

10. West Desert Adaptive Resource Management Local Working Group

WDARM was organized in 2004 and facilitated by Scott Pratt and later by Sarah G. Lupis. Ms. Lupis also served as the technical writer and compiler of the Plan itself. WDARM is comprised of state and federal agency personnel, representatives from local government, non-profit organizations, academic institutions, private industry, and private individuals. The agencies, organizations, and individuals who contributed to the Plan through their participation in WDARM are identified in the LWG Plan.

a. Local Legal Authority

The Tooele and Juab County Commissions serve as the executive and legislative branches of local government. They have the authority to:

- Protect and promote the health, welfare, and safety of the people of Tooele and Juab Counties.
- Regulate land use, land planning, and quality and protection of natural resources.
- Adopt regulations and policies to exercise such authorities, including the review and approval or denial of proposed activities and uses of land and natural resources.

The Tooele County General Plan (Tooele County 2006) call for the maintenance of open space and preservation of critical wildlife habitat. Specific goals related to protection of wildlife and habitat include:

- To protect native wildlife, development which interferes with wildlife and their habitats should be avoided. Knowledge of wildlife and their habitats will aid in determining designations for appropriate locations and densities of development in those areas.
- The preservation of open space is important to maintain important pristine mountain views, watershed systems, as well as important valley views and general rural character of the County. Open space includes agricultural lands as well as undeveloped hillsides and fields. Land-use plans should result in decreased development pressure on threatened open space and agricultural areas.

The Juab County Zoning Ordinances designate a Grazing, Mining, Recreation, and Forestry District the objectives of which are to:

1. Preserve, insofar as possible, natural scenic attractions, natural vegetation, and other natural features located within the district.
2. Promote tourism, grazing, mining, and the development of natural resources.
3. Promote sanitation and protect and conserve the water supply and other natural resources.
4. Prohibit substandard, urban type developments.
5. Coordinate with programs of public land agencies.

Some forms of development are permitted in this zone (Juab County Planning Commission).

b. Status of Local Population

Plan Area

The West Desert Resource Area is located in Tooele and Juab counties in western Utah (Figure 1). The Resource Area encompasses 5,137,991 acres and is divided into two subunits, Vernon and Ibapah, according to sage-grouse population distribution. The Resource Area is bounded on the south by the Juab County-Millard County line, on the east by Tooele County-Utah County boundary and Highway 6, on the north by I-80, and on the west by the Utah-Nevada border, excluding land managed by the U.S. Department of Defense. The Resource Area is managed primarily by the USFS, BLM, and private landowners. The predominant land use in the area is grazing by domestic livestock.

The West Desert is characterized by hot summers and cold winters. According to National Climate Data Center records, temperatures range from an average high of around 90° F in July to an average low of about 12° F in January. As the name implies, the West Desert is a dry region of the state. Ibapah receives an average of only 9.74 inches of annual precipitation; Vernon receives slightly more with an average of 10.52 inches. Most precipitation comes in the form of snow during January.

Landownership

Most of the Resource Area is public land with smaller areas managed by the state of Utah, the USFS, and private landowners (Table 39).

Table 39. Landownership in the West Desert Adaptive Resources Management Sage-grouse Local Working Group Resource Area, 2007.

Subunit	Landowner	Area (acres)*
Deep Creek	BLM	501,683
Deep Creek	Department of Defense	2,013
Deep Creek	Tribal	93,183
Deep Creek	Private	35,461
Deep Creek	State Trust	34,669
Vernon	BLM	498,233
Vernon	Department of Defense	43,985
Vernon	Tribal	9,558
Vernon	Private	386,159
Vernon	State of Utah	956
Vernon	US Forest Service	179,085
Vernon	State Trust	92,949
Great Salt Lake Desert	BLM	6,941,504,024
Great Salt Lake Desert	USFWS	14,917
Great Salt Lake Desert	Tribal	8,582
Great Salt Lake Desert	State Trust	203,763
Great Salt Lake Desert	State of Utah	5,096

Great Salt Lake Desert	Private	183,598
Great Salt Lake Desert	Department of Defense	1,367,688
*Water accounts for 67,825 acres (1.24%) of the total acreage of the Resource Area.		

Sage-grouse Population Status and Distribution

The UDWR began monitoring sage-grouse populations in the Resource Area by annually counting males on leks in 1968 and 1982, in the Vernon and Deep Creek Subunits, respectively (Figures 28 and 29). Subunits are evaluated separately because there is likely no movement between the two areas (Robinson, unpublished data). When monitoring began in the Vernon Subunit, a total of 44 male sage-grouse were counted on two leks. In 1982, 20 males were counted on one lek in the Deep Creek Subunit. The Vernon Subunit high count was recorded in 2002 when 163 males were counted on six leks. Under the assumption that 75% of all males in the population were observed and counted, and assuming a sex ratio of 1.67 females to each male, the estimated spring population size in the Vernon Subunit was approximately 326 adult birds in 2002. New leks discovered in recent years will likely result in a new high count in the Vernon Subunit as monitoring continues and these new leks are considered active and included in indices. New leks are not considered active until at least two males are observed for two years. Further, population estimates based on lek counts should be treated cautiously due to variance in the methods used to collect lek count data, the assumptions built into the estimate, and other factors. However, as no other population estimation technique is currently available, WDARM will use this currently established method. There is no high count available for the Deep Creek subunit because leks have not been monitored consistently in this area.

In 2005, a total of 143 males were counted on two known active and one new lek in Vernon. In Ibapah, a total of 59 males were counted on one known active, and two new leks. In 2006, two additional new leks were discovered and a total of 190 males were counted on six total leks. Also in 2006, a total of 93 males were counted on five total leks, one of which was discovered that year.

An observation 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 the Vernon Subunit, the number of males per lek still reflects a variable but stable pattern in sage-grouse numbers since the late 1960s. It appears that population monitoring through the use of lek counts has been somewhat inconsistent in the past, although increased efforts in 2005 and 2006 have resulted in six new leks being discovered. As Figures 28 and 29 illustrate, there are years when no counts were made. Lek sites can be difficult to access in some years due to inclement weather and road conditions. Additionally, leks may be located on private or Tribal land and permission to access them may not be available.

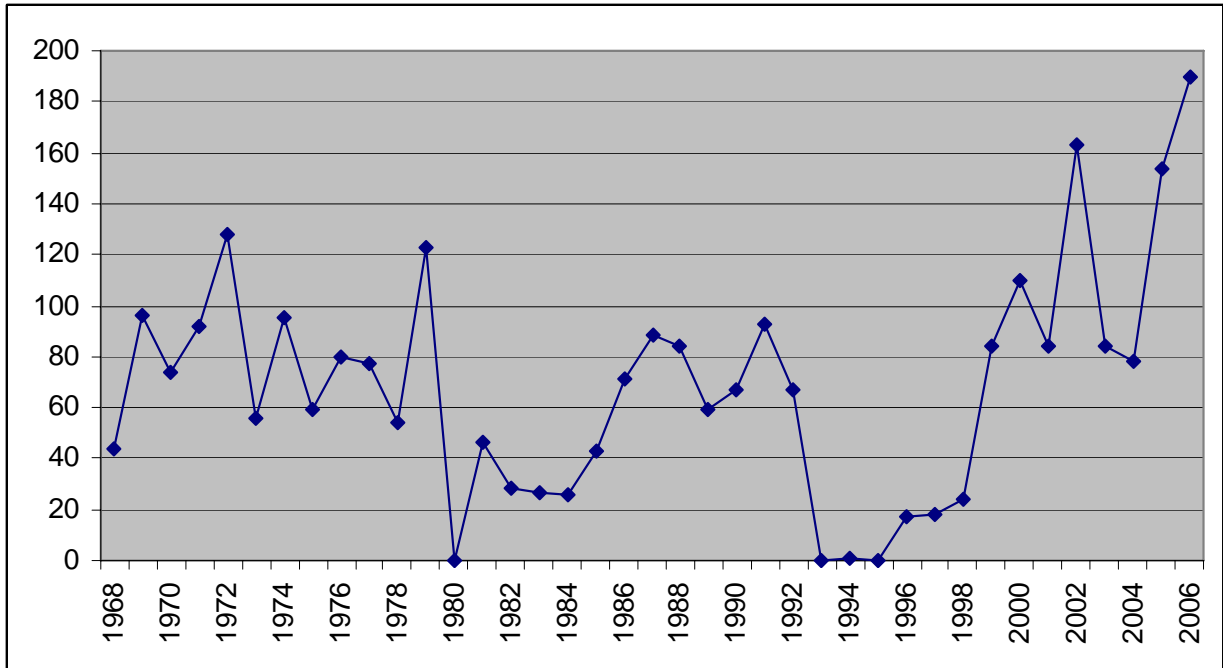


Figure 28. Maximum total number of males counted on all leks in the Vernon Subunit of the Resource Area, 1968-2006.

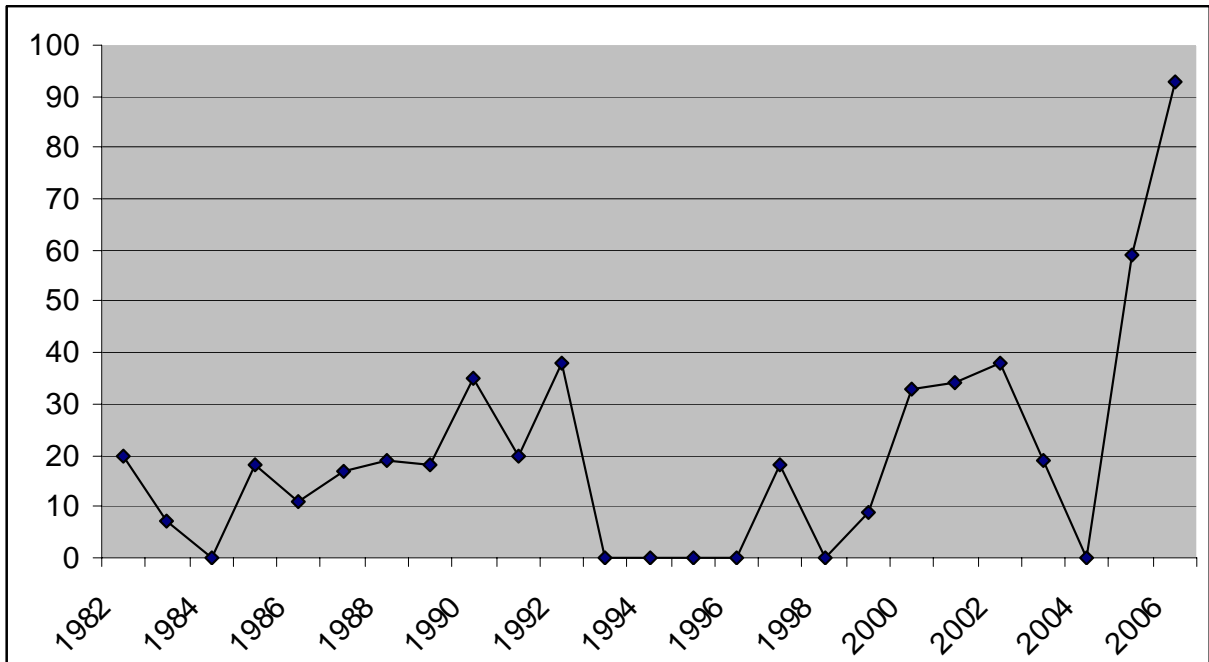


Figure 29. Number of males per lek for the Vernon Subunit of the Resource Area, 1982-2006.

c. Key Ecological Indicators and Threats

WDARM 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 40). They then identified and ranked potential threats (Table 41).

Table 40. Greater sage-grouse key ecological aspects identified in Utah's Tooele and Juab Counties, West Desert Adaptive 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
West Desert	Condition	Breeding Habitat Quality (leks, nesting, early brood-rearing)	Shrub cover and height; availability of open patches; understory height and cover	shrub cover <15% or >25% and <30 or >80 cm tall; no open patches; understory cover <15% and ,18 cm in height.	shrub cover <15% or >25% and <30 or >80 cm tall, open patches sparse; understory cover <15% and <18 cm in height.	15-25% shrub cover and 30-80 cm in height; open patches abundant, understory cover >15% and height >18 cm	not identified.	lacking in understory cover open spaces (shrub cover too dense or absent in many locations).	Fair	Good	6-Feb	16-Jul
West Desert	Condition	Late Summer/Fall Habitat Quality	Sagebrush cover; availability of insect food resources; availability of perennial water sources; availability of forbs.	Sagebrush cover <10% or >25%; no insect food resources; no perennial water sources; no forbs.	Sagebrush cover <10% or >25%, insect food resources lacking; few perennial water sources; few forbs available.	Sagebrush cover 10-25%; insect food resources abundant; perennial water sources abundant; sufficient forbs available.	not identified.	Lacking in insects and water; lack of sagebrush cover in Ibapah.	Fair	Good	6-Feb	16-Jul
West Desert	Condition	Winter Habitat Quality	Sagebrush canopy cover; height above snow.	sagebrush <10 or >30% cover and/or never above snow.	sagebrush <10 or >30% cover and/or rarely above snow	sagebrush 10-30% cover and mostly above snow.	sagebrush 10-30% cover and always above snow.	areas used by radio-collared birds are generally on southwest slopes and sagebrush is generally above snow.	Good	Good	6-Feb	16-Jul
West Desert	Size	Population Distribution	Distribution of leks	Vernon: Anything less than current distribution; Ibapah: Current distribution	Vernon: Current distribution; Ibapah: Current distribution plus leks west of the highway.	Vernon: Current distribution plus leks in Rush Valley; Ibapah: "Fair" plus leks in on the bench.	Vernon: "Good" plus leks in area of potential habitat; Ibapah: "Good" plus all of Ibapah Valley.		Fair	Very Good	6-Feb	16-Jul
West Desert	Size	Population Size	3-year running average maximum number of males	Vernon <200; Ibapah <50	Vernon 200-350; Ibapah 50-100	Vernon 350-500; Ibapah 100-200	Vernon 500+; Ibapah 200+		Poor	Good	6-Feb	16-Jul

			counted on leks									
West Desert	Size	Population Size	Number of active leks	Vernon <4; lbapah <2	Vernon 4-8; lbapah 2-4	<i>Vernon 8-16; lbapah 5-7</i>	Vernon 16+; lbapah 7+		Fair	Good	6-Feb	16-Jul

Table 41. Relative importance/contribution of threats to sage-grouse populations in Utah’s Tooele and Juab Counties, West Desert Adaptive 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).

WDARM							
Threat	Reduced Population Size	Reduced Population Distribution	Reduced Breeding Habitat Quality	Reduced Late Summer/Fall Habitat Quality	Reduced Winter Habitat Quality	Reduced Connectivity of Seasonal Habitat Types	Reduced Connectivity of Populations & Sub-populations
Altered Water Distribution	-	VH	VH	H	L	L	H
Drought and Weather	M	H	M	M	L	L	-
Existing and New Fences	-	M	M	M	-	M	-
Home and Cabin Development	-	M	M	M	M	M	M
Power lines and Other Tall Structures	-	M	M	M	-	M	-
Renewable and Non-renewable Energy Development	-	M	M	M	-	L	L
Roads	-	M	M	M	M	M	M
Incompatible Vegetation Management	H	M	H	L	M	M	M
Poaching	H	L	-	-	-	-	-
Fire	-	-	VH	VH	VH	H	M
Incompatible Livestock Grazing	-	-	H	H	L	L	L
Recreation	VH	VH	H	M	VH	M	M
Invasive/Noxious Weeds	-	-	VH	VH	H	H	M
Parasites and Disease	M	M	-	-	-	-	-
Predation	VH	M	-	-	-	-	-
Pinyon-Juniper Encroachment	-	-	H	H	H	H	-
Conversion to Agriculture	-	-	L	L	-	-	-

d. Status of Conservation Strategies and Actions

This section summarizes efforts made by individual and partners to address threats and strategic actions for the West Desert Vernon Greater Sage-grouse Local Conservation Plan July 2007. This adaptive plan is in effect until the year 2016. WDARM 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 completion. For the complete list of threats identified by the WDARM group, see page 62 of the conservation plan located on line at

<http://utahbcpc.org/files/uploads/westdesert/WDARMSAGRPlanFinal.pdf>

1. Strategy: Maintain and increase coordination and communication with agency and private partners.

1.1. Action: Participate with and coordinate with the Central Region UPCD, Tooele County Natural Resource Group, Deep Creek Watershed partnership, Goshute Tribe, Tooele and Juab County Commissioners, SCDs, UFBF, and any other groups, as necessary.

Status: WDARM members regularly attend (Utah Partners for Conservation and Development) UPCD meetings to coordinate and discuss projects. Attend watershed/SCD, tribal and county commission meetings to discuss projects and coordinate efforts.

1.2. Action: Hold annual field tours to review projects, evaluate on-the-ground progress on the Plan, and share ideas.

Status: A field tour was held in May 2007 to review and look at future project areas and previously implemented projects within the Resource area.

1.3. Action: Develop educational material appropriate for a broad recreationist audience to develop sensitivity to issues identified in the Plan.

Status: WDARM members in conjunction with UDWR posted no hunting signs in key areas throughout the resource area and in sporting good stores in the Tooele area.

2. Strategy: By 2010, reduce pinyon/juniper stands from sage-grouse use areas.

2.1. Action: Remove pinyon/juniper trees from priority areas where action is warranted.

Status: WDARM partners treated encroaching P/J in sage valley clover creek, Ibapah west and east slopes of the Onaqui mtns. Bennion Ranch, Goshute Reservation, Base of the Stansbury mtns, and other areas, see table and project map

2.2. Action: Revisit and retreat pinyon/juniper removal sites, as needed.

Status: WDARM partners treated encroaching P/J in sage valley, Lee and Round Canyon, Bennion Ranch, and other areas, see table and project map

3. Strategy: By 2016, increase brood-rearing habitat quality in the Resource Area.

3.1. Action: Work with the NRCS and private partners to develop projects that would increase brood-rearing habitat quality in the Resource Area.

Status: WDARM members worked on brood-rearing projects in West middle and east pastures in Ibapah valley and then on the Goshute Reservation and a spike treatment and Bennion Ranch.

3.2. Action: Work with agency partners to develop projects that would increase brood-rearing habitat quality in the Resource Area.

Status: WDARM partners meet in conjunction with UPCD partners to identify and discuss projects within the Resource Area—these projects are planned through 2010.

3.3. Action: Work with private and public partners to monitor effects of habitat improvement projects on vegetation and sage-grouse habitat use.

Status: WDARM partners UDWR and BLM collect range trend data and ecological site inventory on treated projects.

3.4. Action: Where appropriate, reduce sagebrush canopy cover with mechanical or chemical treatments and reseed with ecologically appropriate seed mixes.

Status: WDARM partners treated sagebrush around Bennion Ranch, Sage Valley, Goshute Reservation., Ibapah west and east slopes, Rush Valley, the west slope of the Oquirrh.

4. Strategy: Thru 2016, maintain and protect winter habitat distribution and quality in the Resource Area.

4.1. Action: Promote protection of winter habitat from fire.

Status: WDARM partners treated areas in Ibapah west and east slopes, Rush Valley, West slope of the Onaqui Mtns

4.2. Action: Promote protection of winter habitat from OHV trail development and activities.

Status: UDWR made recommendations to the BLM to key OHV users to stay out of brooding and nesting areas north of the little sahara recreation area.

4.3. Action: Update maps of crucial winter habitat areas and monitor winter habitat use areas for presence of sage-grouse.

Status: USU completed research project in 2006 identifying key wintering areas data was then used in the UPCD database to identify and expand key focus areas.

4.4. Action: In the event of fire, aggressively rehabilitate sites to prevent domination of invasive/noxious weed communities.

Status: WDARM partners treated the St. John, Cedar Fort, Quincey, Kimball, M&M, etc. within the resource area.

5. Strategy: Reduce the threat of conversion of sagebrush stands to invasive/noxious weed communities.

5.1. Action: Seed green-strips and/or fire breaks in crucial areas (to be identified).

Status: WDARM partners treated sagebrush Ibapah west and east slopes, Rush Valley, (see table and Map)

5.2. Action: Identify areas where fire suppression should be promoted to protect crucial habitat.

Status: WDARM partners will be working in Ibapah area, south slope of the Sheep Rock mtns, North Slope of the Gilson Mtns. West side of Onaqui mtns.

5.3. Action: Maintain and/or increase fuels reduction projects in crucial areas (to be identified)

Status: WDARM partners will be working in Ibapah area, Onaqui mtns, Stansberrys, Sheep Rock mtns.

5.4. Action: Work with agency and private partners to conduct vegetation treatments that restore functional plant groups to sagebrush communities.

Status: Ongoing

5.5. Action: Coordinate with noxious/invasive weed Coordinated Weed Management Area (CWMA) personnel.

Status: WDARM partners participate in the Squarrose knapweed CWMA. BLM participates in all the CWMAs.

6. Strategy: Minimize the impact of excessive predation.

6.1. 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: WDARM partners removed poles in the Benmore pasture area.

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

Status: See P/J projects listed above

6.3. Action: Maintain or increase site-specific predation management to consider all predator species (especially common ravens and red fox) where necessary and appropriate.

Status: WDARM partners (WS) aerial gunning of foxes and coyote, removed raven nest and baited nesting areas with DRC1339 eggs—contact WS for more info.

6.4. Action: Initiate research on direct and indirect impacts of predation during each sage-grouse life history phase.

Status: No action taken 2006/07

6.5. Action: Coordinate management and research with USDA-WS.

Status: No action taken 2006/07

7. Strategy: Work with public and private partners to implement livestock management plans that address seasonal needs of sage-grouse and livestock operations.

7.1. Action: Incorporate appropriate livestock management in vegetation/habitat treatment projects.

Status: WDARM partners work with livestock owners and operators to adjust and rest treated projects and modify grazing plans. Any treatment sites that were re-seeded were rested for a minimum of 2 growing seasons.

7.2. Action: Initiate research on the direct and indirect effects of livestock grazing on various aspects of sage-grouse life history.

Status: No action taken 2006/07

7.3. Action: Work with public and private partners to evaluate livestock management in crucial sage-grouse use areas.

Status: WDARM partners works with livestock owners and operators to adjust and rest treated projects and modify grazing plans.

8. Strategy: By 2016, increase population and habitat monitoring efforts in the Resource Area.

8.1. Action: Encourage public and private partners to use techniques from Connelly et al. (2003) “Monitoring of Greater Sage-grouse Habitats and Populations”

Status: WDARM partners lek surveys, range trend surveys and ecological site inventories.

- 8.2. Action:** In 2007, UDWR biologists will coordinate with Goshute Tribe biologists to identify sage-grouse lek sites and count birds on Tribal lands.
Status: WDARM partners (USU/EXT and UDWR) count know leks in conjunction with the Tribe.
- 8.3. 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: WDARM partners initiated lek searches in WDARM identified areas in 2007.
- 8.4. Action:** Through 2016, test dead sage-grouse for West Nile Virus and any other parasites/pathogens of importance.
Status: No dead grouse found 2006/07 but WNV is present in Tooele County.
- 8.5. Action:** Secure funding to support additional research and monitoring on issue as identified in the Plan.
Status: WDARM partners submitted proposals for future research in 2007.
- 8.6. Action:** Increase outreach with private landowners to facilitate greater communication about sage-grouse distribution, ecology, and management.
Status: WDARM partners participate in landowner meetings throughout the county; develop a quarterly news letter that is sent out to various groups. Landowners also participated in field tours and lek surveys.
- 9. Strategy:** Encourage use of this Plan in local, county, state, and federal natural resources planning efforts.
- 9.1. Action:** Provide the Plan to all appropriate local, county, state, and federal natural resource agencies, departments, and personal.
Status: WDARM partners distributed the plan to all partners and other agencies and originations in 2007 the plan is also on the CBCP web page.
- 9.2. Action:** Review local, county, state, and federal plans and projects with the potential to impact sage-grouse and/or sagebrush habitats in the Resource Area.
Status: Ongoing through UPCD meetings and UPCD identified projects.
- 9.3. Action:** Participate in local, county, state, and federal natural resource planning efforts, committees, and working groups.
Status: Ongoing through UPCD meetings and UPCD identified projects.
- 10. Strategy:** Minimize impacts of oil and gas development on sage-grouse and their habitat.
- 10.1. Action:** Coordinate and communicate with BLM and USFS to ensure that adequate information/data is available for decision making process.
Status: WDARM partners review all proposed projects and provide comments to avoid sage-grouse issues.
- 10.2. Action:** Support recommendations that provide for temporal avoidance, minimization of tall structures, and avoid crucial habitat or use areas, where possible. **Status:** WDARM partners review all proposed projects and provide comments to avoid sage-grouse issues.
- 10.3. Action:** Reduce fragmentation of sage-grouse habitat by oil and gas development activities.
Status: No action taken 2006/07
- 10.4. Action:** Minimize disturbance to sage-grouse associated with oil and gas

development.

Status: No action taken 2006/07

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

Status: No action taken

10.6. Action: Share sage-grouse data with industry and encourage planning to reduce and/or mitigate for impacts.

Status: No action taken 2006/07

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

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

Status: Done through UPCD meetings and UPCD identified projects.

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

Status: Done through UPCD meetings and UPCD identified projects.

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

Status: No action taken 2006/07

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

Status: Done through UPCD meetings and UPCD identified projects.

11.5. Action: Work with public and private partners to maintain rural economies and viable ranching and agricultural enterprises.

Status: Done by participating through UPCD farm bill and GIP programs.

12. Strategy: By 2016, maintain or increase distribution and quality of mesic sites available to sage-grouse during summer months.

12.1. Action: Work with public and private partners to develop mesic sites for sage-grouse associated with existing or new water developments.

Status: No action taken 2006/07 some planning initiated.

12.2. Action: Develop project planning tools (both printed material and on-the-ground examples) to illustrate successful, wildlife-friendly, water developments.

Status: No action taken 2006/07 some planning initiated.

13. Strategy: Maintain or improve breeding habitat quality in the Resource Area.

13.1. Action: Where appropriate, conduct vegetation manipulation to maintain open areas on lek sites.

Status: No action taken 2006/07 some planning initiated.

13.2. Action: Work with public and private partners to maintain nesting cover in crucial breeding areas.

Status: See sagebrush and p/j projects mentioned above.

13.3. Action: Work with public and private partners to minimize disturbance to crucial areas during lek and nesting seasons.

Status: Done through UPCD meetings and UPCD identified projects.

14. Strategy: Minimize the negative impacts of recreation on sage-grouse populations and their habitats.

14.1. Action: Work with local, county, state, and federal planners and managers to minimize impacts of OHV trails and undeveloped roads on crucial sage-grouse habitat.

Status: WDARM partners review all proposed projects and provide comments to avoid sage-grouse issues. USFS through the NEPA process is eliminating non system roads and trails.

14.2. Action: Work with law enforcement agencies to enforce existing and new laws, ordinances, and regulations specific to hunting/poaching, OHV recreation, and trespassing.

Status: WDARM partners posted signs to address poaching issues, identified sensitive areas where to avoid trails

14.3. Action: Work with OHV recreation groups to develop greater sensitivity and awareness to issues identified in this Plan.

Status: WDARM partners identified sensitive areas where to avoid trails and recreation uses. Worked with County trails committee to identify these areas. Worked with organized motorcycle groups to avoid recreation around critical nesting areas little Sahara.

14.4. Action: If appropriate, work with public and private partners to restrict lek viewing opportunities during crucial time-periods and in crucial areas.

Status: Lek locations are not advertised, private landowners restrict access.

e. Habitat Improvements and Completed Conservation Actions

Several habitat improvement projects in the Resource Area have been implemented by WDARM partners and were targeted at restoring or enhancing sage-grouse habitat. Treatments were generally aimed at reducing sagebrush canopy and enhancing native grass/forb cover in the understory. Additional habitat improvement projects were planned for 2006. The UPCD state and regional teams are currently addressing habitat issues with their statewide watershed initiative which focuses on the protection, management, and/or restoration of important sagebrush-steppe habitats. The UPCD is made up of a variety of partners including state and federal land management agencies, private landowners, universities and extension services, soil conservation districts, and county and local entities. The Central Region UPCD team has delineated focus areas within the Resource Area based upon critical sage grouse habitats, and is currently working on identifying projects and acquiring funding to implement restoration activities. Habitat restoration projects involving the reduction of expanding pinyon-juniper forests into sagebrush habitats have already begun in the Vernon subunit. Likewise, a project to enhance sage grouse wintering habitat on BLM lands was completed in the Deep Creek subunit in 2005. Several Big Game Range Trend sites were established in 2006 to monitor treatments. Most of these projects have been a combination of fence, water development, fuels reduction projects, and brush management. The locations of some projects conducted in the Resource Area are illustrated in Figure 32; acreage of past and proposed treatments is listed in Table 42.

Table 42. Habitat improvement projects completed to mitigate sage-grouse threats identified by the West Desert Adaptive Resources Management Sage-grouse Local Working Groups, 2004-2007.

Year	Project Name	Description	Acres
2005	Middle Pasture	Aerator, broadcast, and aerial seeding	1000
	Clover Creek	Bullhog, aerial seeding	400
	Iosepa	Bullhog, aerial seeding	400
	Bennion Ranch	Lop and scatter	150
2006	Sage Valley	Harrow, broadcast seeding	500
	Goshute Chaining	2-way chaining, aerial seeding	800
	Bennion Ranch	2-way chaining, aerial seeding	500
	Bennion Ranch	Spike	160
	St. John	Aerial seed, 1-way chain	1200
	East Onaqui	Harrow, broadcast seeding	200
2007 (funded)	East Onaqui	Bullhog, aerial seeding	500
	Big Hollow	Bullhog, aerial seeding	600
2007 (proposed)	Sage Valley	Lop and scatter	1300
	Clover Creek	Chaining and harrow, reseeding	550
	Ibapah	Harrow, broadcast seeding	250
	East Pasture	Harrow, broadcast seeding	150
	Stansbury Mtns. West slope	Bullhog, Rx burn	60

Spanish Fork District	Noxious weed control	650
Big Hollow	PJ thinning, reseeded	55

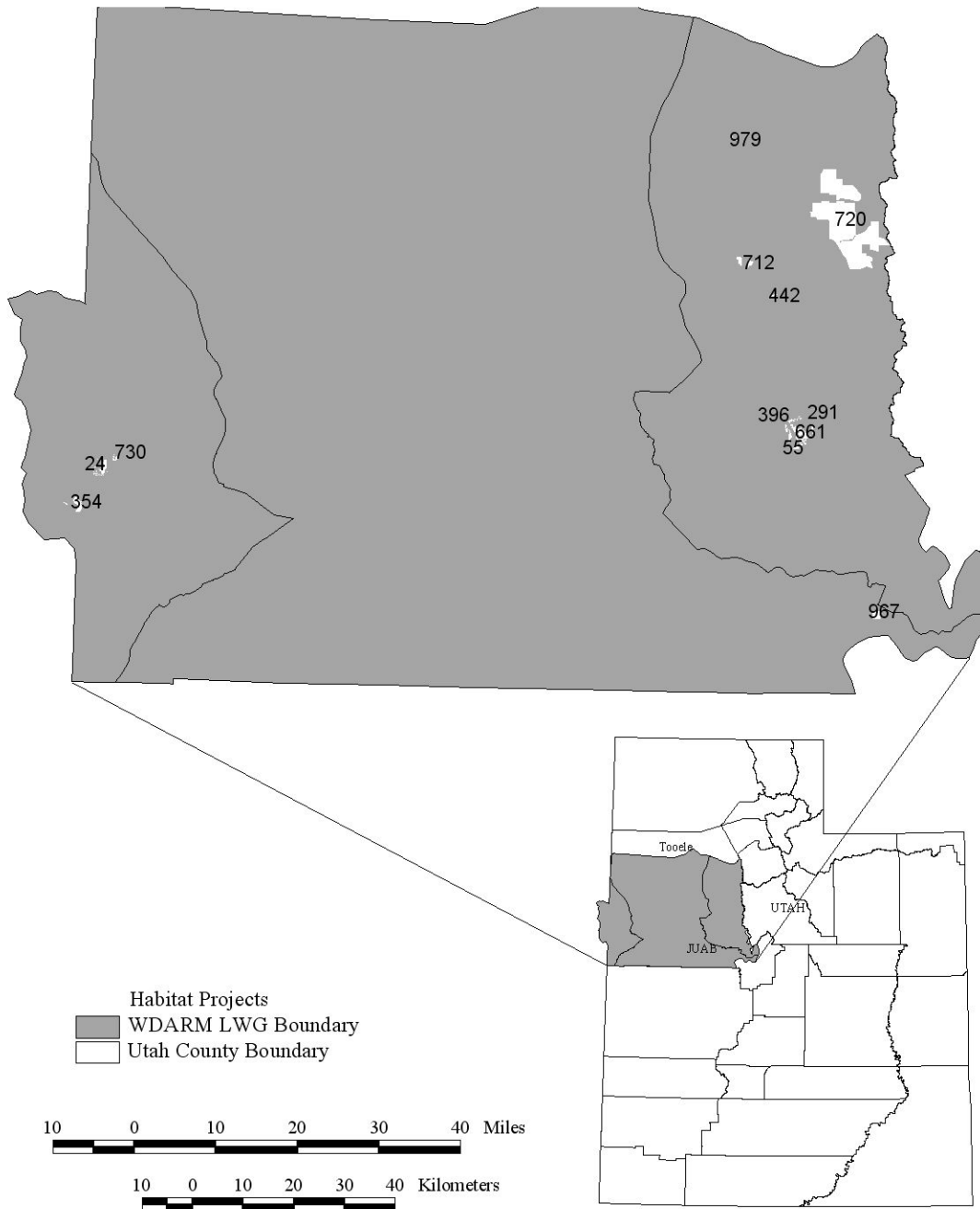


Figure 32. Location of habitat improvement projects within the West Desert Adaptive Resources Management (WDARM) Sage-grouse Local Working Group Resource Area, 2005-2007.