse for nesting habitat.

PARM group discussed the possibility of removing this action item as it is likely that nesting habitat is not limited and no habitat projects are recommended at this time.

4.5. Action: Identify research needs to address sagebrush treatments at 'lower' elevations where the majority of these nesting activities occur.

See above—we need research—Terza Flats treatments and seeding trials. Research is showing that we don't need 'treatments' at lower elevations.

4.6. Action: Use mechanical or chemical treatments to reclaim and/or reseed areas (when necessary) using suitable seed mixtures.

No chemical treatments were conducted in 2010. SITLA plans small treatments in the fall of 2011. The BLM is discussing chemical treatments and NEPA.

4.7. Action: Where economically feasible, restore understory vegetation in areas lacking desirable quality and quantity of herbaceous vegetation.

USFS did more control burns, to improve understory in the Pollywog and Blue Springs area.

4.8. Action: Conduct vegetation treatments to improve forb diversity (e.g., harrowing, aerating, chaining) and reclaim or reseed disturbed area, if needed.

See above—The USFS conducted brush mowing treatments in these areas as well.

4.9. Action: Develop management techniques to increase forb diversity and density in sagebrush steppe, within limits of ecological sites and annual variations.

See above (mowing, burning, chemical, Dixie harrow).

5. Strategy: By 2011, identify key public, SITLA, and private lands in the Resource Area (specific locations to be selected) that are managed so as to conserve/improve sage-grouse lekking habitat.

This task is complete but further monitoring efforts will continue by PARM members.

5.1. Action: Open lek areas that have been invaded by sagebrush and other shrubs.

BLM and Parker Mountain Grazing Association treated historic leks using sheep in the Black Point area to reduce the sagebrush canopy cover.

5.2. Action: Encourage use of PARM defined conditions for state and federal lands to influence management actions to move toward improved conditions for sage-grouse.

This is an ongoing process with PARM members and will continue through the duration of the plan.

5.3. Action: Support partner efforts that manage sage-grouse lekking habitat on key public, SITLA, and private lands

Sheep grazing Black Point lek (see above) Department of Agriculture and Food. A video describing the project was placed on youtube.com as

<http://www.youtube.com/watch?v=GX4027DbePk>

6. Strategy: Through 2011, avoid natural resource development (oil/gas exploration and development) within important sage-grouse use areas. If development does occur, work with private industry to minimize impacts and follow recommended actions below.

The PARM group had discussion on this strategy and felt that over the past several years doesn't really think this is a big threat as they initially discussed and thought. Oil/gas exploration has fallen through. The USFS is working on NEPA for future oil/gas on USFS lands protecting lekking areas.

6.1. Action: Reduce fragmentation of sage-grouse habitat by oil and gas development activities.

Not an issue of concern.

6.2. Action: Locate compressor stations off ridge tops and at least 2,500 feet from active sage-grouse leks, unless topography allows for closer placement.

Not an issue of concern.

6.3. Action: Avoid locating facilities within ¼ mile of active sage-grouse leks, unless topography allows for closer placement.

See above with USFS NEPA but not a current issue/threat.

6.4. Action: Plan for and evaluate impacts to sage-grouse of entire field development rather than individual wells.

See above with USFS NEPA but not a current issue/threat.

6.5. Action: Implement near-site and/or off-site mitigation as necessary to maintain sage-grouse populations.

See above with USFS NEPA but not a current issue/threat.

6.6. Action: Share sage-grouse data with industry to allow planning to reduce impacts.

See above with USFS NEPA but not a current issue/threat.

6.7. Action: Minimize disturbance to sage-grouse associated with oil and gas development.

See above with USFS NEPA but not a current issue/threat.

6.8. Action: Reduce cumulative impacts of oil and gas development.

See above with USFS NEPA but not a current issue/threat.

6.9. Action: Plan and construct roads to minimize duplication.

See above with USFS NEPA but not a current issue/threat.

6.10. Action: Cluster development of roads, pipelines, electric lines and other facilities.

See above with USFS NEPA but not a current issue/threat.

6.11. Action: Use existing, combined corridors where possible.

See above with USFS NEPA but not a current issue/threat.

6.12. Action: Use early and effective reclamation techniques, including interim reclamation, to speed return of disturbed areas to use by sage-grouse.

See above with USFS NEPA but not a current issue/threat.

6.13. Action: Avoid construction during the breeding/nesting season (March 1 – June 30) when possible in sage-grouse habitat.

See above with USFS NEPA but not a current issue/threat.

6.14. Action: Limit activities during breeding season (March 1 – May 1) near sage-grouse leks to portions of the day after 9:00 a.m. and before 4:00 p.m.

See above with USFS NEPA but not a current issue/threat.

6.15. Action: Reduce daily visits to well pads and road travel to the extent possible in sage-grouse habitat.

See above with USFS NEPA but not a current issue/threat.

6.16. Action: Reduce long-term footprint of facilities to the smallest possible.

See above with USFS NEPA but not a current issue/threat.

6.17. Action: Avoid persistent, nonnative grasses (e.g. intermediate wheatgrass, pubescent wheatgrass, crested wheatgrass, smooth brome, etc) in reclamation seed mixes.

See above with USFS NEPA but not a current issue/threat.

6.18. Action: Eliminate noxious weed infestations associated with oil and gas development disturbances.

See above with USFS NEPA but not a current issue/threat.

6.19. Action: Minimize width of field surface roads.

See above with USFS NEPA but not a current issue/threat.

6.20. Action: Participate in county planning efforts for natural resource exploration and development to ensure that biodiversity impacts are minimized.

See above with USFS NEPA but not a current issue/threat.

6.21. Action: Cooperate with partners (NRCS, UDWR, USFS, BLM, SITLA) planning efforts to minimize impacts on sage-grouse brood rearing habitat.

See above with USFS NEPA but not a current issue/threat.

7. Strategy: Through 2011, identify high use areas available to sage-grouse during the late summer and early fall brood rearing time period.

7.1. Action: Use available grouse and brood telemetry data and remote sensing data to identify key brood rearing habitat areas within the Parker Mountain subunit.

USU is compiling data to show nesting, brood-rearing habitat, and winter habitat models, work to be completed in 2012.

7.2. Action: Work with public and private partners to maintain areas use by sage-grouse during late summer and early fall.

USU is compiling data to show nesting, brood-rearing habitat, and winter habitat models, work to be completed in 2012.

8. Strategy: Through 2016, identify measures to manage key wintering areas available for sage-grouse.

8.1. Action: Use available winter grouse telemetry data and local knowledge to map these areas.

USU is compiling data to show nesting, brood-rearing habitat, and winter habitat models, work to be completed in 2012.

8.2. Action: Work with public and private partners to identify winter locations.

USU is compiling data to show nesting, brood-rearing habitat, and winter habitat models, work to be completed in 2012.

8.3. Action: Use UDWR aerial winter big game surveys to identify and map these areas.

Completed annually and noted by UDWR personnel

9. Strategy: By 2009, maintain or increase populations of sage-grouse in the Resource Area. *Since peaking in 2007, the PARM sage-grouse population based on lek counts has been trending downwards as has been most of the state. These trends have been attributed to unfavorable weather patterns to include drought in combination with severe winter weather. However USU's research and models shows that while decreasing numbers are reported from lek counts, the population is starting to trend upwards again.*

9.1. Action: Support and encourage the prevention of illegal harvest of sage-grouse on public lands throughout the year.

PARM group supports this action and works with the UDWR to report any illegal harvest.

9.2. Action: Support continued sport hunting within current UDWR models.

PARM would like to see additional research on this. We recommend looking at production data (late season brood counts) rather than lek counts to determine harvest rates/numbers. PARM group supports this action and works with the UDWR to support harvest based models. A recently completed research project by USU suggests the hunting may be having a disproportionate effect on juvenile survival.

9.3. Action: PARM group will review and determine support of any translocation of sage-grouse hens from the resource area based on population status.

This is an ongoing action item and PARM supports and recognizes the importance of translocation of grouse across the state to areas where population augmentation is needed. The last translocation from the Parker population occurred in 2009, when 30 hens were relocated to Anthro Mountain.

9.4. Action: Continue with annual PARM group counting/classification efforts with sage-grouse lek surveys.

This is an ongoing action item and PARM continues to hold annual group lek counts where the public is invited to attend.

10. Strategy: Through 2009, search additional areas (TBD by PARM) for new/previously undiscovered sage-grouse lekking sites.

Completed, this has been done every year and will likely continue in specific areas as determined by the PARM group.

10.1. Action: Coordinate with UDWR to conduct aerial surveys in areas (Bear Valley, north of Koosharem Reservoir, north/Mytoge Mountain, Greenwich) suspected to be undiscovered lekking areas.

Completed, this has been done every year and will likely continue in specific areas as determined by the PARM group.

10.2. Action: Coordinate with UDWR, public and private partners to conduct terrestrial like searches in areas (Bear Valley, north of Koosharem Reservoir, north/Mytoge Mountain, Greenwich) suspected to be undiscovered lekking areas.

Completed, this has been done every year and will likely continue in specific areas as determined by the PARM group.

10.3. Action: Continue with and expand annual PARM group counting/classification efforts to include the entire Resource Area.

Done annually in cooperation and in conjunction with the PARM annual counts and the UDWR.

11. Strategy: Increase cooperation and coordination between PARM members and other public and private partners.

11.1. Action: Continue with quarterly PARM meetings.

Completed, this has been done every year and will continue through the duration of the plan see <http://www.utahcbcp.org/htm/groups/parkermountain>.

11.2. Action: Annual review and assessment of PARM plan.

Completed, this has been done every year and will continue through the duration of the plan.

11.3. Action: Review and amend the MOU

Completed, this has been done every year and will continue through the duration of the plan.

11.4. Action: Develop means to inform, involve, and educate the local communities as to the efforts of PARM to protect sage-grouse.

Ongoing with the CBCP Communicator newsletter and web page. See for more information <http://utahcbcp.org/>.

12. Strategy: By 2016, work to decrease the populations of sage-grouse predators, especially in areas used for nesting and/or brood-rearing.

PARM group receives updates and reports annually from WS on activities done within the resource area specifically for sage-grouse.

12.1. Action: Modify power lines and wood fence posts (to remove raptor perches) in important sage-grouse areas, where feasible and where predator concerns have been identified.

N/A

12.2. Action: Remove trees, remove/modify raptor perches, and maintain quality sagebrush habitat, where predation concerns on sage-grouse have been identified.

N/A

12.3. Action: Begin site-specific predation management considering all predator species (especially common ravens and red fox) where necessary and appropriate.

PARM group has identified areas to focus these efforts using WS and continues to identify additional areas of concern.

12.4. Action: Support efforts of USDA-WS to remove red foxes and ravens in areas used by sage-grouse for nesting and brood-rearing during spring and early summer.

At the time of this report, current 2011 efforts were unavailable.

12.5. Action: Identify research needs to look at wildlife herbivory issues and treatment sites and the removal of predators.

Still something PARM discusses and needs to be done.

12.6. Action: Identify additional sources of funding to continue with the current predator removal efforts.

Has been discussed with WS and UDWR. PARM group has identified areas to focus these efforts using WS and continues to identify additional areas of concern.

13. Strategy: Provide an appropriate level and system for domestic livestock grazing that maintains and improves both the long-term stability of sage-grouse populations and habitats and the livestock industry in the Resource Area.

13.1. Action: Coordinate grazing management with livestock operators to reduce resource and timing conflicts on leks and prime nesting habitat when possible.

Research has shown that there are few livestock conflicts within the PARM area. This is largely attributed to the elevational grazing regime. By the time livestock move into nesting and early brooding-rearing areas hen with broods have relocated to higher elevations.

PARM also uses livestock currently to remove cover from lekking areas. PARM continues to work with partners to improve grazing conditions that are beneficial to sage-grouse by working to address water distribution and fencing improvements to control livestock movements in nesting habitat and plans to improve grazing rotation on the SITLA block.

13.2. Action: Apply grazing management practices to achieve desired conditions including maintenance of residual herbaceous vegetation appropriate for the site.

Due to geologic conditions, annual precipitation, and soil conditions, PARM will likely never achieve 'guidelines' from a herbaceous/grass cover standpoint for nesting habitat.

However, research has show that the Parker population is increasing ($\lambda > 1$), high chick survival, and winter adult survival despite vegetative conditions. PARM uses livestock currently to remove cover from lekking areas. PARM continues to work with partners to improve grazing conditions that are beneficial to sage-grouse by working to address water distribution fencing improvements to control livestock movements in nesting habitat and plans to improve grazing rotation on the SITLA block.

13.3. Action: Encourage implementation of grazing systems that provide for areas and times of deferment while taking into consideration the resource capabilities and needs of the livestock operator.

PARM continues to work with partners to improve grazing conditions that are beneficial to sage-grouse by working to address water distribution and fencing improvements to control

livestock movements in nesting habitat and plans to improve grazing rotation on the SITLA block.

14. Strategy: Minimize impacts of utilities lines in sage-grouse habitat.

The PARM group had discussion on this strategy and felt that over the past several years this is not as big a threat as they initially discussed and thought. Oil/gas development has not been as big as a threat as predicted at the beginning of the plan, it's unlikely that any significant utility development will occur.

14.1. Action: Avoid new construction during important periods and reroute lines where technically and economically feasible to avoid impacts.

N/A

14.2. Action: Schedule maintenance to minimize impacts during biologically important time-periods (i.e. breeding), however, maintenance in emergency situations will be unrestricted.

N/A

14.3. Action: Install raptor deterrents when applicable.

N/A

15. Strategy: Improve knowledge of disease in sage-grouse populations.

15.1. Action: Collect grouse parasite and disease organism samples while handling birds for other research.

No birds found dead due to disease in 2010/11.

15.2. Action: Monitor radio-collared and other sage-grouse for West Nile Virus and other disease outbreaks.

No birds found dead due to disease in 2010/11.

16. Strategy: By 2016 work to begin to improve understanding of the relationship between livestock grazing and sage-grouse in the Resource Area.

16.1. Action: Conduct study on the affects of different types of livestock use, time of use, and intensity of use on sage-grouse populations.

Completed and published by USU see

<http://utahcbcp.org/files/uploads/parm/ElmoreDissertation.pdf> for more information.

17. Strategy: By 2016 implement a study to better understand of the predator/prey dynamics specific to sage-grouse in the Resource Area.

17.1. Action: Conduct study of the effects of predation on sage-grouse populations.

Still a needed research project but with funding cuts it's likely not to happen during the duration of this plan.

Major Needs and Concerns

One of the most pressing research needs on Parker Mountain is to look at the effects of increased predation on this population. Intensive predation management that occurred in the area in the past (associated with the sheep industry) is being curtailed. Additionally, WS had been addressing raven populations for the past several years but may not continue at current levels because of funding limitations.