Massacre PMU Habitat Risk Assessment Matrix Draft!!! (All final comments from 6 August 2002 meeting not yet incorporated)

RISK FACTOR: Habitat Degradation	Contributing Management Actions	Risk (Y/N)	H/M/L	Conservation Measures	Responsible parties	Monitoring (BLM)	Timeline (BLM)
1) Temporary conversion of sagebrush to perennial herbaceous (R-1)	Wildland and prescribed fires/herbicide on areas with strong native understory	Y	H	Emergency rehabilitation measures after fire, use of native seed mix when possible to enhance sage grouse habitat, keeping cows off for two growing seasons. Full suppression on R-0 sites (can shift to R-1 easily).	BLM	-Photo-points -Site inspection to ensure seed mix appropriate and effective	-Every 3-5 years -Annually
2) Long-term/permanent conversion of sagebrush to perennial herbaceous (R-4)	Non-native species seedings	Y	L	Where possible use native seed mixtures appropriate to the soil, climate and land form.	BLM	-Photo-points -Site inspection to ensure seed mix appropriate and effective	-Every 3-5 years -Annually
3) Conversion of sagebrush to annual herbaceous (R-4)	Fire on areas with weak understory, usu. low elevations	Y	H	Emergency rehabilitation measures, site specific seeding or other treatment particularly on low elevation sites and/or south facing slopes. Increase priority for fire suppression on R-2 sites to prevent shift to an R-4.	BLM	-Photo-points -Site inspection to ensure seed mix appropriate and effective	-Every 3-5 years -Annually
	Noxious weed invasion	Y	M	Aggressively treat noxious weed and other invasive plants where they threaten quality sage-grouse habitat	BLM, local counties	GPS and track polygon size	Monitor treatments annually until controlled/eliminated
4) Conversion of sagebrush to juniper (R-3)	Lack of fire/disturbance	Y	H	Mechanical treatment or prescribed fire. Current planning efforts within the BLM, AMP revisions, current and projected rangeland projects	BLM	Photo-points	Re-shoot photo points up to twice a year. 5 year maximum?
5) Loss of sagebrush acres	Mining	Y	L	Avoid surface occupancy within 2 miles of known/occupied sage-grouse use areas, consider off site mitigation. Reclaim mining areas after disturbance with native seeding.	BLM	-Photo-points -Site inspection to ensure seed mix appropriate and effective	-Every 3-5 years -Annually

5) continued	Urban and agricultural expansion	Y	L	Retain public lands that contain leks or other important habitat unless acquisition would result in obtaining equal or better habitat.	Local and state governments	???	???
6) Conversion of forb meadows to mat grass meadows	Underutilization	Y	L	In areas that have the potential to produce mat grass meadows and that are currently unallotted to livestock or horses, prescriptive graze or burn, e.g. Bicondoa (Bighorn sheep), Highrock Canyon (Horses).	BLM	Photo-points	Every 5 years for grazing. Annually every 3-5 years after a prescriptive burn
	Lack of fire	Y	L	Where appropriate, reintroduce fire onto landscape, * Guideline 11 for fire, e.g. Massacre Ranch R_x graze and burn.	BLM	Photo-points, GPS fire size	Re-shoot photo points up to twice a year
7) Conversion of meadows to bare ground	Overutilization, usually associated with water sources	Y	M	Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d). * Standard 2 for Streams and 4 for Riparian and Wetland sites, Guideline 16 for utilization levels.	BLM	Photo-points, greenlines, stubble height and soil alteration limitations	3-5 years for photo-points and greenlines ,up to several times a season for stubble height and soil alteration.
8) Conversion of meadows to upland vegetation	Reduced functionality associated with headcutting, soil alteration (roads, heavy grazing), or confinement of floodplain (roads)	Y	H	Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d). No new roads in riparian areas, where a problem consider relocating. * Guideline 16 for utilization levels.	BLM, permittees	Photo-points, greenlines, stubble height limitations, Rangeland Health Assessments (RHA's)	3-5 years for photo-points and greenlines, up to several times a season for stubble height, RHA's 1 in 15 years.

9) Insufficient stubble for successful nesting cover	Short term overutilization	Y	M/H	Temporary livestock exclusion (rest), change in livestock and horse use period or intensity of use, changes in salting or watering use areas. * Standard 5 for biodiversity, Guidelines 5, 8,9,11,16.	BLM, permittees	Utilization or stubble height limitations	Up to several times a season
10) Low vigor herbaceous vegetation (poor nesting cover & spring forage, (R-2)).	Lack of fire/disturbance in Mountain big sagebrush sites	Y	M	Use of prescribed fire, mechanical or chemical disturbance, change in grazing prescription. * Standard 1 for upland soils and standard 5 for bio-diversity, Guidelines 5, 8,9,11,16.	BLM, permittees	Photo-points and long- term trend	Every 3-5 years for photo-points and 1 in 10 years for trend
	Long term overutilization	Y	M	Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d). * Standard 4 for Riparian and Wetland sites, and Standard 5 for Biodiversity, Guidelines 4, 8, 9,16.	BLM, permittees	Utilization compliance and long term trend	1 in 3 years for utilization and 1 in 10 years for trend
	Annual, long duration spring season use (March April, May)	Y	M	Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d).* Guidelines 4, 8, 9, and 16.	BLM, permittees	Utilization compliance and long term trend	1 in 3 years for utilization and 1 in 10 years for trend
	Noxious weed/cheatgrass encroachment	Y	M	Aggressively treat noxious weeds and other invasive plants where they threaten quality of sage grouse habitat. * Guideline 10 for control of noxious weeds which may include grazing or fire management.	BLM, local counties	GPS and track polygon size	Monitor treatments annually until controlled
11) Lack of understory for sage grouse nesting cover and spring forage (R-2)	Lack of fire/disturbance in Wyoming and Lahontan sagebrush sites	Y	L/M	Change in grazing prescription. * Standard 5 for biodiversity, Guideline 11.	BLM	Photo-points and long- term trend	Every 3-5 years for photo-points and 1 in 10 years for trend
	Historic overutilization			Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing management will be made pursuant to 43 CFR 4180.1(d). Brush beating, mechanical or other disturbance or re-seeding also options.	BLM, permittees	Utilization compliance and long term trend	1 in 3 years for utilization and 1 in 10 years for trend
12) Low density or lack of	Lack of diverse habitats for favorable	Y	L	Where livestock grazing results in utilization determined to be detrimental to habitat quality, changes in grazing	BLM, permittees	Utilization compliance and	1 in 3 years for utilization

appropriate insects for early brood rearing forage	insects, e.g. forb areas.			management will be made pursuant to 43 CFR 4180.1(d).		long term trend	and 1 in 10 years for trend
13) Lack of access to water	Spring developments that capture all water and are inaccessible to sage-grouse	Y	L	Construct new spring developments to maintain their free-flowing nature and wet meadow characteristics, install wildlife escape ramps in new water troughs, retrofit existing troughs with wildlife escape ramps. *Guideline 13.	BLM	Project inspections	1 in 5 years
	Recreational camping at water	Y	L	Prohibit development of new campgrounds in riparian or wet meadow areas, apply (as necessary) seasonal or area closures in key sage-grouse areas.	BLM, NDOW, local counties	Law enforcement patrols	Opportunistically

RISK FACTOR: **Disturbance**	**Contributing Management Actions**	**Risk (Y/N)**	**H/M/L**	**Conservation Measures**	**Responsible parties**	**Monitoring (BLM)**	**Timeline (BLM)**
14) Human activity during breeding and nesting, or at watering sites	Mining	Y	L	Avoid surface occupancy within 0.6 miles of known breeding sites/leks. Avoid energy or mineral associated facilities within 0.25 miles of leks. Off site mitigation may be considered in evaluating minerals activities on a case-by-case basis.	BLM	Lek surveys	Monitor lek site at minimum 2 in 5 years

	Roads	Y	M	Except in emergency situations, limit activities in known/occupied sage grouse habitat to avoid adverse impacts ...related to rights of way. Do not authorize new rights of way within 1/4 mile of leks.	BLM, State	Lek surveys	Monitor lek site at minimum 2 in 5 years	
	Urban expansion	Y	L	Retain public lands that contain leks, nesting, brood-rearing or other important habitats for sage-grouse unless disposal would result in acquisition of equal or better habitat or lead to better habitat connectivity.	BLM Local and State governments	Lek surveys	Monitor lek site at minimum 2 in 5 years	
	Recreation	Y	L	Prohibit development of new campgrounds in riparian or wet meadow areas, apply as necessary seasonal or area closures in key sage-grouse areas.	BLM, local county	Lek surveys, law enforcement patrols	Monitor lek site at minimum 2 in 5 years, law enforcement patrols opportunistically	
15) Additional predator perch sites	Juniper encroachment, lack of fire	Y	M	Use mechanical treatment or prescribed fire to reduce juniper. * Guideline 11.	BLM, private land owners	Photo-points	Re-shoot photo points up to twice a year. 5 year maximum?	
	Pasture/Allotment fences, spring exclosures, wells, troughs	Y	M	Construct new livestock facilities (troughs, fences, corrals) at least 0.6 miles from leks, restrict new water developments, use “perch guards” on fence posts and rock cribs, and construct future livestock exclosures large enough to minimize raptor predation. *Guideline 4.	BLM	Lek surveys, project inspections	Monitor lek site at minimum 2 in 5 years, inspect projects 1 in 5 years	

	Transmission lines, communication sites	Y	M	Avoid placing new structures within 2 miles of leks (try to place near existing corridors), avoid visiting sites near leks at dawn or dusk during breeding season, on a case-by-case basis off site mitigation may be considered.	BLM, California and Nevada Public Utilities Commissions (CPUC and NPUC)	Lek surveys	Monitor lek site at minimum 2 in 5 years
16) Artificially high predator population	High speed roads/road kill e.g. attracting ravens	Y	L	Do not authorize new rights-of- ways within 2 miles of leks.	BLM, NDOT?	Lek surveys	Monitor lek site at minimum 2 in 5 years
	Urban expansion, e.g. “ranchettes”	Y	L	Retain public lands that contain leks, nesting, brood-rearing or other important habitats for sage-grouse unless disposal would result in acquisition of equal or better habitat or lead to better habitat connectivity.	BLM	Lek surveys	Monitor lek site at minimum 2 in 5 years
	Agricultural expansion	Y	L	Retain public lands that contain leks, nesting, brood-rearing or other important habitats for sage-grouse unless disposal would result in acquisition of equal or better habitat or lead to better habitat connectivity.	BLM	Lek surveys	Monitor lek site at minimum 2 in 5 years
17) Human-caused fire	Dispersed recreation and roads	Y	L	Limit development of new roads into known/occupied sage-grouse habitat. Do not authorize new rights-of-ways within 2 miles of leks. Aggressive initial attack response to all fires.	BLM, NDOT	Use lookouts, ground spotters, lightning maps, lek surveys	Annually during fire season, monitor lek site at minimum 2 in 5 years
Explanations/comments				* Rangeland Health Standards and Guidelines for California and Northwestern Nevada, ** Directly out of WAFWA guidelines.			

				CFR 43 4180.1 Fundamentals of Rangeland Health BLM Manual 6840 Cowhead/Massacre MFP Tuledad/Homecamp MFP Various HMP's, AMP's			