

6. Rich County Coordinated Resource Management Sage-grouse Subcommittee

In June of 2002 the Rich County Commission determined that the county should take a cooperative and proactive role in the future health of the public lands and sustainability of livestock operations within the county. The Rich County Coordinated Resource Management (CRM) Committee was formed under the direction of the commission involving a wide diversity of interest groups and agency representatives from inside and outside the county. By building trust, leadership, and respect, the group provided a vision for the resources in Rich County: A rich, healthy ecosystem, with sustainable agriculture industry and wildlife populations, containing diverse recreational opportunities and a vibrant rural community.

The CRM Committee organized a subcommittee in 2005 that would deal specifically with issues related to sage-grouse. The CRM Sage-grouse (SAGR) Subcommittee was facilitated by Sarah G. Lupis. Ms. Lupis also served as the technical writer and compiler of the Plan. The CRM SAGR Subcommittee is comprised of state and federal agency personnel, non-profit organizations, academic institutions, and private individuals. A complete list of participants can be found in the CRM SAGR Plan.

a. Local Legal Authority

The Board of Commission for Rich County serves as the executive and legislative branch of local government. The Board has the authority to; 1) protect and promote the health, welfare, and safety of the people of Rich County, 2) regulate land use, land planning, and quality and protection of natural resources, and 3) has duly adopted regulations and policies to exercise such authorities including the review and approval or denial of proposed activities and uses of land and natural resources (Rich County Coordinated Resource Management Draft Strategic Plan 2005).

b. Status of Local Population

Plan Area

Rich County is located in northeastern Utah (Figure 1). Rich County encompasses 661,760 acres managed by the USFS, BLM, SITLA, and private land owners. Rich County is defined by the Utah-Wyoming border to the east, the Utah-Idaho border to the north, the Rich-Summit County border to the south, and is bordered by several Utah counties to the west (Figure 1). The southern half of Bear Lake and the Bear Lake Valley are located in the northern portion of Rich County. Elevation in Rich ranges from 1,800-2,600 m.

Rich County is characterized by hot summers and cold winters. The high elevation conditions of much of the County make it one of the coldest areas in the state. Winter temperatures (measured in the town of Woodruff) often fall below -29° C (-20° F); summer temperatures often exceed 32° C (90° F). Annual precipitation is variable but averages approximately 50 cm at high elevations and 23 cm at low elevations; September, May, and June are the wettest months.

Landownership

Most of Rich County is private land (Table 23). Landownership patterns differ between subunit

Table 23. Landownership in the Rich County Coordinated Resource Management Sage-grouse Local Working Group Resource Area, 2007.

Landowner	Subunit	Acres	MILES²	% of Total
Private	Northeast	57,435	90	8.75
Private	Central	99,408	155	15.14
Private	Southern	169,010	264	25.74
Private	Crawford	54,693	85	8.33
US Forest Service	Central	37,000	58	5.64
US Forest Service	Southern	13,022	20	1.98
Bureau of Land Management	Northeast	24,715	39	3.76
Bureau of Land Management	Central	90,850	142	13.84
Bureau of Land Management	Southern	29,325	46	4.47
Bureau of Land Management	Crawford	26,593	42	4.05
State of Utah	Northeast	27,689	43	4.22
State of Utah	Central	13,314	21	2.03
State of Utah	Southern	4,318	7	0.66
State of Utah	Crawford	7,259	11	1.11
*Water comprises 1,953 acres (3 mi ²) and represents 0.30% of Rich County's total area.				

Sage-grouse Population Status and Distribution

Rich County is among the largest populations of sage-grouse in Utah. There are eight lek complexes in Rich County with a total of 46 active and historic lek sites. The UDWR has been monitoring sage-grouse lek sites and the number of strutting males in Rich County since 1959. Early counts often included less than 10 lek sites and were likely under-representative of the total number of leks and, therefore, the total breeding population. In the last five years, over 30 leks have been monitored and previously unknown lek sites are discovered regularly. Although sage-grouse populations in Rich County seem to be experiencing an increasing trend since 1959 (Figure 16), this could simply be due to increased monitoring efforts and an increase in the number of leks monitored.

Observations of the number of males per lek is another index used to evaluate sage-grouse population trends. Because this index accounts for the number of leks counted, i.e. the amount of effort, this index may, in cases where effort is variable, be a more useful illustration of the population trend. In Rich County, the number of males per lek has fluctuated around approximately 40 males/lek since the early 1970s (Figure 17).

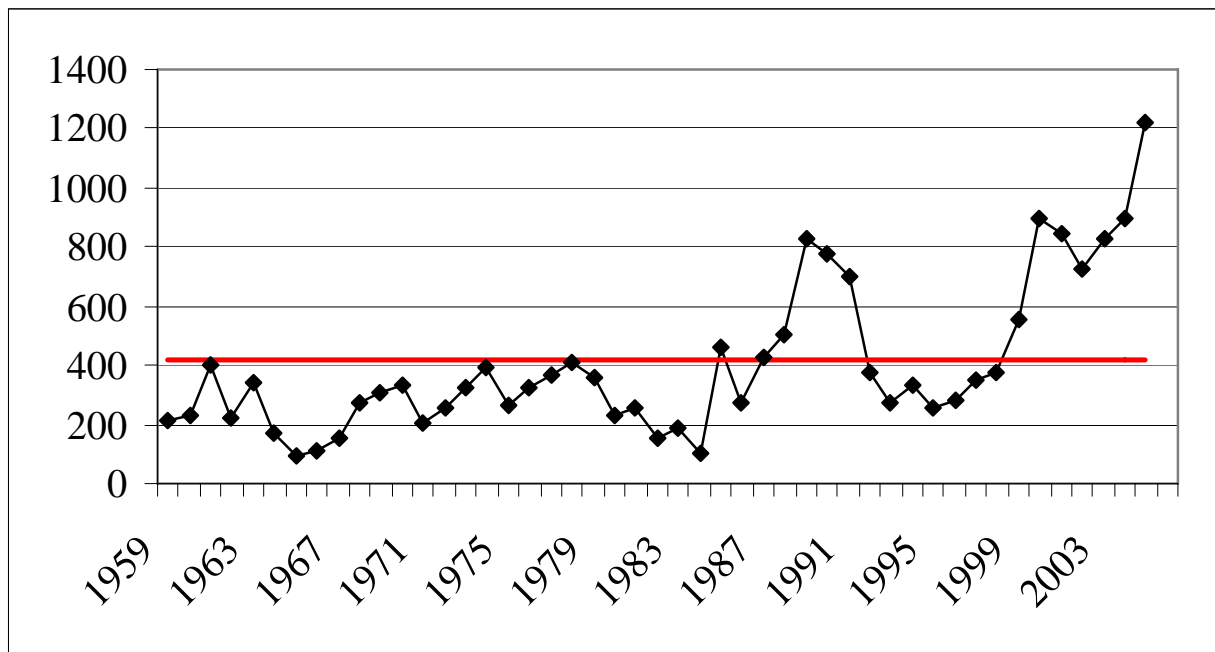


Figure 16. Maximum total number of males counted and 40-year average maximum total males counted on leks in Rich County, 1959-2005.

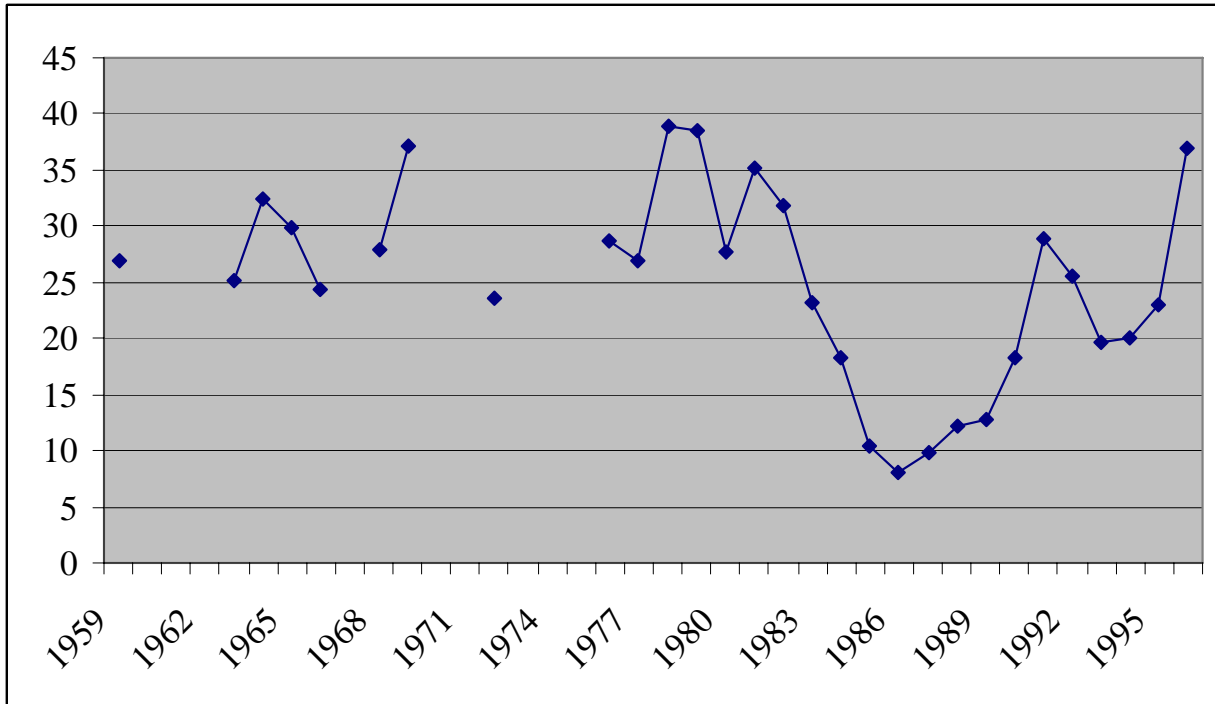


Figure 17. The number of males per lek in Rich County, 1959-2005. Only years when >10 leks were counted were included.

Sage-grouse seasonal habitat types in Rich County were mapped by the UDWR in 1999. Nearly the entire county has been designated as brood rearing and winter habitat and there is nearly 100% overlap of these seasonal habitat types. The Rich CRM SAGR believes this mapping should be revisited to better identify seasonal habitat types and use areas in Rich County to facilitate better management of sage-grouse and their habitats.

The UDWR Big Game Range Trend project has been monitoring sites throughout Rich County to track changes in vegetation composition, structure, and diversity. Although these sites were placed in areas used by big game, where they overlap with sage-grouse seasonal habitat types they can provide information about vegetation and habitat conditions in those areas in a general sense. Data collected at these sites are summarized and available at <http://www.wildlife.utah.gov/range/>.

c. Key Ecological Indicators and Threats

In a step-wise fashion, Rich CRM SAGR participants identified key ecological aspects (KEAs) of sage-grouse ecology and biology and associated indicators (to measure KEAs), determined and ranked the range of variation for each KEA, and assessed the current and desired conditions for each KEA (Table 24). They then identified and ranked potential threats (Table 25).

Table 24. Greater sage-grouse key ecological aspects in Rich County, Rich County Coordinated Resources Management Sage-grouse Local Working Group, 2007. The ‘Key Attribute’ and ‘Indicator’ cells’ are those defined by Greater Sage-grouse guidelines (Connelly et al 2000). The shaded cells represent the current condition as recorded by local working group members of a particular attribute and indicator as it relates to sage-grouse habitat and life history requirements.

Resource	Area Category	Key Attribute	Indicator	Poor	Fair	Good	Very Good	Current Indicator Status	Current Rating	Desired Rating	Date of Current Rating	Date for Desired Rating
Rich County	Condition	Breeding Habitat Quality (leks, nesting, early brood-rearing)	Proximity to sagebrush (or other heavy cover) and vegetation composition and structure on and around lek complex.	Sagebrush cover sparse w/in 2 mi of most leks; significant sagebrush or “weed” encroachment onto lek complex.	Dispersed patches of sagebrush cover and little perennial grass w/in 2 mi of lek; density of tall vegetation on leks increasing.	Large patches of sagebrush or other cover w/in 2 miles of lek; at least 25% perennial grass and forb cover.	<i>Sagebrush steppe surrounding most lek complexes; most sagebrush cover w/in 2 mi of lek > 20% with dense perennial grass and forb cover, high vegetative species richness.</i>	Most lek sites and surrounding habitat in Rich County in good condition.	Good	Very Good	5-Nov	16-Jul
Rich County	Condition	Summer/Late Brood-rearing Habitat Quality	Cover and forb/shrub composition and proximity to open patches	Few perennial grasses & forbs in dense sagebrush or openings.	Poor perennial grass & forb cover in sagebrush and limited in openings	<i>Some grasses & forbs in sagebrush and good grass/forb content in openings.</i>	High stature grasses in shrub lands; dense cover in riparian zone; high species richness; including a matrix of open patches (uplands and riparian).	Late summer brood-rearing habitat is in fair condition; riparian habitat is somewhat lacking and is largely responsible for the current rating.	Fair	Good	5-Nov	16-Jul
Rich County	Condition	Winter Habitat Quality	Sagebrush canopy cover, height, and composition on traditional/preferred winter range (<5% slopes, <6800 feet).	<25% of preferred height (12-25 in) and cover (12-25%) classes. Sagebrush is predominantly short-sparse (0-12 in, <12% CC) and tall-dense (>25 in, >25% CC) OR <5% short-sparse, <3% tall-dense	25-40% is of preferred height (12-25 in) and cover (12-25%) classes. 60-74% of sagebrush is short-sparse or tall dense OR only 6-10 % short-sparse, only 4-6% tall-dense.	<i>41-55% is of preferred height (12-25 in) and cover (12-25%) classes. 45-59% of sagebrush is short-sparse or tall dense OR only 11-15% short-sparse, only 7-10% tall-dense.</i>	56-70% is of preferred height (12-25in) and cover (12-25%) classes. 30-44% of sagebrush is short-sparse or tall-dense OR >15% short-sparse, >10% tall-dense.	Winter habitat is in fair condition.	Fair	Good	5-Nov	16-Jul

Rich County	Size	Population Distribution	Distribution of leks	>75% in Southern Subunit	74-65% in Southern Subunit	64-50% in Southern Subunit	<50% in Southern Subunit	Most leks are located on Desert Land and Livestock and surrounding areas.	Fair	Good	5-Sep	16-Jul
Rich County	Size	Population Size	3-year running average maximum number of males counted on leks	<300	301-1,199	1,200-2,000	2,000+	The 2003-2005 average is 980 males	Fair	Good	5-Sep	16-Jul
Rich County	Size	Population Size	Number of active leks	<15	16-30	31-45	45+	There are currently 33 active leks in Rich Co.	Good	Very Good	5-Sep	16-Jul

Table 25. Relative importance/contribution of threats to sage-grouse populations in Rich County. Rich County Coordinated Resources Management Sage-grouse Local Working Group, 2007. Threats are described in the “Threat Analysis” section of this Plan. Rankings are as follows: L=low; M=medium; H=high; and VH=very high. Ranks are defined according to TNC (2005).

Threat	Reduced Population Size	Population Distribution	Reduced Breeding 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
Home & Cabin Development	M	M	M	M	L	M	M
Powerlines, Fences, & Other Tall Structures	H	L	M	L	L	M	M
Renewable & Non-renewable Energy Development	M	M	H	H	M	L	L
Roads	H	L	M	L	L	M	M
Drought & Weather	H	H	M	H	L	H	H
Hunting Pressure	L	M	-	-	-	-	H
Incompatible Fire Management Practices	H	H	H	H	H	H	H
Incompatible Livestock Grazing	H	H	H	H	M	H	H
Incompatible OHV Recreation	H	M	M	M	M	H	H
Invasive/Noxious Weeds	M	H	M	L	L	M	M
Parasites & Disease	M	M	-	-	-	-	H
Predation	M	M	L	-	-	-	M
Vegetation Management							
Pinyon-Juniper Encroachment							

d. Status of Conservation Actions and Strategies

This report summarizes the status of the efforts made by individual and partners to address threats and strategic actions identified in the Rich CRM SAGR Greater Sage-grouse Local Conservation Plan. This adaptive plan is in effect until the year 2016. Rich CRM SAGR partners not only reported on specific actions completed or addressed in 2006/2007 but also identified steps to be taken to implement additional actions into subsequent years of the plan. Please note that if a Strategy or an action number is missing from this report; it means that no action(s) were taken in 2006/2007 towards its completion. For the complete list of threats identified by the Rich CRM SAGR group, see conservation plan located on line at http://utahcbcp.org/files/uploads/rich/RICOSAGRPlan_Draft1.pdf.

1. Strategy: By 2016 increase amount of breeding habitat in “good” condition the northern two-thirds of the County.

1.1. Action: Work with public and private partners to implement rest-rotation/time controlled grazing management strategies, where appropriate.

Status: Landowners and permittees are working with Bureau of Land Management (BLM) and Utah Grazing Improvement Program (GIP) to initiate a large scale restoration grazing system for the northern part of Rich County.

1.2. **Action:** Implement appropriate treatments and seeding in CRP fields and stands dominated by crested wheatgrass.

Status: No action taken in 2007 with CRM partners

1.3. **Action:** Work with NRCS and private partners to implement Farm Bill programs beneficial to sage-grouse.

Status: Landowners and permeates are working with Utah Grazing Improvement Program (GIP) to initiate a large scale restoration grazing system for the northern part of Rich County.

1.4. **Action:** Work with public and private partners to research/monitor effects of treatments on sage-grouse populations and habitat.

Status: Steps are being taken to ensure research and monitoring efforts continue in conjunction with Utah State University (USU) to monitor the effects of various actions.

2. **Strategy:** Minimize impacts of agricultural conversion on sage-grouse.

2.1. **Action:** Maintain the CRP program and improve its benefit to wildlife by altering seed mixes to include a greater proportion of ecologically appropriate species.

Status: No action taken in 2007 with CRM partners as no new ground was put into CRP

2.2. **Action:** Maintain or reestablish sagebrush patches of sufficient size and appropriate shape to support sage-grouse between agricultural fields.

Status: No action taken in 2007 with CRM partners as no new ground was put into CRP

2.3. **Action:** Work with NRCS and others to maintain the CRP program and enroll important sage-grouse habitats currently in grain production.

Status: No action taken in 2007 with CRM partners as no new ground was put into CRP

2.4. **Action:** Encourage use of sage-grouse friendly seed mixes, including bunchgrasses, forbs and big sagebrush, in CRP and other grassland plantings.

Status: No action taken in 2007 with CRM partners as no new ground was put into CRP

2.5. **Action:** Rehabilitate old low diversity, CRP fields with ecologically appropriate seed mixes including bunchgrasses, forbs, and big sagebrush.

Status: No action taken in 2007 with CRM partners

2.6. **Action:** Encourage interest and enrollment of key sage-grouse habitats in the Grassland Reserve Program or other relevant Farm Bill programs.

Status: No action taken in 2007 with CRM partners

2.7. **Action:** Work with NRCS and private partners to identify areas important to sage-grouse that should be given higher priority for CRP.

Status: No action taken in 2007 with CRM partners

2.8. **Action:** Work with public and private partners to implement sage-grouse appropriate management of CRP.

Status: No action taken in 2007 with CRM partners

3. **Strategy:** Maintain and/or increase amount of winter habitat in “good” condition in the Southern Subunit through the use of appropriate treatments and/or land management strategies.

3.1. **Action:** Work with public and private partners to manage livestock grazing to increase quality and condition of sagebrush stands, where appropriate.

Status: On-going

3.2. **Action:** Work with public and private partners to avoid sagebrush-reducing grazing in areas important for winter use, where feasible.

Status: On-going

3.3. **Action:** Plant sagebrush seedlings into crested wheatgrass stands, where appropriate and feasible.

Status: Pending

4. **Strategy:** Coordinate fire management practices with public and private partners to prevent loss of crucial sage-grouse habitat and enhance/improve sage-grouse habitat, where appropriate.

4.1. **Action:** Comment on BLM/USFS fire plans.

Status: No action taken in 2007

4.2. **Action:** Re-seed sites, post-burn, with ecologically appropriate seed mixture to prevent the establishment of cheat-grass and other invasive/noxious species.

Status: No action taken in 2007

4.3. **Action:** Use fire management to reduce sagebrush canopy cover and create diverse sagebrush stands in brood-rearing and summer use areas, where appropriate.

Status: No action taken in 2007

5. **Strategy:** Maintain and where possible, improve grass/forb component in the understory in nesting and brood-rearing areas.

5.1. **Action:** Reclaim and/or reseed areas disturbed by treatments when necessary, using seed mixtures with appropriate grasses and desirable forbs.

Status: No action taken in 2007

5.2. **Action:** Restore understory vegetation in areas lacking desirable quality and quantity of herbaceous vegetation where economically feasible.

Status: No action taken in 2007

5.3. **Action:** Work with public and private partners to implement rest-rotation/time controlled grazing management strategies, where appropriate.

Status: Landowners and permittees are working with Utah Grazing Improvement Program (GIP) to initiate a large scale restoration grazing system for the northern part of Rich County.

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

Status: CRM partners implemented projects and Desert Land and Livestock property and BLM partners burned several sites to increase forb diversity.

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

Status: CRM partners are working on monitoring the effects of various treatments across the resource area.

5.6. **Action:** Avoid land use practices that reduce soil moisture, increase erosion, cause invasion of exotic plants, and reduce abundance and diversity of forbs.

Status: No action taken in 2007 to evaluate what these land practices are.

5.7. **Action:** Avoid developing springs for livestock in crucial sage-grouse nesting and brood-rearing areas.

Status: No action taken in 2007 as no springs were developed.

6. **Strategy:** Increase information dissemination and education opportunities for public and private partners regarding sage-grouse ecology and habitat needs.

6.1. **Action:** Develop educational materials (brochures, presentations, etc.) about sage-grouse ecology, habitat needs, and habitat management strategies.

Status: CRM partners are still working on several methods to meet this action.

6.2. **Action:** Share information and educational materials with CRM and other partners through use of printed materials, field tours, websites, reports, and other opportunities.

Status: CRM partners are still working on several methods to disseminate information but work continues through web page and newsletters.

6.3. **Action:** Support involvement of public and private partners in sage-grouse monitoring (lek counts, brood counts, etc.) and management.

Status: No action taken in 2007

7. **Strategy:** By 2016, increase percentage of riparian areas in Rich Co. that are functioning properly and provide suitable for sage-grouse brood-rearing habitat.

7.1. **Action:** Work with public and private partners to implement appropriate grazing management practices in riparian areas.

Status: Landowners and permittees are working with Utah Grazing Improvement Program (GIP) to initiate a large scale restoration grazing system for the northern part of Rich County.

7.2. **Action:** Work with public and private partners to implement appropriate management to reduce amount of noxious/invasive weeds in riparian areas.

Status: Rich County is working on this action with their weed management program.

7.3. **Action:** Modify or adapt pipelines or developed springs to create small wet areas.

Status: No action taken in 2007

7.4. **Action:** Protect existing wet meadows and riparian areas, with a focus on those areas in crucial sage-grouse brood-rearing habitats.

Status: No action taken in 2007

7.5. **Action:** Manage vegetation and artificial structures to increase water-holding capability of areas.

Status: No action taken in 2007

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

Status: No action taken in 2007

8. **Strategy:** Increase practice of time-controlled, seasonally appropriate, rest-rotation grazing.

8.1. **Action:** Encourage small operators to combine herds and allotments to provide restoration with minimal fencing.

Status: Landowners and permittees are working with Utah Grazing Improvement Program (GIP) to initiate a large scale restoration grazing system for the northern part of Rich County.

8.2. **Action:** Facilitate cooperation and communication between private livestock operators.

Status: No action taken in 2007

8.3. **Action:** Provide educational opportunities for private operators about benefits of time controlled grazing.

Status: No action taken in 2007

8.4. **Action:** Provide incentives (habitat project approval from CRM, UDWR, BLM, etc.) for cooperation between private partners.

Status: No action taken in 2007

8.5. **Action:** Avoid dividing allotments into pastures, where possible.

Status: No action taken in 2007

9. **Strategy:** Minimize the impact of excessive predation.

9.1. **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.

Status: No action taken in 2007

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

Status: BLM is doing and will continue to address increase juniper in several locations in nesting and brood rearing habitat.

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

Status: CRM partners are working with USDA Wildlife Services to identify these areas.

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

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

Status: No action taken in 2007

10.2. **Action:** Monitor radio collared and other grouse for West Nile Virus and other disease outbreaks.

Status: USU research continues in the area, no birds were discovered to have any diseases in 2007.

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

11.1. **Action:** Avoid new construction during important periods and re-route lines where technically and economically feasible to avoid impacts. If new power lines must be installed, route them along existing roads if possible.

Status: No action taken in 2007

11.2. **Action:** Schedule maintenance to minimize important periods, however, maintenance in emergency situations will be unrestricted.

Status: No action taken in 2007

11.3. **Action:** Install raptor deterrents when applicable.

Status: No action taken in 2007

12. **Strategy:** Minimize impacts of exotic, invasive, and undesirable plant species.

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

Status: No action taken in 2007

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

Status: No action taken in 2007

12.3. **Action:** Work with existing weed management programs to incorporate sage-grouse habitat needs.

Status: No action taken in 2007

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

Status: No action taken in 2007

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

Status: CRM and partners have identified some of these areas on BLM and private lands within the resource area.

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

This action is being implemented where possible.

13. **Strategy:** Minimize the amount of quality sage-grouse habitat eliminated by residential and commercial land development consistent with private property rights.

No action taken in 2007 as no quality sage-grouse habitat was impacted by development.

13.1. **Action:** Participate with County land use decision makers in identifying key sage-grouse habitats.

Status: CRM partners are still working towards completing this action—on going.

13.2. **Action:** Maintain sagebrush environments of sufficient size and shape around developments in sage grouse habitat.

No action taken in 2007 as no quality sage-grouse habitat was impacted by development.

13.3. **Action:** Encourage the voluntary use of conservation easements and other land protection vehicles with willing sellers in sage grouse habitats.

13.4. **Action:** Educate rural residents about the importance of good grazing management in keeping small tracts weed free and capable of providing wildlife habitat.

14. **Strategy:** By 2016, increase population and habitat monitoring efforts in Rich County.

Status: CRM is working with UDWR to increase monitoring efforts and identifying and searching new areas.

14.1. **Action:** Encourage public and private partners to use techniques from Connelly et al. (2000) “Monitoring of Greater Sage-grouse Habitats and Populations”.

Status: CRM encourages public and private partners to employ existing techniques and increase knowledge of new techniques.

14.2. **Action:** UDWR biologists will coordinate with private partners to identify sage-grouse lek sites and count birds on private lands.

Status: CRM is working with UDWR to increase monitoring efforts and identifying and searching new areas.

14.3. **Action:** UDWR to enlist and coordinate private volunteers and/or other agency biologists search for new leks and conduct lek counts on active leks.

Status: CRM partners are working with UDWR to identify and search new potential sage-grouse lekking areas.

14.4. **Action:** Provide, when possible, reimbursement for volunteers for mileage, etc.

Status: USU applied for a grant to obtain monies to meet this action but the grant was not funded.

14.5. **Action:** Test dead sage-grouse for West Nile Virus and any other parasites/pathogens of importance.

Status: No action taken in 2007 as no dead grouse were found. UDWR works with CRM partners to monitor.

15. **Strategy:** Minimize impacts of oil and gas development on sage-grouse and their habitat.

15.1. **Action:** Coordinate and communicate with BLM to ensure that adequate information/data is available for decision making process.

Status: No report from BLM partners.

15.2. **Action:** Support recommendations that provide for temporal avoidance, minimization of tall structures, and avoid crucial habitat or use areas, where possible.

Status: No report from BLM partners.

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

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.5. **Action:** Reduce cumulative impacts of oil and gas development.

Status: No action taken in 2007 action is pending

15.6. **Action:** Use directional drilling where feasible to minimize surface disturbance, particularly where well density exceeds 1:160 acres.

Status: No action taken in 2007 action is pending

15.7. **Action:** Minimize pad size and other facilities to the extent possible, consistent with safety.

Status: No action taken in 2007 action is pending

15.8. **Action:** Plan and construct roads to minimize duplication.

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.10. **Action:** Use existing, combined corridors where possible.

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.13. **Action:** Avoid aggressive, non-native grasses (e.g. intermediate wheatgrass, pubescent wheatgrass, crested wheatgrass, smooth brome, etc) in reclamation seed mixes.

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.15. **Action:** Minimize width of field surface roads.

Status: No action taken in 2007 action is pending

15.16. **Action:** Avoid ridge top placement of pads and other facilities.

Status: No action taken in 2007 action is pending

15.17. **Action:** Use low profile above ground equipment, especially where well density exceeds 1:160 acres.

Status: No action taken in 2007 action is pending

15.18. **Action:** Avoid breeding/nesting season (March 1 – June 30) construction and drilling when possible in sage-grouse habitat.

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.21. **Action:** Utilize well telemetry to reduce daily visits to wells, particularly where well density exceeds 1:160 acres.

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.25. **Action:** Study, and attempt to quantify, impacts to sage-grouse from oil and gas development.

Status: No action taken in 2007 action is pending

15.26. **Action:** Evaluate need for near-site and/or off-site mitigation to maintain sage grouse populations during oil and gas development and production, especially where well density exceeds 1:160 acres.

Status: No action taken in 2007 action is pending

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

Status: No action taken in 2007 action is pending

15.28. **Action:** Share sage-grouse data with industry to allow for planning to reduce and/or mitigate for impacts.

Status: No action taken in 2007 action is pending

15.29. **Action:** Update setbacks, mitigation requirements, and spatial and temporal avoidance recommendations as new information becomes available.

Status: No action taken in 2007 action is pending

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

16.1. **Action:** Avoid new construction during important periods and re-route lines where technically and economically feasible to avoid impacts.

Status: No action taken in 2007

16.2. **Action:** Schedule maintenance to minimize important periods, however, maintenance in emergency situations will be unrestricted.

Status: No action taken in 2007

16.3. **Action:** Install raptor deterrents when applicable.

Status: No action taken in 2007, pending the outcome of research conducted in San Juan County.

17. **Strategy:** Monitor and manage lek viewing opportunities to make sure they do not become harmful to sage-grouse populations.

17.1. **Action:** Occasionally conduct lek viewing tours to facilitate access to leks.

Status: No action taken in 2007

17.2. **Action:** Provide educational materials to local birding groups on appropriate lek viewing behavior.

Status: No action taken in 2007

17.3. **Action:** Discourage viewing of sensitive lek areas through access restrictions, increased law enforcement patrols, and effective use of trespass laws.

Status: No action taken in 2007

18. **Strategy:** Initiate and/or maintain monitoring and research efforts to address information gaps identified in this Plan and in future adaptive planning efforts.

18.1. **Action:** Explore funding opportunities to further scientific research into information gaps identified in this Plan and in future adaptive planning efforts, as needed.

Status: On going

18.2. **Action:** Participate in the Northern Region UPCD Regional Team to develop

Status: On going

18.3. **Action:** Develop research and/or monitoring protocols to address information gaps identified in this plan and in future adaptive planning efforts.

Status: On going

18.4. **Action:** Cooperate with USU and other academic institutions to establish graduate student projects designed to investigate information gaps identified in this Plan and in future adaptive planning efforts.

Status: On going

e. Habitat Improvements and Completed Conservation Actions

The UDWR, BLM, and private landowners have implemented several habitat improvement projects in the Resource Area targeted at restoring or enhancing sage-grouse habitat. In 2004, approximately 4,100 acres of habitat in the Resource Area were treated and 7,000 acres were treated in 2005. Treatments were aimed at reducing sagebrush canopy and enhancing native grass/forb cover in the understory. Additional habitat improvement projects are planned for 2006. The UDWR anticipates treating 15,425 acres in the Resource Area in 2006.

Table 26. Habitat Improvement Projects Implemented to Mitigate Sage-grouse Threats identified by the Rich County Coordinated Resource Management Sage-grouse Local Working Group, 2007.

ID	Region	LWG	FY start	FY complete	Project Title	Treatment type	Threat code	Acres
423	NR	RICHCO	2006	2007	Woodruff Co-Op	spray re-seed	1,12,15,18	96

conversion

4231	NR	RICHCO	2006	2007	Sage Hollow burn	prescribed burn	1,2,18,21	1858
4232	NR	RICHCO	2006	2007	Sage Creek burn	prescribed burn	1,2,18,21	547
4233	NR	RICHCO	2007	2007	Home Ranch South Aeration	Aerator	1,2,18,21	170
4234	NR	RICHCO	2007	2007	Home Ranch Sec. 14	brush crunch	1,2,18,21	670
4235	NR	RICHCO	2006	2007	Home Ranch North Bullhog	Bullhog	1,2,3,18,21	277

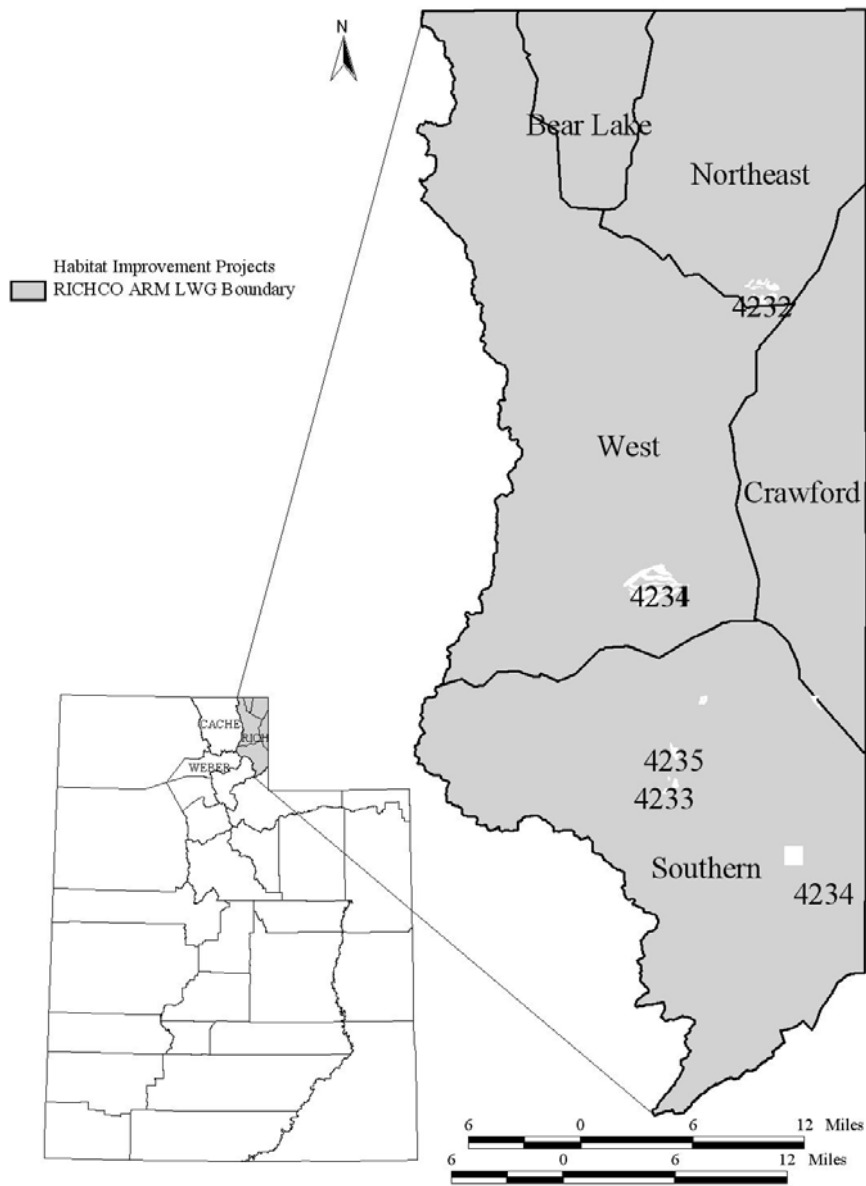


Figure 18. Location of habitat projects completed to mitigate sage-grouse threats in the Rich County Coordinated Resources Management Sage-grouse Local Working Group Resource Area, 2007.