

**DRAFT
ENVIRONMENTAL ASSESSMENT**



**MOUNT HAGGIN WMA-GERMAN GULCH
GRAZING LEASE RENEWAL
JANUARY 2020**

I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action: Montana Fish, Wildlife & Parks (FWP) proposes to maintain a coordinated grazing program on the Mount Haggin Wildlife Management Area (WMA)-German Gulch system for a 10-year term to extend June 2021 through October 2030. The program, which began in 1989 and has been modified over the years to better suit habitat objectives, would consist of a summer grazing lease (436 Animal Unit Months, AUM) with the Peterson Fairmont Ranch, Inc.

This grazing program is run cooperatively with the U.S. Forest Service (USFS) on the Beaverhead-Deerlodge National Forest. The proposed grazing program would encompass approximately 9,287 acres owned by FWP and approximately 10,829 acres administered by the USFS. Total acreage involved would be approximately 20,106 acres.

Renewal of the Mount Haggin WMA-German Gulch coordinated grazing system would provide landscape-level management of elk winter range across ownerships and continue to demonstrate the compatibility of livestock production and wildlife/recreation-based values.

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 the Mount Haggin WMA would have to be consistent with the management goals and objectives as outlined in the Mount Haggin WMA Management Plan (1980). The plan states that Mount Haggin WMA will be managed for dispersed outdoor recreation activities that are 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. FWP is additionally required to conduct an environmental assessment for all leases under the FWP Land Lease-Out Policy, in accordance with Section 87-1-303, M.C.A. FWP Commission must also approve all grazing leases on Wildlife Management Areas owned by FWP.

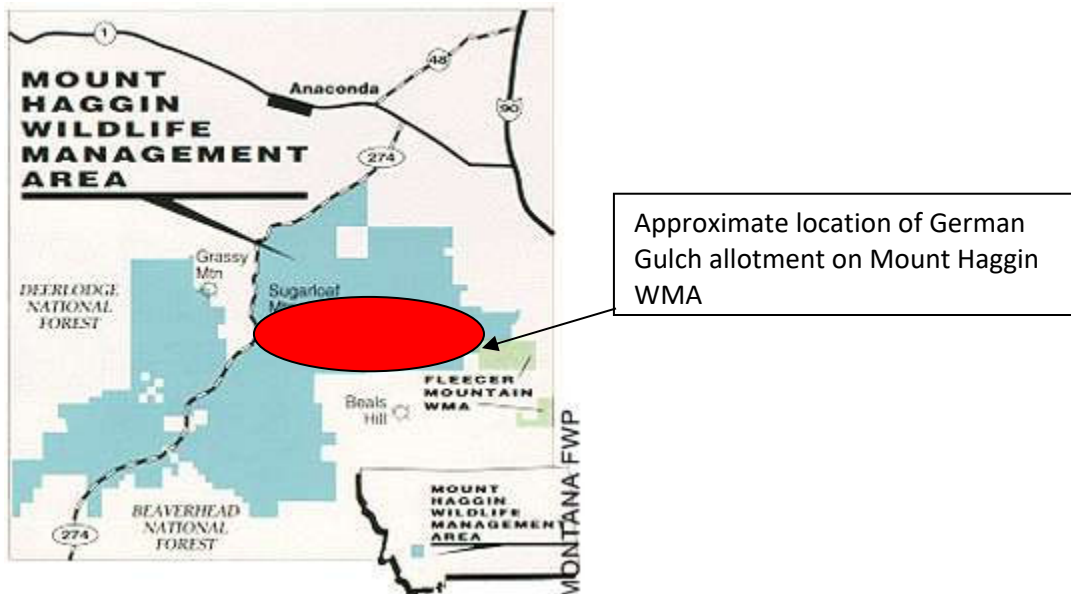
3. Anticipated Schedule:

Public Comment Period: January 21 - February 29, 2020.
Presented to the FWP Commission for Approval: April 2020
Proposed Leases in Effect: June 16, 2021

4. Location:

Mount Haggin WMA is in Silver Bow and Deerlodge Counties in southwestern Montana (Figure 1). The German Gulch allotment is situated in the northeastern portion of the WMA, approximately 10 miles west of Butte, Montana. WMA lands included in this grazing program border USFS lands administered by the Beaverhead-Deerlodge National Forest. The German Gulch grazing system encompasses parts of Township 3 North, Range 10 West and Township 3 North, Range 11 West.

Figure 1: General location of proposed action



5. Project size:

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	<u>0</u>
Residential	<u>0</u>		
Industrial	<u>0</u>	(e) Productive:	
(existing shop area)		Irrigated cropland	<u>0</u>
(b) Open Space/Woodlands/ Recreation	<u>0</u>	Dry cropland	<u>0</u>
(c) Wetlands/Riparian Areas	<u>538</u>	Forestry	<u>6,242</u>
Other	<u>0</u>	Rangeland	<u>2,507</u>

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. In 1989, FWP entered into a cooperative grazing agreement with the U.S. Forest Service on the Beaverhead-Deerlodge National Forest involving the USFS's German Gulch allotment and adjacent Mount Haggin WMA lands. FWP's involvement in this allotment stemmed from the opening of the Beal Mountain Mine in the late 1980's, located within the allotment, which removed significant acreage from the grazing system and resulted in increased pressure on the rest of the allotment, a large portion of which is located on elk winter range. FWP saw this as an opportunity to work cooperatively with the USFS to expand their rotational grazing system which had been in place since 1963 across boundaries with the WMA. This resulted in a 21,000+ acre swath of landscape cooperatively managed under a rest-rotation system as described by Hormay (1970) for the benefit of elk and other wildlife species. In exchange for inclusion of Mount Haggin WMA property into the grazing system, the USFS agreed to perpetually rest one of their pastures that constitutes important elk winter range.

The grazing system originally consisted of eight pastures: 6 pastures on USFS land and two on FWP property, with 509 AUM's on the WMA lease. The grazing system was revised in 2005 when one of the FWP pastures (California Pasture) was temporarily removed from this system in order to accommodate changes in another grazing system on the WMA. As a result, the remaining FWP pasture was split into two (Upper and Lower Beaver) and usage on the WMA was reduced to 436 AUM's. Around the same time, the USFS made two pasture changes: Lower and Upper German Gulch were combined into one pasture (Lower German), and the pasture containing the former Pegasus Gold Beal Mine (Beal Pasture) was removed from the rotation to avoid conflict with USFS cleanup activities associated with the mine. In 2009, the FWP California Pasture was brought back into this grazing system rotation with no adjustments made

to the AUM's since habitat objectives were being met with the lower stocking rate. Minor fencing changes have occurred since 2008 to better distribute livestock usage.

The current Mount Haggin WMA-German Gulch grazing system consists of seven pastures with the rotation of livestock, pasture ownership, and seasonal use by cattle and elk (Figure 2). Three pastures are located primarily on FWP property (Lower Beaver, Upper Beaver, and California), while the other four are on USFS administered lands (Lower Beef, Mid Beef, Lower German, and Minnesota). Lower Beaver, Lower German, Lower Beef, and Mid Beef pastures constitute elk winter range. The other three pastures are located at higher elevation. Mid Beef pasture is perpetually rested for the benefit of elk winter range. In addition, one of the other three winter range pastures is rested annually while the remaining two are grazed either early or later in the summer to avoid the peak growing season and provide maximum winter forage for elk as well as nesting, thermal, and hiding cover for other native species. Figure 2 shows the pastures within the Mount Haggin WMA-German Gulch cooperative grazing system while Table 1 gives the 10-year rotation schedule.

The Mount Haggin WMA - German Gulch lease has been held by the Peterson Fairmont Ranch, Inc. since 2001. It was renewed in 2011 for a 10-year term. The lessees are charged one-half the FWP standard rate of \$24.50/AUM, i.e. \$12.25 per AUM with lessees being responsible for routine fence maintenance. FWP's standard rate reflects the current National Agriculture Statistics Survey (NASS) values for Montana. 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 (2011-2020) include \$95,510 for the California-Beaver Divide fence and \$39,080 for the Lower Beaver Fence. During this same period, 4,360 AUM of livestock use has been provided and \$47,450 in grazing fees have been paid to FWP. An average of 3-5 FWP staff days annually are devoted to the administration of the Mount Haggin-German Gulch WMA grazing program.

Table 1. Projected livestock grazing formula for the German Gulch cooperative grazing system, 2021-2030.

PASTURE	OWNERSHIP	SEASONAL ELK RANGE	YEAR		
			2021 2024 2027 2030	2022 2025 2028	2023 2026 2029
Lower Beaver	FWP*	Winter	Seed	Rest	Early
Lower German	USFS	Winter	Rest	Early	Seed
Lower Beef	USFS	Winter	Early	Seed	Rest
Mid Beef	USFS	Winter	Rest	Rest	Rest
Upper Beaver	FWP	Summer	Mid	Late	Rest
California	FWP	Summer	Rest	Mid	Late
Minnesota	USFS	Summer	Late	Rest	Mid

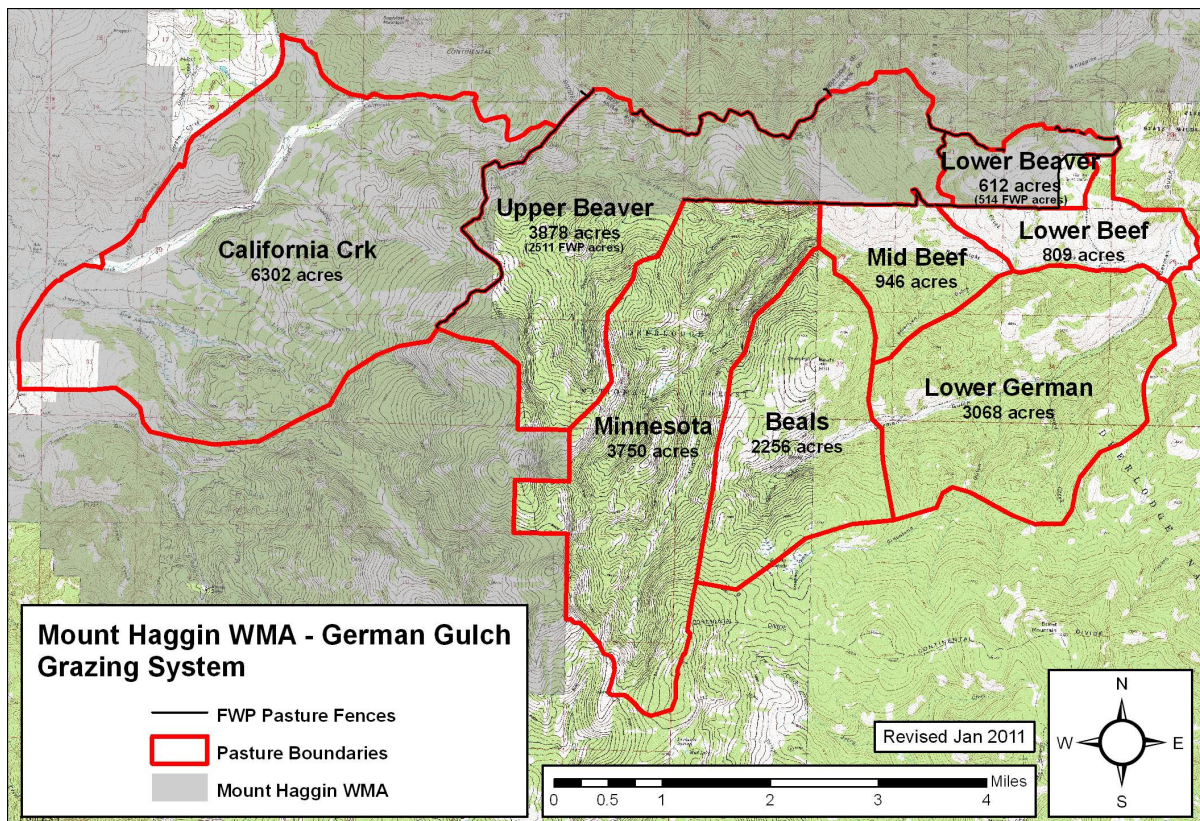


Figure 2: Pasture map for the cooperative Mount Haggin WMA-German Gulch grazing system between FWP and the USFS.

Livestock Grazing Treatments

Early – dates are approximately June 16 through July 15

Mid – dates are approximately July 15 through August 15

Late – dates are approximately August 15 through September 15

Seed – dates are approximately September 15 through October 10

Rest – allows for no livestock grazing

Need for Proposed Action

The proposed action is to continue the coordinated German Gulch grazing program on Mount Haggin WMA as described above. This would continue FWP’s involvement in a grazing system that applies sound stewardship across boundaries for the benefit of over 20,000 acres of wildlife habitat on public lands.

Objectives of the proposed action are to:

- Maintain or improve soils, vegetation, and riparian zones through systematic grazing on the WMA and adjacent Forest Service land.
- Maintain high-quality vegetation for wintering elk and other wildlife through planned rest from grazing across multiple ownerships.

8. Alternatives:

Alternative A: Renewal of the Mount Haggin WMA-German Gulch grazing lease.

This alternative would continue the cooperative grazing system between USFS and FWP on Mount Haggin WMA-German Gulch as it currently exists for 10 additional years. The

Peterson Fairmont Ranch, Inc. would continue to be allowed to graze the Mount Haggin WMA-German Gulch pastures according to the livestock grazing formula presented in Table 1. The total AUMs allowed on this lease would continue to be 436, and the annual period of use would be approximately June 16 – October 10 (vegetation conditions may alter these dates). Payment for use will be 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-German Gulch were charged \$12.25/AUM.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA portion of the German Gulch cooperative grazing system with the USFS.

This alternative would eliminate livestock grazing on this portion of Mount Haggin WMA and subsequently nullify the cooperative grazing agreement with the USFS. The loss of livestock grazing on FWP land could lead to increased use of the Forest Service winter range pastures that currently receive scheduled rest and/or a subsequent reduction in the permittee’s allotted use.

II. EVALUATION OF IMPACTS ON THE PHYSICAL ENVIRONMENT

1. Vegetation

The German Gulch grazing area of Mount Haggin WMA ranges in elevation from approximately 5200 feet along Silver Bow Creek in the Clark Fork River watershed up to 8909 feet at an unnamed peak along the Continental Divide. It is predominantly conifer forest interspersed with open rolling grassland/shrublands and riparian corridors along the streams that intersect the area. Bluebunch wheatgrass and rough fescue grasslands are the predominant grasses. Forests are mainly comprised of lodgepole pine and Douglas fir. Aspen and willow stands are common along stream banks and in wet areas. Three perennial streams flow across the area: Beefstraight Creek, California Creek, and the lower reach of American Creek. Of these, Beefstraight Creek flows into the Clark Fork Watershed west of the continental divide, and the other two streams eventually flow into the Big Hole River on the east side of the divide. Average annual precipitation is about 14 inches at Anaconda with 2.5 inches of rain occurring during June.

From early in the previous century to a few years past when FWP acquired the property in 1976, livestock grazing was a regular use of what is now Mount Haggin WMA. Homesteaders first occupied areas of the WMA. 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). In 1920’s under ownership of the Company, the Mount Haggin Land and Livestock ran a world-class Hampshire sheep operation on the WMA, grazing upwards of 8,000 sheep annually on the Big Hole side of the WMA, trailing them through the German Gulch area each spring and fall. In addition

to sheep, the Company also regularly grazed cattle, horses, and mules on the WMA. Much of this use occurred primarily from early June through late September under a continuous grazing strategy. This significantly reduced forage for wildlife, nesting and hiding cover for birds and other mammals, and negatively impacted willow and other riparian communities along stream corridors. Under FWP's ownership of the property, livestock grazing was eventually eliminated from the WMA until 1984 when a rest-rotation grazing system was implemented on the Big Hole side of Mount Haggin WMA. In 1989, the German Gulch cooperative grazing system was initiated.

In addition to livestock grazing, much of the Mount Haggin WMA area was logged several times during the last century. Historical records indicate there was a logging camp in the vicinity of German Gulch, and that logging occurred nearby. When FWP acquired the property in 1976, the department inherited a logging contract that allowed for commercial harvest of more than 40 million board-feet of timber from 1976-1990 when the contract expired. Several of the cutting units associated with that contract were in the German Gulch area. FWP conducted a 900+-acre habitat improvement project in 2010-2011 to remove encroaching conifer from aspen and bitterbrush stands and create multi-age forests in the German Gulch winter range area (FWP 2008).

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. German Gulch also was the site of a gold mining community. Five patented mining claims still exist along California Creek. Remnants of those gold mining days can still be found throughout the WMA and surrounding USFS lands. Decades of smelting activity in Anaconda in the 1900's associated with the copper mines in Butte had a direct impact on the vegetation on Mount Haggin WMA west of the continental divide. Smoke plumes carrying heavy metals and other contaminants deposited on lands to the east with the prevailing winds, killing vegetation and contaminating soil, resulting in bare slopes, deep gully erosion and sediment plumes draining into creeks. A Consent Decree between Atlantic Richfield Corporation and the State of Montana signed in the early 2000's has resulted in large-scale remedy and restoration efforts across much of the upper Clark Fork Watershed, including Mount Haggin WMA.

Several studies have been 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 FWP's Mount Haggin WMA, Frisina (1992) found

that during early summer, elk use increased in pastures that had been grazed by cattle the previous year. During July and August when cow elk are rearing calves, use switched to the rested pasture where more security cover and forage was available, supporting the fact that the benefits of a rest-rotation system are not just on forage for elk but also for the standing vegetation that is left for thermal, hiding, and nesting cover for birds, amphibians, reptiles and other small mammals.

Long-term vegetation monitoring has been occurring on Mount Haggin WMA since 1986. Over 50 permanent photo points have been established across the WMA to monitor trend over time. There are 5 photo points in the German Gulch pasture system. Repeat photos taken annually indicate stable to increasing vigor of the native plant communities under the cooperative grazing program. Several noxious weed species are present throughout the WMA, with the heaviest concentration occurring west of the continental divide. In 2018 FWP contracted to have those portions of Fleecer and Mount Haggin WMAs within the Clark Fork Watershed surveyed for noxious weeds and a 10-year weed management plan developed. The Natural Resource Damage Program funded this effort as part of the on-going restoration in the Superfund area. With the “Mount Haggin/Fleecer WMA Noxious Weed Baseline Report and 10-Year Management Plan” (FWP 2019), FWP will begin implementing the recommendations during the 2020 field season and use this comprehensive plan to leverage cooperative efforts across ownerships.

Alternative A: Renewal of the Mount Haggin WMA-German Gulch grazing lease.

Some changes in the vegetation community on the WMA are expected under the continuation of this grazing lease. It is expected that this grazing program would positively influence native vegetation by providing: 1) maximum rest during the growing season which promotes the highest quality potential standing crop of vegetation for wintering wildlife as well as nesting, thermal and hiding cover for other native species; 2) rest and a standing crop of available winter forage and cover on adjacent USFS lands; and 3) improved plant vigor, plant health, and soil stability. In addition, vegetation will benefit from hoof-trampling that helps to set seed.

Vegetation in pastures that have been grazed that year will look grazed. However, given a complete year of rest every third year and a system design that takes into consideration seasonal elk ranges with respect to timing of livestock grazing, plant communities will quickly recover from grazing pressure.

Cattle would likely have temporary negative impact on riparian areas such as trampling of stream bank vegetation and breaking willows. This can be mitigated by periods of scheduled rest and actions taken by livestock producers to prevent their cattle from concentrating in these areas.

Mineral blocks would be used to manage livestock. Blocks would be placed in mutually agreed upon locations such as rocky areas and hard-packed ground.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-German Gulch grazing system. If the Mount Haggin WMA-German Gulch grazing lease was not renewed, residual vegetation would accumulate due to the lack of removal by livestock. This would likely cause a shift in grazing by elk onto other portions of the Mount Haggin winter range not managed by FWP. If this shift occurs onto private lands, game damage conflicts would increase. Removing livestock grazing from the WMA could decrease the amount of vegetative rest on USFS pastures. Under the current cooperative system, 2 of the 4 USFS pastures are rested annually because they are in the rotation with 3 FWP pastures. If the FWP grazing lease is not renewed, the USFS could implement a rotation that would still meet Forest Plan objectives of balanced use but would likely reduce the amount of rest from livestock grazing received annually from what is currently being received. Without FWP's participation in the cooperative grazing program with the USFS, the ability to manage elk winter range across the landscape would be greatly reduced.

2. Fisheries and Water Resources

The Mount Haggin WMA-German Gulch grazing pastures contain portions of three streams: Beefstraight, California and American Creek. In Beefstraight Creek, the fishery is comprised of westslope cutthroat trout and brook trout with cutthroat being most common. 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. Brown trout, Arctic grayling, longnose sucker, and white suckers are present in Deep Creek and may also be present in California Creek but were not documented in recent surveys. Western pearlshell mussels are also present in California Creek and are a sensitive species. It should be noted that while no westslope cutthroat trout have been documented recently in either California or American Creek, there is a potential for restoring this species in these streams if adequate fish barriers can be established and non-native fish removed upstream of those barriers.

Alternative A: Renewal of the Mount Haggin WMA-German Gulch grazing lease.

Livestock grazing is expected to have minor negative impacts to riparian areas and the associated fisheries under Alternative A. The dominant channel form in Beefstraight Creek is classified as a "B" channel type under Rosgen Stream Classification System (Rosgen 1996). The geomorphology of these types of streams tends to make them somewhat resistant to widespread grazing impacts. Nevertheless, it is likely that with continued livestock presence along Beefstraight Creek at least some measurable damage to streambanks and woody riparian vegetation will occur. The geomorphology of California and American Creeks result in stream banks and riparian areas that are particularly susceptible to grazing impacts. The dominant channel type of these streams would likely be considered a "C" type channel with low to moderate stream gradient and a meandering, highly sinuous stream channel. The riparian vegetation is primarily

willows, grasses, and sedges, and these plants are the primary features stabilizing the stream banks. Potential impacts to these sensitive areas include removal of streambank and riparian vegetation through grazing and trampling of stream banks. Grazing has been shown to impact riparian vegetation and change riparian species abundance and distribution. Juvenile willows are particularly susceptible to livestock grazing as are certain species of sedges. Both 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 of stream banks, they are less able to transport fine sediment leading to further siltation and degradation of fish and other aquatic organism habitat. Trout require clean gravels for spawning and incubation of eggs. 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 aquatic invertebrates that are prey of fish species. Fine sediment is also detrimental to western pearlshell mussels. An additional impact of livestock on fisheries is the direct trampling of redds. Recent studies in the Beaverhead-Deerlodge Forest indicate that trampling rates of redds in streams can be high. Trampling can lead to direct egg mortality as incubating eggs are highly susceptible to disturbance. The fishery in Beefstraight Creek would likely be the most affected by livestock trampling of redds given the dominance of westslope cutthroat trout in the stream. Westslope cutthroat trout typically spawn in mid to late June, and eggs are present in the gravel until mid to late August. This time period coincides with when livestock are present. Redd trampling currently would not likely result in significant impacts to the fisheries in California and American Creeks because the primary trout species present is brook trout which spawn in the fall (Sept-Oct). Only under the late-season grazing would there be any potential impacts of redd trampling because eggs of fall spawning fish incubate through the winter and hatch in spring (May-June) when livestock are not present. It should be noted, however, that if the streams are restored to westslope cutthroat trout, the potential for trampling impacts may be greater because of the reason described above. Future potential impacts to cutthroat would be evaluated only after the species is restored. Impacts of livestock grazing on the fisheries of Beefstraight, American, and California Creeks are expected to be relatively minor and mitigated by light stocking rates. Further, the existing healthy condition of the riparian area can withstand impacts of light grazing, particularly under the rotational type grazing as proposed. Fisheries surveys conducted in 2008 and 2010 of the Mount Haggin WMA area did not note any significant and/or widespread impacts to any of these streams.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-German Gulch grazing system. Under this alternative, there will be no trampling, siltation, or other negative impacts caused by livestock use in riparian areas. Periodic grazing of riparian areas which can be a valuable practice for rejuvenating willows and other riparian vegetation would not occur, potentially having negative impacts to riparian community health.

3. Wildlife

In 1976, Montana Fish, Wildlife & Parks acquired Mount Haggin WMA primarily as wildlife habitat, and for recreational opportunities for the public. At the time of FWP's acquisition, there was a population of 150-200 elk in Hunting District 341, the district that encompasses the Mount Haggin WMA-German Gulch grazing system. This herd grew to 650-700 elk by the mid to late 1990's. As stated in the Elk Management Plan (FWP 2005), Hunting District 341 is part of the Fleecer Elk Management Unit (EMU) along with Hunting District 319. The population objective for the EMU is to maintain the number of elk observed during post-season aerial surveys within 15% of 1,475 elk (1,250 – 1,700). For HD 341 specifically, the objective is for a maximum of 600 elk. Liberal hunting seasons designed to reduce the population across the EMU during the early 2000's resulted in a steady reduction in the number of elk observed on Mount Haggin winter range during post-season aerial surveys. With the reduction of elk numbers to population objective, the season structure returned to a standard regulation with bulls on the general license and cow elk hunting via a district-specific "B" license. During the most recent winter survey (March 2019), 446 elk observed in HD 341.

The German Gulch area of Mount Haggin WMA supports a year-round population of mule deer as well as serving as important winter range. Trend data for this area (Hunting District 341) indicate that the deer population has fluctuated between 200 and 600 animals from the time of acquisition until the early 2000's. In recent years, the population appears to be holding steady with the number of animals observed during aerial surveys averaging 279. During the most recent survey (Spring 2017), 337 mule deer were observed in HD 341. FWP has implemented several habitat improvement projects across the Mount Haggin WMA winter range in the past decade (FWP 2009).

Mount Haggin WMA is part of Antelope Hunting District 319. While the WMA supports summer use of approximately 60-100 animals, the extent of this seasonal range does not include the German Gulch grazing system area. White-tailed deer occur on the WMA, but in low numbers, found mainly along lower elevation riparian corridors. The area of the Mount Haggin WMA-German Gulch grazing system is located within Moose Hunting District 341. Moose are found throughout this district. Mountain lions, bobcats, coyotes, and black bear occur on Mount Haggin WMA and have been harvested in the vicinity of the German Gulch grazing system.

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.

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-German Gulch grazing lease.

Continuation of the Mount Haggin WMA grazing lease is intended to be beneficial for all wildlife. Grazing treatments are timed to leave high quality vegetation that is attractive to wildlife including wintering elk as well as birds, amphibians, reptiles, and other mammals. Applying a rest-rotation system cooperatively across boundaries extends the benefits of systematic vegetative rest to over 20,000 acres of both FWP and USFS lands. Continuing this cooperative grazing program across publicly owned elk winter range will likely promote elk usage on public land versus private land thus minimizing potential game damage conflicts.

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

Ground-nesting birds, amphibian, reptiles, and small mammals would benefit from the increase in accumulated growth of grasses that provide nesting, thermal and hiding cover on the WMA. Elimination of the Mount Haggin WMA-German Gulch grazing lease would have negative impacts for wintering elk. In the short term, there may be more forage available on the WMA. After a few years of no livestock grazing, previous years' growth of grasses would accumulate across the WMA making it more difficult for wintering elk to reach the more desirable current year's growth underneath. This would cause elk to seek grazed pastures elsewhere. If this occurs on private land, the potential for game damage conflicts to increase is high. Under the current cooperative system, 2 of the 3 USFS pastures that occur on elk winter range are rested annually. If the FWP grazing lease is not renewed, available forage to wintering elk on USFS land could be compromised if the USFS implements a rotation that does not allow for this continued level of annual rest from livestock grazing. Without FWP's participation in the cooperative grazing program with the USFS, the ability to manage elk winter range across the landscape would be lost which may greatly reduce the quantity and quality of available vegetation and may lead to a reduction in the number of elk the habitat can support.

4. Soil Resources

Soils in the area of the Mount Haggin WMA-German Gulch grazing pastures are primarily of volcanic 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 Mollisols and Alfisols (Alt and Hyndman 1986).

Throughout the past century, soils on this portion of the WMA have been exposed to disturbance from livestock movements, movements of resident and transient wildlife, mining, and logging. If Alternative A is selected, some disturbance of soil will occur under the grazing system. Such disturbance would be minor due to the design of the grazing system where pastures receive complete rest during the growing season two out of every three years. Some disturbance to the soil from livestock grazing in the fall is

beneficial for seedling establishment through seed trampling (Hormay 1970). If Alternative B was chosen, this would not occur.

III. EVALUATION OF IMPACTS ON THE HUMAN ENVIRONMENT

1. Access and Recreation

The portion of Mount Haggin WMA where the German Gulch grazing system is located is in deer/elk Hunting District 341. For its relatively small acreage, there is a high amount of recreation hunting in this district due to good public access and proximity to Butte and Anaconda. Since 2004, an average of 637 elk hunters spent 4,716 days afield during the archery and general season combined (7.4 days per hunter). The WMA also provides white-tailed deer, mule deer, moose, black bear, wolf, mountain lion hunting, and mountain grouse hunting opportunities in addition to trapping. Opportunities for camping, hiking, wildlife watching, photography and other forms of outdoor recreation are available as well.

Alternative A: Renewal of the Mount Haggin WMA-German Gulch grazing lease.

The presence of cattle would minimally restrict recreational use of the WMA, mainly in the form of opening and closing pasture gates and for some the visual or odiferous impacts of cattle on the landscape. During the period of use, cattle would only occupy one of three WMA pastures and the recreating public would be permitted full access and use of the WMA even in the pasture that is occupied by cattle. Horn hunting and bear hunting are the main activities that occur on this portion of the WMA during the spring. Due to the timing of the opening of the WMA (May 15), the close of bear season in this district (June 15), and the beginning of the grazing season (June 16), this grazing system won't impact either of these recreational activities. 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 (game being spooked by the livestock, visual impacts to hunters and other recreationalists, etc.). Cattle would be removed from the WMA prior to the start of big game general season. Overall, the proposed action would have a positive effect on the quality and quantity of recreation in the area since the entire grazing system is designed to improve vegetation and habitat conditions on over 21,000 acres of public land for the benefit of wildlife and the recreating public.

Some members of the public may be impacted aesthetically depending on their level of tolerance for the presence of livestock on the WMA. Otherwise, no significant changes to recreational opportunities or access are anticipated if this alternative was implemented.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-German Gulch grazing system. Complete elimination of livestock from the WMA would not significantly affect access except that the public would not need to close gates along interior pasture fences while recreating on the WMA. Otherwise, the public would

continue to have full access and use of the WMA. In the short term, complete elimination of livestock from the WMA may increase hunting and wildlife watching opportunities on the WMA. 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. However, over time and in the absence of livestock grazing on the WMA, habitat quality across the winter range (i.e. across ownership boundaries) may suffer, leading to a decrease of elk and other mammals and birds that rely on dense stands of tall grasses and shrubs for nesting and hiding cover. Over time, this could lead to a decrease in hunting, wildlife viewing, and horn-hunting opportunities on the WMA.

2. Community Impacts and Land Use

Alternative A: Renewal of the Mount Haggin WMA-German Gulch grazing lease.

The proposed grazing system would have a positive influence on the productivity and existing public and private land use in the area. Grazing the WMA in exchange for scheduled rest on adjacent FS lands in a cooperative system illustrates the compatibility of livestock production and wildlife/recreation-based economies. A locally-owned ranch 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 no change in the total number of 436 AUMs that are currently allowed to graze this portion of Mount Haggin WMA.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-German Gulch grazing system. Under this alternative, there would be no livestock grazing on this portion of Mount Haggin WMA. FWP would continue to manage the WMA for the benefit of its natural resources (wildlife and vegetation) while providing for the public access to hunt and recreate. Current lessees would have to locate additional summer grazing lands for their livestock.

3. Cultural and Historic Resources

This portion of Mount Haggin WMA is historically important for providing habitat for wintering elk and other big game species and hunting-oriented recreation. Livestock grazing has been a practice on the WMA through the German Gulch cooperative grazing program since 1989. Prior to FWP's acquisition of the Mount Haggin WMA in 1976, the property had been heavily grazed by livestock for over 50 years while under the ownership of the Mount Haggin Livestock Company, a subsidiary of the Anaconda Mining Company. Remnant domestic sheep trails can still be seen on the landscape. Mining and logging have also been historical uses of this property.

If Alternative A was implemented, the grazing of cattle on the WMA is not expected to disturb existing cultural or historic resources. If either alternative was chosen, FWP would continue to watch for previously undiscovered resources and consult with the State Historic Preservation Office for guidance and assistance.

4. Risk/Health Hazards

Neither of the alternatives are expected to result in increased risk or health hazards to humans or wildlife. Noxious weed control within the WMA will involve the use of chemical herbicides and will be applied in recommended amounts that should have minimal impacts on nontarget vegetation under all alternatives.

5. Public Services

Alternative A: Renewal of the Mount Haggin WMA-German Gulch grazing lease.

This alternative would result in a commitment of FWP funds for continuing oversight to maintain the Mount Haggin WMA-German Gulch grazing system, i.e. fence repair and replacement, as needed. No additional fencing would be required. Any maintenance expenses will be covered by the existing operations and maintenance budget for the WMA as well as shared expenses with the USFS where it pertains to boundary fences.

This alternative would have a positive impact on state and local tax revenues through its contribution to maintaining a viable livestock operation and wildlife/recreation-based economy in the area. Revenue to FWP from grazing fees would be generated at FWP's low rate (\$12.25 per AUM in 2019) for 436 AUMs.

Alternative B (No Action): Elimination of livestock grazing on the Mount Haggin WMA-German Gulch grazing system. Same as Alternative A regarding fencing costs except that only boundary fences would need to be maintained while interior pasture fences could be left in disrepair. If the cooperative grazing agreement with the USFS were eliminated, the USFS would no longer share the cost of fence replacement along the FWP-Forest Service boundary. FWP would have to bear the sole cost of such replacement in order to keep trespass livestock off WMA property.

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 31 until 5:00 PM, February 29, 2020. Comments can be emailed to vbocadori@mt.gov or mailed to:

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

Please put "German Gulch 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:

Peterson Fairmont Ranch
Montana Fish, Wildlife & Parks: Fisheries, Wildlife, and Legal Bureaus
Montana Natural Heritage Program
U.S. Forest Service, Beaverhead-Deerlodge National Forest, Butte District

REFERENCES

- Alt, D. and D. W. Hyndman. 1986. Roadside Geology of Montana. Mountain Press Publishing Company, Missoula, MT. 427 pp.
- Drummond, J. 1997. The history of Mount Haggin Livestock Company and the Drummond family on the ranch. Bozeman, MT. 148 pp.
- Frisina, M. R. 1992. Elk habitat use within a rest-rotation grazing system. Rangelands 14: 93-96.
- Hormay, A.L. 1970. Principles of rest-rotation grazing and multiple-use land management. USDI Bureau of Land Management, USDA Forest Service. (TT-4) (2200). 26 pages.
- Montana Fish, Wildlife & Parks. 1980. Mount Haggin WMA Interim Management Plan. Butte. 9pp
- Montana Fish, Wildlife & Parks. 2005. Elk Management Plan. Helena 397pp

- Montana Fish, Wildlife & Parks. 2008. Mount Haggin Wildlife Management Area Habitat Improvement Project. Environmental Assessment Decision Notice.
- Montana Fish, Wildlife & Parks. 2019. Mount Haggin/Fleecer WMA Noxious Weed Baseline Report and 10-Year Management Plan.
- Rosgen, D. 1996. Applied River Morphology. 2nd ed. Wildland Hydrology, publ. Fort Collins, CO.
- Wambolt, C. L., M.R. Frisina, K.S. Douglass, and H.R. Sherwood 1997. Grazing effects on nutritional quality of bluebunch wheatgrass for elk. *Journal of Range Management* 50: 503-506.