

## Condition description tables for Range analysis.

### Bear Creek C&H.

<b>EXISTING CONDITION</b>	<b>DESIRED CONDITION</b>
<p><b>Range Management:</b> 3 pasture “deferred rotational” system. On date July 1, off date August 31. 15 cow/calf pairs permitted.</p>	<p><b>Range Management:</b> Convert temporary number into Term Permit. Develop water and pipe to tanks in the uplands. Manage for better distribution of the cattle and utilization of the upland forage.</p>
<p><b>Vegetation:</b></p> <p><b>Bear Creek Pasture:</b> Self perpetuating riparian plant communities including sedge, rush, cinquefoil, willow, alder and native upland and riparian graminoids and forbs present in proportion to moisture availability. Lower Bear Creek is a popular recreation site when combined with cattle use contributes to spots in Bear Creek drainage that are not meeting desired conditions. This area would benefit from developed recreation sites. The upper portion of Bear Creek has adjacent meadows of native grass and forb communities with a variety of vegetative structure including, muhly, Thurber fescue and Parry oat grass.</p> <p><b>Spring Gulch Pasture:</b> Mixed native grass and forb communities with a variety of vegetative structure. 2005 CF data showed excellent species diversity, low bare ground % and high litter %. Recently improved water development moved watering site to a tank out of drainage bottom providing clean water to livestock/wildlife and alleviated high use/ trampling problem in Spring Gulch. Small area in Spring Gulch still shows signs of historical disturbance from old sawmill site and is not meeting DC. Multiple age class aspen stands with healthy native grass and forb understories. Mixed conifer and oak brush communities interspersed with native grasses and forbs. Areas of very dense shading mixed conifer overstory limiting understory production not at DC.</p> <p><b>Mud Springs Pasture:</b> Healthy multiple age class stands of aspen with vigorous and diverse native grass and forb understories. Mixed conifer and oak brush communities interspersed with native grasses and forbs. Grasslands with mixed native grass and forb communities with a variety of vegetative structures including needleandthread, Parry oatgrass and Thurbur fescue. 2005 CF data showed excellent species diversity, low bare ground % and high litter %. Pasture is mostly timbered with grassland/oak brush areas making up the primary range. Small spot of Canada thistle present around mud springs.</p>	<p><b>Vegetation:</b></p> <p><b>Bear Creek Pasture:</b> Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Manage to improve areas where negative recreation and livestock impacts exist. Overall Pasture is moving toward DC.</p> <p><b>Spring Gulch Pasture:</b> Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Manage for increased species diversity in old sawmill site. Overall pasture is moving toward DC with areas meeting and not meeting.</p> <p><b>Mud Springs Pasture:</b> Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1. Control or eradicate Canada thistle around Mud springs. Pasture is moving toward or meeting DC.</p>
<p><b>Wildlife:</b> <b>Habitats</b> – Alpine, Upland Grassland/Shrubland, Riparian, and Forest Habitats</p> <p><b>T&amp;E Species</b> – UFB, Canada lynx, and Gunnison</p>	<p><b>Wildlife:</b> <b>T&amp;E Species</b></p> <p><b>UFB:</b> ▪ Protect and maintain suitable habitat conditions,</p>

<p>prairie dog</p> <p><b>FSS Species</b> – white-tailed ptarmigan, wolverine, Brewer’s sparrow, loggerhead shrike, bighorn sheep, Hudsonian emerald dragonfly, northern leopard frog, pygmy shrew, black swift, bald eagle, northern harrier, peregrine falcon, purple martin, olive-sided flycatcher, Lewis’ woodpecker, three-toed woodpecker, boreal owl, flammulated owl, northern goshawk, fringed myotis, Townsend’s big-eared bat, hog-nosed skunk, Gunnison prairie dog, American marten, and spotted bat</p> <p><b>Terrestrial MIS</b> – Abert’s squirrel and elk</p> <p><b>Overall</b> – livestock distribution is generally very limited to a small portion of the allotment (approximately 15-20%). Use is concentrated primarily in riparian areas, aspen, and other forested areas, grass/shrublands in the lower (eastern) portion of the allotment. Water sources are somewhat limited and many are located in or near riparian areas. Much of the higher elevations and upper riparian areas of this allotment (middle and western portion) are not utilized by livestock due to steepness, inaccessibility, and capability/suitability for grazing). Precipitation is very low (ranging from 12-18 inches annually, depending on elevation and location), which affects wildlife habitats and the capability of the allotment to support livestock grazing. Existing range developments (fences, stock tanks, pit, ponds, etc.) on the allotment generally lack wildlife escapement ramps/structures, and have not been constructed to be compatible with/for wildlife use. Generally fair to good habitat conditions exist in this allotment where grazing occurs, depending on livestock use and concentrations. Breeding/reproductive, cover/shelter, forage/prey, and dispersal/movement habitats for the below wildlife species/habitats have been minimally impacted to varying degrees, primarily in riparian and associated forested and upland habitats.</p> <p><b>T&amp;E Species</b> – UFB (see Alpine Habitat), Canada lynx (see Alpine, Upland Grassland/Shrubland, Riparian, and Forest Habitats), and Gunnison prairie dog (see Upland Grassland/Shrubland) below.</p> <p><b>Alpine Habitat</b> – Approximately 6% of this allotment. Very little to no livestock use has occurred in this portion of the allotment due to steep slopes, poor accessibility and capability/suitability. Diverse mix of native grass, forb, and shrub communities, and ground cover is suitable where developed soils exist. Good overall</p>	<p>primarily areas of snow willow.</p> <ul style="list-style-type: none"> <li>▪ See <i>Alpine Habitat</i> below for additional measures.</li> </ul> <p><b>Canada Lynx:</b></p> <ul style="list-style-type: none"> <li>▪ Protect and maintain suitable lynx and snowshoe hare habitat conditions.</li> <li>▪ Provide for native composition and structure of herbaceous and shrub plant communities.</li> <li>▪ Provide for the development of snowshoe hare habitat in natural or created openings within lynx habitat.</li> <li>▪ Maintain and restore habitat connectivity across forested landscapes.</li> <li>▪ For willow, achieve mid seral or higher condition, to maximize cover and prey availability. Such areas that are currently in late seral condition should not be degraded.</li> <li>▪ In aspen stands - ensure sprouting and sprout survival is sufficient to perpetuate long-term viability of aspen clones.</li> <li>▪ See Riparian, Forested, Upland/Shrublands, and Alpine Habitats below for additional measures.</li> </ul> <p><b>Gunnison Prairie Dog:</b></p> <ul style="list-style-type: none"> <li>▪ Protect and maintain suitable habitat conditions.</li> <li>▪ See Upland/Shrublands Habitat below for additional measures.</li> </ul> <p><b>Bighorn Sheep:</b></p> <ul style="list-style-type: none"> <li>▪ Protect lambing areas during the spring (May 15 to June 30) from disturbance.</li> <li>▪ Maintain in perpetuity temporal and spatial separation between domestic sheep/goats and native bighorn sheep.</li> </ul> <p><b>Terrestrial MIS</b></p> <p><b>Abert’s Squirrel:</b></p> <ul style="list-style-type: none"> <li>▪ Encourage mature widely dispersed and interconnected ponderosa pine stands which sustain Abert’s squirrel populations where potential exists.</li> <li>▪ See Forested Habitat for additional measures.</li> </ul> <p><b>Elk:</b></p> <ul style="list-style-type: none"> <li>▪ Maintain or improve habitat conditions for elk.</li> <li>▪ Maintain adequate forage and security cover year-round to allow CDOW to meet management objectives.</li> <li>▪ Maintain and provide for movement corridors for elk that do not act as barriers/restrict movement or cause mortalities from range developments.</li> </ul>
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<p>habitat condition.</p> <p><b>Upland Grassland/Shrubland Habitat</b> – Approximately 17% of this allotment. Good species diversity present in grasses and forbs, with a mosaic of vegetative structure. Grasses decadent in some areas. Desirable native species composition is relatively good in most areas. Litter is low to good. Native grasses and forbs interspersed in many areas, but some shifts in species composition from desirable native bunch grasses to undesirable noted. Noxious weeds present in limited areas (downy brome, cheat grass). Some benches early to mid-seral with high incidence of forbs. Good growth and regeneration of mid-late seral shrub species. Native grasses and forbs interspersed. Oak brush dense and impenetrable in some areas. High incidence of bare ground in some locations. Generally, there is good growth and regeneration of mid-late seral shrub species. Current habitat condition ranging from fair to good depending on use and location.</p> <p><b>Riparian Habitat</b> – Approximately 3% of this allotment. Good vegetation cover in most areas. Riparian graminoids present. Noxious weeds present in limited areas (Canada thistle and cheatgrass). Species composition shifts from native to non-native species (bluegrass, dandelion, and cheat grass) present in some areas. There is a high incidence of introduced clover. Severe bank trampling observed in some areas. Benchmark in Spring Gulch rated at functioning-at-risk, downward trend. Good to fair habitat condition overall, depending on use and location.</p> <p><b>Forest Habitat</b> – Approximately 67% of this allotment. Piñon/Juniper is limited in occurrence in lower sites and is mid-late seral. Aspen is of diverse age structure including good regeneration. Understory of down logs, forbs and grasses present. Aspen is dense and impenetrable in some areas. Trees are dense in some areas. Some areas of ponderosa pine mortality due to MPB resulting in higher numbers of snags/logs. Mixed conifer stands are dense and minimally affected by insects and disease. Bunchgrass understory is increasing as canopy cover is reduced due to insect infestations. Limited amounts of lodgepole present. Overall, the habitat is in good condition.</p>	<ul style="list-style-type: none"> <li>▪ Protect calving and other concentration areas.</li> <li>▪ See Riparian, Forested, Upland/Shrublands, and Alpine Habitats for additional measures.</li> </ul> <p><b>All Habitats:</b></p> <ul style="list-style-type: none"> <li>▪ Reduce/eliminate the presence of noxious weeds to the extent possible.</li> </ul> <p><b>Alpine Habitat:</b></p> <ul style="list-style-type: none"> <li>▪ 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.</li> </ul> <p><b>Forest Habitat:</b></p> <ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ 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.</li> </ul> <p><b>Upland Grassland/Shrubland Habitat:</b></p> <ul style="list-style-type: none"> <li>▪ Protect and maintain healthy upland grassland and shrubland plant communities that provides and maintains and/or enhances suitable habitat conditions for these species.</li> </ul> <p><b>Riparian Habitat</b></p> <ul style="list-style-type: none"> <li>▪ 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.</li> </ul>
<p><b>Fisheries:</b> The allotment does not contain any fish bearing or streams.</p> <p><b>Mollusks:</b> Presence of Rocky Mountain capshell snail or suitable habitat on the allotment is unknown.</p> <p><b>Aquatic invertebrates:</b> Suitable habitat for <i>O. susanae</i> (large springs) does not exist on the allotment.</p>	<p><b>All aquatic species:</b> Riparian ecosystems meet or move towards at least an upper mid-seral stage. Riparian plant communities are healthy and self-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><b>Hydrology:</b></p> <p><b>Spring Gulch Pasture:</b></p> <p>Spring Gulch benchmark. Site visited August 10, 2005. Stream channel is entrenched from past land use activities including a lumber mill that operated in immediate vicinity. Trailing was observed in the lower half of the benchmark, and hoof shear was evident in several places, maybe game-related. A spring development occurs in the center of the benchmark near stock tank 304. At the time of the visit, the tank was located in the drainage bottom on the right bank. As might be expected, heavy trailing, compaction, pedestaling and bank failure was observed in and around the spring development and tank area. The upper part of the benchmark was drier, yet with better vegetative cover, less open.</p> <p><b>Water Developments:</b></p> <p>Existing: 4 tanks</p> <p>Note: Tank 304 supplied by spring (109)</p>	<p><b>Hydrology:</b></p> <p><b>Spring Gulch Pasture:</b></p> <p>Remove the tank from the channel bottom, and put tank(s) in the uplands. Fence out the spring source and allow the riparian and channel to recover. Reduce bare ground and allow vegetation to stabilize the site.</p> <p>Since this visit, the spring has been redeveloped and enclosed with fence, and at least one tank has been located in the uplands. This is a great improvement, and should allow the area to initiate recovery.</p> <p><b>Water Developments:</b></p> <p>Existing unchanged: 2 tanks</p> <p>Existing redeveloped: 1 tank piped to 1 tank 1 spring (109) piped to 2 (maybe 3) tanks</p> <p>Proposed: 2 source each piped to 1 tank</p> <p>Summary: 9 or 10 developed watering sites on NFS (if redeveloped sites are fenced, then cattle would have access to 7 or 8 sites). 1.2 miles of pipeline constructed</p>
<p><b>Soils:</b></p> <p>Major soils of Bear Creek Allotment found in Key Area BCBCCK1 and benchmark include: <b>630M, Pergrin Family</b> soils are very deep and well drained with an effective rooting depth greater than 60 inches. Understory plant production is described as "sparse". The erosion hazard rating is moderate to high. An examination of photographs taken of locations within and adjacent to the benchmark area on 08/10/2005 revealed sparse vegetative cover in one upland location corresponding to this soil type. <b>640M, Libeg Family, cool</b>, soils are moderately deep to deep with an effective rooting depth greater than 40 inches, generally located on gentle and moderate backslopes. This unit is very good for producing grass species, outside of riparian areas. The erosion hazard rating is moderate. An examination of photographs taken of locations within and adjacent to the benchmark area on</p>	<p><b>Soils:</b></p> <p><b>630M:</b> Improvement in overall vegetative cover, where possible, to 85% surface vegetative/litter cover.</p> <p><b>640M:</b> Reduction in areal extent of trampled vegetation, reduction in compaction, pedestalling, and soil puddling.</p> <p><u>(Soil puddling is a physical change in soil properties due to shearing forces that alters soil structure and porosity. Puddling occurs when the soil is at or near liquid limit.)</u></p>

<p>08/10/2005 revealed sparse vegetative cover in one upland location. Vegetation adjacent to riparian area is trampled, with evidence of compaction, pedestaling, and puddling.</p>	
<p><b>Recreation:</b> Recreation use is moderate with the major activities including disperse camping along NFSR 101, mountain biking on NFSR 101 and the Rainbow trail west of NFSR 101, and motor biking on the Rainbow trail and NFSR 101. The annual Banana Belt Mountain Biking event occurs near mid September. The Sangre De Cristo Wilderness overlaps the most of the allotment south of the Rainbow Trail, but receives very little use due to the fact there are no lakes or trails. Mountain bikers and hikers use the old jeep trails leading up Rock Creek and Columbine Gulch even though they are not system routes. The northing fence along Columbine Gulch bisects the trail and is difficult to keep closed to bicyclist. The northeast portion of the allotment is popular for big game hunting.</p>	<p><b>Recreation:</b> Maintain compatible use with 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. Recreation event coordinators communicate with range permittees when organizing events.</p>
<p><b>Forestry:</b> Majority of the ponderosa pine forests has been infected with the mountain pine beetles, especially on the northern and western sides of the allotment, and the Douglas-fir forests have been affected by defoliation from the spruce budworm and infestation of the Douglas-fir bark beetles. Heavy mortality of both ponderosa pine and Douglas-fir trees has resulted throughout the allotment. Aspen forests are mature and most aspen stands are being encroached with a dense, white-fir understory. Upland bunch grasses have increased in quantity and quality due to the decrease of overstory trees, but the increased downfall of dead trees is restricting cattle movement into these areas. No salvage timber sales or prescribed burning projects are planned on the allotment at this time.</p>	<p><b>Forestry:</b> 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 conifers onto the grassland types.</p>