Environmental Assessment for
South Fork Crooked River Fence Re-route
DOI-BLM-OR-P040-2013-0011-EA

U.S. Department of the Interior
Bureau of Land Management, Prineville District
3050 NE Third Street, Prineville OR 97754

February, 2013

This Environmental Assessment (EA) considers the environmental consequences of a proposed action and alternatives to the proposed action to determine if there would be potentially significant impacts. Potentially significant effects would preclude issuance of a Finding of No Significant Impact (FONSI) and require preparation of an environmental impact statement. "Significance" is defined by the National Environmental Policy Act (NEPA) and is found in regulation 40 CFR 1508.27. If a FONSI can be signed after this EA, it may be followed by a decision record (with public appeal period) and implementation of the project. While the Bureau of Land Management (BLM) has identified a "proposed action" alternative in the EA, the final decision on this project may include parts of several of the alternatives.

The BLM will accept written comments postmarked or received at the BLM office by March 8, 2013. Send or deliver comments via postal service, Email or FAX to H.F. "Chip" Faver, Field Manager, Prineville District BLM, 3050 NE Third Street, Prineville, Oregon, 97754, FAX 541-416-6798. Comments may be emailed to BLM_OR_PR_Mail@blm.gov. Please include "DOI-BLM-OR-P040-2013-0011-EA" in the subject line. Direct questions to the project lead, Anna Smith 541-416-6747.

To be most helpful, comments should be as specific as possible. A substantive comment provides new information about the Proposed Action, an alternative or the analysis; identifies a different way to meet the purpose and need; points out a specific flaw in the analysis; suggests alternate methodologies and the reason(s) why they should be used; makes factual corrections; or identifies a different source of credible research which, if used in the analysis, could result in different effects.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment -- including your personal identifying information -- may be made publicly available at any time. *While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.*

Table of Contents

Chapter 1 Introduction

Proposed Action

This project is located in the Camp Creek Community Allotment which is located 60 miles east of Bend, Oregon; and 8 miles south of Paulina, Oregon (see Map 1 and 2). The Bureau of Land Management (BLM) is proposing to re-route one half mile of the Sulphur Butte pasture fence uphill and away from the South Fork Crooked River. Volunteers would reroute the fence boundary by constructing a half-mile of new fence and subsequently removing the half-mile of unnecessary fence from the neighboring South Fork Canyon pasture.

Background

The 1989 Brothers/LaPine Resource Management Plan initially identified conflict between grazing use and the riparian ecosystem along the South Fork Crooked River Area of Critical Environmental Concern (ACEC):

> "The primary conflicts have been yearlong grazing of the riparian zone by wild horses and grazing by cattle drifting through fences during scheduled rest periods. The cattle grazing is partly caused by the difficulty in maintaining the boundary fences which are often ineffective. Although the riparian ecosystem is improving, progress is slowed."
> - South Fork Crooked River ACEC, Existing Use Conflicts, RMP page 68.

More recently, the Camp Creek Community Allotment permittee expressed concerns about a 65 acre cattle "trap" area created by the existing fence boundary between the northeast corner of the Sulphur Butte pasture and the northwest corner of the South Fork Canyon pasture. According to conversations in 2011 between the BLM and the allotment permittee, livestock in the northeast corner of the Sulphur Butte pasture push downhill, towards the green forage along the South Fork Crooked River. The livestock concentrate in this area and eventually break through the pasture boundary fence. As a result, stray livestock graze the South Fork Crooked River riparian area during seasons when the South Fork Canyon pasture is scheduled for rest from livestock grazing.

Purpose and Need

The proposed realignment of the fence between the South Fork Canyon pasture and the Sulphur Butte pasture is in response to problems of high-frequency fence maintenance, slowed riparian recovery in the ACEC, lack of protection for sections of river eligible for study as Wild and Scenic River (eligible WSR) values of fish and riparian, and pasture cattle "trap". The proposed action implements the following RMP guidelines for the BLM management of the ACEC and eligible WSR:

> "Grazing by domestic livestock will continue with the objective of improving the condition of the riparian ecosystem. This will involve limited early spring use with controlled livestock numbers. Fences will be modified and upgraded as necessary to more adequately control livestock. Future developments will be limited to those necessary to enhance the values of the ACEC."
> - South Fork Crooked River ACEC, Management/Use Guidelines, RMP page 68.

> "Areas found to be eligible for further study as wild and scenic rivers will be managed on an interim basis to protect recreation, visual, riparian, fish, wildlife and other values pending resolution of the suitability and wild and scenic river designation issue. Several of these areas are also designated as areas of critical environmental concern…."
> -Wild and Scenic River, RMP page 122.

The purpose of the proposed action is to keep livestock upslope and away from the South Fork Crooked River riparian area, so that they would not be enticed to break through the pasture boundary fence and graze the South Fork Crooked River riparian area.

Issues for analysis

An issue is a point of disagreement, debate, or dispute with an action based on an anticipated effect. While many issues may be identified during scoping, only some are analyzed in the EA. The BLM analyzes issues in an EA when analysis is necessary to make a reasoned choice between alternatives, or where analysis is necessary to determine the significance of impacts. To warrant detailed analysis, the issue must also be within the scope of the analysis, be amenable to scientific analysis rather than conjecture, and not have already been decided by law, regulation, or previous decision. Significant effects are those that occur in several contexts (e.g., local and regional) and are intense (e.g., have impacts on public health or unique areas). For more information on significance, see pages 70-74 in the BLM NEPA Handbook H-1790-1 (USDI BLM 2008).

Issues considered in detail

The following two issues were raised by the public, neighboring landowners, and by the BLM staff, and were considered in detail in this EA.

Issue #1 - How would the fence alignment affect naturalness in the South Fork Crooked River Wilderness Study Area?

Issue # 2 - How would modifying the fence alignment change livestock grazing, and how would this affect the riparian ecosystem and fish habitat?

Chapter 2 Alternatives

This chapter describes two alternatives, including the no action alternative that would continue existing management and the proposed action alternative. The proposed action would meet the purpose and need described in Chapter 1. Table 1 summarizes the alternatives. While the alternatives are separate for analysis purposes, the BLM's decision on this project may include parts from each alternative.

Table 1 - Summary of Alternatives

Actions	No Action	Proposed Action
Miles of new fence construction	0	0.5
Miles of fence removal	0	0.5

Alternative 1, No Action

Under Alternative 1, the pasture boundary fencing would not change. There are no legal mandates that prevent choosing this alternative.

Alternative 2, Proposed Action

Proposed Action

Under alternative 2, the proposed action is to re-route one half mile of the Sulphur Butte pasture fence uphill and away from the South Fork Crooked River. Volunteers would remove the one half mile of the South Canyon pasture boundary fence running East-West. Then volunteers would reconnect the pasture boundary by rebuilding one half mile of fence running North-South (see Appendix Maps). BLM would schedule the fence removal and construction to ensure that pasture boundaries would be intact during the authorized grazing season. The neighboring Sulphur Butte pasture is not scheduled to be grazed in 2013 and the South Fork Canyon (riparian) pasture is scheduled to be grazed from April 15 to May 15, 2013. Consequently, the fence removal would occur after livestock leave the South Fork Canyon pasture.

The fences on public land would be constructed using barbless bottom and top wires and barbed middle wires. The bottom wire would be 18 inches from the ground, the next wire 4 inches above the first, the third wire 4 inches above the second, and the fourth wire 12 inches above the third. Post spacing would be one rod (16.5 feet). Two, 30 inch long metal twist stays would be installed equal-distance between posts. Metal clips would be used to fasten the wires to the fence posts. Although metal stays are more desirable because of their fire resistance, one wood stay may be used in the

place of the two metal twist stays. Where feasible, existing topographic barriers would be used to decrease costs of construction and maintenance. Stress panels may need to be installed every quarter mile. All corner panels would be either three-post or five-post depending on the amount of stress that would be placed on each corner. Volunteers would install one gate at the southernmost end of the fence in order to replace an existing gate at the southernmost end of the fence proposed for removal. Gate design would match the design of the existing wire gate.

Live juniper trees may be used in place of fence posts and panels when the trees are on the fence line. Less than 10 juniper trees would be limbed to a height of less than six feet. Two, two-by-fours or two-by-sixes, at least 30 inches long, would be nailed to the tree and the wires stapled to the boards. The volunteers would avoid vegetation clearing or trimming of trees and brush and would only clear the minimum area necessary to allow the efficient placement of wires and posts (no greater than four feet on either side of the fence line). The BLM would flag areas approved for vegetation removed prior to fence construction. The BLM would not approve digging or pulling out by the roots. Also, the BLM would not authorize blading with heavy equipment and would use the minimum tool necessary within the Wilderness Study Area (WSA).

Project design features

Project design features are measures designed to protect wilderness study areas (WSA), wildlife, and areas susceptible to noxious weed invasion.

To reduce effects to the scenic values of the WSA, ACEC and eligible WSR, the fence line would be nestled among the denser stands of juniper trees. The juniper would hide the fence from the view of recreationists, except hikers coming within a few hundred feet of the proposed fence line. Fencing would be located off ridgelines, which are somewhat visible from the South Fork Crooked River. To reduce effects to visual resources, the BLM would use fence posts that would blend with the surrounding landscape. The fence would either use new fence posts of solid colors or reuse fence posts from the portion of the fence proposed for removal, which have weathered into dull colors.

To reduce effects to wildlife, fences would be constructed according to “wildlife-friendly” guidelines. Specifically, the fence design would include the use of a barbless top and bottom wire to allow wildlife to pass under the fence and the specified wire spacing would allow for the safest big game passage over and under the fence.

In order to maintain WSA naturalness and reduce effects to wildlife, the fence would be placed along low slope areas behind highly visible ridgelines. Locating fences off ridgelines, but on ground with lower slope improves the ability of large game animals like deer and elk to pass through or over the fencing and minimizes jump height. In addition, the project would be conducted one quarter mile away from golden eagle or prairie flacon nests active during the time of construction. This would buffer the nest sites from construction sounds and activity which may otherwise disturb nesting activities and result in reproductive failure.

To reduce effects to native plant populations, the project layout would avoid disturbance in areas susceptible to noxious weed invasion. The BLM would avoid staging materials in areas with heavy clay soil. The BLM’s and volunteers’ equipment would be clean from weeds prior to accessing the sites during fence removal and construction.

Monitoring

The BLM would continue to monitor this area through existing partnerships with public volunteers, non-profit organizations like the Oregon Natural Desert Association, the permittees, Oregon State University and neighboring landowners. Monitoring includes, but is not limited to annual photo points, vegetation transects and surveys of undercut banks, channel shape and floodplain development.

Alternatives considered but eliminated from detailed analysis

Initially, the BLM considered aligning the fence closer to the rim of the river canyon. Subsequent field surveys revealed that locating the fence-line further to the west camouflaged the fence from the river view. This was included in the proposed action and created an alternative that is more consistent with visual resource objectives along the South Fork

Crooked River Wilderness Study Area. The initial alignment was eliminated from detailed analysis because it is substantially similar in design to the alternative being analyzed.

Conformance

The proposed action conforms to the Brothers/LaPine Resource Management Plan (Record of Decision, July 1989). The proposed action would not require an amendment to the Brothers/LaPine Resource Management Plan (RMP). The following relevant laws, regulations, policies, program guidance, and local permitting requirements are germane to the proposed action.

- Riparian Areas – Management Direction, page 86 - "New water development and fencing is expected to improve livestock distribution, provide better forage utilization and reducing the impact of livestock concentration areas".
- Areas of Critical Environmental Concern – Primary Values, page 67 – "The ACEC contains special values as related to riparian ecosystems, a fishery resource, recreation and scenery. The South Fork of the Crooked River and its scenic canyon is the main feature of the ACEC."
- Livestock Grazing – Management Direction, page 75 - "Grazing management in the Brothers portion will continue so as to maintain or improve ecological status on all grazing allotments… Vegetative condition is managed for the goal of mid-seral (40 percent of vegetative potential) to the lower end of late seral (60 percent of potential)".
- Ongoing Management Programs – Wild and Scenic Rivers, page 122 - "Areas found to be eligible for further study as wild and scenic rivers will be managed on an interim basis to protect recreational, visual, riparian, fish, wildlife and other values pending resolution of the suitability and wild and scenic river designation issue".
- Structural Developments – Fences, page 87 - "Fences are constructed to … protect streams and riparian zones and control livestock".
- Wildlife Habitat – Implementation, page 97 - "New fences will be constructed to allow wildlife passage and existing fences will be modified as appropriate".
- Wildlife Habitat – Management Direction, page 97 - "non-game species habitat management will be accomplished by maintenance or enhancement of vegetative structure and diversity".
- Threatened, Endangered or Sensitive Species Habitat, page 121 – "Management activities in the habitat of listed or candidate threatened or endangered and sensitive species will be designed specifically to benefit those species through habitat improvement."
- Wilderness, page 122 – "The BLM wilderness Interim Management Policy… will be followed."
- Visual Resources, page 126 – "Activities within areas of high or sensitive visual quality…[Wilderness Study Areas] may be permitted if they would not attract attention or leave long term adverse visual changes on the land."

Chapter 3 Affected Environment and Environmental Consequences

Introduction

The affected environment describes the present condition and trend of issue-related elements of the human environment that may be affected by implementing the proposed action or an alternative. It describes past and ongoing actions that contribute to present conditions, and provides a baseline for analyzing cumulative effects.

The effects are the known and predicted effects from implementation of the actions, limited to the identified issues. Direct effects are those caused by the action and occurring at the same time and place. Indirect effects are those caused by the action but occurring later or in a different location. Cumulative effects result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects analysis includes other BLM actions, other Federal actions, and non-Federal (including private) actions. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends.

Current Conditions

This project is located in the Picket Canyon – South Fork Crooked River watershed (Hydrologic Unit Code 17070303). The project area vegetation includes, but is not limited to, western juniper, low sagebrush, bottlebrush squirrel tail and blue bunch wheatgrass. The landscape ranges from flat to slightly rolling hills, ancient lava flows and steep mountainous country. There are buttes in the area with rims and rocky outcrops. The elevation varies from approximately 4,000 to 5,600 feet. Annual precipitation rates average less than 14 inches, with most of the precipitation and stream runoff occurring in the late winter and early spring.

In the late 1980s and early 1990s, the BLM implemented a new grazing system along this reach of the South Fork Crooked River. The BLM designed the new (current) rest rotation livestock grazing system to improve the vigor of the riparian ecosystem along the South Fork Crooked River. Every two years, livestock grazing removes some above ground biomass in the spring (April 16 to May 15). In the summer and fall, a sufficient amount of riparian vegetation regrows to protect stream banks during high-energy winter stream flow. Every third year, the riparian vegetation is rested from livestock grazing and uses the entire growing season to produce above ground biomass. (See Figure 1). The above ground biomass of riparian vegetation measures 'how much' riparian vegetation exists. Riparian vegetation is the primary producer for the other species in this riparian ecosystem. Subsequent consumers of the riparian vegetation extend up the food chain from macro invertebrates (aquatic insects) to fish and wildlife. Therefore, above ground biomass of riparian vegetation indicates the overall vigor of riparian ecosystem.

Figure 1- July 2010 photograph of the South Fork Crooked River with above ground biomass after 15+ years of spring grazing (River Mile 12)

Figure 2 – August 1989 photograph of the South Fork Crooked River lacking above ground biomass after 10+ years of season long grazing (River Mile 12)

Monitoring of the South Fork Crooked River riparian vegetation and professional observations (personal communication with Jeff Moss, BLM fish biologist) indicate an increase in riparian above ground biomass over the last eight or nine years. Stream inventory data from 2010 differentiated the riparian vegetation into stabilizing and colonizing species along the greenline and flood prone area. Unlike stabilizing species, colonizing species lack the above ground structure and below-ground root biomass to stabilize the stream channel during flood events (Tocke, 2009). The root structure of stabilizer species resists the shear stresses created by moving water and thus stabilizes stream banks and maintains undercut banks along stream margins (Knutson and Naef 1997). Stabilizing species observed included Nebraska sedge, horsetail, three square bull rush, and soft stem bull rush. Colonizing plants observed included forbs, brook grass, rose, cattail, wooly sedge, red top, basin wild rye, and iris. Shallow rooted meadow grasses still occupy a broad portion of the flood prone area where deep-rooted meadow species would naturally occur. However, stabilizing species are increasing along the greenline of this reach.

Issues considered

*Issue # 1 - How would the fence alignment affect the characteristic of **naturalness** found in the South Fork Crooked River Wilderness Study Area?*

The Pickett Canyon and the canyon of the South Fork Crooked River are the South Fork Crooked River WSA's primary features. The South Fork Crooked River canyon contains outstanding scenery due to the canyon depth, jagged outcroppings of basalt and a variety of colors including lush green vegetation along the canyon bottom. Most of the WSA appears to be in a natural condition, primarily affected by the forces of nature. This WSA contains 21 unnatural features, including fences, reservoirs, crested wheatgrass seedings, dead-end roads and several miles of ways. A 'way' in a WSA is a route maintained solely by the passage of vehicles, or which has not been improved and/or maintained by mechanical means to ensure relatively regular and continuous use. Within one half mile of the proposed action, the WSA's unnatural features include fences and one dead end road. The proposed action maintains the naturalness of the WSA because there would be no net increase in fencing within the WSA. As a result, there is no measurable difference in the alternatives' effect on the naturalness of the South Fork Crooked River WSA.

There are no current or anticipated future actions expected to have an effect on naturalness of the WSA.

*Issue # 2 - How would modifying the fence alignment change **livestock grazing**, and how would this affect the **riparian ecosystem and fish habitat?***

During 2010-2011 field inventories, the BLM fisheries biologist documented the presence of redband trout (*Oncorhynchus mykiss)* throughout the watershed. Redband trout are a Sensitive Species and enhance the fisheries value of the South Fork Crooked eligible WSR. In order for redband trout to flourish, the South Fork Crooked River must provide fish with:

- cool water temperatures
- hiding cover and
- deep pools

The South Fork Crooked River water temperatures follow the seasonal fluctuations of the high desert's extremely cold winters and hot summers. The Oregon Department of Fish and Wildlife (ODFW) stream surveys found that streamside riparian vegetation and natural topography provide 26 percent of the shade from solar heating. As stabilizing species extend along the greenline (see Figure 1), the South Fork Crooked River stream channel is slowly narrowing, increasing its sinuosity, and developing pools (10 pools per mile). Eventually these changes would increase the extent of hyporheic flow. Hyporheic flow is water flowing beneath and adjacent to the stream channel, where it cools. The water reenters the stream channel and cools the stream water below meanders, point bars, or at the bottom of scour pools. Although fish habitat and water temperatures along the South Fork Crooked River are clearly improving, the riparian vegetation does not yet provide high water quality or fish habitat.

In most Eastern Oregon streams, shade from streamside willows keeps water temperatures cool and large woody debris (LWD) from conifers provide approximately 70 percent of structural fish habitat diversity (pool and undercut banks) (Knutson and Naef 1997). However, this low gradient (0.4 percent) stretch of the South Fork Crooked River does not have the capability to support more than scattered patches of willows or riparian trees. In addition, this watershed does not receive enough precipitation to grow conifers, like ponderosa pine, which typically contribute in-channel LWD. Instead, dense mats of sedges facilitate hyporheic flow and create undercut banks. These features would naturally provide fish habitat components of cool water, hiding cover and pools.

Undercut banks are formed by water eroding the soil and rocks away from a well-vegetated stream wall, leaving behind a wall and roof composed of dense riparian root systems. The formation of stable undercut banks requires densely vegetated stream banks of deep-rooted species capable of withstanding high stream flow events. Undercut banks provide fish with cover to hide from predators, shelter during cold winter months when streams ice over, and cool refuge during hot summer months when other portions of the stream exhibit high water temperatures (USDA, 2005).

Livestock trampling of stream edges can eventually collapse undercut banks. Season-long livestock grazing can remove so much of the above ground biomass that the riparian vegetation produces less below ground biomass of root structure, the primary structure of undercut banks. In addition to reducing undercut banks, streambanks become unstable if season long livestock grazing eliminates stabilizing species of riparian vegetation from the greenline.

Under the no action alternative, livestock may continue to stray through the fence and graze the riparian vegetation during the summer and fall every year and remove riparian above ground biomass (See Figure 2) along approximately 6 of the 10 miles of the South Fork Crooked eligible WSR. Under the action alternative, stray livestock would be unlikely to graze any length of riparian vegetation during the summer or fall of any year. Therefore, the action alternative would result in the most aboveground biomass for the riparian ecosystem along the South Fork Crooked River.

Research and field monitoring have shown that both no grazing and spring grazing allow recovery of strongly-rooted streamside vegetation in areas where strongly rooted stream side vegetation has been removed by intense, season-long grazing (Clary, 1999). The expansion of this vegetation eventually restores undercut banks. The potential amount of undercut banks expected on the South Fork Crooked River may be estimated from a downstream reference reach with similar channel gradient, geology and climate – The Crooked River. The reference reach on the Crooked River has not been grazed for 30 years and ODFW stream surveys identified 25 to 50 percent of the sides of habitat units (pools or riffles) now exhibited undercut banks.

The no action alternative is likely to continue the existing condition which has resulted in an average 5 percent of the sides of habitat unit (pools or riffles) exhibiting undercut banks (according to ODFW stream surveys on the South Fork Crooked River). In contrast, the action alternative is likely to minimize livestock trampling of undercut banks during the summer growing season. Recovery of strongly rooted riparian vegetation along the South Fork Crooked River is likely to follow the recovery rate and extent observed along the Crooked River. The action alternative would result in South Fork Crooked River restored to 25 to 50 percent undercut banks within the next 30 years.

There are no other current or anticipated future actions likely to have a cumulative effect on riparian ecosystems or fish habitat within this 10 mile reach of river.

Table 2 - Summary of effects.

Issue	Indicator	No Action	Proposed Action
Issue # 1 - WSA naturalness	Miles of Sulphur Butte pasture fence in WSA	No net change difference between alternatives	
Issue # 2 ACEC and eligible WSR special value of riparian ecosystem	Miles of river riparian area with anticipated stray livestock grazing in South Canyon Pasture	(6 out of 10 miles of public land within the South Fork Crooked eligible WSR).	(0 out of 10 miles of public land within the South Fork Crooked eligible WSR).
Issue #2 ACEC and eligible WSR special value of fish	Average percent of the sides of habitat unit (pools or riffles) with undercut banks	Continue existing 3 percent	Increase to reference reach levels of 25-50 percent

Issues considered but eliminated from detailed analysis

Internal review, discussions with neighboring landowners and phone calls with the allotment permittee identified a number of other issues, not all of them warranted detailed analysis to make a reasoned choice between alternatives or to determine the significance of impacts.

What would be the effect of grazing 65 acres as part of the Sulphur Butte pasture instead of the South Fork pasture on ***upland vegetation****?*

Under all alternatives, the BLM would authorize livestock grazing of the upland shrubs, grasses and forbs under a rest-rotation system. This rest rotation grazing system rests the vegetation from livestock grazing every third year. This grazing system allows the vegetation to complete critical growth cycles, promotes plant vigor, enables plant reproduction and improves forage productivity. Since there is no difference between alternatives, there would be no difference in effects on upland vegetation under any of the alternatives.

Units	Allocation
Allotment AUMs for livestock	915
AUMs for wild horses	300
Season of Use for Livestock	April 16 to September 15

*How would the fence alignment, construction and removal affect cross-country movement of **wildlife** and the values of the South Fork Crooked eligible WSR?*

The existing and proposed fences are both within the crucial deer winter range areas identified in the RMP (RMP page 95). The proposed fence alignment would not measurably affect cross-country movement of wildlife any differently than the existing fence alignment. First, there is no net change to the miles of fence in the crucial deer winter range. Second, the project would use BLM fence specifications. These fence designs minimize effects of fencing on wildlife by using specific spacing, smooth wires, and heights that maximize the ability of deer, elk and pronghorn to pass over or through the fence. None of the proposed actions would have a measurable effect on wildlife.

June 2011 field surveys did not identify any special status species in the area. However, the proposed fence realignment occurs within one half mile of a historic nesting site of prairie falcons (1986 sighting) and within two miles of a historic nesting site of golden eagles (1990 sighting). Within the last three years, sightings during the nesting season indicate that nests occur along this ten mile stretch of the South Fork Crooked River. Fence construction and removal would not occur during the nesting season (January through August) when a nest within one quarter mile is occupied. BLM would ensure that sounds and activity associated with fence construction and removal do not disturb nesting activity or result in reproductive failure (USFWS, 2002). The golden eagle is protected by the "Bald and Golden Eagle Protection Act of 1940, as amended" and the "Migratory Bird Treaty Act of 1918, as amended" (MTBA). The prairie falcon is protected only by the MTBA.

*What would be the effect of fence construction and removal on the Liggett Table **Wild Horse** Herd?*

The Liggett Table Wild Horse Herd Management Area (HMA) covers 25,000 acres between Camp Creek and the South Fork of the Crooked River. The RMP excluded the South Fork Canyon Pasture from the HMA and allocated 300 AUMs to the Liggett Table Wild Horse Herd. Given the allocation rate of 83 acres per AUM, the 65-acre project area could provide less than 1 AUM of forage and would not measurably affect wild horse access to forage. The portion of the landscape potentially fenced into a riparian pasture consists of steep, rock slopes and does not contain any important water sources for the wild horse herd. Water sources heavily influence the areas used by the wild horses and the BLM has no documentation of wild horses using this upland area for forage or water. Even if wild horses were to use this area, the fence design mitigation for wildlife passage (such as smooth top and bottom wires) would also protect the wild horses. Therefore, there would be no measurable effect on the Liggett Table Wild Horse herd.

*What would be the effect of the fence construction and removal ground disturbance on **cultural resources**?*

In accordance with Section 106 of NHPA (1966, as amended), BLM intensively surveyed the area of potential affect for archaeological properties. No properties were found as a result. The BLM has no knowledge of Native American religious sites or traditional use areas occurring in the project area. The possibility that the proposed action would have an effect on Historic Properties is very low.

*How would the fence alignment, construction and removal affect **scenery** (special value of South Fork Crooked River ACEC and the values of the eligible South Fork Crooked eligible WSR)?*

Most recreationists enjoy the scenic canyon of the South Fork Crooked River ACEC and eligible WSR by walking along the riverbanks. The proposed fence alignment would not be visible from the South Fork Crooked River ACEC and eligible WSR (see Figure 3). This new fence alignment and the use of solid, natural color fence posts dispel any potential effects of the fence alignment, construction and removal on the scenery of the South Fork Crooked River ACEC and eligible WSR. (See Figure 3)

*How would the fence alignment affect the outstanding opportunity for solitude and primitive and **unconfined recreation** found in the South Fork Crooked River Wilderness Study Area?*

The four-strand wire fence and gate, proposed in this action, does not confine the movement of recreationists. Project design features, such as the use of a minimum tool and provision preventing the use of heavy equipment, would minimize sight and sounds of fence construction and removal. As a result, this fence project would not result in any measurable effect to the opportunity for solitude and primitive and unconfined recreation available in the South Fork Crooked River Wilderness Study Area.

Chapter 4 Public and other involvement

The BLM is requesting input by publishing this EA to its public website, advertising the availability of the EA in the Central Oregonian newspaper, and sending notification letters to those who have expressed an interest.

BLM Preparers and reviewers

Elise Brown – Field clearances, Special Status Plants and Noxious Weeds
Rick Demmer – Wildlife, Special Status Plants and Noxious Weeds
Jeff Moss – Fisheries
Berry Phelps – Recreation, Wild & Scenic Rivers, Wilderness Study Area
Teal Purrington – Environmental coordination
Anna Smith – Riparian, Areas of Critical Environmental Concern and Project Lead
Cari Taylor – Livestock grazing and Wild Horses
John Zancanella – Cultural resources

References

Clary, W.P. 1999. *Stream Channel and Vegetation Responses to Late Spring Cattle Grazing*. Journal of Range Management, Vol. 52, No. 3 (May, 1999), pp. 218-227.

Knutson, K. L., and V. L. Naef. 1997. Management recommendations for Washington's priority habitats: riparian. Olympia, Washington: Washington Department of Fish and Wildlife. 181 pp.

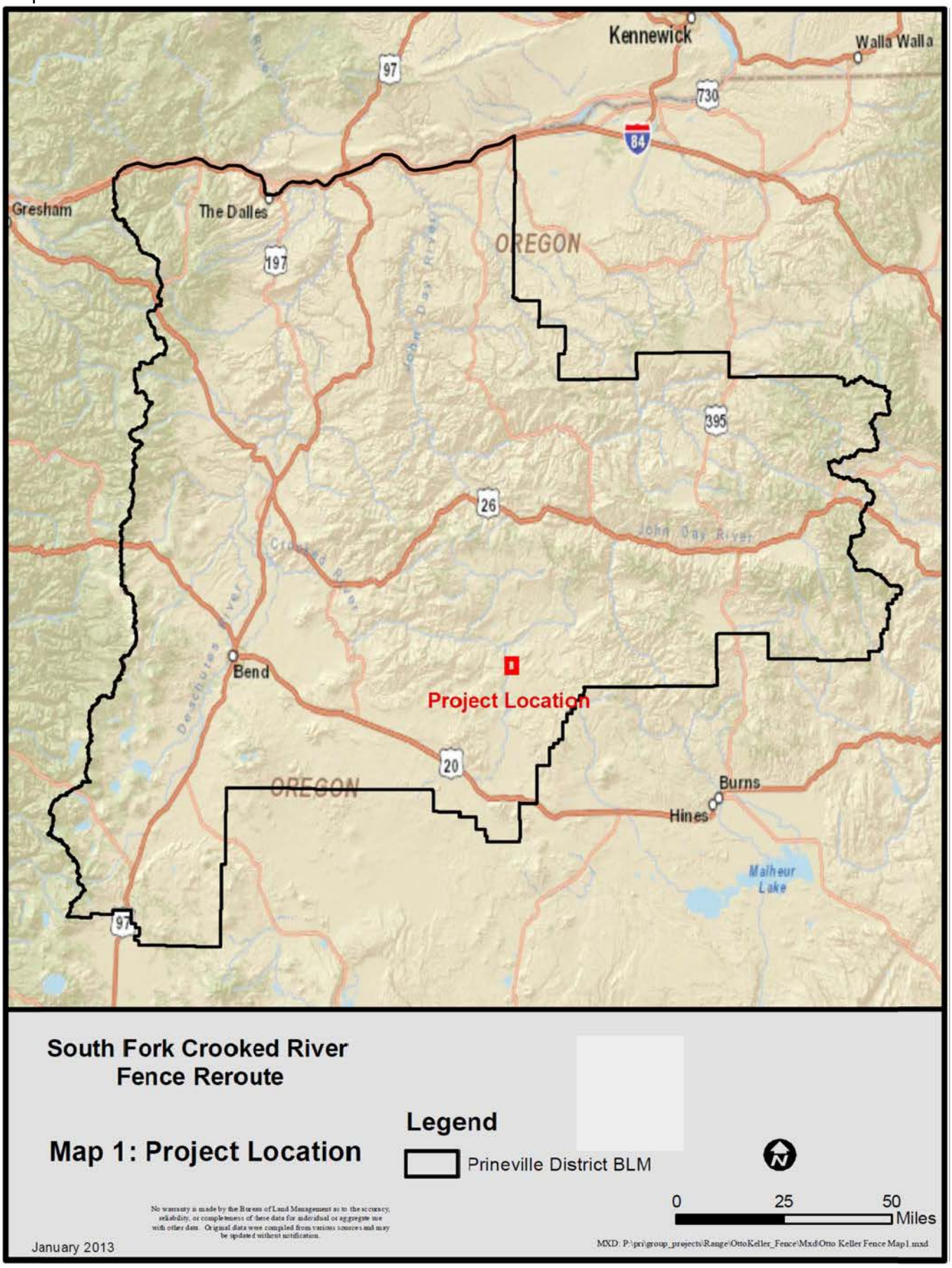
USFWS. 2002. *Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances.* http://fs.ogm.utah.gov/pub/MINES/Coal_Related/MiscPublications/USFWS_Raptor_Guide/RAPTORGUIDE.PDF. Accessed January 15, 2013.

USDA Natural Resources Conservation Service. 2000. *May 2000 Fish and Wildlife Habitat Management Leaflet Number 13*. http://www.wildlifehc.org/new/wp-content/uploads/2010/10/Rainbow-Trout.pdf. Accessed December 18, 2012.

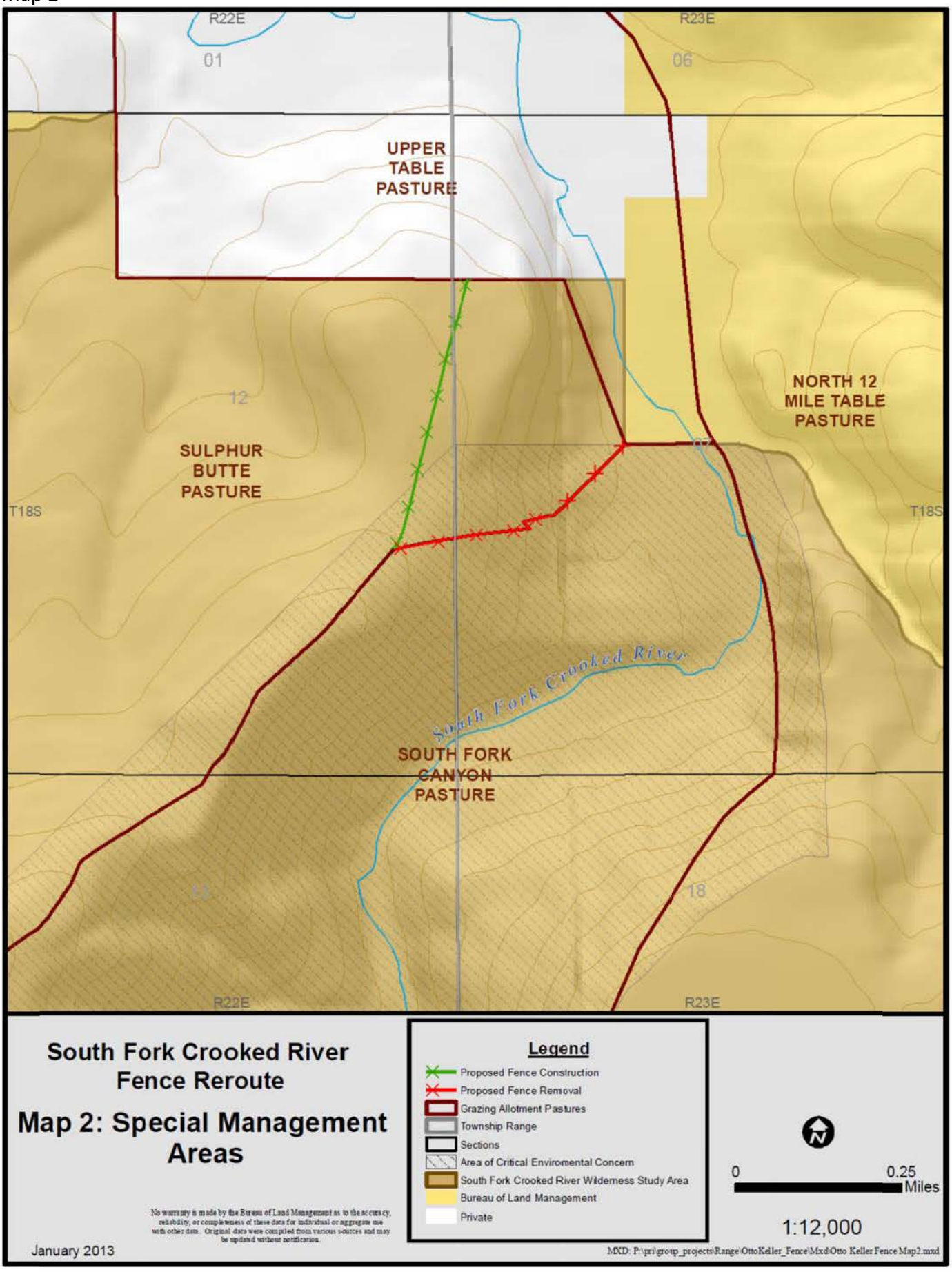
Tocke, Rose. 2009. *A Baseline Survey to Monitor Stream Vegetation in Grazed and un-grazed areas along the South Fork of the Crooked River*, Bio 401 Summer 2009, on file at the Prineville District BLM.

Appendix – Maps

Map 1



Map 2


R22E
R23E
01
06
UPPER TABLE PASTURE
NORTH 12 MILE TABLE PASTURE
12
SULPHUR BUTTE PASTURE
T18S
T18S
South Fork Crooked River
SOUTH FORK CANYON PASTURE
13
18
R22E
R23E
South Fork Crooked River Fence Reroute
Map 2: Special Management Areas
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.
January 2013
Legend
Proposed Fence Construction
Proposed Fence Removal
Grazing Allotment Pastures
Township Range
Sections
Area of Critical Enviromental Concern
South Fork Crooked River Wilderness Study Area
Bureau of Land Management
Private
0
0.25
Miles
1:12,000
MXD: P:\pri\group_projects\Range\OttoKeller_Fence\Mxd\Otto Keller Fence Map2.mxd

Finding of No Significant Impact

South Fork Crooked River Fence Re-route
DOI-BLM-OR-P040-2013-0011-EA
US Department of the Interior, Bureau of Land Management
Prineville Field Office, Oregon

Introduction

The Bureau of Land Management (BLM) has completed an Environmental Assessment (EA), No. DOI-BLM-OR-P040-2013-0011-EA that analyzes the effects of a proposed fence realignment on naturalness of the South Fork Crooked River Wilderness Study Area (WSA) and the riparian ecosystem and fish habitat of the South Fork Crooked River, which is eligible for further study as a Wild and Scenic River (eligible WSR). The project would entail construction of one half mile of new four-strand wire fence and removal of one half mile of existing wire fence. The EA is incorporated by reference in this Finding of No Significant Impact (FONSI).

The proposed realignment of the fence between the South Fork Canyon pasture and the Sulphur Butte pasture is in response to problems of high-frequency fence maintenance, slowed riparian recovery, lack of protection for eligible WSR values of fish and riparian and stray livestock. The purpose of the proposed action is to keep livestock upslope and away from the South Fork Crooked River riparian area, so that they would not be enticed to break through the pasture boundary fence and graze the South Fork Crooked River riparian area.

The Council on Environmental Quality (CEQ) regulations state that the significance of impacts must be determined in terms of both context and intensity (40 CFR 1508.27).

Context

The project is a site-specific action directly involving approximately 10 miles of stream and approximately 65 acres of public land administered by the BLM. The action by itself does not have international, national, regional, or state-wide importance.

Intensity

I have considered the potential intensity and severity of the impacts anticipated from implementation of a Decision on this EA relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

1. **Would any of the alternatives have significant beneficial or adverse impacts (40 CFR 1508.27(b)(I)? No.**

   Rationale: The proposed action would impact resources as described in the EA. Project design features were incorporated into the proposed action to reduce impacts to the ground. None of the environmental effects discussed in detail in the EA are considered

significant, nor do the effects exceed those described in the 1988 Brothers/LaPine Final Environmental Impact Statement and Resource Management Plan.

2. **Would any of the alternatives have significant adverse impacts on public health and safety (40 CFR 1508.27(b)(2)? No.**

   Rationale: The proposed action is designed to control livestock grazing along approximately 10 miles of the South Fork Crooked River. There are no predicted effects to public health or safety.

3. **Would any of the alternatives have significant adverse impacts on unique geographic characteristics (cultural or historic resources, park lands, prime and unique farmlands, wetlands, wild and scenic rivers, designated wilderness or wilderness study areas, or ecologically critical areas (ACECs, RNAs, significant caves)) (40 CFR 1508.27(b)(3)? No.**

   Rationale: The area was reviewed by an archeologist and no cultural or historic properties were found. There are no predicted effects to park lands, WSAs or prime farm lands. Chapter 3 of the EA analyzes the slight effects to eligible WSR, wetlands and ecologically critical areas, such as the South Fork Crooked River Area of Critical Environmental Concern.

4. **Would any of the alternatives have highly controversial effects (40 CFR 1508.27(b)(4)? No.**

   Rationale: The EA did not identify any effects which are expected to be highly controversial. Scoping with neighboring land owners, permittees and interested publics did not reveal any controversial concerns or potential effects.

5. **Would any of the alternatives have highly uncertain effects or involve unique or unknown risks (40 CFR 1508.27(b)(5)? No.**

   Rationale: The project is not unique or unusual. The BLM has implemented similar actions in similar areas. The environmental effects to the human environment are fully analyzed in the EA. There are no predicted effects on the human environment that are considered to be highly uncertain or involve unique or unknown risks.

6. **Would any of the alternatives establish a precedent for future actions with significant impacts (40 CFR 1508.27(b)(6)? No.**

   Rationale: An analysis of the effects of the proposed action is described in the EA. The proposed action follows BLM's standard operating procedures and design criteria for fence construction. No significant cumulative effects were predicted and the action alternative did not establish a precedent for future actions.

7. **Are any of the alternatives related to other actions with potentially significant cumulative impacts (40 CFR 1508.27(b)(7)? No.**

   Rationale: The BLM interdisciplinary team evaluated the possible actions in context of past, present and reasonably foreseeable actions. No other actions would combine with those of the proposed action to create a significant cumulative effect. A complete disclosure of the effects of the project is contained in the EA.

8. **Would any of the alternatives have significant adverse impacts on scientific, cultural, or historic resources, including those listed or eligible for listing on the National Register of Historic Resources (40 CFR 1508.27(b)(8)? No.**

   Rationale: The project would not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor would it cause loss or destruction of significant scientific, cultural, or historical resources.

9. **Would any of the alternatives have significant adverse impacts on threatened or endangered species or their critical habitat (40 CFR l508.27(b)(9))? No.**

   Rationale: No threatened or endangered plants or animals were observed or are expected to occur in the area.

10. **Would any of the alternatives have effects that threaten to violate Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR l508.27(b)(lO))? No.**

    Rationale: The measures described above ensure that the South Fork Crooked River Fence Re-route would be consistent with all applicable Federal, State, and local laws.

Finding

On the basis of the information contained in the EA, the consideration of intensity factors described above, and all other information available to me, it is my determination that: (1) implementation of the alternatives would not have significant environmental impacts beyond those already addressed in the Brothers/LaPine Resource Management Plan EIS; (2) the alternatives are in conformance with the Brothers/LaPine Resource Management Plan; and (3) neither alternative would constitute a major federal action having a significant effect on the human environment. Therefore, an EIS or a supplement to the existing EIS is not necessary and will not be prepared.

_____ _____

H.F. “Chip” Faver Date
Field Manager, Central Oregon Resource Area