

Condition description tables for Range analysis.

Fourmile C&H.

EXISTING CONDITION	DESIRED CONDITION
<p>Range Management: 4 pasture “deferred rotational” system. On date June 1, off date Septemeber 15. 50 cow/calf pairs permitted</p>	<p>Range Management: Keep, numbers and AUMs the same. Rotate grazing schedule on the pastures. Encourage using the allotment during the winter season (November 15-March 31). 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>Upper Fourmile Pasture: Small higher elevation pasture with grassland, mesic meadow and stream and riparian communities. Has been in nonuse status since 2003. Current condition unverified.</p> <p>Lower Fourmile Pasture: Variety of shrub age classes and species interspersed with native grasses and forbs, good mix of native upland and riparian graminoids and forbs present in proportion to moisture availability. 2005 shrubland photo point shows evidence of conifer encroachment, and drought stressed vegetation. 2005 Rangeland Health Evaluation was rated mostly in healthy category. 2005 riparian photo point 5 shows diverse vigorous riparian vegetation community including willow, cinquefoil, carex and tufted hairgrass with greater than 90% ground cover. 2005 riparian photo point 3 shows good mix of riparian species with low vigor and evidence of drought stress. Has been in nonuse status since 2003 Spots of Canada thistle present.</p>	<p>Vegetation:</p> <p>Upper Fourmile Pasture: Maintain, continue to move toward, or start moving toward community type desired conditions that are outlined in Table 1.</p> <p>Lower Fourmile 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. Overall pasture is moving toward DC with some areas meeting.</p>
<p>Wildlife:</p> <p>Habitats – Alpine, Upland Grassland/Shrubland, Riparian, and Forest Habitats</p> <p>T&E Species – UFB, MSO, 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, bald eagle, peregrine falcon, northern harrier, 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>MIS – Abert’s squirrel and elk</p> <p>Overall – Livestock distribution is generally poor and very limited to a small proportion of the allotment (approximately 10-20%). Of this, use has been concentrated primarily in riparian areas.</p>	<p>Wildlife:</p> <p>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>MSO:</p> <ul style="list-style-type: none"> ▪ Attain good to excellent range/habitat conditions within potential nesting, roosting, and forage areas, and provide for their recruitment. <p>Canada Lynx:</p> <ul style="list-style-type: none"> ▪ Protect and maintain suitable lynx and snowshoe hare habitat conditions. ▪ Provide for the development of snowshoe hare habitat in natural or created openings within lynx habitat. ▪ Maintain and restore habitat connectivity across forested landscapes. ▪ For willow, achieve mid seral or higher condition, to maximize cover and prey availability. Such areas that are currently in late seral condition

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<p>Little to no livestock use has occurred in this allotment over past decade, particularly in some units/portions of the allotment. Water availability is very limited to only a few drainages, with very little available in the southern portion of the allotment in particular. Use is concentrated in the Four-mile, Seven-mile, Davis Meadows (historically), and some other drainages in the allotment. Use has been almost exclusively within and adjacent to riparian areas with the exception of when winter grazing was permitted in 2006. Soils are highly erosive and are decomposed granite. Precipitation is very low, (ranging from 10-18 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. 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), MSO (see Upland Grassland/Shrubland, Riparian, and Forest Habitats), Canada lynx (see Alpine, Upland Grassland/Shrubland, Riparian, and Forest Habitats), and Gunnison prairie dog (see Upland Grassland/Shrubland Habitat) below.</p> <p>Alpine Habitat – Approximately 3% of this 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. Overall good habitat condition.</p> <p>Upland Grassland/Shrubland Habitat – Approximately 28% of this allotment. Diverse mixture of forbs, graminoids, and shrubs are present. Systems have experienced significant drying. Upland grasses decadent in some areas. High incidence of bare ground in some areas. High incidence of weedy species and forbs in bench and transition areas. Fringed sage increasing in some areas. Noxious weeds in limited areas (downy brome, Canada thistle, leafy spurge). Generally, there is fair growth and</p>	<p>should not be degraded.</p> <ul style="list-style-type: none"> ■ In aspen stands - ensure sprouting and sprout survival is sufficient to perpetuate long-term viability of aspen clones. <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: ■ Maintain riparian-wetlands in proper functioning conditions (PFC). ■ Maintain water quality and quantity at Clean Water Act standards as a minimum. ■ 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.

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<p>regeneration of mid-late seral shrub species. Some shrubs are decadent. Current habitat condition ranging from fair to good.</p> <p>Riparian Habitat – Approximately 3% of this allotment. Little to no livestock use in Upper Unit has occurred over the past decade. There is a known boreal toad breeding site in Upper Unit. Good vegetation cover in most stream channels; however, some areas of bare ground present in some areas. Trampling of vegetation by livestock has been documented in some areas. Plant species composition shifts from desirable (for wildlife) to less desirable species have been observed in some areas. Willow and riparian graminoids present and diverse in age structure and species in most areas; however, cottonwood regeneration lacking in many areas and some mushrooming of willows present. Recent restoration efforts (fencing, seeding, and travel management) has taken place. Location of noxious weeds (Canada thistle and leafy spurge) are present. Some stream channels deeply incised and evidence in a decrease of wetted area. Pedestaling in some areas in Lower Unit. Two benchmarks in the Lower Fourmile pasture were rated at PFC (Davis Meadow and Seven-mile Creek – both in the lower Unit). Poor-good habitat conditions depending on location and livestock use/concentrations.</p> <p>Forest Habitat – Approximately 59% of this allotment. In aspen forests, there is a diverse native grass and forb understory. Aspen age classes are diverse, although some encroachment of conifers is occurring in some areas. Snags and downed logs are present. 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 mortality of ponderosa pine resulting in higher numbers of snags/logs. 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 due to mortality, which is also causing under story to increase. Overall the habitat is in good condition.</p>	<ul style="list-style-type: none"> ▪ 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 to the extent possible. <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. ▪ Where developed soils exist, ground cover is 80% or greater. ▪ Protect and maintain suitable habitat conditions in alpine and subalpine use areas (primarily willow carrs and riparian areas) to maintain or achieve mid seral or higher conditions to provide cover and forage for these 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 via
<p>Fisheries: Fourmile Creek supports a high biomass</p>	<p>All aquatic species: Riparian ecosystems meet or</p>

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<p>brook, brown and cutthroat trout population. Brook trout are the dominant species followed by cutthroat trout. Usually, cutthroat trout cannot live in sympatry with brook trout, but in this system they seem to persist. Length ranges for each species represented multiple year classes and demonstrates a naturally reproducing, self-sustaining fish assemblage.</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>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>Hydrology:</p> <p>Lower Fourmile Unit:</p> <p>Goddard benchmark. Site visited July 7, 2005. No defined channel was observed, yet riparian vegetation (rushes, sedges and willows) is present throughout benchmark indicating that groundwater is likely near ground surface. No water reported at several locations along benchmark, drought-related. One small bare spot noted; crew thought it was perhaps a rubbing spot. Not rated with PFC as no defined channel exists.</p> <p>Davis Meadows benchmark. Site visited July 6, 2005. Crew reported, 'Condition is good. Beaver dams (inactive) in place and will probably remain due to high amount of vegetation. Vegetation looks great, lots of vigor and variety of plants. Erosion deposition is holding together and stream is transferring very little sediment.' Burned trees observed in area; riparian didn't show signs of burn. Red, brown, orange color water observed. Pond water was stagnant. Riparian narrows as move toward upper end of benchmark as gradient increases. Crew rated at proper functioning condition. Hydrologist concurs.</p> <p>Sevenmile Creek benchmark. Site visited June 21, 2005. Crew reported, 'Dense riparian vegetation (willow, alder and cottonwoods), undercut banks, stream seems stable and doesn't show much disturbance. Large, woody debris throughout. Lots of animal droppings. Uplands showed dryness (drought related) with lots of bare ground. Crew rated at proper functioning condition. Hydrologist concurs.</p> <p>Water Developments:</p>	<p>Hydrology:</p> <p>Lower Fourmile Unit:</p> <p>Goddard benchmark. Maintain riparian vegetation and try to increase cover by 10 to 15% over next planning cycle. Improve vigor of grasses and reduce the amount of bare ground in the uplands. Consider establishing water development in uplands.</p> <p>Davis Meadows benchmark: Maintain at existing condition. Consider establishing a water development on outer margins of riparian area and or open park/forest contact.</p> <p>Sevenmile Creek benchmark. Maintain at existing condition; however, reduce the amount of bare ground in the uplands.</p> <p>Water Developments:</p> <p>Existing unchanged: 1 unspecified water development 1 tank</p> <p>Existing redeveloped: None</p>

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<p>Existing: 1 unspecified water development 1 tank</p> <p>Summary: 2 developed watering sites on NFS lands</p>	<p>Proposed: 7 sources each piped to 1 tank</p> <p>Summary: 9 developed watering sites on NFS 1.6 miles of pipeline constructed</p>
<p>Soils: The erosion hazard for all benchmark and key areas on this allotment is rated moderate to low.</p> <p>Upper Fourmile Pasture: FMUFK1 & Benchmark: 110F, Cryoborolls Cryaquolls association is found in valley bottoms and have an effective rooting depth greater than 60 inches. At present, soils in the area of this benchmark and key area appear stable and in good condition, with little or no compaction or rutting evident from photographs of the sites.</p> <p>Lower Fourmile Pasture: FMLFK1 & Benchmark: 100F, Cryofluvents Cryaquolls - Histosols complex, found in subalpine valley flood plains. This complex has an effective rooting depth greater than 40 inches and a depth to seasonal high water table of 1 foot (very shallow water table). There is evidence of pedestaling and hoof shear in middle of benchmark area. Other photo point locations appear to be in good condition with stable soils and good ground cover.</p> <p>FMLFK3: & Benchmark: Photographs of this area reveal fair to good vegetative cover with stable upland soils present. However, photographs also reveal some mild undercutting of stream bank in several locations. 122F, Cumulic Haploborolls, found on lower montane, dry and lower montane, valleys and have an effective rooting depth of greater than 40 inches. 753M, Ratake - Jodero families complex, found on dry upland plains and pediments. These soils have an effective rooting depth of less than 20 inches to 20 inches. 780M, Herberman family, found on upland plains, hills, and mountains with an effective rooting depth of less than 20 inches. Drought tolerant plants have the greatest chance for success on this soil. 708S, Hechtman - Guffey families complex, north facing canyons, hills, and mountains and have an effective rooting depth of less than 20 inches to 40 inches.</p>	<p>Soils: In areas where soil resources are in good condition continue to maintain good ground cover. Prevent formation of ruts, soil compaction, soil puddling, and soil pedestaling.</p> <p>In area where soil resources need improvement, FMLFK1 & Benchmark: 100F Buffer zones are required on adjacent map units to minimize impacts to wetlands. For soil type 100F, Cryofluvents Cryaquolls - Histosols complex, A short growing season reduces the potential for successful planting. Maintaining a high water table is required to replant riparian vegetation. For soil type 122F, Cumulic Haploborolls, Mulch or similar treatment will protect the soil from erosion, help conserve soil moisture, and protect emerging plant seedlings.</p> <p>Damaged soil resource (FMLFK3 & Benchmark: 122F, 708S, 753M, 780M) should display an improvement in vegetative/litter cover with a reduction in trampling, compaction, puddling, and pedestaling.</p> <p>122F: Mulch or similar treatment will protect the soil from erosion, help conserve soil moisture, and protect emerging plant seedlings.</p> <p>708S: Management activities on this soil are limited by steep slopes and erosion hazard. 753M, 780M: Drought tolerant plants have the greatest chance for success on these soils.</p> <p>Damaged soil resource (FMLFK4 & Benchmark: 122F, 779M) should display an improvement in vegetative/litter cover with a reduction in trampling, compaction, puddling, and pedestaling.</p> <p>122F, 779M: Mulch or similar treatment will protect the soil from erosion, help conserve soil moisture, and protect emerging plant seedlings.</p> <p>FMLFK2: soil map unit 120F. Revegetating Endoaquolls soil with riparian vegetation requires maintaining a high water table. Buffer zones are</p>

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<p>FMLFK2: soil map unit 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>FMLFK4 & Benchmark: Photographs of a few areas adjacent to stream reveal a loss of vegetative cover with some trampling evident.</p> <p>122F, Cumulic Haploborolls, found on lower montane, dry and lower montane, valleys and have an effective rooting depth of greater than 40 inches.</p> <p>779M, Herberman - Adderton families complex, with an effective rooting depth of greater than 40 inches.</p> <p>FMLFK5: 110F, This area was not evaluated.</p>	<p>required on adjacent map units to minimize impacts to wetlands.</p>
<p>Recreation: Recreation use is moderate to heavy in the spring to fall, then moderate in the winter depending on snow levels and access. The allotment lies within the Fourmile Travel Management area which was approved in October 2002. Since that time many user created routes have been closed and some system roads have been converted to ATV trails. Major activities include big game hunting, scenic drives, OHV use, hiking, horseback riding, mountain biking, and disperse camping. Most of the camping occurs along Fourmile Creek, Shields Gulch, and Lenhardy Cutoff Road (NFS road 176) near shields Gulch and McGee Gulch. The Buffalo Peaks Wilderness lies on the north end of the allotment. There are three NFS trails (Buffalo Peaks No. 617, Davis Meadow No. 1413, and Midland Bike Trail No. 1450). The Midland Bike Trail follows the old Midland railroad grade. There is a trailhead at Shields Gulch where the Midland Bike Trail changes from single track on the old RR grade to the Shields Gulch Road. There are several recreation events within this allotment.</p>	<p>Recreation: 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 will work with range permittees to reduce conflicts with cattle and people.</p>
<p>Forestry: Majority of the ponderosa pine forests has been infected with the mountain pine beetles, and the Douglas-fir forest have been affected by defoliation from the spruce budworm resulting in heavy mortality of both ponderosa pine and Douglas-fir trees throughout the allotment. Upland bunch grasses have increased in quantity and quality due to the decrease of overstory trees. Salvage timber sales, firewood gathering and thinnings have and will occurred on some of the operable forests in the allotment reducing stand stocking levels, reducing the fuel loadings, and</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 understorey 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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removing slash barriers that are affecting cattle movements in these upland forest grasslands. Understory forage conditions are expanding from the openness of the forest and are in good condition. Several prescribed burning projects have occurred and others 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.