

**DRAFT
ENVIRONMENTAL ASSESSMENT**



**MOUNT HAGGIN WMA-SOUTH
GRAZING LEASE RENEWAL
JANUARY 2020**

I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action: Montana Fish, Wildlife & Parks (FWP) proposes to maintain a cooperative rest-rotation grazing program on the Mount Haggin Wildlife Management Area (WMA)-South system. This 5-year program would extend from June 16, 2021 through October 5, 2025 and continue the current fee grazing usage of 321 Animal Units/1,188 Animal Unit Months (AU/AUM) for three local livestock producers (Thompson Ranch, Bacon Ranch and Ralston Ranch) plus an additional 178 AU/658 AUM through an exchange of use agreement with the Ralston Ranch. This would bring the total livestock use on the Mount Haggin WMA-South grazing system to 499 Animal Units/1,846 Animal Unit Months. The annual period of use would continue to be June 15 through October 5.

In lieu of payment to FWP for the additional grazing use on the WMA, the Ralston Ranch enrolled approximately 2,600 acres of deeded ground in a 15-year Upland Game Bird Habitat Enhancement Program (UGBHEP) contract in 2011. Terms of this contract include a rest-rotation grazing system applied to Ralston's deeded ground and 2,600 acres of their Bureau of Land Management (BLM)-Connor Gulch allotment. Enrollment in the UGBHEP contract allowed for reduced stocking rates across riparian and forested habitat that supports all three mountain grouse species (ruffed, Franklin, and dusky) as well as important elk winter range. It provided an average of 50 additional hunter days annually. The last five years of the contract (2021-2025) are contingent upon renewal of the Mount Haggin WMA-South grazing lease.

Three agencies currently administer the Mount Haggin WMA-South cooperative grazing program: Fish, Wildlife & Parks (FWP), the U.S. Forest Service (USFS), and the Bureau of Land Management (BLM).

This cooperative agency format began in 2002, though FWP has operated a grazing system on this portion of Mount Haggin WMA since 1984.

The proposed grazing program and the associated UGBHEP contract with the Ralston family would encompass 12,091 FWP acres, 6,847 USFS acres, 3,073 BLM acres, and 2,600 deeded acres. The total affected area comprises 24,611 acres across state, federal and private lands for the benefit of fish, wildlife and the recreating public.

2. Agency authority for the proposed action: FWP has the authority under Section 87-1-210, M.C.A. to protect, enhance, and regulate the use of Montana’s fish and wildlife resources for public benefit now and in the future. Any consideration of continued livestock grazing on Mount Haggin WMA would have to be consistent with the management goals and objectives as outlined in the Mount Haggin WMA Interim Management Plan (1980). The interim management plan states that Mount Haggin WMA will be managed for dispersed outdoor recreation activities. These activities must be consistent with the area’s ability to support such use without degradation of its natural resource values (wildlife, fisheries, vegetation, and cultural/historical resources). The plan describes activities that are aimed at protecting the basic soil, vegetation, and water resources of the WMA such as the implementation of a grazing system that will maintain or enhance wildlife and wildlife habitat. In addition, the FWP Commission must approve all grazing leases on Wildlife Management Areas owned by FWP.

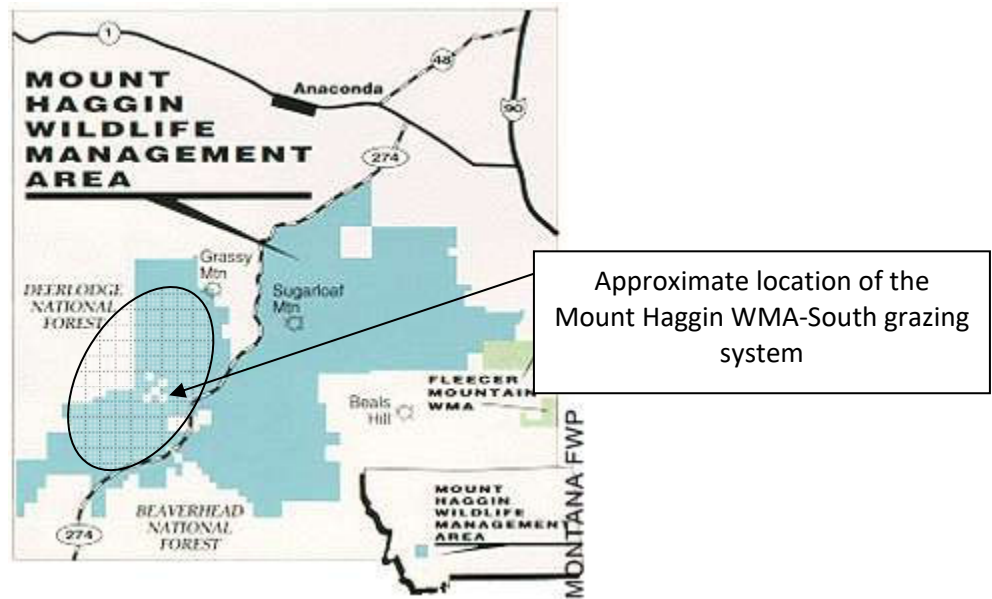
3. Anticipated Schedule: Public Comment Period: January 29-February 29, 2020.
Presented to the FWP Commission for Approval: April 2020
Proposed Leases in Effect: June 16, 2021

4. Location: This grazing system is located on portion of the Mount Haggin WMA in Deer Lodge County in southwestern Montana (Figure 1). The Mount Haggin WMA-South allotment is situated in the southwestern portion of the WMA, approximately 15 miles south of Anaconda. WMA lands included in this grazing program border USFS lands administered by the Beaverhead-Deerlodge National Forest. In addition, several parcels of land administered by the BLM are embedded within the WMA. They are managed as part of the Mount Haggin WMA-South grazing system through a Memorandum of Understanding (MOU) between the two agencies. The cooperative grazing system is located within Township 2 North, Range 11 West; Township 2 North, Range 12 West; Township 3 North, Range 11 West; and Township 3 North, Range 12 West.

5. Project size (acres are for the WMA portion of the project only):

<u>Acres</u>	<u>Acres</u>
(a) Developed:	(d) Floodplain
Residential	<u>0</u>
Industrial	
(existing shop area)	(e) Productive:
(b) Open Space/Woodlands/	Irrigated cropland
Recreation	Dry cropland
(c) Wetlands/Riparian Areas	Forestry
<u>2,096</u>	Rangeland
	Other
	<u>219</u>

Figure 1: General Location of the Proposed Action



6. Costs and Jurisdictions:

(a) Permits: none

(b) Costs to FWP: 3-5 staff days to administer the coordinated grazing program

(c) Other Overlapping or Additional Jurisdictional Responsibilities: none

7. Need for Proposed Action:

History of Proposed Action

Livestock grazing on Mount Haggin WMA lands has occurred since the turn of the last century. Homesteaders claimed lands in this area because of its natural meadows and ample water. Many of their cabins can still be found throughout the WMA. During the 1910's, the Anaconda Mining Company purchased most of these homesteads and amassed the lands that now make up Mount Haggin WMA and much of the surrounding USFS lands. The Mount Haggin Livestock Company, a subsidiary of the mining company, ran cattle, horses, mules, and sheep on the property in addition to having many of the native grass meadows (Drummond 1997). Much of the livestock use occurred from June through September annually in a continuous grazing fashion. At its height, Mount Haggin Livestock summered upwards of 8,000 sheep on the Mount Haggin area while running a world-class Hampshire sheep operation. The buildings that remain at the Mule Ranch on the WMA are relics of that era.

FWP acquired Mount Haggin WMA in 1976 from the Nature Conservancy, who had bridged the land deal with the then-owner until department funds could be gathered. Along with the property, FWP inherited a grazing lease for 2,000 cows on the WMA from June to November with no control on rest from grazing. The inherited lease expired in 1984 after which FWP began a rest-rotation grazing program on the WMA to better meet wildlife objectives. This system was based on principles described by Hormay (1970) on the south portion of the WMA and reduced permitted usage by half. August L. Hormay consulted with FWP to design the grazing system. This grazing system was initially contained solely on the WMA and the embedded BLM land, which is managed as part of the WMA through a

MOU. The system was expanded in 2002 to include the adjacent USFS Seymour allotment, resulting in the formation of two 3-pasture rest-rotation grazing systems (North and South). The systems were cooperatively managed by the USFS, BLM, and FWP. This redesign of the grazing system was intended to benefit wildlife by removing land ownership boundaries and conducting grazing over an expanded area with large rest pastures available for the exclusive use of wildlife. FWP had the opportunity in 2007 to terminate the lease on the North grazing system, with no eminent plans to fill in behind it.

In 2011, FWP adjusted the Mount Haggin WMA-South grazing system by incorporating pastures from the North system, increasing the acreage by 67% (Figure 2). Concurrently, FWP increased the allotted usage on the South system (321 AUs) 36% by allowing the Ralston Ranch an additional 178 AUs in exchange for implementing a rest-rotation grazing system on 2,600 acres of their deeded land and 2,600 acres of their BLM allotment through a 15-year Upland Game Bird Habitat Enhancement Program contract. With these changes the Ralston Ranch was able to waive two grazing permits back to the USFS in areas of elk calving and winter range. The USFS has not reissued these grazing permits due to allotment boundary and division fence issues, overstocking concerns, and grazing impacts to riparian areas.

These overall changes to the Mount Haggin WMA-South grazing system allowed for better disbursement of livestock grazing across larger areas and reduced stocking rates from approximately 5-9 acres per AUM to approximately 7-11 acres per AUM. Table 1 gives the projected 5-year grazing formula for the Mount Haggin WMA-South system as well as the approximate percentage of land contributed to each pasture complex by agency.

Table 1: Projected livestock grazing formula and agency contribution of land for the Mount Haggin WMA-South cooperative grazing system, 2021-2025.

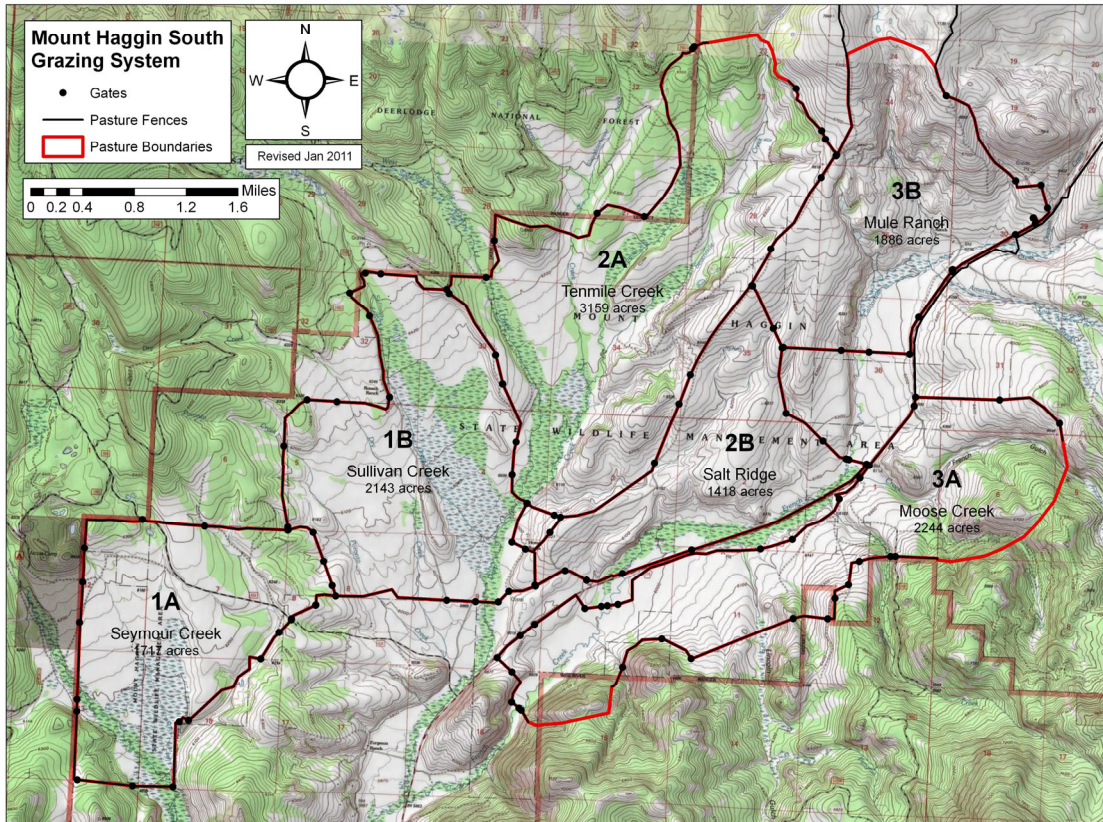
PASTURE	OWNERSHIP	YEAR		
		2021 2024	2022 2025	2023
1A (Seymour) and 1B (Sullivan)	FWP: 60% USFS: 30% BLM: 10%	LATE	REST	EARLY
2A (Tenmile) and 2B (Salt Ridge)	FWP: 75% USFS: 20% BLM: 5%	REST	EARLY	LATE
3A (Moose Cr) and 3B (Mule Ranch)	FWP: 85% USFS: 0% BLM: 15%	EARLY	LATE	REST

Early – dates are approximately June 16 through August 15

Late – dates are approximately August 15 through October 5

Rest – allows for no livestock grazing

Figure 2: Map of the Mount Haggin WMA-South cooperative grazing system. Pasture boundaries as shown include FWP property and embedded BLM parcels that are managed as part of this grazing system. USFS portions of the pastures are not shown on this map but extend from the Seymour, Sullivan, and Tenmile pastures. Acreage listed includes FWP land as well as 473 acres of BLM administered property embedded within and managed as part of the WMA.



The Mount Haggin WMA-South grazing lease has been held by the current lessees since 2002. It was renewed in 2011 for a 10-year term. Payment for use has been one-half the FWP standard rate with lessees responsible for routine fence maintenance. FWP’s standard rate reflects the current National Agriculture Statistics Survey (NASS) values for Montana. In 2019 this value was \$24.50/AUM; i.e. lessees on Mount Haggin WMA-South were charged \$12.25/AUM.

FWP is responsible for providing materials and any fence replacement or construction. Operation costs incurred by this grazing system during the period of the last lease include several stretches of fence replacement associated with Montana Department of Transportation’s (MDT) realignment project on Highway 569 where it crosses the WMA. These projects were paid for by MDT. FWP also completed four other fencing projects during this time period to allow for full implementation of the grazing system and general maintenance of the WMA. The first involved replacing 0.6 miles of non-functioning 25+ year old jack-leg fence plus construction of 1 mile of new fence in the Mule Ranch pasture, paid for from the WMA operations and maintenance fund (\$10,045). The second project involved reconstructing the boundary fence between USFS and FWP property in the Tenmile Creek drainage, paid by a Beaverhead-Deerlodge National Forest Resource Advisory Committee grant. The third project

involved relocating 1.25 miles of pasture fence along French Creek, funded by FWP and a Future Fisheries grant (cost to FWP \$28,000, split equally between Fisheries and Wildlife Divisions). The last project involved replacement of 0.75 miles of boundary fence in the Seymour Creek area, funded by the adjacent landowner, BLM and FWP (cost to FWP \$13,000).

Over the term of the last lease, the Mount Haggin WMA-South grazing program has provided 4,990 AUM of livestock use and generated \$75,203 in grazing fees paid to FWP. An average of 3-5 FWP staff days annually are devoted to the administration of the Mount Haggin-South WMA grazing program.

Need for Proposed Action

The proposed action is to maintain the cooperative Mount Haggin WMA-South grazing program in its current format for the benefit of wildlife, fisheries and the recreating public across state, federal, and private lands. In so doing, the following needs will be accommodated:

- Maintain or improve soils, vegetation, and riparian zones through systematic grazing;
- Maintain high-quality vegetation for seasonal use by wildlife through planned rest from grazing across multiple ownerships;
- Demonstrate the compatibility of wildlife and domestic livestock grazing; and
- Economically benefit local communities through viable wildlife, recreation and livestock production.

8. Alternatives:

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease

This alternative would continue the cooperative grazing system between FWP, USFS, and BLM on Mount Haggin WMA-South for 5 additional years and the Ralston Ranch would continue with the final 5 years of their 15-year Upland Game Bird Habitat Enhancement Project contract (began in 2011). Current usage on the WMA would continue: 321 Animal Units/1,191 Animal Unit Months of fee grazing for three livestock producers (Thompson, Bacon, and Ralston Ranches) and 178 AU/658 AUM grazing through an exchange of use agreement with the Ralston Ranch for applying rest-rotation grazing on their 2,600 deeded acres and 2,600 acres of BLM-Connor Gulch allotment through their UGBHEP contract. Under this alternative there would be a total livestock usage of 499 AUs and 1,846 AUMs on the Mount Haggin WMA-South grazing system. The annual period of use would continue to be June 15 through October 5.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system.

This alternative would discontinue FWP's participation in the Mount Haggin WMA-South cooperative grazing program with the USFS and BLM and terminate the remaining 5 years of the Ralston Ranch UGBHEP contract. By dissolving this partnership, the rest-rotation grazing program would no longer be applied across 24,611 acres of state, private, USFS and BLM.

II. EVALUATION OF IMPACTS ON THE PHYSICAL ENVIRONMENT

1. Vegetation

The portion of Mount Haggin WMA where the South grazing system is located varies from 5,500 feet to 8,000 feet; annual precipitation is about 20 inches. The area is a mixture of wet and dry meadow types, grass/shrubland, and conifer forests. Willows are common along numerous stream courses and wide riparian areas enhanced by beaver dams. Lodgepole pine is the most common forest cover type, occurring in small patches throughout the area; much of the lodgepole forest in this and the surrounding area has been heavily impacted by the mountain pine beetle. Engelmann spruce is also present in small populations near riparian areas.

Homesteaders first occupied the area that is now Mount Haggin WMA. Livestock grazing occurred regularly on the WMA from the early 1900's until FWP acquired the property in 1976. Later in response to the "Smoke Case", the Anaconda Mining Company (the Company) began acquiring these homesteads and eventually amassed the contiguous piece of land that comprises the WMA and much of the surrounding USFS lands (Drummond 1997). Mount Haggin Land and Livestock ran a world-class Hampshire sheep operation on the WMA in the 1920's, under ownership of the Company, grazing upwards of 8,000 sheep annually on the Big Hole side of the WMA. The Company also regularly grazed cattle, horses, and mules on the WMA. The Company used a continuous grazing strategy primarily from early June through late October. This type of use significantly reduced forage for wildlife, nesting and hiding cover for birds, amphibians, reptiles and other mammals, and negatively impacted willow and other riparian communities along stream corridors. FWP began rest-rotation grazing on the WMA in 1984 to better meet wildlife objectives.

In addition to livestock grazing, much of the Mount Haggin WMA area was logged several times during the last century. FWP had inherited a logging contract along with the purchase of the property that allowed for commercial harvest of more than 40 million board-feet of timber. This logging continued from 1976-1990 when the contract finally expired. Mining also played a significant role in the Mount Haggin WMA history. One of the first gold mining districts in the greater Butte area was in French Gulch on the Big Hole side of the WMA. Five patented mining claims exist along California Creek, and remnants of the mining days can still be found throughout the WMA and surrounding USFS lands.

Long-term vegetation monitoring has taken place on Mount Haggin WMA since 1986. Thirty-four permanent photo points, comprising a total of 167 photos, were established on the WMA. Twenty-nine of these photo points, comprising a total of 110 photos, are located within the Mount Haggin WMA-South and North grazing systems to monitor impacts over time. Sites preferred by cattle included historic salting areas or resting areas where use by livestock is intense. These were the preferred sites for photo monitoring. The rationale used was that if positive changes became apparent at these intensely used locations, then it could be assumed that less intensely used areas were also improving. This approach was used because the grazing program is not a research project but an ongoing management action, and monitoring is included with other duties of the wildlife biologist on the WMA. Based on this monitoring, the habitat on Mount Haggin WMA has responded positively under the implemented rest-rotation livestock grazing (Frisina and Keigley 2004).

Two vegetation exclosures, as well as the photo plots, are located within this grazing system. Erected on the WMA in 1986, these structures were designed to keep cattle out but allow entry to wildlife so that grazing impacts to vegetation can be monitored. A more rigorous and repeatable system was implemented in 2006 to replace the monitoring that had been done at these sites since 1986. This system includes two permanent transects within and two permanent transects outside each exclosure. These transects provide quantified Daubenmire (1959) canopy cover and line intercept data and are read approximately every five years by the FWP botanist.

There have been several studies conducted to assess the effects of livestock grazing on wildlife. A study conducted on the Fleecer WMA (Wambolt et al 1997) examined the effects of cattle grazing on the nutritive quality of bluebunch wheatgrass, an important forage plant for elk. The study found no significant difference in nutrient content from bluebunch wheatgrass that is grazed in the spring by cattle over that which is totally rested for one year or never grazed during the growing season. However, the amount of more desirable current year's growth of bluebunch wheatgrass that is available to elk is likely greater where cattle have grazed versus never grazed areas due to the removal of residual forage. Findings from Crane et al (2001) lend support to this supposition. They found that seasonal elk use increases in areas where cattle grazed the previous summer versus areas that had been rested. On Mount Haggin WMA, Frisina (1992) found that during early summer, elk use increased in pastures that had been grazed by cattle the previous year. Use switched, however, during July and August (when cow elk are rearing calves) to the rested pasture where more security cover and forage was available. This use supports the fact that the benefits of a rest-rotation system are not just increased forage but also for the standing vegetation that is left for thermal, hiding, and nesting cover for elk, birds, amphibians, reptiles, and other small mammals.

In 2013, FWP implemented a forestry project on Mount Haggin WMA designed to remove standing dead and green beetle-infested lodgepole pine from select roads and ski trails to reduce hazard trees. Merchantable dead and dying timber was removed from certain expanded road- and trailside units to cover costs of the project, including removing noncommercial trees, road improvements, weed control and removal of unwanted fences. Approximately 800 acres, 4.8 miles of roads and 8 miles of ski trails were treated. No new roads were constructed.

Photo points and aerial imagery were used recently to develop and implement a conifer encroachment project on Mount Haggin WMA. In 2019, 1,182 acres of grassland, shrubland and aspen habitat were treated for Douglas fir expansion into these more desired habitats on big game winter and summer ranges. In 2020, an additional 1,192 acres will be treated.

Overall, Mount Haggin WMA hosts a variety of native vegetation and cover types. Vegetation monitoring shows a positive response to the management strategies that FWP has employed since acquisition of the property. Habitat improvement projects continue to bolster the robustness of native plant communities. Noxious weeds do occur within the Mount Haggin WMA-South grazing system. Infestations are small enough that they are not causing a negative shift in plant composition and are being managed for eradication.

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease

Vegetation in pastures that have been grazed that year will look grazed, but the overall health of the plant community would not be compromised. The grazing system as designed provides two years of rest during the growing season following a year of being grazed during the growing season. This would allow plant communities to quickly recover from grazing pressure, promoting plant vigor and health. The benefit of vegetative rest would extend beyond the WMA to private, BLM and USFS lands that are incorporated into this cooperative grazing system. The large pastures and low stocking rate would reduce overall grazing pressure and leave ample residual vegetation for wildlife forage, nesting, thermal and hiding cover. Cattle would likely have negative impacts to riparian areas such as stream bank trampling and mechanical damage to willows. This would be mitigated by periods of scheduled rest and actions taken by livestock producers to prevent cattle from concentrating in these areas (mineral blocks, herding).

Positive benefits to vegetation using sound range management and cooperative programs under this alternative would be realized on 24,611 acres of wildlife and fisheries habitat across the WMA, private, BLM and USFS lands.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system. If FWP's Mount Haggin WMA-South grazing lease is not renewed, the cooperative grazing program with the BLM and USFS would be terminated as well as the rest-rotation grazing system on the Ralston ranch and their associated BLM allotment under the UGBHEP contract. While elimination of livestock grazing on Mount Haggin WMA would result in increased standing vegetation for wildlife on the WMA, it would decrease habitat quality across the landscape by increasing grazing pressure on the adjacent USFS allotment, 2,600 deeded acres of the Ralston Ranch and 2,600 acres of their BLM-Connor Gulch allotment as these systems absorbed the lost AUMs. The benefits to 24,611 acres of wildlife habitat as described above would not be realized.

2. Fisheries and Water Resources

The Mount Haggin WMA-South grazing system contains 11 streams and approximately 37 stream miles of riparian habitat. All these streams are located within the Big Hole River watershed. The fish community in American Creek consists of eastern brook trout and mottled sculpin. The fishery in California Creek contains eastern brook trout, rainbow trout, mountain whitefish, and mottled sculpin. It may also contain Arctic grayling, brown trout, and white and longnose suckers because of similar gradient and stream characteristics to nearby streams that maintain these species. French Gulch and Moose Creek only contain mottled sculpin and brook trout; however, surveys completed up until the late 1990's found Arctic grayling in French Gulch. Moose Creek formerly contained an unhybridized population of westslope cutthroat trout, but recent surveys indicated that population has disappeared. The fishery status of Lincoln Gulch and Dry Gulch is unknown. Deep Creek contains brown, brook and rainbow trout, mountain whitefish, Arctic grayling, mottled sculpin and white and longnose suckers. All age classes of Arctic grayling have been captured in Deep Creek indicating its importance for spawning. Seymour Creek contains brook trout, mottled sculpin, and potentially westslope cutthroat trout (surveys have not been conducted recently). This creek is also an important spawning channel for Arctic grayling. Sullivan Creek contains brook trout and mottled sculpin. Sullivan Creek upstream of the WMA has a low pH (5.4) and is devoid of fish and other aquatic life. However before reaching the

WMA, the pH approaches neutral, and fish and aquatic life are present. Twelvemile, Corral, and Tenmile Creeks contain brook trout, mottled sculpin, and conservative populations of westslope cutthroat trout. Sixmile and Sevenmile Creeks contain brook trout, mottled sculpin, and rainbow trout. Western pearlshell mussels, a sensitive species, are also present in California Creek and in Deep Creek. Deep Creek contains one of the healthiest populations of mussels in the Big Hole drainage. It is possible that pearlshell mussels are present in lower Sullivan, Tenmile, and Twelvemile Creeks, but surveys have not been conducted to document occurrence.

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease. Livestock grazing is expected to have minor negative impacts to riparian areas and the associated fisheries under Alternative A. Stream banks and riparian areas on the Mount Haggin-South grazing lease are particularly susceptible to grazing impacts due to geomorphology and stream channel type. Most streams on the WMA area are classified as “C” channel types under Rosgen Stream Classification System (Rosgen 1996) with a low to moderate stream gradient and a highly sinuous stream channel. The riparian vegetation is predominately willow species, grasses, and sedges, and these plants are the primary features stabilizing the stream banks. Potential impacts to these sensitive areas include removal of stream bank and riparian vegetation through grazing and trampling. Grazing has been shown to impact riparian vegetation and change species composition and cover. Juvenile willows are particularly susceptible to livestock grazing as are certain species of sedges. These plant groups are important for stream bank stability. Destabilizing stream banks through trampling and hoof shear can lead to increased erosion and sedimentation. Further, as streams become widened by trampling, their ability to transport fine sediment is reduced. This leads to further siltation and degradation of aquatic habitat. Trout require clean gravels for spawning and egg incubation, and if the interstitial spaces between gravels become filled with fine sediment, egg survival decreases dramatically. High levels of fine sediment can also be detrimental to western pearlshell mussels and aquatic invertebrates which are a major food source for fish species. An additional impact of livestock on fisheries is the direct trampling of redds (fish spawning areas). Recent studies in the Beaverhead-Deerlodge Forest indicate that redd trampling rates in streams can be high. Trampling can lead to direct egg mortality as incubating eggs are highly susceptible to disturbance. Because brook trout (Sept-Oct spawners) are the primary species in these streams, redd trampling will not have a significant impact on the fisheries population. Only under late-season grazing would there be redd trampling impacts because eggs of fall spawning fish incubate through the winter and hatch in spring (May-June) when livestock are not present. Although westslope cutthroat trout (spring spawners) are present in Twelvemile, Tenmile, and Corral Creek, they are very rare on the Mount Haggin WMA. Impacts to this species as a result of redd trampling is therefore unlikely. Arctic grayling are also spring spawners, but do not excavate redds; they broadcast their eggs in freshly deposited gravels, which make egg-trampling effects difficult to quantify.

Impacts of livestock grazing on the fisheries and riparian areas of Mount Haggin WMA-South pastures are expected to be minor and mitigated by light stocking rates, periods of rest and using mineral blocks to move cattle away from riparian areas. Further, the existing healthy riparian conditions can withstand impacts of light grazing, particularly under the rotational grazing system proposed. Surveys conducted in 2010 on the Mount Haggin area did not note any significant impacts of livestock on the stream banks or riparian areas. The Ralston Ranch’s implementation of the rest-rotation grazing plan through the Upland Game Bird contract (2011-2025, with the last 5 years contingent upon renewal of

the Mount Haggin WMA-South grazing lease) has allowed the ranch to also continue in the Candidate Conservation Agreement with Assurances (CCAA) program for Arctic grayling by making improvements to fisheries habitat, water quality and in-stream flows on their deeded acres. Ralston Ranch has worked with FWP for over 15 years implementing numerous conservation projects on their land through the CCAA program (off-stream stock watering systems, channel restoration, riparian fencing, and installation of irrigation headgates and measuring devices). Continuation of conservation projects on the Ralston Ranch would move forward with the proposed Alternative A.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system. Under this alternative, there will be no trampling, siltation, or other impacts caused by livestock in riparian areas on the WMA. Periodic grazing of riparian areas can be a valuable practice for controlling weeds and rejuvenating willows and other riparian vegetation, so the complete elimination of grazing may pose potential negative impacts to riparian community health. None of the benefits to fisheries and riparian habitat described above for the Ralston Ranch, BLM, and USFS associated with this cooperative grazing system would be realized.

3. Wildlife

FWP acquired Mount Haggin WMA in 1976 primarily as wildlife habitat and for public recreational opportunities. The area of the Mount Haggin WMA-South grazing system constitutes important elk calving areas and summer range. At the time of FWP's acquisition, there was a population of 400-500 elk in Hunting District 319 which encompasses the Mount Haggin WMA-South grazing system. This herd grew to over 1,400 elk by the mid to late 1990's. The population objective for Hunting District 319, as stated in the Elk Management Plan (FWP 2005), is to maintain the number of elk observed during post-season aerial surveys between 955-1,100 elk. Liberal hunting seasons designed to reduce the population were implemented during the early 2000's, resulting in a steady reduction in the elk population until the number observed during post-season aerial surveys dropped below the target range. Several years of restricted hunting opportunity followed until the population increased to within range then stabilized with standard hunting regulations. Elk numbers have been within the accepted range since 2015.

The south portion of Mount Haggin WMA provides summer range for mule deer and a small population of white-tailed deer (<20). Trend data for Hunting District 319 indicate that the mule deer population has fluctuated between 300-800 animals since the time of acquisition with a high of over 1,000 mule deer in the mid 1980's. In the past 10 years the population has been on a downward trend with the number of animals observed during aerial surveys being 300-670 (336 mule deer observed in HD 319 in 2018).

Mount Haggin WMA is part of Antelope Hunting District 318. It provides summer range for 60-100 animals that migrate annually through the Upper Big Hole valley from wintering grounds on Bannack Bench. Current antelope populations in this district are on a downward trend with 768 counted in the north half of the district in 2019.

The south side of Mount Haggin WMA provides excellent wintering and calving habitat for moose. Winter aerial surveys are conducted annually. In 2019, 45 moose were observed in the Mount Haggin

WMA area. The dense willow stands found on the WMA also provide excellent and calving and calf-rearing habitat throughout the spring and summer.

Mountain lions, bobcats, coyotes, wolves and black bear occur throughout Mount Haggin WMA and the surrounding area. There have been several confirmed grizzly bear sightings on the WMA in the past 3 years as well, which is significant since this area is outside occupied recovery areas of the Greater Yellowstone and the Northern Continental Divide Ecosystems, suggesting these populations are robust and expanding.

Sandhill cranes nest in the wet meadow complexes found on the south side of Mount Haggin WMA. Blue grouse, Franklin grouse, and ruffed grouse occur on Mount Haggin WMA as well as a variety of small mammals, amphibians, and reptiles. In 2010-11, FWP conducted a comprehensive bird survey of Mount Haggin and Fleecer WMAs. Results from this effort have been compiled in a birder checklist, available to the public.

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease. Continuation of the Mount Haggin WMA-South grazing lease would benefit all wildlife utilizing the state, federal and private lands include in this cooperative grazing program and associated UGBHEP contract with the Ralston Ranch. Rotational grazing treatments are timed to leave high quality vegetation attractive to wildlife for foraging, nesting, thermal and hiding cover. The low stocking rate and lessees' efforts to prevent cattle concentrations would diffuse livestock impacts. Applying a cooperative rest-rotation system across ownership boundaries extends the benefits of systematic vegetative rest to riparian, grassland, shrubland and forested habitat found on 24,611 acres of private, state and federal lands

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system. There would be more forage, nesting, thermal and hiding cover available in the short term on the WMA and the embedded BLM acres that are managed as part of the WMA. In the long-term, the elimination of the Mount Haggin WMA-South grazing lease would negatively impact wildlife across the landscape. Without FWP's participation in the cooperative grazing program the USFS would be unable to apply an independent rest-rotation system to their allotment and would likely manage the grazing under a system that does not allow for enough vegetative rest. This would greatly reduce the quantity and quality of available vegetation for a variety of wildlife species. The absence of livestock grazing on Mount Haggin WMA would nullify the remaining 5 years of the Ralston Ranch's UGBHEP contract which was designed to greatly improve their deeded ground as well as the associated BLM allotment.

4. Soil Resources

Soils in the area of the Mount Haggin WMA-South grazing pastures are primarily of sedimentary and alluvial origin, ranging from slightly developed and very shallow on the steeper slopes to highly developed and deep in the stream bottoms. Soils are classified as coarse- and fine-loamy Mollisols (Alt and Hyndman 1986).

All Alternatives: Soils on this portion of the WMA during the past century have been exposed to disturbance from livestock movements, wildlife movements, mining, and logging. If Alternative A is selected, some disturbance or displacement of soil will occur under the grazing system. Such

disturbance would be minor due to the design of the grazing system giving pastures rest during the growing season for two years following grazing during the growing season. Such treatments promote soil stability over time because they allow enough time for plants to recover growth and carbohydrate reserves, and to establish new seedlings. Some disturbance to the soil from livestock grazing in the fall is beneficial for seedling establishment through seed trampling (Hormay 1970). No disturbance or displacement of soil from livestock grazing would occur if Alternative B is chosen.

III. EVALUATION OF IMPACTS ON THE HUMAN ENVIRONMENT

1. Access and Recreation

The Mount Haggin WMA-South grazing system is in deer/elk Hunting District 319. Recreational hunting in this district is very popular due to the large proportion of public land as well as proximity to Butte and Anaconda. Over the past 15 years, an estimated average of 1,496 hunters spent 11,166 days (30.6 years!) in the field during hunting season. The WMA also provides moose, antelope, black bear, wolf, mountain lion, and mountain grouse hunting opportunities in addition to trapping for furbearers and coyotes. Opportunities for camping, hiking, wildlife watching, photography, and other forms of recreation are also available to the public.

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease. The presence of cattle would minimally restrict recreational use of the WMA, mainly in the form of opening and closing pasture gates. Some members of the public may be impacted aesthetically, depending on their level of tolerance for the presence of livestock on the WMA. Cattle would only occupy one of three WMA pasture complexes (as shown in Table 1 and Figure 2) during the period of use, and the recreating public would be permitted full access and use of the WMA even in the pasture that is occupied by cattle. Bear hunting comprises the main activity on this portion of the WMA during the spring. Due to the timing of the grazing season start (June 16) and the close of bear season in this district (June 15), the grazing system won't impact bear hunting activity. Wildlife viewing is also a popular activity on the WMA from spring through fall. The presence of livestock may cause some temporary displacement of wildlife. Grazing in the fall is concurrent with several game hunting seasons. Minor impacts to these recreational activities can occur due to the presence of livestock (visual impacts to hunters and other recreationalists, opening and closing gates, cattle mixed in with game making shooting difficult, etc.). Cattle would be removed from the WMA prior to the start of big game general season.

Contingent upon renewal of the Mount Haggin WMA-South grazing lease, the Ralston Ranch would continue with the final 5 years of the UGBHEP contract, allowing 50-80 bird hunter days annually to the Ralston Ranch. The grazing system applied to the Ralston's deeded ground and BLM allotment through the UGBHEP contract would continue to augment other conservation measures taken on the Ralston Ranch to improve riparian habitat, allow fish passage, and prevent entrainment for native fisheries including fluvial Arctic Grayling. Improved riparian and fisheries habitat would continue to increase angling opportunity and quality on an already popular fishing resource existing on the property. The Ralston Ranch has a total of 6.93 river stream miles flowing through the property and currently allows open access to anglers.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system. Discontinuation of the Mount Haggin WMA-South grazing lease would not affect public access other than eliminating the need to close gates along interior pasture fences while recreating on the WMA. The public would continue to have full access and use of the WMA in compliance with seasonal closures. Cattle would not be present on the WMA to offend some segments of the public who do not like to recreate on public lands in the presence of livestock. Habitat quality across the larger landscape of state, federal and private land could be compromised in the absence of this cooperative grazing program and the associated contracts, leading to a decrease in hunting, fishing, and wildlife viewing opportunities on the WMA and surrounding area.

2. Community Impacts and Land Use

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease. Three locally owned ranches would be allowed to utilize a portion of Mount Haggin WMA for summer livestock grazing. The proposed grazing treatment would have a positive influence on the productivity and economics of existing public and private land use in the area. This alternative would result in continuation of the Ralston Ranch's UGBHEP contract, allowing for a rest-rotation grazing system and reduced stocking rates applied to 5,200 acres of deeded and BLM ground. These actions would cumulatively have a positive influence on the productivity and economics of public and private land use in the area.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system. FWP would discontinue its participation in the Mount Haggin WMA-South cooperative grazing program with three local livestock producers, the USFS and the BLM. The lessees would have to find other summer grazing lands or reduce their operations. The USFS would possibly absorb the lost usage from the WMA, thus increasing grazing pressure on smaller amount of land. The Ralston Ranch would terminate their UGBHEP contract, which would result in lost hunting opportunity, cessation of the rest-rotational grazing and increased stocking rate on their deeded ground and BLM allotment. FWP would continue to manage the WMA for the benefit of its natural resources while providing for the public access to hunt and recreate.

3. Cultural and Historic Resources

This portion of Mount Haggin WMA has a long history of human use. Homesteading, livestock grazing, logging, and mining have all been part of the historical uses of this property. Numerous buildings in various states of decay and associated with various past uses of the land can still be found on the WMA. A chert outcrop located on the WMA apparently served as a source of rock for arrowheads and other tools that date back to prehistoric periods.

If Alternative A was implemented, livestock grazing on the WMA may cause some disturbance to existing cultural or historic resources. Most of the cabins, etc., however, are beyond repair, and it has been the policy of FWP to let nature reclaim them. FWP would consult with the State Historic Preservation Office for guidance and assistance if previously undiscovered resources were discovered.

4. Risk/Health Hazards

Neither of the alternatives are expected to result in increased human risk or health hazards.

5. Public Services

Alternative A: Renewal of the Mount Haggin WMA-South grazing lease. This alternative would result in a commitment of FWP funds for continuing oversight to maintain the Mount Haggin WMA-South grazing system. Such maintenance would include fence repair/replacement and administering the program (3-5 personnel days annually). This alternative would have a positive impact on state and local tax revenues by maintaining three local livestock operations and a wildlife/recreation-based economy in the area. Direct revenue to FWP for grazing fees is an approximately \$3,932 annually.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-South grazing system. FWP would continue to commit funds for the continuing maintenance and management of the WMA but would not need to invest in maintaining interior pasture fences. Expenses would be incurred to remove those fences. Boundary fences would continue to be maintained by WMA staff.

IV. PUBLIC PARTICIPATION

1. Public involvement:

The public will be notified in the following manners to comment on this current EA, the proposed action, and alternatives:

- Two public notices in each: *Butte Montana Standard*, *Anaconda Leader*, *Helena Independent Record*
- One statewide press release
- Public notice on the Fish, Wildlife & Parks web page: <http://fwp.mt.gov>, and
- Copies of this environmental assessment will be distributed to neighboring landowners, local sportsmen's clubs, county commissioners, and other interested parties to ensure their knowledge of the proposed project.

2. Duration of comment period:

The public comment period will extend for (30) thirty days from January 29 until 5:00 PM, February 29, 2020. Comments can be emailed to vboccadori@mt.gov or mailed to:

Vanna Boccadori
Montana Fish, Wildlife & Parks
1820 Meadowlark Lane.
Butte, MT 59701

Please put "South Grazing EA" in the subject line.

V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No.

Based upon the above assessment, which has identified a very limited number of minor impacts from the proposed action, most of which can be mitigated, an EIS is not required and an environmental assessment is the appropriate level of review.

2. Person responsible for preparing the EA:

Vanna Boccadori
Butte Area Wildlife Biologist
Montana Fish, Wildlife & Parks
1820 Meadowlark Lane.
Butte, MT 59701
(406) 494-2082

3. List of agencies or offices consulted during preparation of the EA:

Ralston Ranch, Bacon Ranch, Thompson Ranch
Montana Fish, Wildlife & Parks: Fisheries, Wildlife, and Legal Bureaus
Montana Natural Heritage Program
U.S. Forest Service, Beaverhead-Deerlodge National Forest, Butte District
Bureau of Land Management, Butte Field Office

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