

Red Mountain Open Space Management Targets

Priority Conservation Targets	Nested Targets	Why Significant	Threat/Impact	Source of Threat/Impact	Management Goal	Management Strategies	Mgmt Zone
Ecological Conservation Targets							
Foothills Shrubland System	Mountain mahogany/mixed grass (Griffith's wheatgrass, mountain muhly, needle and thread and New Mexico feathergrass) communities	CNHP S2 & S3 rankings (one of largest expanses in world, intact ecosystem, few weeds, etc.); NRCS excellent rating and use as an ecological site model.	Weeds; Large-scale conversion of native plant comm to non-native (ie: bromes); Habitat fragmentation from trails/roads/etc.; Erosion	Horses; Fire; Lack of herbivory; Roads; Trails; Other fragmentation; Too much or incompatible grazing; Weeds in hay from off-site.	Maintain large, intact areas of mountain mahogany/mixed grass communities with a native species composition and functioning within its natural range of variability.	Minimize fragmenting shrublands with trails, roads, etc. No driving off-roads. No off-trail public access. Manage vegetation sustainably (grazing & other mgmt based on ecological principles, etc.); Integrated weed management. No livestock from weedy pastures. Education about sensitivity of sites.	All
	Sensitive bird/raptor species (barn owl, golden eagle, red-tail, raven nest sites)	Nest sites; State species of concern; Potential species from RMBO 2007 survey	Disturbance during nesting periods or to perching raptors	Activity within nest buffer areas during nesting; Direct disturbances (nest looting, recreation, shooting.)	Protect and buffer nest sites.	Keep trails away from clifflines and outside nest buffers; Minimize fragmenting large areas of habitat; Ranger presence. Education. Monitoring.	P/Sensitive
	Wide ranging mammals (elk, deer, mtn lion, bear, bobcat, pronghorn)	Severe winter range/concentration areas/potential calving sites	Disturbance during sensitive periods (winter & calving) and flushing year-round; Negative human-wildlife interactions.	Domestic dogs; People off-trail; Activity in calving / wintering areas.	Provide large, undisturbed blocks of habitat and protected calving/birthing sites.	Seasonal trail closures; No trails in calving areas; Minimize fragmenting large tracts of range and mvmt corridors; Education at TH ("living with wildlife"); Monitoring for distribution and abundance; Do not allow dogs.	All
	Rare songbird sp.? Towhee?				If present, protect rare songbird habitat.	2007 RMBO Survey	
Foothills grassland complex		NRCS good to excellent rating and use as an ecological site model	Weeds; Large-scale conversion of native plant comm to non-native (ie: bromes); Habitat fragmentation from trails/roads/etc.; Erosion	Horse manure; Lack of fire & herbivory; Roads; Trails; Other fragmentation; Too much or incompatible grazing; Weeds in hay from off-site.	Maintain large, intact areas of native foothills grassland plant composition and cover and functioning within its natural range of variability. • Continue livestock grazing to meet grassland management goals.	Minimize fragmentation by trails, roads, etc.; No driving off-roads; On-trail access only by public; Integrated weed management; Manage vegetation sustainably (grazing & other mgmt based on ecological principles). No livestock from weedy pastures. Education. Monitoring.	All
Riparian System	Narrowleaf cottonwood /bluestem willow community	CNHP S2 ranking (imperiled in state; only 6-20 occurrences known)	Weeds; Habitat fragmentation from trails/roads/etc.; Bank erosion; Lack of natural processes (flooding; natural flows)	Too much or incompatible grazing; Trails; Roads; Upstream flow regulation; lack of stockwater development	Maintain narrowleaf cottonwood / bluestem willow community with a native species composition and functioning within its natural range of variability.	No fragmentation by trails, roads, etc.; Fence riparian areas as separate grazing units for spring weed grazing; Control timing of grazing to prevent damage to streambank when most vulnerable; Limit # /group size/ timing of any access; Integrated weed mgmt. Education about sensitivity of sites.	P/Sensitive
	Narrowleaf cottonwood /chokecherry community	CNHP S1/S2 ranking (critically imperiled statewide; only 5 or fewer occurrences known)	Weeds; Habitat fragmentation from trails/roads/etc.; Bank erosion; Lack of natural processes (flooding; natural flows)	Too much or incompatible grazing; Trails; Roads; Upstream flow regulation; lack of stockwater development	Maintain narrowleaf cottonwood / chokecherry community with a native species composition and functioning within its natural range of variability.	No fragmentation by trails, roads, etc.; Fence off riparian areas from livestock as separate pasture for spring weed grazing; Control timing of grazing to prevent damage to streambank when most vulnerable; Limit #/ group size/ timing of any access; Integrated weed mgmt; Education about sensitivity of sites.	P/Sensitive
	Restoration target - greenback cutthroat trout (GCT)	CNHP S2 ranking (imperiled in state; only 6-20 occurrences known)	Competition; Overfishing; Warm stream temps; Poor water quality (sedimentation; fecal coliform); Improper hydrology; Drought	Non-native fish species; Unregulated fishing; Too much or incompatible grazing; Vegetation loss; Upstream flow regulations (dams/diversions); Climatic effects. Streambank impacts from recreation and grazing.	If conditions are appropriate for reintroduction, protect and improve the habitat for GCT prior to and following successful restoration efforts.	Work with DOW to remove non-native fish and reintroduce GCT in Sand and Boxelder creeks; If successful, work with DOW for long-term management success measures; Work with upstream landowners to maintain normal flows and not introduce non-natives. Grazing management. No public access.	P/Sensitive
	Potential prebles habitat	Threatened/CNHP S1 ranking (critically imperiled statewide; only 5 or fewer occurrences known)	Weeds; Riparian habitat loss; Habitat fragmentation from trails/roads/etc.	Roads; Trails; Other facilities in habitat; Vegetation loss.	If present, protect Preble's meadow jumping mouse habitat.	Complete all USFWS trapping requirements. Minimize fragmentation of riparian areas and mvmt corridors with trails, roads, facilities, etc. Maintain healthy upland veg. for seed sources.	P/Sensitive

	Aquatic insects	Indicator species of good stream and aquatic health - assemblage of native aquatic insects were found in both creeks.	Warm stream temps; Eutrophication or poor water quality (sedimentation; fecal coliform); Drought	Too much or incompatible grazing; Non-native insects; Vegetation loss; Climatic effects.	Improve conditions for desirable aquatic insects (i.e. species intolerant of poor water quality).	2007 CSU Aq. Insect Survey. Limit sedimentation; maintain healthy riparian veg. to protect banks.	
Ponderosa Woodlands	Ponderosa pine/Spike fescue	CNHP G3/S3 Ranking (vulnerable statewide, only 20 - 100 occurrences known)	Weeds; Habitat fragmentation from trails/roads/etc.; Erosion	Lack of natural processes (fire, herbivory, etc.); Roads; Trails; Other facilities in habitat	Maintain ponderosa pine/spike fescue community with a native species composition and functioning within its natural range of variability.	Minimize fragmentation by trails, roads, etc. No driving off-roads. On-trail access only by public. Forest stewardship (thinning; low intensity prescribed fire related to historic fire intervals).	All
	Wide ranging mammals (elk, deer, mtn lion, bear, bobcat)	Potential calving areas; Severe winter range; Important habitat requirements	Disturbance during sensitive periods (winter and calving); Flushing year-round	Domestic dogs; People off-trail; Activity in calving / wintering areas.	Provide undisturbed block of habitat and protected calving/birthing sites.	Seasonal trail closures; Minimize fragmenting large tracts of range and mvmt corridors. Education. Monitoring.	All
Soils		Stable soils are the key to providing a sustainable landscape for grazing, recreation, weed control, habitat protection, and cultural resource protection.	Loss of topsoil by wind or water erosion; Loss of cultural sites; Degradation of habitat; Reduced quality of recreational experience (e.g. rutted trails); Deterioration of aesthetics; Impacts to water quality	Too much or incompatible grazing; Trampling and removal of vegetation by hikers and bikers; Poor trail and road design	Prevent excessive human and livestock caused soil erosion throughout entire site.	Monitor watershed (pastures, drainages, roads, trails) for excessive erosion. Implement soil stabilization measures, where necessary (e.g. check dams, revegetation, rest, etc.); In areas where cultural resources are imperiled, work with CSU to determine best course for protection (stabilize banks, etc.); Proper trail/road construction.	All

Cultural Resource Conservation Targets

Lykins Valley Site		Multi-occupation proto-historic site; very early culture contact between Euroamericans and Indigenous populations	Trampling; Looting; Digging; Erosion; Site fragmentation from trails/roads/etc.	Off road driving; Livestock grazing; Trails; Roads; Water Erosion; Other surface disturbances; Unsupervised public access to site.	Protect Lykins Valley site.	Language in CE to protect site if traded and allow for education/research access; Fence from livestock; Regularly monitor; Evaluate merit and need for research access; Consider nominating for Nat. Reg. Hist Places or future excavation of site (thereby eliminating need by protecting significant resources). or Retain ownership to maximize the protection with consistent on-site management presence.	P/Sensitive or Private CE
Stone Circles, Lithic Scatter, Campsites	Archaeological Survey Areas with cumulative ranking of 4 or higher.	Archaeological Survey Areas with cumulative ranking of 4 or higher are most sensitive or significant.	Trampling; Looting; Digging; Erosion; Site fragmentation from trails/roads/etc.	Off road driving; Livestock grazing; Trails; Roads; Other surface disturbances; Unsupervised public access to sites.	Protect, research, and interpret as appropriate.	No trails, roads, or facilities on or within 30 m buffer of sensitive cultural resource areas (survey area rank 4 or higher); No off-trail or vehicle use; Fence from livestock; Interpret as appropriate to ensure protection; Monitor erosion and collect newly surfaced or at-risk artifacts. Careful site selection for any ground disturbing activities (fence posts, signs, trail markers, tanks).	All (except Developed/Access); P/Sensitive
	Archaeological Survey Areas with cumulative ranking 1-3	Archaeological Survey Areas with ranking of 1 are least sensitive but many have educational value.	Trampling; Erosion; Site fragmentation from trails/roads/etc.	Off road driving; Livestock grazing; Trails; Roads; Other surface disturbances	Protect, research, and interpret as appropriate.	Minimize trails, roads, or facilities within cultural sites (survey area rank 1); No off-trail or vehicle use; Interpret as appropriate to ensure protection; Monitor erosion and collect newly surfaced or at-risk artifacts	All (except Developed/Access)
	Collected Artifacts at Fort Collins Museum & Lab of Public Archaeology CSU	Collected because they were diagnostic or imperiled where they lay.	Lost if used without appropriate storage, handling, etc.; Mis-interpreted; Kept in storage and not displayed for education			Protect, research, and interpret as appropriate.	Work with museum on educational displays at new museum facility; Encourage this off-site interpretation of cultural resources as the primary interpretive goal for Red Mountain cultural artifacts Consolidate CSU's collection with the museums collection. Provide visitors with an on-site experience interpreting/displaying representative artifacts at a central location

Homesteads; Historic Buildings; Early Water Control Features		Historic schoolhouse and barn are most significant on-site; Homestead and shepherd cabin also historic; High educational value; Water control features document use of area.	Collapse; Vandalism	Livestock inside and nearby; Elements; Time	Protect, research, and interpret as appropriate.	Language in CE to protect any historic structures to be traded; Barn and schoolhouse re-roofed on trade lands; Historic structures on open space fenced from livestock and monitored. Interpret as appropriate. Consider moving selected historic buildings to appropriate visitor access sites	Backcountry
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Western Heritage Conservation Targets

Preservation of Ranching Tradition	Good to excellent range condition	NRCS good to excellent rating; Demonstrates sustainable grazing practices; Keeps ranching viable on landscape.	Weeds; Erosion; Large-scale conversion to non-natives (ie: bromes); Lack of grazing; Poor water sources/quality; Drought	Too much or inappropriate grazing; Severe restrictions on operator; Springs/tanks not working.	Continue sustainable ranching operations.	Develop grazing mgmt plan with NRCS including any needed livestock facilities; Consider grass banking; Grazing lease that is mutually beneficial to resource protection/recreation experience goals and to operator; Work with operator to monitor grazing utilization & springs; Develop springs outside resource areas; Define frequency/ timing/ appropriateness of livestock mgmt activities (branding, dehorning, driving to check facilities vs. riding, etc.); Education of grazing as a management tool & W. heritage.	All
	Entry road into open space	Passes through large landscapes of protected ranchlands, working landscapes and adds to the experience of the western heritage.	Development of adjacent lands; Poorly constructed access; Features that change the natural/western character.	Exurban development; Poor road design; Excessive signs; Wind power facilities; Towers;	Provide public with glimpse of working landscape.	Continue to work with adjacent ranchers and landowners to place lands under CE's; Consider role of grass banking in achieving this; Work with Planning Dept. to review development proposals for buffering and fit with open space goals.	Access / Private CE

Outdoor Recreation Targets

High Quality Recreational/ Educational Experiences	Trail layout and design	Connect to other open space area trail systems; Trails leading to vistas, interesting features; Educational opportunities	Using roads that are not sustainable; Social trails developing; Poor views; Too many people on-site; Vehicles on trails/open space.	Poor trail layout and design; overgrazing, off-road use or other mgmt activities;	Create a system of safe, interesting, multi-level, and sustainable trails while minimizing impacts to ecological, cultural and western heritage resources on-site.	Partner with trail designs to connect with Fort Collins & Cheyenne (future); Identify points of interest that are non-sensitive; Identify educational points of interest.	Front & Back country
	Trailhead (TH) Experience	First impression of the open space; Most highly developed area on-site; Focal point for information exchange.	TH is too large or too small; Unkept; Highly visible from trails; Sun glinting off vehicles from a distance; Too distant from Big Hole proper; Livestock; Congestion; Too many signs; Unclear regulations/ visitor expectations. Erosion	Poor TH design and/or location on-site; TH exceeds carrying capacity of site; People parking askew; Livestock w/in TH area.	Create a visually appealing, functional, and sustainable trailhead.	Work with L.A./Rec Planner to locate TH in location that provides access to important experience areas; Design TH to match appropriate on-site carrying capacity; No TH lighting; Ranger presence to prevent parking outside TH if full; Fence TH from livestock; Provide high quality, accessible information /educational materials at an aesthetically designed kiosk; Provide picnicking opportunities. Phase in minimum parking space numbers to meet projected visitation. Bear proof trash receptacles.	Developed
	Hiking, Mountain Biking & Equestrian Experience	Main users of trail system	Multi-use conflicts; Negative interaction between Old West (Ranching) and New West (Recreation)	Bikers not warning approach; Horse manure; Sounds and sights of hunting; Negative interaction with livestock; Crowded trails	Maintain an enjoyable on-trail recreational experience while minimizing impacts to ecological, cultural and western heritage resources on-site.	Design trails to meet multi-use needs and trail design standards. Consider distance of travel, level of difficulty and diverse experiences in planning trails; Frontcountry trails may need to have separation of uses closer to TH and shorter loop segments; Post multi-use ethic signs; Consider cost of high ranger presence to enforce diverse recreation regulations/ uses/etc.; Look at options for equestrian access to minimize weed introductions (on roads only unless haunch bags, etc.).	Front & Back country

	Backcountry camping	Large landscape - to really see it on-foot may require opportunity to stay overnight in backcountry.	Developed sites leave footprint/structure on landscape; Visual resource impactst; Weeds; Additional management cost/staffing; Cultural resource impacts; Natural resource impacts; No available water source for campers; Wind; Train horn; Negative interaction with livestock; Conflict with hunting; Tower lights; Fire danger.	Horses picketed (manure & hoof action) off-trail; Unsupervised overnight stay in open space with sign. cultural resources; Livestock coming into camps; Lack of water; Stoves/Campfires; Trespass onto private property or into sensitive resource areas.	If appropriate, implement safe, enjoyable, and sustainable backcountry camping while minimizing impacts to ecological, cultural and western heritage resources on-site.	Assess the need, public interest, and feasibility of backcountry camping over first 5-10 years property is open to public to determine if warranted to enhance recreational experience, and to evaluate the resource impacts and how to manage/mitigate for them. With this information, consider as a future potential use during management plan update and public process in 5-10 years. Consider if TH locations on RMOS, SPNA & Cheyenne lands meet goal of access to the landscape and thus removing potential need to provide camping.	Backcountry
	Elk and/or Deer Hunting	Management tool for large mammal herds and to ensure good health, movement and selection of populations. Wildlife quadrant dollars were partially used (comprise ~10%) of acquisition cost of open space.	Neighbors upset; Weeds; Additional management cost/staffing; No vehicular access for hunting/retrieving animals; Safety concern; Noise if rifle hunting; Doesn't accomplish a wildlife management purpose.	Off trail use; Trespass onto private property; Pack horses off-trail; Shooting animals near recreation trails; Too restrictive hunting regs.; Not enough research on herds and management needs/goals.	Utilize hunting as a sustainable and scientifically-credible wildlife management tool and recreational opportunity while minimizing impacts to ecological, cultural and western heritage resources on-site.	Work with the CDOW to develop a limited, high quality hunting lease and mutually agreeable hunting management plan that specifically outlines a wildlife management goal from hunting; No vehicular access for hunting or animal retrieval; Hunting access on-foot only. Education of non-hunting public.	Backcountry
Views/Sense of Place	On-site (trails, trailhead) experience	Protect significant visual resources on-site and provide high quality recreational experience.	Erosion; Highly visible structures (TH & facilities); Lights; Noise; Incompatible mgmt techniques (driving off-roads; many vehicles; CWD hunting); Sun glinting off vehicles;	Poorly located site features; Lighting; Incompatible design	Provide a fulfilling and aesthetically pleasing recreational experience in a natural setting throughout entire open space.	Work with L.A./Rec Planner to locate TH not visible from trails, overlooks, long vistas, etc.; No TH lighting; Site trails to provide a variety of experiences & to points that are of interest so users stay on the trail; On-trail recreation use only; Set guidelines for no-off road driving of staff or livestock operator; Set guidelines to minimize vehicle trips into open space for any management purposes.	All
	Entry road design	Sets the tone entering area; Part of bigger LFMTP vision of landscape sense of place protection; Long-term maintenance costs.	Development of adjacent lands; Features that change the natural/western character of entry/road; Erosion; Visible scarring of landscape; Dust from vehicles on roads.	Exurban development; Too urban feeling of a road design (runoff, scars, high visibility); Fast driving;	Provide an aesthetically pleasing and natural/western character along entire entryway into the open space.	Design road to be sensitive to the visual resources, tucked out of sight from glinting windshields, and fit with the western and natural character of the landscape; Consider trade-offs with treating road for dust; Post speed limit signs that are compatible colors with landscape.	Access