

Condition description tables for Range analysis.

Arkansas C&H Allotment.

EXISTING CONDITION	DESIRED CONDITION
<p>Range Management: 4 pasture “deferred rotational” system. On date June 1, off date September 30. 90 cow/calf pairs permitted.</p>	<p>Range Management: Keep dates, numbers and AUMs the same. Rotate grazing schedule on the pastures. Develop water and pipe to tanks in the uplands. Manage for better distribution of the cattle and utilization of the upland forage.</p>
<p>Vegetation:</p> <p>High Pasture: Good grassland species diversity, structure, and mix of native grasses and forbs. Multiple Aspen age classes present including late successional communities with healthy native understory. Riparian graminoids and forbs present in proportion to moisture availability. CF transect located in lower seral/transitional community site with 2004 bare soil and litter amounts higher than desired.</p> <p>Low Pasture: Good to excellent mix of native grasses, forbs, shrubs, and structure in the grassland. 2004 CF data shows a decrease in non-native crested wheatgrass. Some areas have increased % of fringed sage probably resulting from past drought period. Healthy and diverse mix of riparian graminoids, woody species, and forbs present in mesic meadow and riparian areas</p> <p>Squaw Pasture: Good mix of native grasses, forbs, shrubs, and structure in the grassland. Healthy and diverse mix of riparian graminoids, woody species, and forbs present in mesic meadow and riparian areas. Multiple Aspen age classes present including late successional communities with healthy native understory. Some spots of Canada thistle along Squaw Creek.</p> <p>Weldon Pasture: Good to excellent mix of native grasses, forbs, shrubs, and structure in the grassland. Healthy and diverse mix of riparian graminoids, woody species, and forbs present in mesic meadow and riparian areas. Areas of Canada thistle present.</p>	<p>Vegetation:</p> <p>High Pasture: Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Manage to decrease bare soil and litter amounts where needed. Overall pasture is moving toward or meeting DC.</p> <p>Low Pasture: Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Manage for improved livestock distribution and upland utilization to decrease use in spots along Droney Gulch and Placer Creek. A few spots in Droney Gulch and Placer Creek are not meeting DC and would benefit from less recreation pressure in riparian areas and better cattle distribution, overall pasture is moving toward or meeting DC.</p> <p>Squaw Pasture: Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Control or eradicate Canada thistle. Pasture moving toward or meeting DC.</p> <p>Weldon Pasture: Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Control or eradicate Canada thistle. Manage for improved livestock distribution and upland utilization to decrease use in spots along Weldon Gulch and Placer Creek. A few spots in Weldon Gulch and Placer Creek are not meeting DC and would benefit from less recreation pressure in riparian areas and better cattle distribution, overall pasture is moving toward or meeting DC.</p>
<p>Wildlife: Habitats – Alpine, Upland Grassland/Shrubland, Riparian, and Forest Habitats</p> <p>T&E Species – UFB, Canada lynx, and Gunnison prairie dog</p> <p>FSS Species – white-tailed ptarmigan, wolverine, Brewer’s sparrow, loggerhead shrike, bighorn sheep, Hudsonian emerald dragonfly, boreal toad, northern leopard frog, pygmy shrew, black swift,</p>	<p>Wildlife: T&E Species</p> <p>UFB:</p> <ul style="list-style-type: none"> ■ Protect and maintain suitable habitat conditions, primarily areas of snow willow. <p>Canada Lynx:</p> <ul style="list-style-type: none"> ■ Protect and maintain suitable lynx and snowshoe hare habitat conditions.

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<p>bald eagle, northern harrier, purple martin, peregrine falcon, olive-sided flycatcher, Lewis' woodpecker, three-toed woodpecker, boreal owl, flammulated owl, northern goshawk, fringed myotis, Townsend's big-eared bat, hog-nosed skunk, American marten, and spotted bat</p> <p>Terrestrial MIS – Abert's squirrel and elk</p> <p>Overall – livestock distribution is generally limited to a small portion of the allotment (approximately 25%). Of this, livestock use is primarily concentrated in riparian areas, aspen and other forested areas, grass/shrublands in the lower portion of the High Unit, upper portion of Weldon and Low Units, and in riparian areas of Squaw Unit. Water sources are limited and many are located in riparian areas. Much of the High Unit is not utilized by livestock due to poor capability and suitability. Precipitation is low to moderate (ranging from 10-20 inches annually, depending on elevation and location), which affects wildlife habitats and the capability of the allotment to support livestock grazing. Poor to fair habitat conditions in some areas, good condition in others depending on livestock use and concentrations. Breeding/reproductive, cover/shelter, forage/prey, and dispersal/movement habitats for the below wildlife species/habitats have all been adversely impacted to varying degrees, primarily in riparian and associated forested and upland habitats.</p> <p>T&E Species – UFB (see Alpine Habitat), Gunnison prairie dog (see Upland Grassland/Shrubland), Canada lynx (see Alpine, Upland Grassland/Shrubland, Riparian, and Forest Habitats), and Gunnison prairie dog (see Upland Grassland/Shrubland) below.</p> <p>Alpine Habitat – Approximately 11% of the allotment. Very little to no livestock use has occurred over the past decade. Diverse mix of native grass, forb, and shrub communities, and ground cover is suitable where developed soils exist. Fens may be present in portions of High Unit. Overall good habitat condition.</p> <p>Upland Grassland/Shrubland Habitat – Approximately 5% of the allotment. Desirable native species composition is poor in some areas. Litter is low or absent in some areas. Plant species composition shifts from desirable (for wildlife) to less desirable species have been observed in some areas. High incidence of Kentucky bluegrass and introduced clover in many areas. High incidence</p>	<p>Gunnison Prairie Dog:</p> <ul style="list-style-type: none"> ▪ Protect and maintain suitable habitat conditions. <p>FSS Species</p> <p>Boreal Toad:</p> <ul style="list-style-type: none"> ▪ Protect and maintain suitable breeding, summer, and winter hibernation habitat conditions and movement corridors for boreal toads: ▪ Minimize activities that may cause direct mortality (trampling) of boreal toads, egg masses, tadpoles, metamorphs (toadlets), and adults by livestock. ▪ Provide sufficient vegetation in boreal toad breeding, summer, and wintering areas (hibernacula) and movement corridors. Locate and protect toad movement corridors from livestock grazing impacts. ▪ Maintain a minimum of 75% of the streambank or shoreline in stable condition. ▪ Protect and enhance boreal toad habitat where possible with water developments. ▪ Minimize the spread of <i>Bd</i> (a chytrid fungus) to new areas from livestock grazing and associated activities. <p>Bighorn Sheep:</p> <ul style="list-style-type: none"> ▪ Protect lambing areas during the spring (May 15 to June 30) from disturbance. ▪ Maintain in perpetuity temporal and spatial separation between domestic sheep/goats and native bighorn sheep. <p>Terrestrial MIS</p> <p>Abert's Squirrel:</p> <ul style="list-style-type: none"> ▪ Encourage mature widely dispersed and interconnected ponderosa pine stands which sustain Abert's squirrel populations where potential exists. <p>Elk:</p> <ul style="list-style-type: none"> ▪ Maintain or improve habitat conditions for elk. ▪ Maintain adequate forage and security cover year-round to allow CDOW to meet management objectives. ▪ Maintain and provide for movement corridors for elk that do not act as barriers/restrict movement or cause mortalities from range developments. ▪ Protect calving and other concentration areas. <p>All Habitats:</p> <ul style="list-style-type: none"> ▪ Reduce/eliminate the presence of noxious weeds

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<p>of bare ground in some locations. Noxious weeds present (Canada thistle, yellow toadflax, spotted knapweed). Generally, there is good growth and regeneration of mid-late seral shrub species. Current habitat condition ranging from fair to poor.</p> <p>Riparian Habitat – Approximately 4% of the allotment. Good vegetation cover in most areas although not adequate to prevent erosion (stability) in some areas. High incidence of Kentucky bluegrass and introduced clover in some areas. Noxious weeds present (Canada thistle, toadflax) in some locations. Drought stress evident. Woody species regeneration is limited in some areas from overbrowsing, and some incidence of hedging/mushrooming and overutilization. Trampling of vegetation by livestock has been documented in some areas. Bank alteration/bare ground present in some areas. Alder die off is occurring. Excessive sedimentation and stream braiding observed in some areas. Some channel entrenchment and bare backs caused by hoof action. Hummocking/pedalisting noted in some areas. Some channel entrenchment and bare backs caused by hoof action. Water table appears to have lowered in some areas. Weldon Gulch and Placer Creek in the Weldon Unit rated at functioning-at-risk. Placer Creek in Low Unit rated at functioning-at-risk. Squaw Creek in Squaw Unit rated at PFC. Fair habitat condition, poor in some areas.</p> <p>Forest Habitat – Approximately 74% of the allotment. In aspen there is a diverse native grass and forb understory. Downed logs present. Diverse age structure present. Livestock use of regeneration as browse is excessive in some areas. Ponderosa pine has experienced recent infestations of MPB. Bunchgrass understory is increasing as canopy cover is reduced due to insect infestations, timber harvesting, and prescribed burning. Some un affected/untreated forests are denser and drought stressed. Some mortality of ponderosa pine resulting in higher numbers of snags/logs in untreated areas. Lodgepole is limited in occurrence. Mixed conifer past spruce budworm activity as resulted in some mortality. Upland grasses increasing in quality and quantity due to decrease of overstory vegetation cover due to dead and dying trees. Canopy cover is decreasing with mortality under story is increasing. Overall, the habitat is in good condition.</p>	<p>to the extent possible.</p> <p>Alpine Habitat:</p> <ul style="list-style-type: none"> ▪ Protect and maintain healthy alpine plant communities with a diverse mix of desirable native grass, forb and shrub communities, and minimal ground disturbance that provide suitable habitat conditions for alpine species. <p>Forest Habitat:</p> <ul style="list-style-type: none"> ▪ Maintain/create forests with diverse age structure, late successional communities, openings, snags and down woody debris across forested areas; vigorous understory of native grasses (e.g., grama, needle and thread, junegrass, Arizona fescue, mountain muhly, mutton grass) and forbs where light allows. ▪ Perpetuate aspen communities with diverse age structure. Aspen areas shall include late successional communities, regeneration, openings, snags and down woody debris; vigorous and diverse native grass and forb understories shall be present. Protect aspen and other hardwood regeneration. <p>Upland Grassland/Shrubland Habitat:</p> <ul style="list-style-type: none"> ▪ Protect and maintain healthy upland grassland and shrubland plant communities that provides and maintains and/or enhances suitable habitat conditions for these species. <p>Riparian Habitat</p> <ul style="list-style-type: none"> ▪ Protect and maintain healthy riparian and wetland plant communities that provides and maintains and/or enhances suitable habitat conditions for riparian dependant species. Provide habitats for viable populations of wildlife species.
<p>Fisheries: Squaw Creek supports a robust brook trout population. Since 2005, estimated biomass annually ranks in the upper 10th percentile of</p>	<p>All aquatic species: Riparian ecosystems meet or move towards at least an upper mid-seral stage. Riparian plant communities are healthy and self-</p>

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<p>surveys conducted across the Forest. It supports multiple year classes, demonstrating natural reproduction and a self-sustaining population. Brook trout are generally smaller than average because Squaw Creek is similar to many small, headwater streams that lack the substrate particle size needed to provide habitat complexity at the level necessary to support larger fish. However, the stream habitat available likely provides for excellent spawning and rearing habitat. Impacts from grazing (mushroomed willows, bank trampling and trailing) are usually evident at the survey site.</p> <p>Mollusks: Presence of Rocky Mountain capshell snail or suitable habitat on the allotment is unknown.</p> <p>Aquatic invertebrates: Suitable habitat for <i>O. susanae</i> (large springs) does not exist on the allotment.</p>	<p>perpetuating. State and Federal water quality standards met. Stream channels and still water-body shorelines are stable and well vegetated with appropriate species. Suitable riparian habitat exists for viable populations of wildlife, fish and terrestrial and aquatic invertebrates.</p>
<p>Hydrology: Allotment-wide:</p> <p>All of the existing water developments are in the riparian. Only one of these is proposed to be redeveloped into the uplands. Forest Service roads parallel closely too many miles of the stream network in this allotment, therefore, these creeks and gulches transport large quantities of sediment. Thus the channels are constantly adjusting their patterns, profiles and dimensions. One would also expect the storage capacity of existing stock developments to be reduced/limited.</p> <p>Placer Creek (Weldon and Low Units)</p> <p>Site visited August 3, 2004. Approximately two miles of Placer Creek were surveyed. Per crew, channel type varies between A and B, photos also indicate C-type where gradient is less. Per crew, 'Creek was running at or above bankfull...There were several sediment deposits due to excessive sediment and bank erosion, and the stream was braided...There are upland species in the riparian area. The young willows are being browsed by cattle/wildlife. In several areas the stream is incised about 2 feet. There are not many sedges/rushes to hold the soil in place, and therefore there are areas where the bank has sloughed off with clumps of grasses.</p> <p>The stream changes dramatically when it crosses FSR 252. This reach has a narrow drainage with a very narrow riparian area. It has several long steep banks without vegetation.' Crew rated at functional-at-risk. Hydrologist</p>	<p>Hydrology: Allotment-wide:</p> <p>Consider redeveloping other pits/tank in the riparian to upland sites. Close and reroute road segments out of the riparian. Clean out stock tank/pits until they can be relocated.</p> <p>Placer Creek (Weldon and Low Units)</p> <p>Manage to improve stream stability and water quality. See road comment for allotment-wide above. Also, increase the recruitment of woody species (both in age and size classes).</p> <p>Squaw Creek (Squaw Creek Unit)</p> <p>Manage to improve stream stability and water quality. See road comment for allotment-wide above. If ditch diversion and stream damage haven't been repaired consider as a watershed improvement project; validate water right/permit status of diversion prior to repairing. If needed, repair stream if feasible given usual constraints. For proposed direct diversion, install at a stable and suitable site; seek hydrology, engineering, fisheries and soil input to accomplish.</p> <p>Weldon Gulch (High and Weldon Units)</p> <p>Manage to improve stream stability and water quality. See road comment for allotment-wide above. Also, increase the recruitment of woody species (both in age and size classes), especially</p>

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<p>concur.</p> <p>Squaw Creek (Squaw Creek Unit)</p> <p>Site visited August 11, 2004. Approximately one mile of Squaw Creek was surveyed. Riparian vegetation consists of willows, alders and some sedges. Old beaver pond is revegetating with grasses and sedges. Large woody debris present. Per crew, 'channel type varies between A and B, photos also indicate C-type where gradient is less. Stream is transporting high volume of sediment, flooded recently. Vertical instability and eroded banks noted in several places. Recent flood event blew out ditch diversion near NFS boundary.' Crew rated at a low PFC. Hydrologist rates at functional-at-risk due to the amount of sediment that is being delivered to the stream.</p> <p>Weldon Gulch (High and Weldon Units)</p> <p>Site visited August 3, 2004. Approximately two miles of Placer Creek were surveyed. Per crew, B channel type. Per crew, '...watershed has historically been overgrazed, and riparian shows signs of this. There is an excessive amount of sediment throughout the entire stream causing braiding and deposits. Type and amount of sediment seems to be the result of the road washing out. The stream is entrenched in several areas and is vertically unstable...The riparian vegetation is not adequate to prevent erosion even with many old alders present. Many of these alders suffered greatly during the drought. There were virtually no willows. A leopard frog was found near a stock pond.' Crew rated as low, functional-at-risk; hydrologist concurs.</p> <p>Water Developments: Existing: 9 pits 1 tank</p>	<p>willow. Reduce/eliminate Canada thistle.</p> <p>Water Developments:</p> <p>Existing unchanged: 8 pits 1 tank</p> <p>Existing redeveloped: 1 pit to be redeveloped and piped to tank</p> <p>Proposed: 1 spring piped to 3 tanks 1 seep piped to 1 tank 1 direct diversion piped to 1 tank on NFS 1 direct diversion piped from NFS to 1 tank on private.</p> <p>Summary: 16 developed watering sites on NFS (if redeveloped pit is fenced, then cattle would have access to 15 developed watering sites). 1 developed watering site on private 2.2 miles of pipeline constructed</p>
<p>Soils:</p> <p>All benchmark and key areas are in areas of low erosion hazard.</p> <p>High Unit: Benchmark and Key Area AKHIK1: associated soil type 620G, Frisco family, found on montane and subalpine ground and lateral moraines where sedimentary rocks predominate. The effective rooting depth is greater than 60 inches.</p> <p>Low Unit: Key area is within 50 feet of a high erosion hazard.</p>	<p>Soils:</p> <p>Continued maintenance of good surface cover where present and improve surface vegetative cover where needed using recommendations for soils as described for soil types below.</p> <p>High Unit and Squaw Unit: associated soil type 620G, Frisco family. Mulch or similar treatment may be required to protect the soil from erosion, help conserve soil moisture, and protect emerging plant seedlings. Thinning or creating small openings in the overstory canopy cover can</p>

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<p>Key Area AKLOK1: associated soil type 120F, Cumulic Haploborolls - Endoaquolls association, found on lower montane, dry and lower montane valleys with an effective rooting depth of greater than 40 inches.</p> <p>Squaw Unit: AKSQK1: associated soil type 620G, see above for description. AKSQK2: associated soil type 615G, Dominson family, found on lower montane, dry, south facing lateral moraines with an effective rooting depth greater than 60 inches.</p> <p>Weldon Unit: AKWEK1: associated soil type 120F, see above for description. AKWEK2 and benchmark: associated soil type 120F, see above for description.</p>	<p>stimulate understory productivity.</p> <p>Low Unit and Weldon Unit: associated soil type 120F, Cumulic Haploborolls - Endoaquolls association. Revegetating Endoaquolls soil with riparian vegetation requires maintaining a high water table. Buffer zones may be required on adjacent map units (high erosion hazard) to minimize impacts to wetlands.</p> <p>Squaw Unit: associated soil type 615G, Dominson family. Drought tolerant plants have the greatest chance for success. Mulch or similar treatment will protect the soil from erosion, help conserve soil moisture, and protect emerging plant seedlings.</p>
<p>Recreation: Recreation use is low to moderate with the exception of the Mt. Shavano Trailhead where weekend use is high. The only developed recreation site is the trailhead consisting of a parking lot, some bulletin boards and a CXT toilet. The major recreation activities include hunting, hiking, Mountain biking, disperse camping, and driving for pleasure. The Colorado Trail bisects the allotment from north to south primarily within the High Unit and a little in the Squaw Unit. Moving cattle from one pasture to the next during hunting season may change where wildlife prefer to be and where hunters expected to find them. The Ahern irrigation ditch begins in Squaw Creek near the Colorado Trail and heads southeast to an earthen tank near the upper end of Placer Creek. There is no written agreement between the grazing permittee and the water ditch permittee for the use of this water. Most of the fences crossing NFS roads have cattleguards. Conflicts with cattle are very minimal.</p>	<p>Recreation: Maintain compatible use of campers and cattle where campers are minimally affected by cattle's waste and trampling, and campers are not blocking cattle paths. Recreationist are well informed they are sharing the land with cattle, and when to keep gates closed and open, depending on whether cattle are in the pastures. Range improvements do not conflict with recreation use, i.e. placing water improvements in highly desirable campsites and trails. Fences are kept operational to keep cattle where they should be.</p>
<p>Forestry: Majority of the ponderosa pine forests have been infected with the mountain pine beetles, resulting in heavy mortality throughout the allotment. Upland bunch grasses have increased in quantity and quality due to the decrease of overstory trees. Salvage timber sales and thinnings have (past 6 years) and are occurring throughout the allotment reducing stand stocking levels, reducing the fuel loadings, and removing slash barriers that are affecting cattle movements in these upland forest grasslands. Understory forage conditions are expanding from the openness of the</p>	<p>Forestry: Maintain a healthy, mixed-conifer forest community of ponderosa pine, Douglas-fir and aspen with a dispersed age structure, openings, snags and down woody debris across these forested areas. Improve forest health conditions throughout. Perpetuate aspen communities with diverse age structures including late successional communities, regeneration, and openings. Maintain a vigorous understory of native grasses (grama, needle and thread, junegrass, Arizona fescue, mountain muhly, mutton grass) and forbs throughout these forest communities. Minimize the encroachment of</p>

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forest and are in good condition. Prescribed burning projects are planned (+5years) throughout the allotment that will benefit the quality of the understory vegetation while also reducing the fuel loadings.	conifers onto the grassland types.