

MOUNTAIN ALLOTMENT MANAGEMENT PLAN

ENVIRONMENTAL ASSESSMENT
OR-05-025-061

Bureau of Land Management
Burns District Office
28910 Hwy 20 West
Hines, Oregon 97738

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CHAPTER I: PURPOSE AND NEED FOR THE PROPOSED ACTION

A. Introduction

The Mountain Allotment #5532 is located approximately 30 miles east of Burns, Oregon (Map A). The allotment contains 36,914 acres of Bureau of Land Management (BLM) managed land and 6,420 acres of private land (Map B). There are five grazing permits within the allotment and six pastures. The authorized season of use is May 1 to September 15 (see Table 1 for current stocking levels).

Table 1. Current number of AUMs of permitted use for each permittee.

Permittee	Active Preference	Suspended Use	Total Preference	Exchange of Use	Total Use
Frank Catterson	244	69	313	27	340
Pat Wilber	790	335	1,125	0	1,125
Wilber Bros.	1,359	488	1,847	217	2,064
G. Wright Wilber Trust	855	307	1,162	0	1,162
Total	3,248	1,199	4,447	244	4,691

The Mountain Allotment comprises approximately 40 percent of the Stinkingwater Wild Horse Herd Management Area (HMA). The Appropriate Management Level (AML) for the HMA is 40 to 80 wild horses. During the fall of 2005, 173 horses were gathered from both inside and outside the HMA with the Mountain Allotment contributing 113 horses to this total. Forty of the gathered horses were returned to the HMA.

In 2003, monitoring data collected on the Mountain Allotment over the previous 11 years were analyzed using a formal interdisciplinary allotment evaluation process. Livestock grazing management was evaluated for progress toward achieving allotment-specific resource objectives and Oregon and Washington Standards for Rangeland Health and Guidelines for Livestock Grazing Management (August 12, 1997).

Stinkingwater and Warm Springs Creeks failed to achieve the Standard for Rangeland Health for Water Quality. Current livestock grazing is a contributing factor to the headwaters of Stinkingwater Creek failing to meet this standard. This riparian area is located within a water gap that receives continuous late season livestock grazing. Continuous grazing during critical growth periods of riparian vegetation has fostered a downward trend in riparian condition. Current livestock grazing management is not a contributing factor to Stinkingwater Creek (downstream of water gap) and Warm Springs Creeks failing to meet the Standard for Rangeland Health for Water Quality.

These reaches are located within pastures that are managed for an upward trend in riparian condition. Livestock grazing occurs early in these pastures, allowing riparian plant communities opportunity during the growing season for regrowth and recovery. Recovery of these communities has resulted in greater bank stability, increased shading, and greater water storage/retention.

The Standard for Watershed Function in Riparian/Wetland Areas was achieved on East Warm Springs Creek. The headwaters of Stinkingwater Creek and a three-quarter mile reach of Stinkingwater Creek, however, did not achieve this standard. Current livestock grazing management is a contributing factor to these reaches failing to meet the Standard for Watershed Function in Riparian/Wetland Areas.

The Standards for Watershed Function in Upland Areas, for Ecological Processes, and for Native, Special Status, and Locally Important Species were achieved over the majority of the allotment; exceptions included areas of late phase western juniper (*Juniperus occidentalis*) encroachment and medusahead rye (*Taeniatherum caput-medusae*) infestation. Current livestock grazing management is not a contributing factor to areas within the allotment failing to meet these standards.

The Mountain Allotment evaluation revealed that resource objectives were achieved on the allotment, with the following two exceptions: (1) stable and upward trends in rangeland condition were not realized in the Little Stinkingwater, West, and East Pastures due to a combination of the following factors: current grazing management, drought, and the expansion of the noxious weed medusahead rye; and (2) an upward trend in riparian habitat condition was not realized for the portions of Stinkingwater Creek described above. It was also determined in the evaluation that current livestock grazing management was not in conformance with the Guidelines for Livestock Grazing Management because periodic rest from livestock grazing during critical growth periods for upland and riparian vegetation was not being provided to all pastures comprising the Mountain Allotment.

B. Purpose of and Need for Action

The BLM will be amending livestock grazing management on the Mountain Allotment to accomplish the following objective:

1. Increase uniformity of livestock utilization levels and provide periodic growing season rest from livestock grazing for upland and riparian plant communities within the Mountain Allotment.

Background: Grazing management employed over the last evaluation period (1998 to 2004) has incorporated growing season rest for most pastures comprising the Mountain Allotment, with the exceptions of the West and Little Stinkingwater Pastures. Actual use reports indicate grazing has occurred during the growing season of upland plant communities 6 of the last 8 years on both pastures.

Consequently, monitoring data analyzed in 2003 consistently indicated a stable or downward trend in range condition of key areas comprising both pastures. The evaluation cited livestock grazing as a contributing factor to stable and downward trends in range condition. The Three Rivers Resource Management Plan/Environmental Impact Statement (RMP/EIS) directs that grazing management should be changed to improve rangeland condition and productivity (Three Rivers RMP/EIS, 1992, Appendices 92). Additionally, continuous growing season grazing by livestock along Little Stinkingwater Creek in the Little Stinkingwater Pasture has contributed to a downward trend in riparian habitat condition; no Proper Functioning Condition (PFC) assessment has been conducted on Little Stinkingwater Creek to date, therefore, observations are based on utilization studies in the Little Stinkingwater Pasture. The RMP directs that riparian and aquatic habitat should be improved or maintained in good or better habitat condition (Three Rivers RMP/EIS, 1992, Appendices 92).

Development of livestock grazing management for the Mountain Allotment will be based on meeting the above objective, maintaining the Standards for Rangeland Health and Guidelines for Livestock Management, and achieving the following other compatible, multiple-use allotment objectives recommended in the 2003 allotment evaluation:

2. Provide for a stable to upward trend in rangeland condition within the mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*)/Idaho fescue (*Festuca idahoensis*)/Thurber's needlegrass (*Achnatherum thurberianum*) plant communities in the East, West, and Crow Camp Pastures. Provide for upward trend in rangeland condition in the low sagebrush (*Artemisia arbuscula*)/Idaho fescue/Sandberg's bluegrass (*Poa secunda*) plant communities in the Red Flat Pasture. Provide for upward trend in rangeland condition within the mountain big sagebrush/Idaho fescue/Thurber's needlegrass/bluebunch wheatgrass (*Pseudoroegneria spicata*) plant communities in the Little Stinkingwater and Stinkingwater Pastures. This allotment objective is in conformance with the RMP that directs deterioration of soil resources will be prevented by ensuring that BLM-administered lands are in stable or upward trend in range condition as outlined in "Rangeland Monitoring in Oregon and Washington" BLM Handbook H1734-2 (Three Rivers RMP/EIS, 1992, SM 1, pg. 2-15).
3. Maintain availability of perennial native forbs from mid-April through mid-July and maintain the percent composition by frequency of occurrence of native forbs on all sagebrush ecological sites over the next 5 years to maintain Greater sage-grouse brood-rearing habitat. This objective is in conformance with the RMP that directs grazing systems on all sage-grouse ranges in the Three Rivers Resource Area will be designed to improve forb production and availability (Three Rivers RMP/EIS, 1992, p. 2-63).

4. Maintain current stands of antelope bitterbrush (*Purshia tridentata*) in a healthy condition over the next 5 years to improve and maintain big game habitat in satisfactory habitat condition. This objective is in conformance with the RMP that directs approximately 335,000 acres of mule deer (*Odocoileus hemionus*) winter range; 375,000 acres of mule deer summer range; 235,000 acres of Rocky Mountain elk (*Cervus canadensis*) winter range; 105,000 acres of elk summer range, will be maintained in satisfactory condition (Three Rivers RMP/EIS, 1992, WL 1, pg. 2-67). As part of this direction, the RMP states that browse on at least 85 percent of the acreage in deer and elk winter range is maintained where it is currently supported (Three Rivers RMP/EIS, 1992, WL 1.3, pg. 2-67). Approximately 14 percent (5,155 acres) and 100 percent (37,313 acres) of the Mountain Allotment is classified as deer winter and summer range, respectively. Approximately 71 percent (26,389 acres) and 100 percent (37,313 acres) of the Mountain Allotment is classified as elk winter and summer range, respectively.
5. Improve streambank stability and the ecological rating on Stinkingwater Creek. Continue upward trend in riparian condition on Warm Springs Creek during the next evaluation period. Manage for upward trend in riparian condition on Little Stinkingwater Creek. This objective is in conformance with improvement of surface water quality on public lands to meet or exceed water quality requirements for all beneficial uses consistent with Department of Environmental Quality (DEQ) Nonpoint Source Assessment and Management Plan, where BLM-authorized actions are having a negative effect on water quality (Three Rivers RMP/EIS, WQ 1, pg. 2-4). This objective is also in compliance with ensuring that 75 percent or more of riparian habitat is in PFC (Three Rivers RMP/EIS, WL 6, pg. 2-71).

C. Compliance with Land Use Plans, Laws, Regulations, and Policy

This Allotment Management Plan/Environmental Assessment (AMP/EA) is in conformance with objectives and land use allocations in the 1992 Three Rivers RMP/EIS, and the August 12, 1997 Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands Administered by the BLM in the States of Oregon and Washington. This AMP/EA is also consistent with the Endangered Species Act Sections 2(c) and 7(a) 1 and conforms to all State, local, and Tribal laws, regulations, and land use plans.

D. Decision Factors: Factors BLM is Using to Select Among Alternative Ways to Achieve Allotment Objectives

In selecting the alternative that best meets project objectives and other management needs, the BLM will consider the extent to which each alternative would:

1. provide rangeland resources to grazing permittees and other users of the public lands;
2. maintain adequate cover (live plants, plant litter, and residue) to promote infiltration, conserve soil moisture, and maintain soil stability in upland areas;

3. maintain adequate cover and plant community structure to promote streambank stability, debris and sediment capture, and floodwater energy dissipation in riparian areas;
4. provide for the life cycle requirements, and maintain or restore the habitat elements of native and desired plants and animals (including Special Status and locally important species);
5. provide periodic rest from grazing by livestock to desirable plants to:
 - a. allow plants periodic opportunity to make and store carbohydrates (i.e., recover vigor)
 - b. allow plants periodic opportunity for seed ripen
 - c. allow plants periodic opportunity for seedlings to become established (i.e., recruitment)
 - d. allow litter to accumulate between plants
6. maintain or restore diverse plant populations and communities that fully utilize site resources by occupying the potential rooting volume of the soil and that promote photosynthesis throughout the potential growing season;
7. slow the increase and spread of noxious weeds;
8. protect or restore water quality;
9. promote conservation of paleontological resources;
10. promote conservation of cultural resources;
11. promote cost effectiveness; and
12. promote compatibility of livestock grazing management with maintaining, protecting and controlling a thriving herd of wild, free-roaming horses in the Stinkingwater HMA in accordance with Part 4700 of the Code of Federal Regulations.

CHAPTER II: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

A. No Action Alternative

Grazing management designed in the 1998 AMP stipulated that all permittees' cattle were to graze in a common herd that amounted to approximately 700 head. During odd numbered years, the combined herd was to start on the east side of the allotment and move west, spending 3 to 4 weeks in each pasture. During even numbered years, the rotation was to be reversed and cattle were to start on the west side of the allotment and move east, again spending 3 to 4 weeks in each pasture.

This grazing rotation was implemented for only 1-year and abandoned. Grazing management from the 1998 AMP failed because herding large numbers of cattle over steep terrain was untenable. Following this unsuccessful trial, cattle have grazed separately in two herds.

A description of the grazing management, derived from actual use reports, follows (grazing treatments are described in Appendix A):

- West and Little Stinkingwater Pastures have been grazed during the growing season for 6 of the last 8 years.
- East Pasture has received an early grazing treatment annually.
- Crow Camp Pasture has been on a graze/defer grazing rotation.
- Red Flat Pasture has been on a graze/rest grazing rotation.
- Stinkingwater Pasture has received an early grazing treatment since 2001.

Two prominent perennial, fish-bearing creeks, Stinkingwater Creek and West Warm Springs Creek, are flow through the Mountain Allotment. Prior to 1996, the Stinkingwater Creek riparian zone was within the Crow Camp Pasture, which was grazed by livestock in a graze/defer rotation. Grazing management in the Crow Camp Pasture was designed to provide upland plant communities periodic growing season rest, which resulted in livestock having perennial access to the Stinkingwater Creek riparian zone during critical growth periods of riparian vegetation. Continuous growing season use by cattle, coupled with yearlong use by wild horses, caused a downward trend in riparian habitat condition. In response to these findings, an allotment evaluation in 1993 recommended that livestock be excluded from Stinkingwater Creek for a period of at least 5 years to promote recovery in riparian habitat. This was accomplished in 1995 with fencing along both sides of the creek, which resulted in the partitioning of the Crow Camp Pasture into the following three pastures: Stinkingwater Pasture – a riparian pasture that functioned as an enclosure for 5 years; Red Flat Pasture – located on the east side of Stinkingwater Creek; and Crow Camp Pasture – located on the west side of Stinkingwater Creek. Since 2001, the Stinkingwater Pasture has been grazed with a riparian treatment for 3 to 4 weeks in May. Riparian monitoring data, analyzed in a 2003 allotment evaluation, suggested riparian conditions were improving on the middle and upper reaches of the creek, whereas the lower section remained in poor condition.

Substantial wild horse sign and use were noted along the lower sections of Stinkingwater Creek during a use supervision visit in July of 2003, suggesting riparian habitat recovery of this reach is being retarded by continuous late season use by wild horses. An upward trend in riparian condition of the remainder of Stinkingwater Creek can be attributed to early use by livestock affording riparian vegetation sufficient time during the growing season following defoliation for regrowth and life cycle completion. Until 1993, the Warm Springs Creek riparian zone was similarly contained within a pasture (Little Stinkingwater Pasture) that was on a graze/defer rotation. The 1993 allotment evaluation identified a downward trend in riparian condition and recommended Warm Springs Creek be excluded from livestock grazing for a period of at least 5 years. In 1993, the portion of the Little Stinkingwater Pasture containing Warm Springs Creek was fenced into a new pasture named East Pasture. Since 1999, the East Pasture has been grazed with a riparian treatment for 3 to 4 weeks in May. Riparian monitoring data analyzed in the 2003 allotment evaluation showed an upward trend in riparian condition using this grazing treatment.

Crow Camp Pasture has been grazed on a graze/defer rotation beginning in 1996 through the present. Monitoring data, analyzed in the 2003 allotment evaluation, indicated the trend in range condition was stable. Red Flat Pasture has been grazed on a graze/rest rotation beginning in 2000 through the present. Monitoring data, analyzed in the 2003 allotment evaluation, indicated grazing management in this pasture fostered an upward trend in range condition of key areas in the Red Flat Pasture.

Monitoring data, analyzed in the 2003 allotment evaluation, indicated downward or stable trends in range condition of key areas within the West and Little Stinkingwater Pastures. Actual use reports indicate livestock use of these pastures has occurred predominantly during the growing season of upland plant communities over the evaluation period. These data show continuous growing season use by cattle in these pastures has contributed to key areas failing to show upward trends in range condition.

B. Proposed Action Alternative - Management Changes and Project Development

The proposed level of use is shown in Table 2.

Table 2. Proposed number of AUMs of permitted use for each permittee under the Proposed Action Alternative.

Permittee	Active Preference	Suspended Use	Total Preference	Exchange of Use	Total Use
Frank Catterson	244	69	313	27	340
Pat Wilber	790	335	1,125	0	1,125
Wilber Bros.	1,359	488	1,847	217	2,064
G. Wright Wilber Trust	855	307	1,162	0	1,162
Total	3,248	1,199	4,447	244	4,691

The Mountain Allotment would remain a single management unit; however, two use areas, grazed separately with two cattle herds, would be recognized for the following reasons: to facilitate better herd management and ranch operations, to assist in achieving a 50 percent target level of utilization on key plant species, to provide growing season rest to key plant species, to mitigate impacts of livestock to cultural and paleontological resources in congregation areas, and because past attempts to graze all permittees' cattle together as one herd have been largely unsuccessful. The first use area would be comprised of the West, Crow Camp, and Stinkingwater Pastures. The second use area would be comprised of the Red Flat, Little Stinkingwater, and East Pastures.

Modifications of the boundaries of pastures comprising the second use area are also being proposed (Map E). Herd A would be comprised of approximately 362 cattle and graze the first use area. Catterson would contribute approximately 62 cattle to Herd A. Herd B would contain approximately 400 cattle and graze the second use area.

On even numbered years, Herd A would begin grazing in Stinkingwater Pasture, be moved to Crow Camp Pasture and finish the grazing season in West Pasture. In this rotation, Stinkingwater Pasture would be managed as a riparian pasture and receive an early graze treatment, Crow Camp Pasture would receive a graze treatment and West Pasture would receive deferment until after seed set is achieved by key forage species. On odd numbered years, Herd A would begin in West Pasture and would subsequently be moved to Crow Camp Pasture to finish the grazing season. In this rotation, West Pasture would receive a graze treatment, Crow Camp Pasture would receive growing season deferment most years (i.e., phenological differences exist among different plant individuals, plant species, and years) and Stinkingwater Pasture would receive rest. The private land known as the Devine Flat Field would be grazed with these pastures.

On even numbered years, approximately 300 cattle from Herd B would begin in the proposed Little Stinkingwater Riparian Pasture, be moved to the Little Stinkingwater Pasture and finish the grazing season in the Red Flat Pasture. Approximately 100 cattle from Herd B would begin in East Pasture and be moved to the Little Stinkingwater Pasture to finish the grazing rotation with the remainder of the herd. In this rotation, the Little Stinkingwater Riparian and East Pastures would receive early graze treatments, Little Stinkingwater Pasture would receive a graze treatment, and grazing in the Red Flat Pasture would be deferred until after seed set by key plant species. On odd numbered years, approximately 400 cattle from Herd B would start in Little Stinkingwater Riparian Pasture, be moved to Red Flat Pasture and finish the grazing season in Little Stinkingwater Pasture. In the even year rotation, Little Stinkingwater Riparian Pasture would again receive an early graze treatment, Red Flat would receive a graze treatment, Little Stinkingwater Pasture would receive deferment, and East Pasture would receive rest. Table 3 and Map C display the approximate use dates for each pasture by herd.

Interim grazing management would only be realigned in Herd B's use area during fenceline removal and construction operations (see proposed project section below).

On even numbered years, Herd B would begin in the Little Stinkingwater Pasture (May 15 to July 15) and then be moved to the Red Flat Pasture (July 16 to August 20) to finish the grazing season. In this grazing rotation, Little Stinkingwater Pasture would receive a graze treatment and Red Flat Pasture would receive deferment. On odd years, Herd B would begin grazing in Red Flat Pasture (May 15 to July 15) and finish the season grazing in Little Stinkingwater Pasture (July 16 to August 20). In this grazing rotation, Red Flat Pasture would receive a graze treatment and Little Stinkingwater Pasture would receive deferment. East Pasture would be grazed early (April 15 to May 31) each year with approximately 100 cattle.

While perimeter gates would remain closed, most gates internal to the Stinkingwater HMA would remain open after cattle are gathered to facilitate wild horse passage and dispersal. Two exceptions would exist under the Proposed Action Alternative. To accomplish riparian objectives, gates along the perimeters of the proposed Little Stinkingwater Riparian and the Stinkingwater (riparian pasture) Pastures would remain closed after cattle are gathered to preclude access by wild horses during critical growth periods for riparian vegetation. Removal of livestock grazing during periods critical for riparian vegetation would only be effectual for improving riparian condition in these pastures if also similarly rested from use by wild horses. Wild horses remaining in the proposed Little Stinkingwater Riparian and the Stinkingwater Pastures would be driven into the Little Stinkingwater Pasture by the BLM following livestock gathering. This action would discourage established and emerging bands of wild horses from perennially inhabiting riparian zones associated with Stinkingwater and Little Stinkingwater Creeks. This action would be accomplished with the use of All-Terrain Vehicles (ATVs), riders on horseback, a helicopter, or a combination of these methods. The need for this action would be determined annually based on observations during utilization studies, use supervision, riparian monitoring, and wild horse censuses (when funding is available). Map D shows the Stinkingwater HMA boundary.

Table 3. Approximate use dates for pastures comprising the Mountain Allotment for even and odd years for grazing management under the Proposed Action Alternative.

Even Year

	Little SW* Riparian	Red Flat Pasture	Little SW	SW Pasture	Crow Camp Pasture	West Pasture	East Pasture
Herd A	x	x	x	04/25–05/25	05/26–06/25	06/26–08/10	x
Herd B	05/01–05/25	07/16–08/20	05/26–07/15	x	x	x	05/01–05/25
Catterson	x	x	x	x	05/25–06/25	06/26–08/31	x

Odd Year

	Little SW Riparian	Red Flat Pasture	Little SW Pasture	SW Pasture	Crow Camp Pasture	West Pasture	East Pasture
Herd A	x	x	x	Rest	07/01–08/05	05/01–06/30	x
Herd B	05/01–05/25	05/26–07/15	07/16–08/20	x	x	x	Rest
Catterson	x	X	x	x	x	05/01–08/31	x

In order to implement the proposed changes in grazing management under the Proposed Action Alternative, a new fenceline would need to be installed along the east side of Little Stinkingwater Creek. Approximately 1.25 miles of this fence would be constructed on BLM-managed land and approximately 2.15 miles would be constructed along private lands. This newly-constructed fence would create a riparian pasture that would be grazed 3 to 4 weeks in May annually. This action would remove livestock from Little Stinkingwater Creek from June 1 through the remainder of the growing season, thereby affording riparian vegetation time during the growing season for regrowth and life cycle completion. The new fence would be of a standard 40-inch high, 4-strand barbed wire construction with a smooth bottom strand. New internal gates would be at least 24 feet wide (i.e., "double gates") to facilitate wild horse passage and dispersal throughout the Stinkingwater HMA. Three "double gates" would be installed along the new fence, proposed to create the Little Stinkingwater Riparian Pasture (Map E). An additional "double gate" would be installed between Red Flat and Little Stinkingwater Pastures (Map E). As internal gates need maintenance and/or replacement, they would be converted to "double gates."

The 2003 Mountain Allotment evaluation recommended fencing the headwaters of Stinkingwater Creek into Stinkingwater Pasture. This portion of Stinkingwater Creek is currently located within the Crow Camp Pasture which receives either a graze or defer treatment annually. Although rotating between these grazing treatments has achieved management objectives for upland vegetation, livestock have continuous access to the headwaters of Stinkingwater Creek during critical growth periods of riparian plant communities. Therefore, the 2003 evaluation identified livestock as a contributing factor for the headwaters of Stinkingwater Creek failing to meet watershed function (riparian/wetland areas) standards for rangeland health. The proposed action would incorporate this portion of Stinkingwater Creek into the Stinkingwater Pasture. Stinkingwater Pasture is managed as an early-grazed riparian pasture, thus the proposed management action would shift the timing of grazing away from critical phases in riparian plant growth and promote plant community recovery along the headwaters of Stinkingwater Creek. Upland water sources are well distributed across Crow Camp Pasture, thus the identified segment of Stinkingwater Creek is not a critical water source for livestock. The proposed range management project would involve construction of a one-half mile long, standard, 40-inch tall, 4-strand barbed wire fence with a smooth bottom strand in T. 23 S., R. 35 E., Section 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$.

In Little Stinkingwater Pasture, Pinto Spring, located in T. 22 S., R. 36 E., Section 32, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, has a corroded, nonfunctional trough that would be replaced. Total disturbance would be minimal and would not exceed the original area of disturbance.

Maintenance work would be conducted on the spring in Crow Camp Pasture located in T. 23 S., R. 34 E., Section 1, SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$. This would require reconstruction of the head box, collection system, protection fence, and installation of a new trough.

Tule Spring in West Pasture, located in T. 23 S., R. 34 E., Section 9, SE¹/₄NE¹/₄NW¹/₄ would also require maintenance. The fence around the spring is down and would be reconstructed. The trough would be relocated to higher ground, or gravel would be placed around the trough. Currently the trough is located on a low site which tends to be boggy.

Maintenance work would be conducted on Bitterbrush Spring (T. 23 S., R. 34 E., Section 4 SW¹/₄NE¹/₄SE¹/₄). Currently, there is insufficient flow to the trough.

The waterhole in Crow Camp Pasture would be reconstructed. This waterhole is located in T. 23 S., R. 34 E., Section 2, SE¹/₄SE¹/₄NE¹/₄.

A cooperative agreement (on an individual project basis) addressing the permittees' responsibilities for construction and/or maintenance would be prepared upon affirmative final decision of this alternative. A Special Status plant and cultural resources survey would be completed prior to any construction of proposed projects to assure avoidance or mitigation of possible impacts. Equipment would be washed prior to initiation and following completion of proposed projects to avoid spreading noxious weeds.

Salient differences between the No Action Alternative and the Proposed Action Alternative include the following:

- Under the Proposed Action Alternative, Little Stinkingwater Creek and its associated riparian zone would be fenced into a pasture separate from the Little Stinkingwater Pasture. The Little Stinkingwater Riparian Pasture would be spring grazed during May annually under the Proposed Action Alternative, whereas under the No Action Alternative, cattle would retain continuous, late season access to Little Stinkingwater Creek and its associated riparian zone.
- Grazing management in the East Pasture would change from perennial spring use under the No Action Alternative to a spring graze/rest rotation under the Proposed Action Alternative.
- Grazing management in the West Pasture would change from continuous growing season use under the No Action Alternative to a graze/defer rotation under the Proposed Action Alternative.
- Grazing management in the Little Stinkingwater Pasture would change from continuous growing season use under the No Action Alternative to a graze/defer rotation under the Proposed Action Alternative.
- To accommodate providing growing season rest to plant communities comprising the Little Stinkingwater Pasture, grazing management in the Red Flat Pasture would change from a graze/rest rotation under the No Action Alternative to a graze/defer rotation under the Proposed Action Alternative.
- Repairs and reconstruction (where applicable) of existing range improvements in the Mountain Allotment would occur under the Proposed Action Alternative.

- Wild horses would retain continuous access to Stinkingwater and Little Stinkingwater Creeks and associated riparian zones under the No Action Alternative, whereas pasture boundary gates around the perimeters of the Stinkingwater Pasture and the proposed Little Stinkingwater Riparian Pasture would remain closed. Thus, wild horse access to Stinkingwater and Little Stinkingwater Creeks would be precluded under the Proposed Action Alternative.
- Wild horses and livestock would retain continuous access to the headwaters of Stinkingwater Creek during growth periods critical for riparian vegetation under the No Action Alternative, whereas this area of concern would be fenced into the Stinkingwater Pasture that is managed for riparian habitat objectives under the Proposed Action Alternative.

C. Cross Fencing Alternative - Management Changes and Project Development

The proposed level of use is shown in Table 4.

Table 4. Proposed number of AUMs of permitted use for each permittee under the Cross Fencing Alternative.

Permittee	Active Preference	Suspended Use	Total Preference	Exchange of Use	Total Use
Frank Catterson	244	69	313	27	340
Pat Wilber	790	335	1,125	0	1,125
Wilber Bros.	1,359	488	1,847	217	2,064
G. Wright Wilber Trust	855	307	1,162	0	1,162
Total	3,248	1,199	4,447	244	4,691

The Mountain Allotment would remain a single management unit; however, two use areas, grazed separately with two herds, would be recognized for the following reasons: to facilitate better herd management and ranch operations, to assist in achieving a 50 percent target level of utilization on key plant species, to provide growing season rest to key plant species, to mitigate impacts of livestock to cultural and paleontological resources in congregation areas, and because past attempts to graze all permittees' cattle together as one herd have been largely unsuccessful. The first use area would be comprised of the West, Crow Camp, and Stinkingwater Pastures. The second use area would be comprised of the Red Flat, Little Stinkingwater, and East Pastures. Modifications of the boundaries of pastures comprising the second use area are also being proposed (Map F). Herd A would be comprised of approximately 362 cattle and graze the first use area. Catterson would contribute approximately 62 cattle to Herd A. Herd B would contain approximately 400 cattle and graze the second use area.

The grazing management previously described for the Proposed Action Alternative would remain the same in the Cross Fencing Alternative for Herd A. Salient differences between the Cross Fencing Alternative and the Proposed Action Alternative are related to grazing management in Herd B's use area. In addition to fencing that would create the Little Stinkingwater Riparian Pasture, cross-fencing the remainder of the Little Stinkingwater Pasture to create the following two similarly sized pastures is also being proposed as part of the Cross Fencing Alternative: South Little Stinkingwater Pasture and North Little Stinkingwater Pasture (Map G). On even numbered years, approximately 300 cattle from Herd B would begin in the proposed Little Stinkingwater Riparian Pasture, be moved to the proposed South Little Stinkingwater Pasture and finish the grazing season in the proposed North Little Stinkingwater Pasture. Approximately 100 cattle from Herd B would begin in East Pasture and be moved to the proposed South Little Stinkingwater Pasture to finish the grazing rotation with the remainder of the herd. In this rotation, Little Stinkingwater Riparian and East Pastures would receive early graze treatments, North Little Stinkingwater Pasture would receive deferment until after seed set is achieved by key forage species and Red Flat Pasture would be rested. On odd numbered years, approximately 300 cattle from Herd B would start in Little Stinkingwater Riparian Pasture, be moved to Red Flat Pasture and finish the grazing season in South Little Stinkingwater Pasture. Approximately 100 cattle from Herd B would start in North Little Stinkingwater and be moved to South Little Stinkingwater Pasture to finish the grazing rotation with the remainder of the herd. In the even year rotation, Little Stinkingwater Riparian Pasture would again receive an early graze treatment, Red Flat and North Little Stinkingwater Pastures would receive graze treatments, South Little Stinkingwater would receive deferment, and East Pasture would be rested. Table 5 and Map F display the approximate use dates for each pasture by herd.

Interim grazing management would only be realigned in Herd B's use area during fenceline removal and construction operations (see proposed project section below) and would be identical to that described in the Proposed Action Alternative.

While perimeter gates would remain closed, most gates internal to the Stinkingwater HMA would remain open after cattle are gathered to facilitate wild horse passage and dispersal. Two exceptions would exist under the Proposed Action Alternative. To accomplish riparian objectives, gates along the perimeters of the proposed Little Stinkingwater Riparian and the Stinkingwater (riparian pasture) Pastures would remain closed after cattle are gathered to preclude access by wild horses during critical growth periods of riparian vegetation. Removal of livestock grazing during periods critical for riparian vegetation would only be effectual for improving riparian condition in these pastures if also similarly rested from use by wild horses. Wild horses remaining in the proposed Little Stinkingwater Riparian and the Stinkingwater Pastures would be driven into the Little Stinkingwater Pasture by the BLM following livestock gathering. This action would discourage established and emerging bands of wild horses from perennially inhabiting riparian zones associated with Stinkingwater and Little Stinkingwater Creeks.

This action would be accomplished with the use of ATVs, riders on horseback, a helicopter, or a combination of these methods. The need for this action would be determined annually based on observations during utilization studies, use supervision, riparian monitoring, and wild horse census data (when funding is available). Map D shows the Stinkingwater HMA boundary.

Table 5. Approximate use dates for pastures comprising the Mountain Allotment under the Cross Fencing Alternative.

Even Year

	Little SW* Riparian	Red Flat Pasture	North Little SW	South Little SW	SW Pasture	Crow Camp Pasture	West Pasture	East Pasture
Herd A	x	x	x	x	04/25–05/25	05/26–06/25	06/26–08/10	x
Herd B	05/01–05/25	Rest	07/11–08/20	05/26–07/10	x	x	x	04/15–05/31
Catterson	x	x	x	x	x	05/25–06/25	06/26–08/31	x

Odd Year

	Little SW Riparian	Red Flat Pasture	North Little SW	South Little SW	SW Pasture	Crow Camp Pasture	West Pasture	East Pasture
Herd A	x	x	x	x	Rest	07/01–08/05	05/01–6/30	x
Herd B	05/01–05/25	05/26–07/15	05/01–07/15	07/16–08/20	x	x	x	Rest
Catterson	x	x	x	x	x	x	05/01–08/31	x

In addition to changes to grazing management, a number of range improvements (Map E) are included in the Cross Fencing Alternative. The range improvements under this alternative are identical to those described in the Proposed Action Alternative, with the exception being the addition of approximately 2.4 miles of fencing that would separate the Little Stinkingwater Pasture into the proposed North and South Little Stinkingwater Pastures. This fencing would afford management more flexibility in designing grazing rotations that provide periodic growing season rest to key plant species. New fences would be of a standard 40-inch high, 4-strand barbed wire construction with a smooth bottom strand. New gates, internal to the Stinkingwater HMA, would be at least 24 feet wide (i.e., "double gates") to facilitate wild horse passage and dispersal. This design feature is proposed to mitigate negative effects of new fencing to wild horse movement and distribution within the Stinkingwater HMA. Three "double gates" would be installed along the new fence proposed in the Cross Fencing Alternative to create the Little Stinkingwater Riparian Pasture (Map G). In addition, another "double gate" would be installed between Red Flat and Little Stinkingwater Pastures on Buzzard Ridge (Map G). An additional two "double gates" would be installed along the new fence proposed in the Cross Fencing Alternative to divide the existing Little Stinkingwater Pasture into the North and South Little Stinkingwater Pastures (Map G). As internal gates need maintenance and/or replacement, they would be converted to "double gates."

A cooperative agreement (on an individual project basis) addressing the permittees' responsibilities for construction and/or maintenance would be prepared upon affirmative final decision of this alternative. A Special Status plant and cultural resources survey would be completed prior to any construction of proposed projects to assure avoidance or mitigation of possible impacts. Equipment would be washed to avoid spreading noxious weeds (if noxious weed infestations are found, they will be treated using the most appropriate methods).

The differences in grazing management between the No Action Alternative and Proposed Action Alternative cited above are identical to differences between the No Action Alternative and the Cross Fencing Alternative, with the following exception:

- Fencing described in the Cross Fencing Alternative that would divide the Little Stinkingwater Pasture into the North and South Little Stinkingwater Pastures would not be constructed under the Proposed Action Alternative. Thus, grazing management in the Red Flat Pasture would be changed from a graze/rest rotation to a graze/defer rotation to accommodate changing grazing management in the Little Stinkingwater Pasture from continuous growing season use to a graze/defer rotation. In other words, a graze/defer rotation would be implemented between the Red Flat and Little Stinkingwater Pastures under the Proposed Action Alternative. Conversely, the cross-fencing project, proposed as part of the Cross Fencing Alternative, would allow more flexibility for designing grazing management that provides growing season rest to plant communities with the Little Stinkingwater Pasture without changing grazing management in the Red Flat Pasture. Therefore, grazing management in the Red Flat Pasture would continue as a graze/rest rotation under the Cross Fencing Alternative.

CHAPTER III: AFFECTED ENVIRONMENT

A. Critical Elements

The following critical elements of the human environment have been analyzed in the Three Rivers RMP/EIS, are not known to be present, or would not be known to be affected by the proposed action or alternatives and will not be discussed further in this EA:

Air Quality
Environmental Justice
Prime or Unique Farmlands
Flood Plains
Wild and Scenic Rivers
Hazardous Materials
Areas of Critical Environmental Concern
Wilderness Study Areas or Wilderness Areas

The critical elements of the human environment which may be affected by the proposed action and/or alternatives are described below.

1. Special Status Species

Fauna

There are no known Federally listed Threatened, Endangered, or Proposed wildlife species found within the allotment.

Greater sage-grouse (*Centrocercus urophasianus*) and its habitat exist within Mountain Allotment. The Greater sage-grouse, a BLM Special Status Species (SSS), has been closely monitored in recent years due to concerns for population numbers. Approximately 50 percent of the Mountain Allotment is classified as probable habitat and approximately 10 percent of the allotment is classified as yearlong habitat. The remaining 40 percent of the allotment is classified as unsuitable habitat for sage-grouse, mainly due to establishment and encroachment of western juniper.

There are no known sage-grouse leks located in Mountain Allotment. The nearest active lek site, known as the "Gold Gulch" lek, is located within 1-mile of the Mountain Allotment boundary in the southern portion of the Texaco Basin Allotment. Fourteen male sage-grouse were observed at this lek site in 1990. Sage-grouse are known to inhabit Mountain Allotment and are commonly seen in West Pasture. West Pasture is situated in the western portion of the allotment and comprises approximately 15 percent of the allotment. West Pasture provides high-quality habitat for sage-grouse, and is likely used for brood rearing and early summer habitat. Cattle generally use about half the entire allotment area during spring and early summer which provides full availability of forbs for wildlife on the remainder of the allotment.

Flora

Special Status plants are not known to occur within the Mountain Allotment. However, the following Special Status plants have been documented in adjacent allotments: Back's sedge (*Carex cordillerana*), Raven's lomatium (*Lomatium ravenii*), Malheur prince's plume (*Stanleya confertiflora*), and Malheur prince's plume is a Bureau Sensitive plant species while Back's sedge and Raven's lomatium are Bureau Assessment species. Short-lobed penstemon (*Penstemon serous*), a Bureau Tracking species, has also been observed in adjacent allotments, but tracking species are currently not considered to be Special Status plants.

Because a detailed inventory for Special Status plants is lacking, it is possible that these plant species may also occur in the Mountain Allotment.

Aquatic

Redband trout (*Oncorhynchus mykiss*), an SSS, are known to occur in the portions of Stinkingwater and Warm Springs Creeks that flow through this allotment. This species prefers cool, fast-flowing water but can tolerate warmer water with lower oxygen levels. The fish spawn in the spring during periods of rising water temperatures.

2. Migratory Birds

Although no formal monitoring has been conducted in the Mountain Allotment, migratory birds are known to use the allotment for nesting, foraging, and resting as they pass through on their yearly migrations. Migratory birds that transiently inhabit grassland, sagebrush, and juniper habitats may occur on this allotment. Brewer's sparrow (*Spizella breweri*), sage sparrow (*Amphispiza belli*), and loggerhead shrike (*Lanius ludovicianus*), all Birds of Conservation Concern for the Great Basin Region, are expected to intermittently inhabit the allotment.

3. Cultural Resources

In excess of 1,200 acres of cultural resources inventory has been conducted within Mountain Allotment. Inventories have been completed for spring/waterhole developments, juniper treatments, and wildfire rehabilitation. This acreage, though more concentrated than most areas on Burns District, is only about 3 percent of the total number of acres in the allotment. A total of 23 archaeological sites have been recorded, ranging from simple lithic scatters and historic can dumps to complex, buried, prehistoric spring root gathering/summer camps. The potential for discovery of additional prehistoric sites on the allotment is high.

4. American Indian Traditional Practices

The allotment is well watered with a moderate number of perennial springs and contains plant communities rich in edible roots and traditional fruit plants, such as chokecherry and squaw-apple, still gathered by American Indians. The allotment is part of a modern American Indian traditional use area visited primarily by the Burns Paiute Tribe. It is likely that campsites used continually by particular tribal families for the last millennium or longer occur within the allotment.

5. Paleontology

The Mountain Allotment likely contains fossilized plants and may also contain remnants of vertebrate animals. No localities have been formally recorded but a few collecting locations for petrified wood are known to occur near Stinkingwater Creek.

6. Water Quality

Water quality is monitored within the Mountain Allotment to assess whether or not it is beneficial for fish, recreation, drinking, agriculture, and other uses. The Oregon DEQ has established water quality standards for the State of Oregon designed to protect the most sensitive of these multiple uses. In this case, redband trout represents the most sensitive use upon which water quality standards in this allotment are based. The standard is set at 68 °F for the 7-day average daily maximum in salmonid-bearing streams. Water quality has been monitored by collecting water temperature data in creeks known to bear redband trout. These water temperature data were collected using recording thermographs in Warm Springs Creek in 2002 and 2003 and in Stinkingwater Creek in 1998, 2002, and 2005. Each year the temperature has exceeded the 68 °F standard set by the Oregon DEQ for salmonid-bearing streams.

7. Wetlands and Riparian Zones

In June of 1998, a PFC Assessment of Warm Springs Creek within the East Pasture was conducted. The reach was in PFC with the exception of a 0.4-mile segment considered to be functioning at-risk with an unapparent trend in riparian habitat condition. The 2003 allotment evaluation indicated the Standard for Rangeland Health for Watershed Function in Riparian/Wetland Areas was achieved along Warm Springs Creek. Stinkingwater Creek, in T. 23 S., R. 35 E., Section 6, however, was rated as nonfunctional in a 1998 PFC Assessment and was not achieving this standard. Due to topography, use by wild horses, cattle, and wildlife is concentrated along this portion of the creek. Insufficient width to depth ratios, plant composition, and community structure and bank stability were indicators of the determination. The remainder of the creek within Stinkingwater Pasture did meet Standards for Rangeland Health demonstrating upward trends in riparian habitat conditions.

The headwaters of Stinkingwater Creek also did not meet the Standard for Watershed Function in Riparian/Wetland Areas. Pasture boundary fences between the Stinkingwater, Crow Camp, and Red Flat Pastures converge and function as a water gap in this area. This has concentrated livestock use along this headwater stream, resulting in barren areas, sloughing streambanks, and excessive erosion and sedimentation. Insufficient width to depth ratios, plant composition and community structure and bank stability were indicators that the Standard for Rangeland Health for Watershed Function in Riparian and Wetlands was not being met.

8. Noxious Weeds

The Burns District Geographic Information System (GIS) database currently lists 20 noxious weed sites totaling 206 acres in the Mountain Allotment.

The following noxious weed species have been documented: whitetop (*Cardaria draba*), Canada thistle (*Cirsium arvensis*), bull thistle (*Cirsium vulgare*), Scotch thistle (*Onopordum acanthium*), and medusahead rye. Systematic weed inventories are lacking on the Mountain Allotment, therefore most locations and abundances of noxious weeds have been incidentally documented. Documented weed sites have predominantly occurred along roadsides and have been treated. The most contentious weed problem in the allotment is the encroachment and rapid expansion of medusahead rye. Medusahead rye has rapidly increased in the uplands and likely occurs in all pastures comprising the Mountain Allotment, although it has only been formally recorded in the East and Little Stinkingwater Pastures. The estimated area of 175 acres dominated by medusahead is likely underestimated by our GIS database.

B. Noncritical Elements

Noncritical elements of the human environment which may be affected by the proposed action and/or alternatives are:

1. Wildlife

Riparian and upland areas within the Mountain Allotment provide habitat for a diversity of native and nonnative wildlife species. Wildlife known to use habitat within the Mountain Allotment include mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus canadensis*), pronghorn antelope (*Antilocapra americana*), mountain quail (*Oreortyx pictus*), chukar (*Alectoris chukar*), mourning dove (*Zenaida macroura*), coyote (*Canis latrans*), and numerous bats (*Myotis* spp.), small mammals, and birds associated with sagebrush steppe ecosystems.

Approximately 14 and 71 percent of the allotment is classified as winter range for mule deer and elk, respectively. The allotment is not considered important winter range for deer; however, no formal monitoring of terrestrial wildlife habitat has occurred in this allotment. Forage for elk and limiting big game habitat were resource concerns identified in the 1992 Three Rivers RMP/EIS. These concerns were addressed in that document by allocating 166 AUMs for deer, 10 AUMs for antelope, and 352 AUMs for elk within Mountain Allotment.

The Mountain Allotment occurs within the Stinkingwater HMA and provides yearlong wild horse habitat. Forage allocations outlined in the Three Rivers RMP/EIS amounted to 620 AUMs. Wild horse habitat elements largely overlap with many wildlife species common to the Mountain Allotment, and direct competition is likely if populations of wild horses exceed AMLs.

Several juniper cuttings have taken place to improve aspen, mountain mahogany, and big sagebrush-bitterbrush habitats. Post treatment photo monitoring indicates juniper cutting has stimulated desirable responses in aspen, mountain mahogany, antelope bitterbrush, and mountain big sagebrush plant communities.

2. Vegetation

Vegetation types on this allotment are primarily mountain big sagebrush/Idaho fescue-Thurber's needlegrass-bluebunch wheatgrass; stiff sagebrush (*Artemisia rigida*)/Sandberg's bluegrass; western juniper-mountain mahogany (*Cercocarpus ledifolius*)/Idaho fescue. There are also a number of plant communities dominated by antelope bitterbrush, mountain mahogany, and quacking aspen (*Populus tremuloides*). Isolated pockets of ponderosa pine (*Pinus ponderosa* var. *scopulorum*) can be found along Stinkingwater Creek.

3. Soils

The majority of the soils in Mountain Allotment are shallow to moderately deep, well-drained gravelly loams. There are small inclusions of shallow, well-drained gravelly to cobbly clay soils.

4. Wild Horses

The Mountain, Texaco Basin, and Stinkingwater Allotments occur within the Stinkingwater HMA. The AML set in the Three Rivers RMP/EIS was a range of 40 to 80 head. The breakdown of AUMs and AML for each allotment follows (ranges represent low and high ends of the AML for each allotment):

Mountain	310 to 620 AUMS	26 to 52 Horses
Texaco Basin	50 to 100 AUMS	4 to 8 Horses
Stinkingwater	120 to 240 AUMS	10 to 20 Horses

Wild horses in Mountain Allotment were last gathered in the fall of 2005. There were 173 horses gathered from the Stinkingwater HMA and surrounding areas. Approximately 113, 10, and 10 horses were gathered from the Mountain, Texaco Basin, and Stinkingwater Allotments, respectively. Approximately 40 head were gathered from outside the HMA in the Upton Mountain and Riverside Allotments. Forty of the 173 head gathered in 2005 were returned to the HMA. It would be unrealistic to assume that all horses within the HMA were gathered during the fall of 2005. Estimates of the number of horses remaining in the HMA after the gather and prior to reintroduction of the 40 head described above, ranged between 10 and 20 horses. Census data are lacking for the time period following the gathering to the present. However, the current population within the HMA likely exceeds AML.

Average actual wild horse use for Mountain Allotment from 1993 to 2000 was 572 AUMs.

Specific monitoring for wild horse use was conducted in 2000 in Crow Camp and Stinkingwater Pastures of Mountain Allotment. It was estimated that utilization by wild horses accounted for approximately 10 percent of the total utilization of key plant species.

5. Livestock Grazing Management

Grazing management designed in the 1998 AMP was followed for only 1-year and then abandoned. Moving cattle as a single large herd proved to be untenable because of topographic constraints. Actual use reports indicate the West and Little Stinkingwater Pastures have received growing season use 6 out of the last 8 years. The East and Stinkingwater Pastures have been used annually with an early use riparian treatment (April 11 to June 5). Crow Camp Pasture has been used on a graze/defer rotation (May 22 to June 28 and June 30 to August 19). Red Flat Pasture has been used on a graze/rest management (May 24 to July 6 every other year).

6. Recreation

Hunting is the most frequent form of recreation that occurs within Mountain Allotment. Some opportunities for primitive camping opportunities also exist in the allotment.

7. Visual Resources

The majority of the project area is remote and not visible from any highway. The project area falls entirely within Visual Resource Management (VRM) Class IV. The allowed level of change to the characteristic landscape within this VRM class is major. Management activities may dominate the view and be the major focus of viewer attention. However, attempts should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

8. Social and Economic Values

One of the highest individual agricultural sales revenues in Harney County is derived from cattle ranching, which is inextricably linked to the commodity value of public rangelands. Ranching revenues contribute greatly to the local economy, and tax dollars from the ranching community make up a large portion of County tax dollars.

CHAPTER IV: ENVIRONMENTAL CONSEQUENCES

A. No Action Alternative - Critical Elements/Cumulative Effects

1. Special Status Species

Fauna

There would be no known effects to Threatened or Endangered wildlife species under this alternative. Threatened or Endangered wildlife species are not known to occur on Mountain Allotment.

Current grazing management under the No Action Alternative fails to provide growing season rest to key plant species that comprise critical sage-grouse habitat elements within the West and Little Stinkingwater Pastures. Desirable perennial grasses and forbs that lack periodic opportunity to make and store carbohydrates, set seed, and recruit seedlings will eventually lose vigor and decline in population. A continuous lack of growing season rest would result in declines in key herbaceous plant populations in the foreseeable future. The herb layer, composed of both grasses and forbs, is an important component of sage-grouse habitat, providing both a food source and cover for hiding and nesting.

Flora

Special Status plants have not been documented in Mountain Allotment, thus estimating species specific effects would be speculative. In general, however, perennial plant species lacking periodic growing season rest lose vigor overtime and decline in population. Thus, current grazing management under the No Action Alternative is not conducive to maintaining populations of desirable plant species; particularly in pastures that currently receive infrequent growing season rest from livestock grazing.

Aquatic

Current grazing management includes continuous livestock use of the headwaters of Stinkingwater Creek and Little Stinkingwater Creek during critical growth periods of riparian plant vegetation. The No Action Alternative would continue current grazing management, thus deep-rooted woody species, important for providing streambank stability and stream shading, would not recover along the headwater tributary of Stinkingwater Creek. Indicators of deteriorated conditions of this habitat include low streambank stability, high width to depth ratios and inadequate vegetation in the riparian zone to dissipate stream energy, filter sediment, and maintain channel characteristics. These conditions have contributed to high water temperatures, reduced stream shading and declining habitat quality and connectivity for redband trout.

Riparian vegetation along Little Stinkingwater Creek would continue to be grazed during critical growth periods under the No Action Alternative. Continuous grazing during the growing season of riparian vegetation is not conducive to maintaining populations of desirable plant species. Cattle preference for actively growing vegetation dominates livestock distribution patterns during late season grazing periods. Riparian vegetation sustains active growth much longer than upland forage species. The nutritional quality and palatability of upland forage species decline during maturation, and rapidly deteriorates post seed set. As a consequence, there is typically a distinct shift in livestock distribution patterns in response to preference for actively growing riparian vegetation during the later developmental phases of upland forage species. Under this scenario, carbohydrate reserves of riparian vegetation are continually being utilized because plant structures (i.e., leaves and stems) that perform photosynthesis (i.e., manufacture carbohydrates) are repeatedly being removed by livestock. Without periodic rest, riparian vegetation lacks opportunity to recover vigor, set seed, and recruit seedlings and would eventually decline in population. Since Little Stinkingwater Creek is a tributary of Stinkingwater Creek, its conditions influence the aquatic conditions of Stinkingwater Creek. In the long term, continued degradation along these stream segments would move Stinkingwater Creek farther from desired conditions in fish habitat. As the downward trend in habitat quality continues, restoration costs increase and the feasibility of restoration declines.

The No Action Alternative would not affect the season of use along the remainder of Stinkingwater Creek or Warm Springs Creek. Monitoring data analyzed in the 2003 Mountain Allotment Evaluation, showed current livestock grazing management has improved riparian habitat condition of these reaches.

2. Migratory Birds

Key plant species for migratory birds in the Little Stinkingwater and West Pastures would not receive periodic growing season rest from livestock grazing under the No Action Alternative. A lack of growing season rest would disallow key plant species periodic opportunity to make and store carbohydrates (i.e., recover vigor), ripen seed, establish seedlings, and accumulate litter between plants. The inability of plant species to periodically complete their life cycle would lead to reduced vigor and eventually to declines in population overtime. The herb layer, composed of both grasses and forbs, is an important component of migratory bird habitat, providing both a food source and cover.

3. Cultural Resources

Current grazing management under the No Action Alternative in the West and Little Stinkingwater Pastures may accentuate trampling effects on cultural sites that are sensitive to ground disturbance. Continuous grazing may intensify effects such as soil churning, lateral displacement of artifacts and artifact breakage under the No Action Alternative.

4. American Indian Traditional Practices

The No Action Alternative has the potential to affect the practice of root and fruit gathering. Current grazing management in the Mountain Allotment does not provide for growing season rest from livestock grazing for key forage species. A lack of growing season rest in these areas would disallow key forage plant species periodic opportunity to make and store carbohydrates (i.e., recover vigor), ripen seed, establish seedlings, and accumulate litter between plants. The inability of plant species to periodically achieve these critical life phases would lead to reduced vigor and eventually to declines in their population overtime. As key forage species for livestock decline in vigor and population, use of target fruit species (e.g., chokecherry and squaw-apple) may increase, reducing the amount available for Indian gatherers. Large numbers of livestock in a gathering area could affect the traditional practice experience to the point that tribal practitioners abandon the location for other places with fewer intrusions. However, it is not known at this time whether or not these effects are realistic because little is known about tribal use in this allotment. Its use by Burns Paiute Tribe is inferred because of resources that are present within allotment and its close proximity to areas where gathering is known to take place.

5. Paleontology

Current grazing management under the No Action Alternative in the West and Little Stinkingwater Pastures may accentuate trampling effects on paleontological sites that are sensitive to ground disturbance. Continuous grazing may intensify effects such as soil churning, lateral displacement of fossils and fossil breakage under the No Action Alternative.

6. Water Quality

Under the No Action Alternative, there would be no change to the current grazing management on the headwater tributary of Stinkingwater Creek, which includes continuous seasonal grazing during critical growth periods of key hydric herbaceous and deciduous woody plant species. Continuous seasonal livestock grazing of riparian plant communities would similarly continue along Little Stinkingwater Creek. Continuous livestock grazing during critical growth periods would eventually lead to declines in the vigor and abundance of riparian vegetation. The functional role of these species within their respective riparian zones would be compromised, causing streambank instability, decreased stream shading, and a reduced water storage/retention capacity. These changes typically reduce water quality by decreasing the sediment storage capacity of riparian zones, increasing turbidity, and raising water temperatures.

Although Little Stinkingwater Creek is not currently listed by the State for noncompliance with water temperature standards, it does serve as a tributary to Stinkingwater Creek and likely contributes to its failure to meet water quality standards. In the long term, continued degradation along these reaches would move the streams farther from desired conditions and temperatures would continue to rise and affect conditions downstream. As the downward trend in water quality continues, restoration costs increase and the feasibility of restoration declines.

The No Action Alternative would not change grazing management in Stinkingwater Creek (Stinkingwater Pasture) and Warm Springs Creek (East Pasture) where current livestock management was not a causal factor for exceeding the Oregon DEQ water temperature standards.

7. Wetlands and Riparian Zones

The BLM standard for watershed function in riparian/wetland areas is currently not being met along portions of Stinkingwater Creek. Under the No Action Alternative, the headwater stream to Stinkingwater Creek, which is currently in a deteriorated condition, would not be included in Stinkingwater Pasture (early use). Where fences are currently placed, impacts from livestock and wild horse use would continue to affect riparian vegetation and streambank alteration levels along this headwater tributary to Stinkingwater Creek. Current conditions would be maintained in this location and vegetative characteristics would remain unable to dissipate stream energy, filter sediment, aid in ground water recharge and flood plain development or maintain/improve channel characteristics.

The No Action Alternative would sustain current livestock management along Stinkingwater Creek (Stinkingwater Pasture) and Warm Springs Creek (East Pasture), which would maintain these streams in PFC or functioning at-risk with an upward trend. The long-term impacts to Little Stinkingwater Creek from current management are unknown due to a lack of data. In general, the current season of use and livestock grazing management are not conducive to riparian plant community stability and/or improvement. Continuous late season grazing in this riparian zone during critical riparian plant growth periods would lead to downward trend in community composition, structure, and function.

8. Noxious Weeds

Any soil-disturbing activity has potential to create an environment for the establishment of noxious weeds. Under the No Action Alternative, no range improvements would be implemented that improve livestock distribution and mitigate soil-disturbing activities in congregation areas.

In addition, continuous seasonal grazing in the West and Little Stinkingwater Pastures would continue and key forage plants would not receive periodic growing season rest for completion of their reproductive cycles. Plant species that lack periodic opportunity to make and store carbohydrates, set seed, and establish seedlings lose vigor and decline in population overtime. Perennial plants that are not afforded periodic opportunity to recover vigor also experience reductions in competitive ability overtime. In addition, as key plant species decline in population, functional roles of those species within the plant community are diminished. Cumulatively, these changes reduce plant community resistance to noxious weed invasion. Undesirable shifts in plant composition can be expected as key plant species decline in vigor and population.

B. No Action Alternative – Noncritical Elements/Cumulative Effects

1. Wildlife

Current livestock grazing management in Little Stinkingwater Pasture, West Pasture, and portions of East Pasture is not conducive to providing for habitat requirements for most wildlife species. Plant communities that do not receive growing season rest from livestock grazing lack periodic opportunity to complete their life cycle. Key forage species for wildlife and livestock would experience reduced vigor and recruitment, and would eventually become scarce or absent from the habitat. As the abundance and production of herbaceous species decline, browsing of shrubs would likely increase. Similarly, vegetation that provides hiding and thermal cover for wildlife, especially stands of mountain mahogany, may also experience increased browsing pressure and reduced vigor. Winter range for deer and elk would not improve under this alternative, and concerns regarding elk forage and limiting big game habitat would not be addressed. Consequently, the perpetuation of the current livestock grazing management would likely have negative effects to habitat used by wildlife in the Mountain Allotment.

2. Vegetation

Most native plant communities within the Mountain Allotment would maintain the current trend in rangeland condition under the No Action Alternative. Native plant communities would remain stable in the short term; however, lack of growing season rest and limited change in the timing and duration of grazing would eventually degrade plant communities in the foreseeable future within the West, East, and Little Stinkingwater Pastures and, to a lesser extent, Stinkingwater Pasture. Current grazing management in these pastures would reduce native plant vigor and would cause declines in population overtime.

3. Soils

Continuous growing season use in the West and Little Stinkingwater Pastures would eventually result in the loss of desirable vegetation which would expose more of the soil surface to accelerated erosion from wind and water. Grazing management under the No Action Alternative would not sustain adequate cover (live plants, plant litter, and residue) to promote infiltration, conserve soil moisture, and to maintain soil stability in upland areas in the West and Little Stinkingwater Pastures. In addition, continuous use during critical growth periods of riparian vegetation along the headwaters of Stinkingwater Creek and Little Stinkingwater Creek would not maintain adequate cover and plant community structure to promote streambank stability, debris and sediment capture, and floodwater energy dissipation. Thus, current grazing management would negatively affect other watershed resources by increasing sediment loads in streams, reducing water quality, and accelerating downstream erosion.

4. Wild Horses

Growing season rest is not provided to plant communities within the Little Stinkingwater and West Pastures under the No Action Alternative. Plant communities lacking periodic opportunity to recover vigor and recruit seedlings would eventually decline in population. As key species decline in population, the functional diversity and competitive ability of plant communities is reduced, thereby degrading its resistance to undesirable shifts in composition. Because the diets of wild horses and livestock largely overlap, compositional changes of plant communities dominated by key forage species to either more grazing tolerant plants or noxious weeds would decrease the quantity and quality of forage for wild horses. In addition, wild horse movement and dispersal would continue to be constrained by a deficiency of horse friendly gates within the Stinkingwater HMA.

5. Livestock Grazing Management

Livestock grazing management would be maintained as described in Chapter II under the No Action Alternative. Current grazing management, based on actual use records, does not provide periodic growing season rest in the Little Stinkingwater and West Pastures. In addition, continuous seasonal grazing would continue in riparian areas associated with Little Stinkingwater Creek and the headwater water tributary to Stinkingwater Creek. Upland and riparian plant communities that lack periodic opportunity to recover vigor, set seed, and establish seedlings, decline in population overtime. Functional and structural diversity of plant communities would be compromised as desirable species decline in vigor and population, potentially leading to the following:

- insufficient upland vegetation cover and plant community structure to maintain soil stability and infiltration and retention of soil water;

- insufficient riparian vegetation cover and plant community structure to maintain streambank stability, debris and sediment capture, and floodwater energy dissipation;
- decreased sediment storage capacity of riparian zones, higher turbidity, and increasing water temperatures.
- homogeneous plant populations and communities that are less able to utilize site resources by occupying the potential rooting volume of the soil and by photosynthesizing throughout the potential growing season; and
- undesirable shifts in plant composition (i.e., noxious weed invasion).

6. Recreation

There would be no effects to primitive camping within Mountain Allotment under the No Action Alternative in the foreseeable future. A lack of adequate growing season rest for key herbaceous and woody plant species would reduce habitat for wildlife, thereby potentially negatively affecting hunting opportunities in Mountain Allotment in the foreseeable future.

7. Visual Resources

There would be no impacts to visual resources with the No Action Alternative in the foreseeable future. No range improvement projects would be implemented.

8. Social and Economic Values

Rangeland health would decline in the West and Little Stinkingwater Pastures under the No Action Alternative. Declining rangeland health would directly affect the carrying capacity of the allotment and the permittees' livestock operations. The No Action Alternative would eventually have a negative impact on the permittee's ranching livelihood, as well as the economy of Harney County.

C. Proposed Action Alternative – Critical Elements/Cumulative Effects

1. Special Status Species

Fauna

There are no known effects to Federally Threatened, Endangered or Proposed wildlife species under this alternative, as none are known to occur here.

The proposed grazing management would provide periodic growing season rest from livestock grazing to all pastures comprising the Mountain Allotment.

Perennial plant species require periodic opportunity to make and store carbohydrates (i.e., recover vigor) and recruit seedlings to sustain or increase their populations over time. Thus, species and structural diversity within plant communities, currently providing critical elements of Greater sage-grouse habitat, would be maintained under the proposed action. The proposed grazing management would also allow for the timing and duration of livestock grazing to be varied, reducing disturbance by livestock to the breeding, nesting, and early brood-rearing seasons for sage-grouse. However, changing grazing management in the Red Flat Pasture from a graze/rest rotation to a graze/defer rotation would increase livestock presence from every other year to every year. The annual presence of cattle during the grazing season may intensify effects of livestock disturbance on sage-grouse nesting and brood-rearing seasons. In addition, although livestock grazing is deferred every other year in Red Flat Pasture, which meets the physiological demands for maintenance of plant populations, removal of herbaceous biomass is still occurring annually. In contrast, the Red Flat Pasture is rested every other year under the No Action Alternative, which allows herbaceous plant species to complete their life cycle and carryover residual herbage into the following spring. Residual herbage may be important for providing ground nesting cover to sage-grouse during the spring of the subsequent year.

Flora

Special Status plants have not been documented in Mountain Allotment, thus estimating species specific effects would be speculative. In general, however, perennial plant species that lack periodic growing season rest lose vigor and decline in population over time. Thus, current grazing management under the No Action Alternative is generally not conducive to maintaining populations of desirable plant species; particularly in pastures that currently receive infrequent periodic growing season rest from livestock grazing. Grazing management under the Proposed Action Alternative would provide periodic growing season rest to desirable plant species within all pastures comprising the Mountain Allotment. This change in management would afford these species periodic opportunity to recover vigor and recruit seedlings, thereby increasing the potential for maintenance of their populations over time.

Aquatic

Stinkingwater and Warm Springs Creeks are the only two known fish-bearing streams within the allotment. However, Little Stinkingwater Creek does flow into Stinkingwater Creek and likely bears fish in certain reaches. The greatest effects to fish habitat under the Proposed Action Alternative are related to vegetation responses to changes in livestock grazing management. Current grazing management, under the No Action Alternative, includes continuous seasonal use of hydric herbaceous and woody species during critical periods of growth. In contrast, fencing in the Proposed Action Alternative would afford management a means to plan livestock grazing for less critical periods for riparian vegetation.

The headwaters of Stinkingwater Creek would be incorporated into the Stinkingwater Pasture that is spring grazed annually. Little Stinkingwater Creek would be fenced into a pasture separate from the Little Stinkingwater Pasture that would similarly be spring grazed annually. Early season grazing of riparian areas after high flow in the spring would allow sufficient time during the growing season for regrowth and life cycle completion of riparian vegetation. This change in grazing management would facilitate the recovery of herbaceous and woody riparian vegetation communities along Little Stinkingwater Creek and the headwater tributaries to Stinkingwater Creek. With the reestablishment and recovery of these plant communities, greater bank stability, a greater percentage of overhanging banks, increased shading, and greater water storage/retention within the riparian zone is expected. These changes typically improve fish habitat by increasing the sediment storage capacity of riparian zones, reducing turbidity, reducing water temperature and increasing fish cover, foraging, and spawning habitat.

Current management, not being proposed for change, would either maintain or continue to improve riparian areas along the remainder of Stinkingwater and Warm Springs Creeks. The timing of livestock grazing on these creeks is currently prescribed to ensure adequate regrowth of riparian plants for life cycle completion. Management of these riparian zones has promoted an upward trend in riparian condition and is projected to do so in the future.

2. Migratory Birds

In contrast to the No Action Alternative, grazing management under the Proposed Action Alternative would provide periodic growing season rest for perennial grasses, forbs, and shrubs used by migratory birds in the West, East, and Little Stinkingwater Pastures. This should improve the vigor of vegetation and sustain plant populations over time. Also, periodically resting pastures from grazing would reduce the potential for livestock disturbance of nests, nestlings, and fledglings. Habitat conditions for Brewer's sparrow, sage sparrow, and loggerhead shrike is expected to improve as rangeland health improves.

3. Cultural Resources

The Proposed Action Alternative incorporates range improvements (i.e., fencing and repairs to watering locations) that would increase uniformity of livestock distribution. In addition, the proposed grazing management alternates the timing of grazing within the allotment. Both aspects of the Proposed Action Alternative should reduce trampling effects by livestock in congregation areas. Cultural resources would thus be affected at a lower intensity than under the No Action Alternative.

4. American Indian Traditional Practices

Livestock grazing management under the proposed action would potentially reduce the effect of livestock intrusions on traditional practices within the allotment. However, this analysis is speculative because definitive information about American Indian use of this area is lacking. It is not known whether or not smaller numbers of livestock, grazing separate areas of the allotment, would affect the availability of target fruit species. Fruit species within rested and deferred pastures would have a higher likelihood of yielding a desirable harvest than those grazed continuously during the growing season, such as in the West and Little Stinkingwater Pastures.

5. Paleontology

The proposed action incorporates range improvement projects (i.e., fencing and repairs to watering locations) that would improve livestock distribution. In addition, the proposed grazing management alternates the timing of grazing within the allotment. Both aspects of the proposed action should reduce trampling effects by livestock in congregation areas. Paleontological localities would thus be affected at a lower intensity than under the No Action Alternative.

6. Water Quality

The greatest effect to water quality of the proposed action would be related to changes in vegetation communities in response to amending grazing management along Stinkingwater and Little Stinkingwater Creeks. The proposed grazing management and fence construction would facilitate the recovery of deep-rooted riparian species along the quarter mile "water gap" section of the headwater tributary to Stinkingwater Creek and along an approximately 3.1-mile (0.6-mile is BLM managed) reach of Little Stinkingwater Creek. With reestablishment of these communities, greater bank stability, increased shading, and greater water storage/retention is anticipated. These changes are expected to improve water quality by increasing the sediment storage capacity of riparian zones, reducing turbidity, and water temperatures.

The proposed livestock grazing management is expected to maintain an upward trend in riparian habitat conditions on the remainder of Stinkingwater Creek and Warm Springs Creek. The proposed action maintains the season of use on these creeks (early season), which fostered upward trends in riparian habitat conditions on these two creeks during the last evaluation period (1998 to 2003).

7. Wetlands and Riparian Zones

Grazing management under the Proposed Action Alternative would either maintain or improve riparian areas along Stinkingwater, Little Stinkingwater, and Warm Springs Creeks. A quarter mile water gap at the headwaters of Stinkingwater Creek would also be removed and included as part of Stinkingwater Creek riparian pasture (early season use). Livestock use contributed to this section of the stream not meeting the riparian or water quality standard for rangeland health. Use would decrease along this quarter mile reach and regeneration and recovery of woody species is expected. Early season use does have the greatest potential to increase soil compaction and bank trampling due to high soil moisture content in riparian areas at this time of year. However, cattle would likely be discouraged from grazing along creeks this time of year by the relative temperature differences between the canyon bottoms and uplands resulting from cold air drainage. In addition, cattle would be more inclined to graze the uplands due to the availability of palatable vegetation.

Under the No Action Alternative, Little Stinkingwater Pasture is grazed during critical growth periods of riparian vegetation every year. Next to seasonlong grazing, repeated grazing during the hot summer season is generally considered the most injurious to riparian zones (Ehrhart and Hansen 1998). This grazing prescription would not be conducive to meeting riparian standards and would result in declining riparian conditions. Fencing in the proposed action would afford management a means to mitigate continuous grazing during critical riparian growth periods and would lead to an upward trend in riparian plant communities along Little Stinkingwater Creek.

Wild horses currently have continuous access to riparian zones associated with Little Stinkingwater and Stinkingwater Creeks. Riparian monitoring indicates the lower reaches of Stinkingwater Creek remain in poor condition. Heavy use by wild horses along the lower reaches of Stinkingwater Creek was noted during a use supervision visit in July of 2003, suggesting riparian habitat recovery is being retarded by yearlong use by wild horses. Under the Proposed Action Alternative, perimeter gates of the Stinkingwater Pasture would remain closed yearlong. This action would limit livestock grazing to early growing season use and would preclude access by both livestock and wild horses during critical growth periods of riparian vegetation. As a consequence, this action would foster improvement of trend in riparian habitat condition. Creation of the Little Stinkingwater Riparian Pasture would similarly limit livestock grazing to early growing season use and would provide a means to preclude access by livestock and wild horses during critical growth periods of riparian vegetation. Perennial water sources are well distributed throughout the allotment, thus wild horse access to Stinkingwater and Little Stinkingwater Creeks is not critical.

8. Noxious Weeds

Any soil-disturbing activity has potential to create an environment for the establishment of noxious weeds. Range improvements would be implemented under the proposed action to improve livestock distribution and mitigate soil-disturbing activities in congregation areas. In addition, grazing management under the proposed action incorporates growing season rest for all pastures comprising the Mountain Allotment. In contrast, no range improvements would be implemented that improve livestock distribution and mitigate soil-disturbing activities in congregation areas under the No Action Alternative. Continuous seasonal grazing in the West and Little Stinkingwater Pastures would continue and key forage plants would not receive periodic growing season rest for completion of their reproductive cycles under the No Action Alternative. Plant species that lack periodic opportunity to make and store carbohydrates, set seed, and establish seedlings lose vigor and decline in population overtime. Perennial plants that are not afforded periodic opportunity to recover vigor also experience reductions in competitive ability overtime. As key plant species decline in population, functional roles of those species within the plant community are diminished. Cumulatively, these changes reduce plant community resistance to noxious weed invasion and increase the potential for undesirable shifts in plant composition. Implementation of grazing management under the Proposed Action Alternative would maintain or increase the resistance of plant communities to invasion of noxious weeds within all pastures comprising the Mountain Allotment.

D. Proposed Action Alternative – Noncritical Elements/Cumulative Effects

1. Wildlife

Grazing management under the Proposed Action Alternative is expected to improve rangeland health, especially in the West, East, and Little Stinkingwater Pastures that currently do not receive periodic rest during the critical portions of the growing season. As rangeland health improves over time, the quality of habitat for wildlife species would improve in the foreseeable future.

2. Vegetation

Native plant communities would benefit from grazing management in the Proposed Action Alternative. Periodic growing season rest and alternating the timing of livestock grazing would allow for improved vigor and diversity of native plants. The proposed action would also improve plant community composition, age class distribution, and overall production within the allotment.

The proposed grazing system, along with the range improvements, would improve distribution and trend in rangeland condition in the foreseeable future. A caveat to the grazing management under the Proposed Action Alternative, however, is that the grazing rotation in the Red Flat Pasture would be changed from a graze/rest rotation to a graze/defer rotation. Total rest from livestock grazing in this pasture every other year, has fostered an upward trend in range condition over the last allotment evaluation period (1998 to 2003). The 2003 Mountain Allotment Evaluation cited increases in the cover of native perennial grasses and forbs and decreases in the amount of bare soil exposure. Grazing management under the Proposed Action Alternative would defer grazing until after seed set by key species every other year. This grazing rotation would similarly afford key plant species periodic opportunity to complete their life cycle, and thus should foster stable to upward trends in range condition.

3. Soils

Soils would continue to be compacted in localized areas immediately around watering and salting areas. The majority of the allotment would have improved livestock distribution due to alternating the timing and duration of livestock grazing which would provide for increased plant cover. This would facilitate protection of the soil surface from raindrop impact through interception by vegetation cover and by reducing the potential for accelerated soil erosion caused by surface runoff. The anticipated cumulative effects of the Proposed Action Alternative would be an increase in overall ground cover which would improve soil stability and lessen the potential for accelerated soil erosion on Mountain Allotment.

4. Wild Horses

Some of the effects of the Proposed Action Alternative would be positive for wild horse habitat. Under the proposed action, livestock grazing would be managed to provide periodic growing season rest to key forage species across the allotment. The proposed fencing and subsequent creation of an additional pasture (i.e., Little Stinkingwater Riparian Pasture) would afford management more control in alternating the timing and duration of livestock grazing. Since the diets of livestock and wild horses largely overlap, periodic growing season rest for key forage species would benefit wild horses by sustaining/improving plant community composition and productivity over time. The proposed action, coupled with vegetative responses associated with various large-scale vegetation manipulations within the HMA, would serve to enhance wild horse habitat by fostering improved quality and quantity of key forage species.

Because of a net increase in fencing, the proposed action would further constrain movement of horses during the season of use by livestock. This effect would be partially mitigated by requiring most gates internal to the HMA be opened after livestock are gathered. Gates along the perimeters of the Stinkingwater and the proposed Little Stinkingwater Riparian Pastures would remain closed yearlong to preclude access by livestock and wild horses during critical growth periods of riparian vegetation. Perennial water sources are well distributed across the allotment. In addition, the proposed grazing management should foster improvements in rangeland health, resulting in increased quality and quantity of forage. Thus, wild horses would have sufficient forage and water without access to the Stinkingwater and the proposed Little Stinkingwater Riparian Pastures.

5. Livestock Grazing Management

The proposed livestock grazing management would provide periodic growing season rest to all pastures comprising the Mountain Allotment. The proposed action would improve livestock distribution, causing more even utilization patterns, and decrease grazing pressure around congregation and riparian areas.

Providing adequate growing season rest and adjusting the timing and duration of livestock grazing is likely to promote vigor and diversity of native plants and regrowth in riparian areas.

6. Recreation

Under the proposed action, there would be no impacts to camping activities that occur within Mountain Allotment. Hunting opportunities are likely to improve as rangeland condition improves.

7. Visual Resources

The proposed action meets VRM Class IV requirements. Visual resources would be affected short term, during construction of range improvements, but would improve once vegetation is reestablished. Management activities would not dominate the view of the casual observer.

8. Social and Economic Values

There are currently three permittees who have active grazing permits within the Mountain Allotment. Under the Proposed Action Alternative, periodic growing season rest would be provided, leading to long-term positive impacts on the allotment, the ranchers, and the associated community. Implementation of the Mountain AMP and associated projects would improve the economies of the affected ranch and the local communities.

E. Cross Fencing Alternative – Critical Elements/Cumulative Effects

1. Special Status Species

Fauna

There are no known effects to Federally Threatened, Endangered or Proposed wildlife species under this alternative, as none are known to occur here.

Many of the effects to sage-grouse habitat of the Cross Fencing Alternative would be similar to the Proposed Action Alternative. The Cross Fencing Alternative would be beneficial for sage-grouse and other SSS because the proposed grazing management would provide growing season rest for vegetation on the allotment and would be expected to improve rangeland health. The proposed grazing management would promote plant species and structural diversity within plant communities. This would allow for increased production of perennial grasses and forbs, which are preferred forage species for sage-grouse during spring, summer, and fall. In general, as rangeland health improves, the quality of habitat for sage-grouse and other wildlife would improve. The proposed grazing management would also allow for livestock timing and duration of grazing to be varied reducing the potential to impact the breeding, nesting, and early brood-rearing seasons for sage-grouse.

One salient difference between the Cross Fencing Alternative and the Proposed Action Alternative is the grazing management that would be prescribed for the Red Flat Pasture. Under the Proposed Action Alternative, the grazing management in the Red Flat Pasture would need to change from a graze/rest to a graze/defer rotation in order to accommodate providing deferment to the Little Stinkingwater Pasture. Therefore, grazing would occur annually under the Proposed Action Alternative. This change would reduce the amount of residual herbaceous biomass that would function as ground nesting cover for sage-grouse the subsequent spring. Conversely, the additional cross-fencing proposed in the Cross Fencing Alternative would preclude the need to incorporate the Red Flat Pasture in a graze/defer rotation with the Little Stinkingwater Pasture. In contrast to the Proposed Action Alternative, the Red Flat Pasture would continue to be managed with a graze/rest rotation under the Cross Fencing Alternative. Thus, every other year, residual herbage would overwinter and be available the subsequent spring to function as ground nesting cover for sage-grouse.

Depending on decomposition rates of residual biomass, the amount of herbaceous litter and standing residual biomass would increase overtime, thereby increasing the perennial availability of nesting cover for sage-grouse. Residual herbage is generally low in palatability and is typically not preferred by foraging ungulates, including livestock and wildlife. During years the Red Flat Pasture receives a graze treatment, the Stinkingwater Pasture would receive complete rest from grazing. Thus, grazing management under the Cross Fencing Alternative would prescribe complete rest from livestock grazing for at least one large pasture within the Mountain Allotment annually.

Flora

Special Status plants have not been documented in Mountain Allotment, thus estimating species specific effects would be speculative. In general, however, perennial plant species that lack periodic growing season rest lose vigor, lack sufficient recruitment, and decline in population over time. Thus, current grazing management under the No Action Alternative is generally not conducive to maintaining populations of desirable plant species; particularly in pastures that currently receive infrequent periodic growing season rest from livestock grazing. Grazing management under the Cross Fencing Alternative would provide periodic growing season rest to desirable plant species within all pastures comprising the Mountain Allotment. This change in management would allow these species periodic opportunity to recover vigor and recruit seedlings, thereby increasing potential for maintenance of their populations over time.

Aquatic

Stinkingwater and Warm Springs Creeks are the only two known fish-bearing streams within the allotment. However, Little Stinkingwater Creek does flow into Stinkingwater Creek and likely bears fish in certain reaches. The effects of the Cross Fencing Alternative to aquatic habitat associated with these stream reaches is projected to be similar to the effects described for the Proposed Action Alternative. The greatest effects to fish habitat under the Cross Fencing Alternative are related to the change in vegetation communities in response to changes in livestock grazing management. The proposed fences should facilitate the recovery of herbaceous and woody riparian vegetation communities along Little Stinkingwater Creek and the headwater tributaries to Stinkingwater Creek. With the reestablishment of these communities, greater bank stability, a greater percentage of overhanging banks, increased shading and greater water storage/retention within the riparian zone is expected. These changes typically improve fish habitat by increasing the sediment storage capacity of riparian zones, reducing turbidity, reducing water temperature and increasing fish cover, foraging, and spawning habitat.

Current management, not being proposed for change, would either maintain or continue to improve riparian areas along the remainder of Stinkingwater and Warm Springs Creeks. These creeks are currently grazed early annually with grazing rotations timed to ensure adequate regrowth of riparian plants for life cycle completion. This management has promoted an upward trend in condition along these two creeks and is projected to do so in the future. The proposed fencing for the creation of the Little Stinkingwater Riparian Pasture would similarly afford management a means to plan grazing for less critical times during riparian plant growth cycles.

2. Migratory Birds

The effects of the Cross Fencing Alternative to migratory birds and associated habitat would be similar to those described in the Proposed Action Alternative. The proposed grazing management under the Cross Fencing Alternative would provide periodic growing season rest for perennial grasses, forbs, and shrubs used by migratory birds. This should improve the vigor of vegetation and sustain plant populations over time. Also, periodically resting pastures from grazing would reduce the potential for livestock disturbance of nests, nestlings, and fledglings. Habitat conditions for Brewer's sparrow, sage sparrow, and loggerhead shrike are likely to improve as rangeland health improves.

3. Cultural Resources

The effects of the Cross Fencing Alternative to cultural resources would be similar to those described for the Proposed Action Alternative. Dividing the herd in half to graze separate use areas throughout the grazing season should reduce the trampling impacts of livestock in congregation areas. In addition, the timing of grazing would be alternated across the allotment, thereby shortening the duration cattle would spend in congregation areas. Cultural resource sites will thus be affected at a lower intensity than under the No Action Alternative.

4. American Indian Traditional Practices

The effects of the Cross Fencing Alternative to American Indian traditional practices would be similar to those described for the Proposed Action Alternative. It is considered likely that grazing management under the Cross Fencing Alternative would reduce the effect of livestock intrusions on traditional practices within the allotment. However, this analysis is speculative because definitive information about American Indian use of this area is lacking. It is not known whether or not smaller numbers of livestock, grazing separate areas of the allotment, would affect the availability of target fruit species. It would seem logical that fruit species within rested pastures would have a higher likelihood of yielding a desirable harvest than those grazed every year.

5. Paleontology

The effects of the Cross Fencing Alternative to paleontological resources would be similar to those described for the Proposed Action Alternative. Improving livestock distribution and grazing at different locations within the allotment should reduce trampling affects in livestock congregation areas. Paleontological localities would thus be affected at a lower intensity than under the No Action Alternative.

6. Water Quality

The effects of the Cross Fencing Alternative to water quality would be similar to the effects described for the Proposed Action Alternative. The greatest effect to water quality of the Cross Fencing Alternative would be related to changes in vegetation communities following adjustments to the grazing management along Stinkingwater and Little Stinkingwater Creeks. The proposed grazing management and fence construction will facilitate the recovery of deep-rooted riparian species along the quarter mile "water gap" section of the headwater tributary to Stinkingwater Creek and along an approximately 3.1-mile (0.6-mile is BLM managed) reach of Little Stinkingwater Creek. With the reestablishment of these communities, greater bank stability, increased shading, and greater water storage/retention is expected. These changes typically improve water quality by increasing the sediment storage capacity of riparian zones, reducing turbidity, and water temperatures.

The proposed livestock grazing management should either maintain or continue to improve conditions on the remainder of Stinkingwater and Warm Springs Creeks. Alternative 1 does not change the season of use on these creeks (early season). The early season of use allowed for improvement on these two creeks during the last evaluation period (1993 to 2003) and should continue to do so in the foreseeable future.

7. Wetlands and Riparian Zones

The effects of the Cross Fencing Alternative to wetlands and riparian zones would be similar to those described for the Proposed Action Alternative. Grazing management under the Cross Fencing Alternative would either maintain or improve riparian areas along Stinkingwater, Little Stinkingwater, and Warm Springs Creeks. A quarter mile water gap at the headwaters of Stinkingwater Creek would also be removed and included as part of Stinkingwater Creek riparian pasture (early season use). This section of stream did not meet the riparian or water quality standard and livestock grazing was a significant factor.

This portion of Alternative 1 should enable progress toward achievement of these two standards. Use should decrease along this quarter mile reach and woody species regeneration and growth should be bolstered. Early season use does have the greatest potential to increase soil compaction and bank trampling due to high soil moisture content in riparian areas at this time of year. However, this impact would be minimized if cattle are discouraged from hanging in the riparian zone due to cold air in the canyons at this time of year and the availability of palatable upland vegetation.

Little Stinkingwater Creek, which flows through Little Stinkingwater Pasture, is not a known fish-bearing stream and is predominately situated on private land. Out of the 5 miles that flow within the allotment, 2 miles fall under BLM-administered land. However, all 5 miles are managed in conjunction with the BLM-managed uplands. A large portion of the 2-mile public segment is intermittent flow. The remaining 3 miles within this pasture has perennial flow. Under Alternative 1, Little Stinkingwater Creek would be fenced into a riparian pasture and grazed early every year. Under current management, Little Stinkingwater Pasture is grazed during critical growth periods of riparian vegetation every year. Next to seasonlong grazing, repeated grazing during the hot summer season is generally considered the most injurious to riparian zones (Ehrhart and Hansen 1998). This grazing prescription would not be conducive to meeting riparian standards and would result in declining riparian conditions. Alternative 1 would afford management a means to mitigate repeated grazing during critical riparian growth periods and would lead to an upward trend in riparian plant communities along Little Stinkingwater Creek.

Wild horses currently have continuous access to riparian zones associated with Little Stinkingwater and Stinkingwater Creeks. Riparian monitoring indicates the lower reaches of Stinkingwater Creek remain in poor condition. Heavy use by wild horses along the lower reaches of Stinkingwater Creek was noted during a use supervision visit in July of 2003, suggesting riparian habitat recovery is being retarded by yearlong use by wild horses. Under the Cross Fencing Alternative, perimeter gates of the Stinkingwater Pasture would remain closed yearlong. This action would limit livestock grazing to early growing season use and would preclude access by both livestock and wild horses during critical growth periods of riparian vegetation. As a consequence, this action would foster improvement of trend in riparian habitat condition. Creation of the Little Stinkingwater Riparian Pasture would similarly limit livestock grazing to early growing season use and would provide a means to preclude access by livestock and wild horses during critical growth periods of riparian vegetation. Perennial water sources are well distributed throughout the allotment, thus wild horse access to Stinkingwater and Little Stinkingwater Creeks is not critical.

8. Noxious Weeds

The effects of the Cross Fencing Alternative to the invasibility of plant communities by noxious weeds within the Mountain Allotment are similar to the effects described for the Proposed Action Alternative. Any soil-disturbing activity increases the potential for the introduction or establishment of noxious weeds. Under the Cross Fencing Alternative, range improvements would be implemented that improve livestock distribution and mitigate soil-disturbing activities in congregation areas. In addition, grazing management under the Cross Fencing Alternative incorporates growing season rest for all pastures comprising the Mountain Allotment. This is in contrast to the No Action Alternative, in which the West and Little Stinkingwater Pastures have been grazed during the growing season 6 of the last 8 years. Over time, continuous grazing during critical growth periods of key forage species causes shifts in the composition of vegetation and reduces the resistance of plant communities to noxious weed invasion. Conversely, plant communities that are periodically allowed to grow and store carbohydrates (i.e., recover vigor), set seed, and establish seedlings will maintain their populations and are less susceptible to invasion by noxious weeds.

F. Cross Fencing Alternative – Noncritical Elements/Cumulative Effects

1. Wildlife

Grazing management under the Cross Fencing Alternative is expected to improve rangeland health, especially in the areas that currently do not receive periodic rest during the critical portions of the growing season. As rangeland health improves over time, the quality of habitat for wildlife species would improve in the foreseeable future.

2. Vegetation

Native plant communities would benefit from management proposed in the Cross Fencing Alternative. Periodic growing season rest and alternating the timing of livestock grazing would allow for improved vigor and diversity of native plants. The proposed action would also improve plant community composition, age class distribution, and overall production within the allotment. The proposed grazing system, along with the range improvements, would improve distribution and trend in rangeland condition in the foreseeable future.

3. Soils

Soils would continue to be compacted in localized areas immediately around watering and salting areas. The majority of the allotment would have improved livestock distribution due to alternating the timing and duration of livestock grazing which would provide for increased plant cover. This would facilitate protection of the soil surface from raindrop impact through interception by vegetation cover and reducing surface runoff lessening the potential for accelerated soil erosion. The anticipated cumulative effects of the Cross Fencing Alternative would be an increase in overall ground cover which would improve soil stability and lessen the potential for accelerated soil erosion on Mountain Allotment.

4. Wild Horses

Some of the effects of the Cross Fencing Alternative would be positive for wild horse habitat. Livestock grazing would be managed to provide periodic growing season rest to key forage species across the allotment. The proposed fencing and subsequent creation of additional pastures would afford management more control in alternating the timing and duration of livestock grazing. Since the diets of livestock and wild horses largely overlap, periodic growing season rest for key forage species would benefit wild horses by sustaining/improving plant community composition and productivity over time. Grazing management under the Cross Fencing Alternative, coupled with vegetative responses associated with various large-scale vegetation manipulations within the HMA, would serve to enhance wild horse habitat by fostering improved quality and quantity of key forage species. Because of a net increase in fencing, the proposed action would further constrain movement of horses during the season of use by livestock. This effect would be partially mitigated by the requirement that gates internal to the HMA remain open after livestock are gathered. The addition of horse friendly gates (i.e., "double gates") with all new fenceline construction would also facilitate wild horse passage through fences and partially mitigate effects to wild horse movement. Gates along the perimeters of the Stinkingwater and the proposed Little Stinkingwater Riparian Pastures would remain closed yearlong to preclude access by livestock and wild horses during critical growth periods of riparian vegetation. Perennial water sources are well distributed across the allotment. In addition, the proposed grazing management should foster improvements in rangeland health, resulting in increased quality and quantity of forage. Thus, wild horses would have sufficient forage and water without having access to the Stinkingwater and the proposed Little Stinkingwater Riparian Pastures.

5. Livestock Grazing Management

The livestock grazing management in the Cross Fencing Alternative would provide periodic growing season rest to all pastures comprising the Mountain Allotment. The proposed action would improve livestock distribution, causing more even utilization patterns, and decrease grazing pressure around congregation and riparian areas.

6. Recreation

Under the proposed action, there would be no impacts to camping activities that occur within Mountain Allotment. Hunting opportunities are likely to improve as upward trends in rangeland and wildlife habitat condition are realized.

7. Visual Resources

The proposed action meets VRM Class IV requirements. Visual resources would be affected short term, while construction of range improvements occurs, but would improve once vegetation is reestablished. Management activities would not dominate the view of the casual observer.

8. Social and Economic Values

There are currently three permittees who have active grazing permits within the Mountain Allotment. Under the Cross Fencing Alternative, periodic growing season rest would be provided, leading to long-term positive impacts on the allotment, the ranchers, and the associated community. Implementation of the Mountain AMP and associated projects would improve the economies of the affected ranch and the local communities.

Additional Comments on Cumulative Effects:

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, the "environmental analysis required under NEPA is forward-looking," and review of past actions is required only "to the extent that this review informs agency decision-making regarding the proposed action." Use of information on the effects on past action may be useful in two ways according to the CEQ guidance. One is for consideration of the proposed action's cumulative effects, and secondly as a basis for identifying the proposed action's direct and indirect effects.

The CEQ stated in this guidance that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." This is because a description of the current state of the environment inherently includes the effects of past actions. The CEQ guidance specifies that the "CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions." Our information on the current environmental condition is more comprehensive and more accurate for establishing a useful starting point for a cumulative effects analysis, than attempting to establish such a starting point by adding up the described effects of individual past actions to some environmental baseline condition in the past that, unlike current conditions, can no longer be verified by direct examination.

The second area in which the CEQ guidance states that information on past actions may be useful is in "illuminating or predicting the direct and indirect effects of a proposed action." The usefulness of such information is limited by the fact that it is anecdotal only, and extrapolation of data from such singular experiences is not generally accepted as a reliable predictor of effects.

However, "experience with and information about past direct and indirect effects of individual past actions" have been found useful in "illuminating or predicting the direct and indirect effects" of the proposed action in the following instances: the basis for predicting the direct and indirect effects of the proposed action and its alternatives is based on the general accumulated experience of the resource professionals in the agency with similar actions.

CHAPTER V: PERSONS, GROUPS, AND GOVERNMENT AGENCIES CONSULTED

Frank Catterson, Permittee
Wilber Brothers, Permittees
Pat Wilber, Permittee
G. Wright Wilber Trust, Permittee

CHAPTER VI: LIST OF PREPARERS

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Lindsay Davies, Fishery Biologist
Gary Foulkes, District Planning/Environmental Coordinator
Rick Hall, Natural Resource Specialist (Botanist)
Dustin Johnson, Rangeland Management Specialist, Lead Preparer
Fred McDonald, Natural Resource Specialist (Recreation and Wilderness)
Lesley Richman, District Weed Coordinator
Douglas Spaeth, Wildlife Biologist
Scott Thomas, District Archaeologist

CHAPTER VII: MAPS

Map A – General Location Map

Map B – Land Status Map

Map C – Proposed Action Alternative Grazing Schematic Maps

Map D – Stinkingwater HMA Boundary Map

Map E – Existing Range Improvements/Proposed Action Alternative Range Improvements Map

Map F – Cross Fencing Alternative Grazing Schematic Maps

Map G – Existing Range Improvements/ Cross Fencing Alternative Range Improvements Map

References cited:

Ehrhart, R.C, and Hansen, PL. 1998. Successful Strategies for Grazing Cattle in Riparian Zones. USDI Bureau of Land Management Technical Bulletin No. 4. Missoula, MT

Appendix A

Grazing Treatment Descriptions

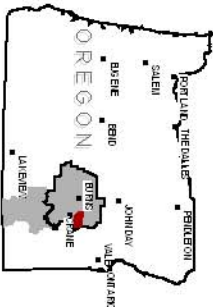
Early (Riparian) – (approximately April 15 to May 31) – This treatment provides plants opportunity for regrowth and recover following defoliation of early plant growth by livestock. Timing of this grazing treatment in upland areas must be highly linked to soil moisture. Soil moisture must be closely monitored to ensure adequate amounts remain for regrowth and recovery of plants following livestock removal. In contrast to the uplands, riparian areas retain soil moisture much longer into the growing season. That being the case, temperature becomes more limiting for plant regrowth and recovery following defoliation by livestock. The timing of livestock removal from riparian areas must occur with sufficient time remaining in the growing season to allow plant regrowth and recovery.

Graze – (approximately May 1 to July 15) – This treatment allows for grazing during the critical growth period of most plants. Carbohydrate reserves are continually being utilized because plant structures (i.e., leaves and stems) that perform photosynthesis (i.e., manufacture carbohydrates) are repeatedly being removed by livestock. Pastures that are under the graze treatment should be provided growing season rest (see defer and rest treatments below) the subsequent year to afford plants opportunity to make and store carbohydrates (i.e., recover vigor), ripen seed, and recruit seedlings.

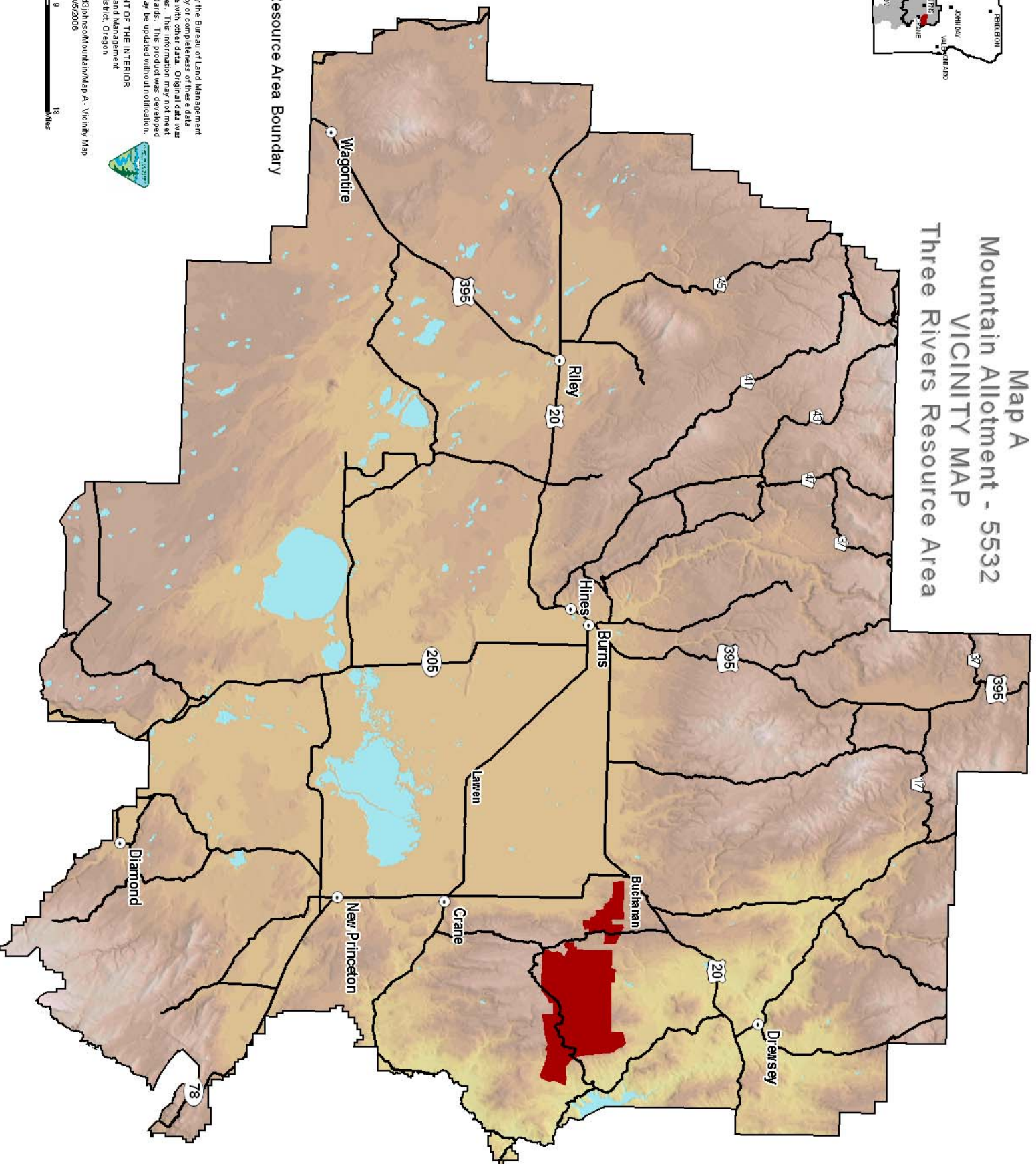
Defer – (approximately July 15 to October 31) – Grazing during this treatment will not begin until after most plants have reached seed ripe and have stored adequate carbohydrate reserves. This treatment meets objectives for maintaining plant populations over time by providing plants periodic opportunity to make and store carbohydrates (i.e., recover vigor), ripen seed, and recruit seedlings.

Rest – This treatment provides plants a full year of growth in the absence of grazing. They are allowed to store maximum carbohydrate reserves, set seed, and provide carryover herbage for the following year's turnout and for other multiple use objectives (e.g., residual cover for ground nesting birds, winter forage for wildlife, residual ground cover and litter for soil protection, etc.).

Dates listed above are approximations based on general plant phenology within the project area. Annual variation in plant phenology will occur with climatic fluctuation.



Map A Mountain Allotment - 5532 VICINITY MAP Three Rivers Resource Area



- Legend**
- Three Rivers Resource Area Boundary
 - Allotments

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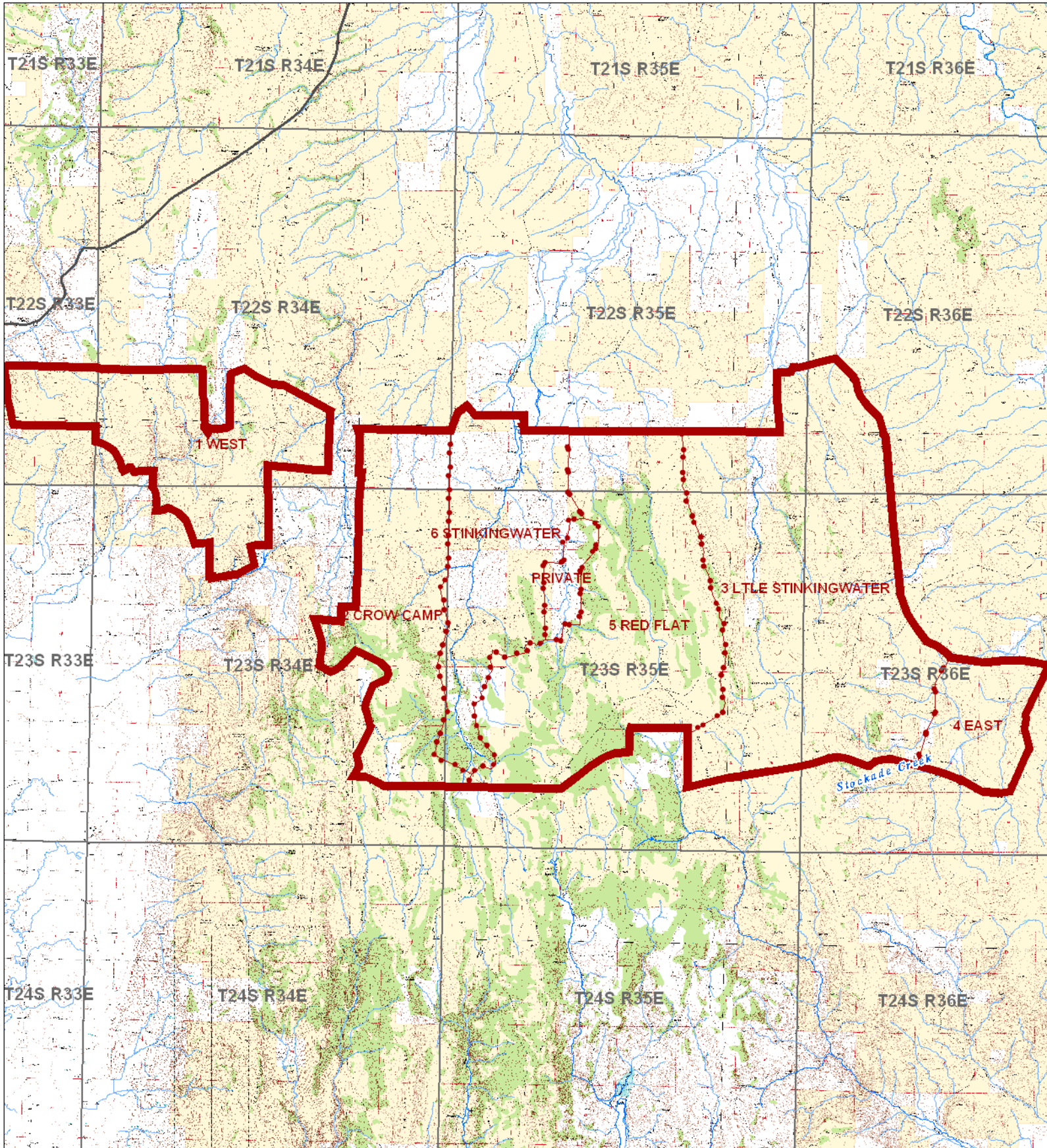


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Burns District, Oregon



blm/dfs/or/bul/loc/3/swork/area/d3/johns/mountain/Map A - Vicinity Map
10/6/2006

Mountain Allotment - #5532 LAND STATUS



Legend

- Land Administration
- Bureau of Land Management
- Private
- Allotment Boundary
- Patent Boundary



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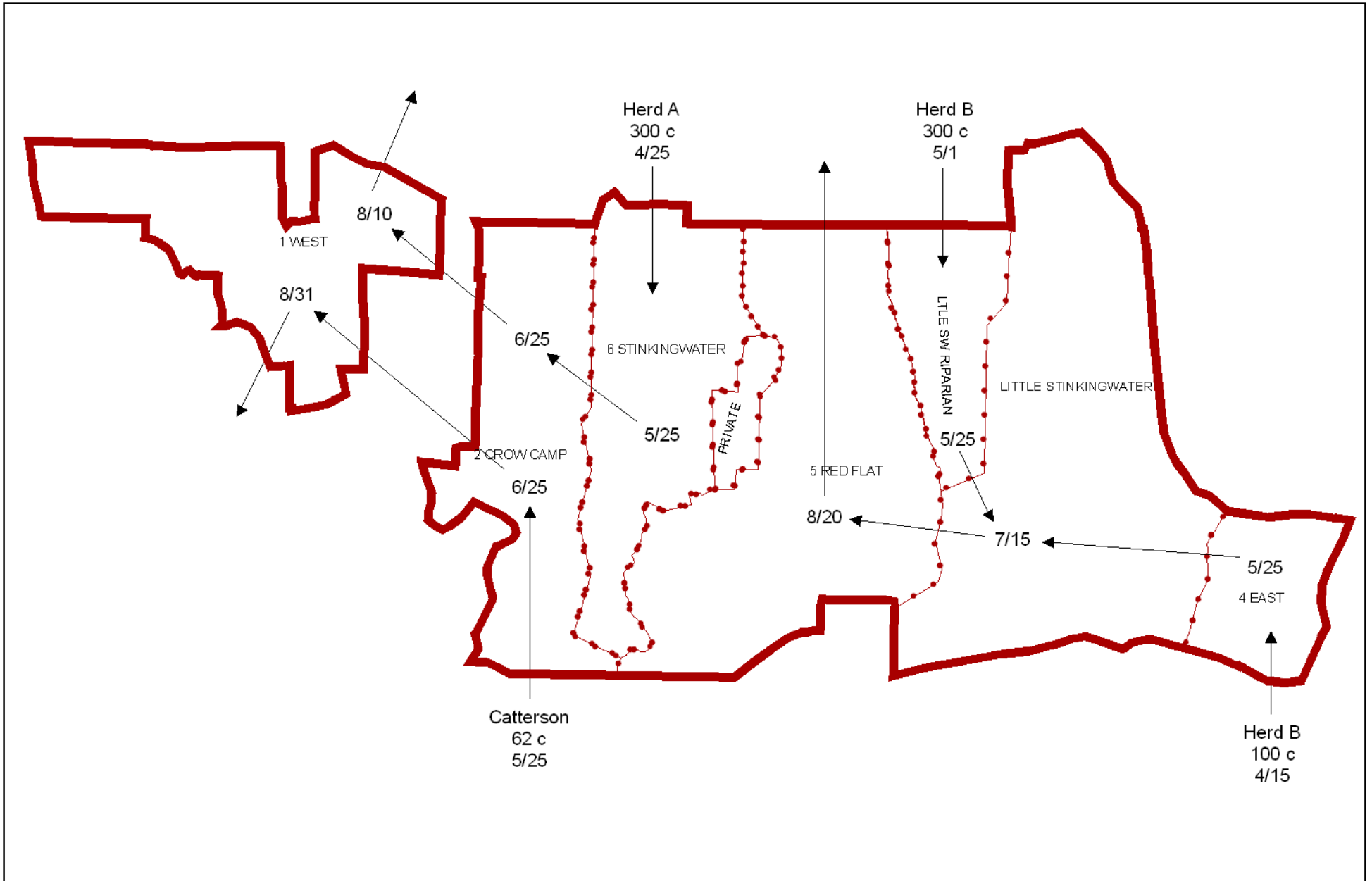
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Great District, Oregon







©GIS/WorkArea/304/Geo/Map/Map B - L
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0 0.5 1 2 Miles

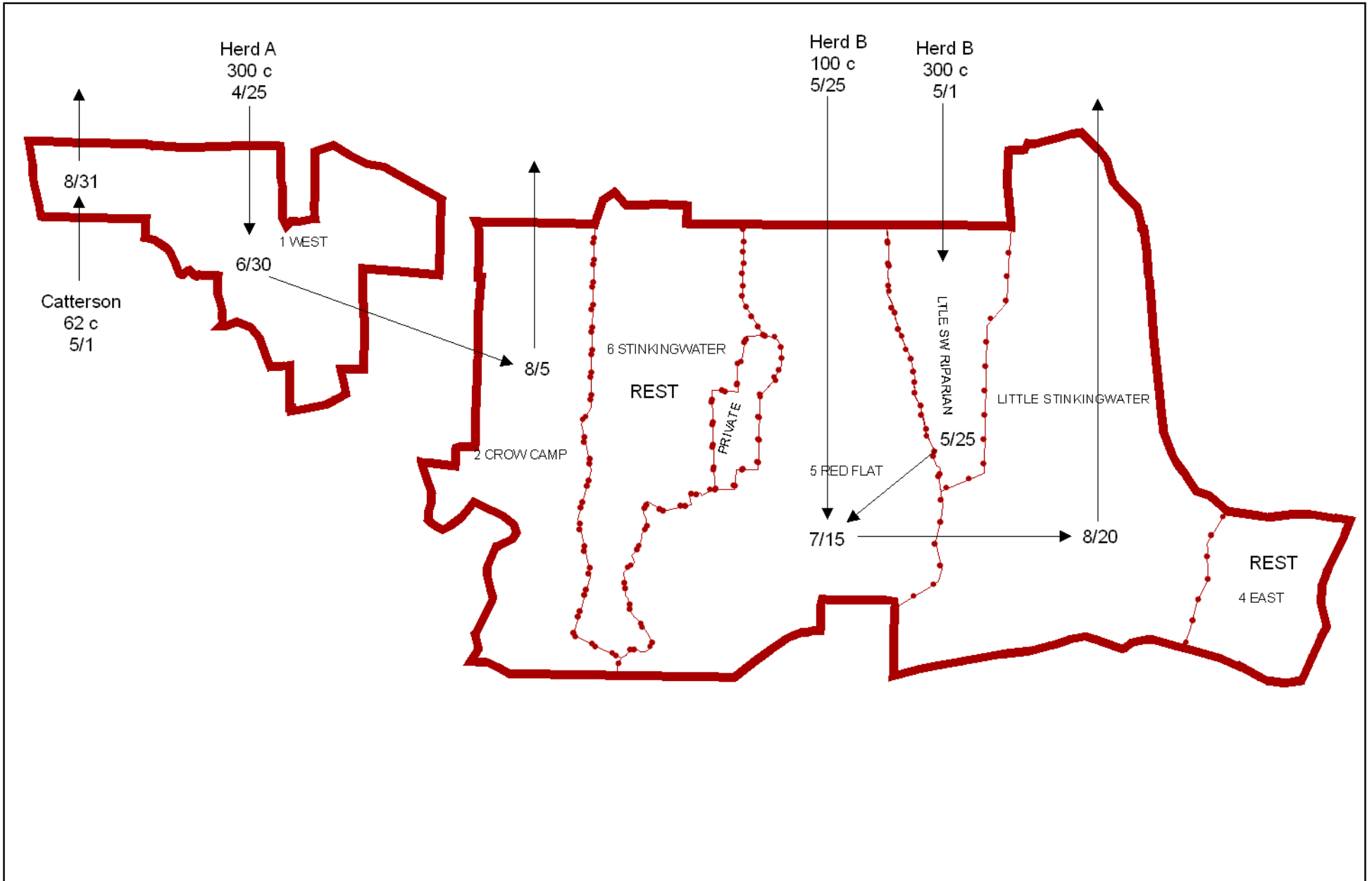
Map C
 Mountain Allotment
 PROPOSED ACTION ALTERNATIVE GRAZING SCHEMATIC







 Allotment Boundary
 Pasture Boundary

 Even Year
 Odd Year

Map C
 Mountain Allotment
 PROPOSED ACTION ALTERNATIVE GRAZING SCHEMATIC

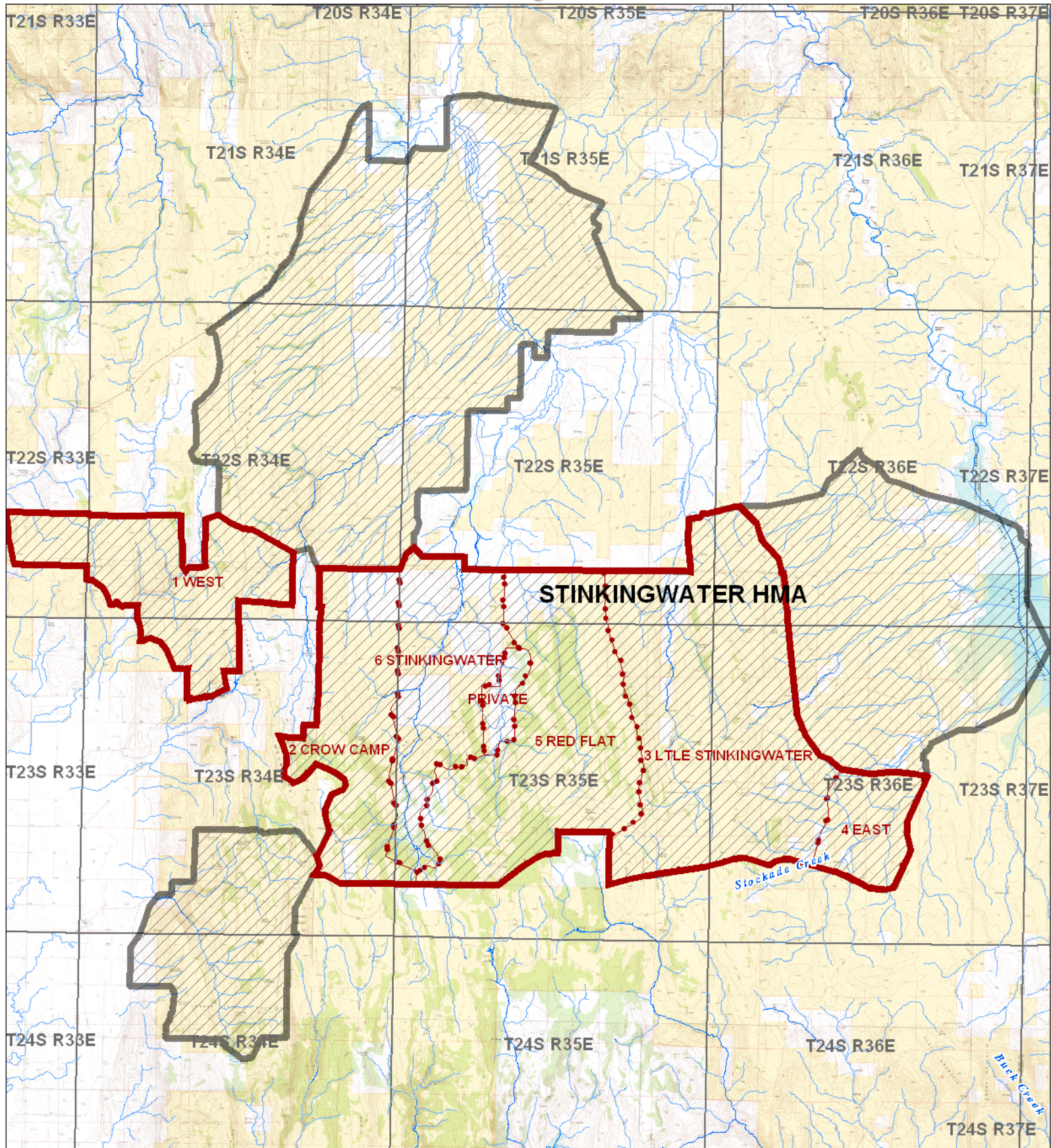


 Allotment Boundary
 Pasture Boundary

 Even Year
 Odd Year

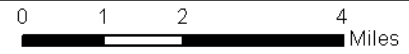
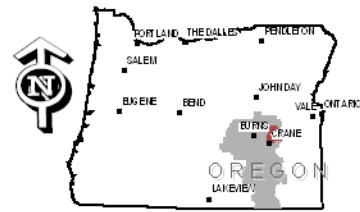
Stinkingwater Herd Management Area

Map D



- Legend**
- Allotment Boundary
 - Pasture Boundary
 - Perennial Streams
 - Intermittent Streams

- Herd Management Area
- Land Administration**
- Bureau of Land Management
 - Private



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












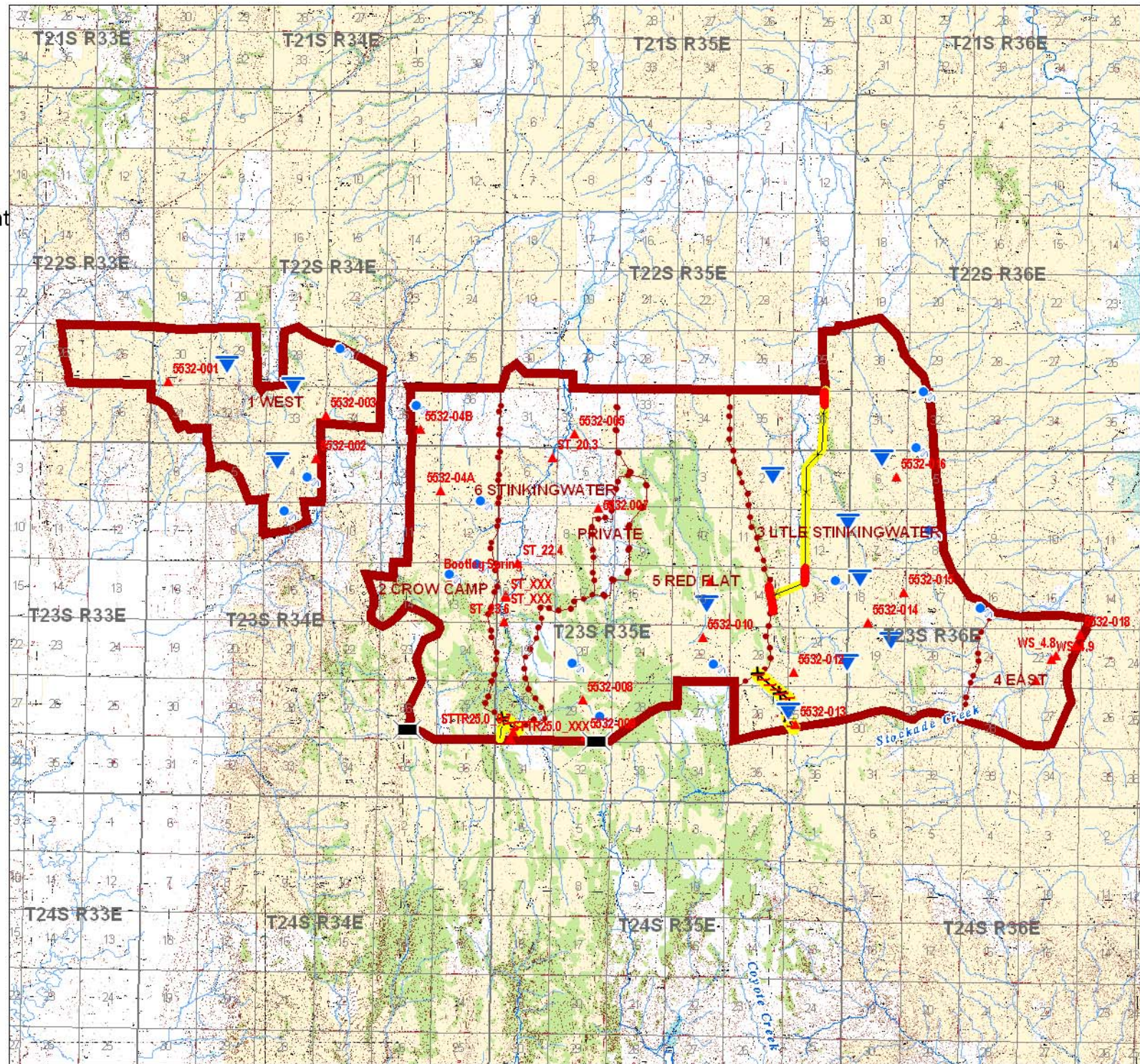
US DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
BENTON DISTRICT, OREGON



Map E
 Mountain Allotment
 # 5532
 PROPOSED ACTION
 RANGE IMPROVEMENTS

Legend

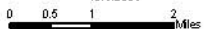
-  Perennial Streams
-  Intermittent Streams
-  Bureau of Land Management
-  Private
-  Allotment Boundary
-  Pasture Boundary
-  CATTLE GRD
-  RESERVOIR
-  SPRING
-  FENCE
-  REMOVE
-  Trend Sites
-  "Double Gates"



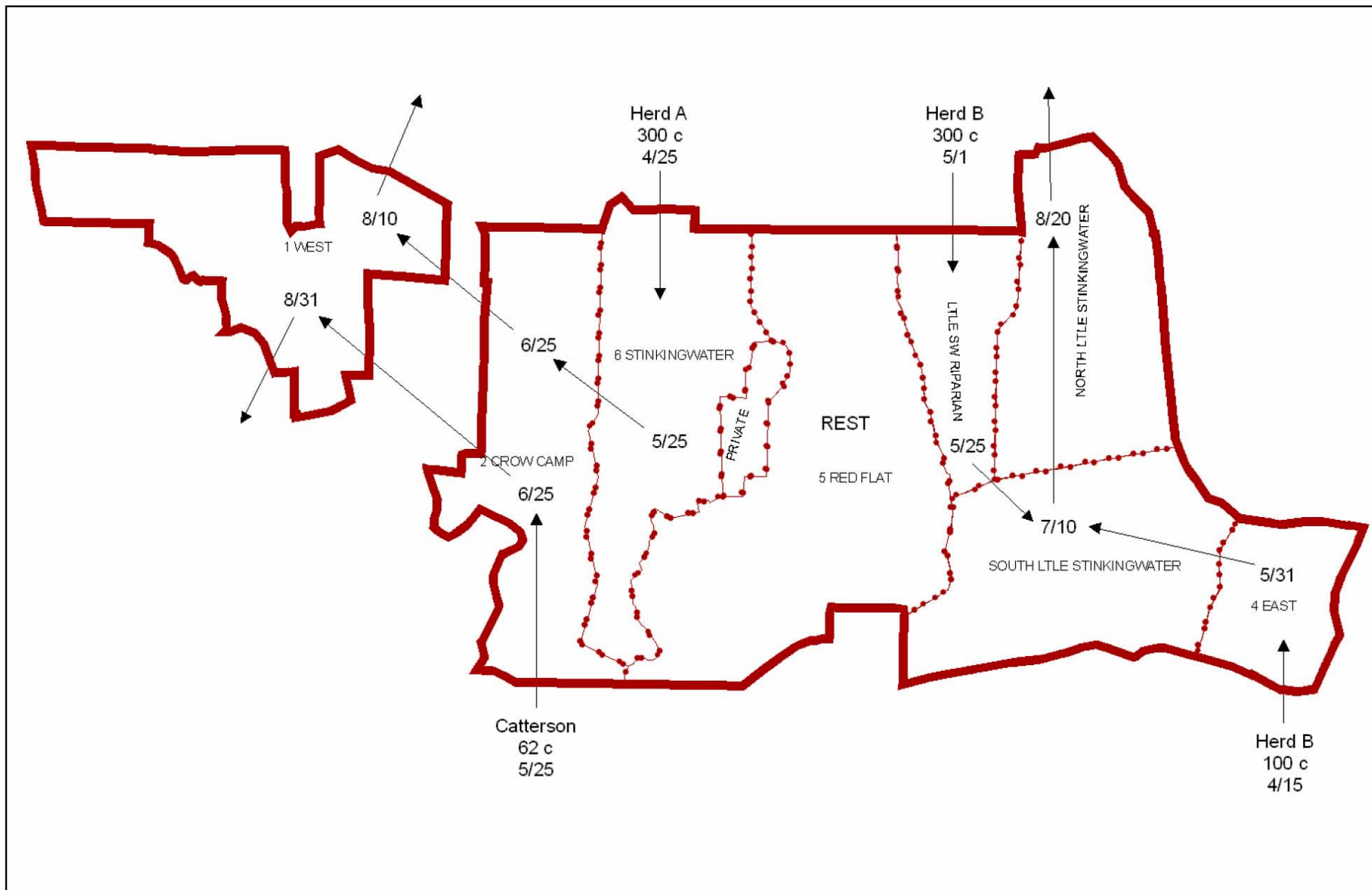
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US DEPARTMENT OF THE INTERIOR
 Bureau of Land Management
 Burns District, Oregon

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 MountainMap E - Proposed Action Range Improvements
 10/6/2006



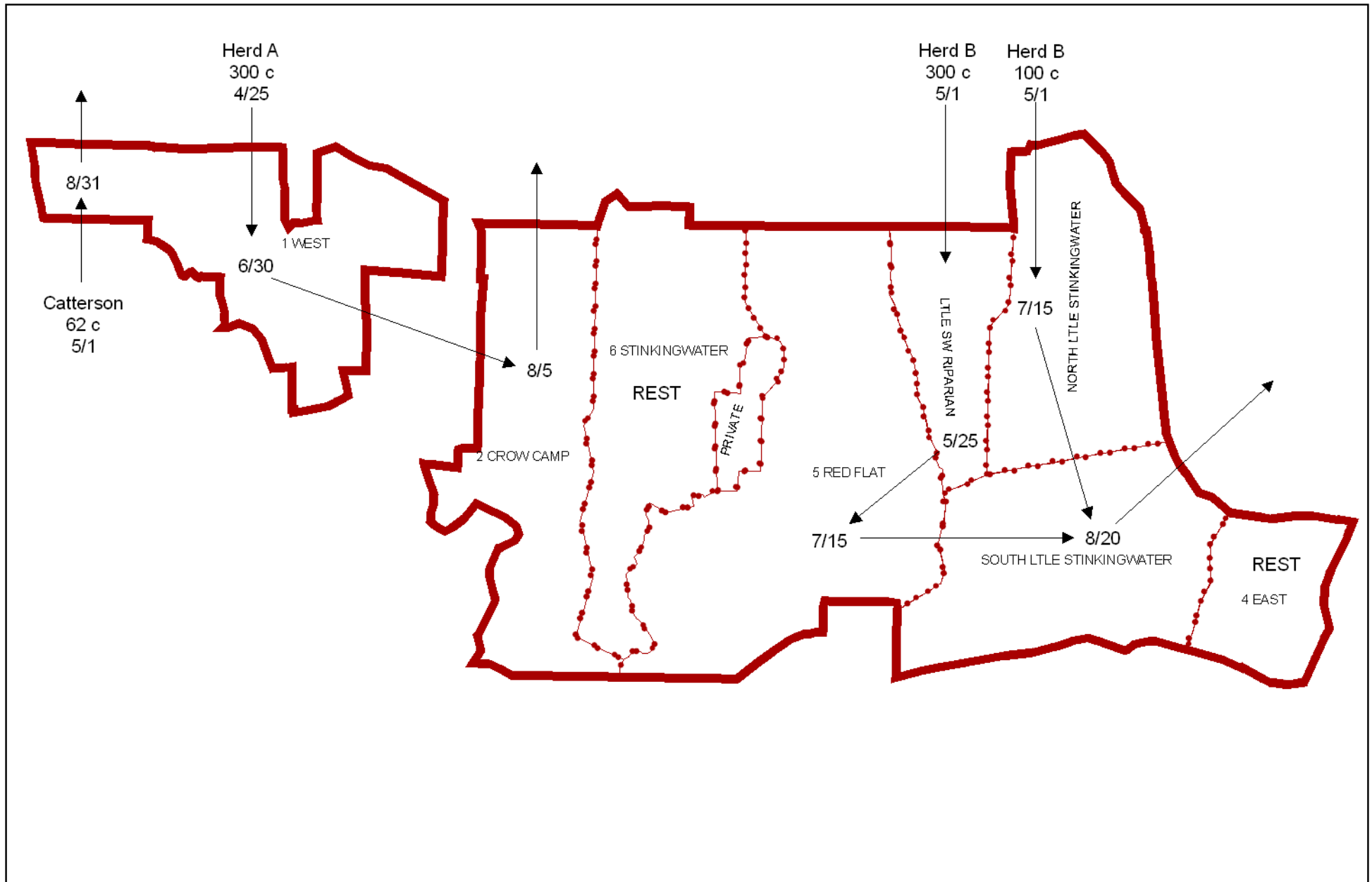
Map F
 Mountain Allotment
 CROSS FENCING ALTERNATIVE GRAZING SCHEMATIC







 Allotment Boundary
 Pasture Boundary

 Even Year
 Odd Year

Map F Mountain Allotment CROSS FENCING ALTERNATIVE GRAZING SCHEMATIC
















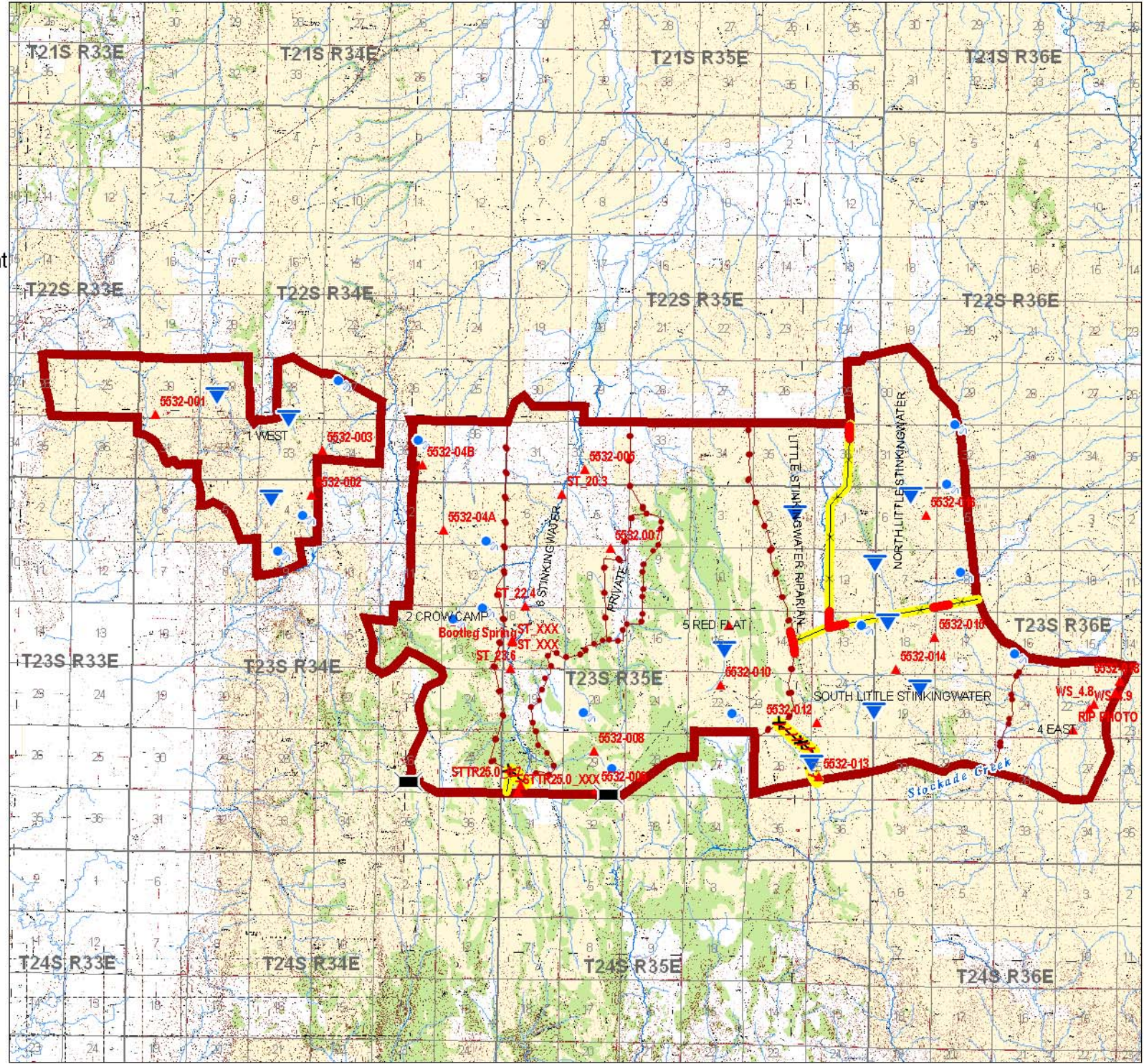
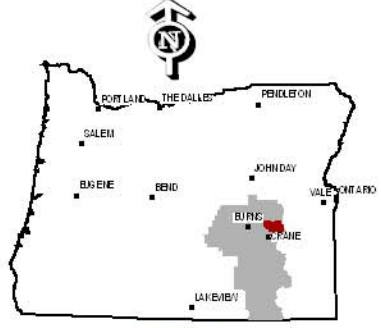
 Allotment Boundary
 Pasture Boundary

 Even Year
 Odd Year

Map G
 Mountain Allotment
 # 5532
 CROSS FENCING
 ALTERNATIVE
 RANGE IMPROVEMENTS

Legend

-  Perennial Streams
-  Intermittent Streams
-  Bureau of Land Management
-  Private
-  Pasture Boundary
-  Allotment Boundary
-  CATTLE GRD
-  RESERVOIR
-  SPRING
-  "Double Gates"
-  Trend Sites
-  FENCE
-  REMOVE



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US DEPARTMENT OF THE INTERIOR
 Bureau of Land Management
 Burns District, Oregon

\\blm\fs\orbu\Loc\GIS\workarea\d3\johnso\Mountain\Map G - Cross Fencing Alternative Range Improvements 10/5/2008

