

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Turner Enterprises Incorporated Fence Line Replacement Application
Proposed Implementation Date:	Spring 2009
Proponent:	Turner Enterprises Inc. Snowcrest Ranch, Dave Dixon - Manager
Location:	T9S R5W Sections 15 & 22
County:	Madison
I. TYPE AND PURPOSE OF ACTION	

The Montana Department of Natural Resources and Conservation received a request from Turner Enterprises, Inc. (TEI) to replace approximately 2.5 miles of 4 strand barbed wire fence with a 5 wire high tensile electric fence lines. The purpose of the replacement is to increase the effectiveness of the boundary between TEI bison and Ruby – Dell Ranch cattle on adjacent State Trust Land leases and BLM permits.

The State Trust Lands that would be affected by this proposal include Sections 15 & 22 leased by TEI, and Sections 16 and 21 leased by Ruby – Dell, all located in T9S R5W. The replacement fence is designed to reduce trespass by TEI Bison onto the adjacent cattle operation.

The proposed fence construction includes 1½ inch fiberglass posts at a spacing of approximately 50' between posts. The wire spacing would be approximately:

- Top wire: 48"
- Fourth wire: 39"
- Third wire: 30"
- Second wire: 24"
- Bottom wire: 18"

The bottom wire, third wire, and top wire would be capable of being electrified but would only be charged when bison or livestock are present in or adjoining to the pastures the fence would be located between. Four gates would be installed along the 2 miles of North – South running fence, one approximately every half mile. The gates would be 16 foot tubular steel swinging style with chain latches. The gates can be opened when livestock and/or bison are not present.

The lessee, TEI, is responsible to contain TEI bison, while excluding adjacent cattle from trespassing onto TEI controlled lands.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:
Provide a brief chronology of the scoping and ongoing involvement for this project.

Montana Fish, Wildlife, & Parks
Patrick Rennie, DNRC Archaeologist

A scoping letter was sent out March 31, 2009 with a deadline for written comments of April 16, 2009.

Comments were received from Robert Brannon, DFWP Biologist. His comments are located in the "Impacts to Wildlife" section.

Patrick Rennie was emailed for comments in regard to archaeology. His comments are summarized in the "Archaeology" section.

Faxed comments were also received by Tony Schoonen.

Jack Atcheson called on May 5, 2009 to ask if comments would still be accepted as he was out of town and did not receive the request for comments until he returned. The comment period was extended until May 8, 2009.

Jack's comments were received on May 7th.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

3. ALTERNATIVES CONSIDERED:

Alternative A) No action

Alternative B) 2) Allow replacement of an existing 4 strand barbed wire fence with a five wire electric fence as proposed by TEI.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The proposed project is a reconstruction of an existing ranch boundary fence requiring fewer posts. Soil disturbance by the project will be minimal.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

No surface water resources are present within the proposed project area.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

The proposed project would not affect air quality.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The vegetative community on site is common to the area and the state and is composed of native species. Current vegetation on the site includes bluebunch wheatgrass, needle-and-thread grass, Western wheatgrass, fringed sagewort, Idaho fescue, Junegrass, Sandberg bluegrass, and patches of big sagebrush. The proposed project would replace the existing fence with a new fence running along the same line. No cumulative impacts to vegetation are expected as a result of this project.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

The project area is year round habitat for a variety of big game species including elk, mule deer, whitetail deer, black bear, antelope, and mountain lions. Avian species include sage grouse, various raptor species, and

songbirds. Robert Brannon, DFWP Wildlife Biologist, was solicited for comment. His comment letter regarding the proposal is copied below:

“Katie Benzel asked that I send you a letter regarding FWP’s opinions and concerns about Snowcrest Ranch’s proposed electric bison fence in the Dry Hollow area. Recently, with Dave Dixon, we looked at a fence with the same design they are proposing, as well as the location for the new fence.

That area is year around range for pronghorn and winter range for elk, receives occasional use by mule and whitetail deer, and is also used by many raptor species. Accommodating movement and flight by these species would be an important consideration in the fence design. As I recall, the fence would be 5 wire with the top, middle and bottom being hot. The top would be 48", the bottom would be 18" and there would be a 50' span between posts.

The 18" bottom wire falls within our and your agency’s guidelines of a 16-18" high bottom wire, though it would be hot. The top wire is 6" above those guidelines of 42". The hot bottom wire and the higher top wire both could pose some problem for wildlife movements. However, the proposed design is a vast improvement over the much higher fence with shorter spans between posts that the Snowcrest has used elsewhere. The wider span between posts should provide more flexibility in the wires, and this combined with the lower top wire and higher bottom wire should better allow wildlife crossing than the previous design. Also, the smooth wire used in the fence construction would be more negotiable by crossing wildlife and stray flight raptors as they would be less likely to become entangled than if barb wire were used.

I visited with Dave the other day about the possibility of using barbed wire on the bottom, at the same height of 18", to prevent potential problems with pronghorn crossing under a hot wire. I also suggested the idea of constructing the fence to accommodate the 48" top wire if needed but starting at 42" to see if that would be effective first. I would recommend these as possible alternatives, though Dave did seem reluctant to adopt these suggestions. We do though, understand the legal requirements of the Snowcrest ranch to contain bison and to exclude other livestock.

I hope this provides you with the information you were looking for.”

Respectfully,

/s/Robert D. Brannon

Robert D. Brannon

Wildlife Biologist

In regard to other comments received there is concern the proposed fence project would restrict wildlife movement between the TEI state leases and adjacent lands. See #24. **OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES** for further discussion on this topic.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

The Montana Natural Heritage Program was contacted regarding species of concern within and around the project area. Four Species of concern were identified in the report and are listed below.

1) Grey wolf (*Canus lupus*) – All of Southwest Montana is listed as grey wolf habitat. The Southwest Montana wolf population has been deemed as an experimental population and has been proposed for delisting from the endangered species act. The proposed project involves the replacement of an existing barbed wire

fence with high tensile electric wire. The bottom wire height of 18 inches would be sufficient to allow wolves to cross under the wire. The project would not have cumulative effects grey wolf habitat or distribution.

2) Greater Sage-grouse (Centrocercus urophasianus) – Greater sage-grouse use has been recorded in the area of the proposed project. The site is comprised mainly of native grasses including needle-and-thread grass, bluebunch wheatgrass, sandberg bluegrass, Junegrass, Idaho fescue, and scattered patches of big sagebrush. The proposed project involves the replacement of an existing barbed wire fence with high tensile electric wire. No cumulative impacts to sage grouse are expected as a result of this project.

3) Brewer's Sparrow (Spizella breweri) – Brewer's sparrow is a BLM sensitive species. Per Montana Natural Resource Information Service (NRIS), the species prefers nesting in sagebrush averaging 16 inches in height. The proposed project would not significantly alter the current vegetative community and proper management of bison grazing of the affected pastures should not alter the vegetation on-site or lead to negative cumulative effects on Brewer's sparrow populations of the area.

4) Black-tailed Jack Rabbit (Lepus californicus) – The black-tailed jack rabbit is a Montana State listed sensitive species. The proposed project involves replacement of an existing fence line with high tensile electric line with a bottom wire height of 18 inches. The project would not impact habitat for black-tailed jack rabbits.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

No cultural resource concerns as per Patrick Rennie, DNRC Archaeologist

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The project is located near the Robb-Ledford and Blacktail Wildlife Management Areas. The area is used extensively by recreationists with primary use occurring in the Fall during the big game hunting season. The project involves removal of an existing 4 strand barbed wire fence with posts at an approximate spacing of 20 feet between posts and construction of a 5 strand electric fence with posts at 50 foot intervals with gates at approximately 50 foot intervals. Aesthetics in the area should not be impacted by the proposed project.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

The proposed project would not require limited resources. The project is not expected to lead to cumulative effects on environmental resources.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

The Dillon Field Office of the Bureau of Land Management is currently conducting an environmental analysis on a similar request from TEI to continue the electric fence line on BLM lands North of the affected Trust Land.

IV. IMPACTS ON THE HUMAN POPULATION

- RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.
- Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.
- Enter "NONE" if no impacts are identified or the resource is not present.

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The health and safety risks associated with the project are related to recreational use and the installation of an electric fence as a replacement to the existing barbed wire fence. The issue of liability and potential for injury to sportsman from the fence has been raised. However, electric fence is commonly used throughout the state in a variety of locations and there is no record of liability or significant injury resulting from electric fence use in the state.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

The area has been historically grazed by bison and cattle. Use of the tract will remain as grazing land. No increase or decrease in agricultural production would occur as a result of this project.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

The proposed project would not have a noticeable effect on long term employment. The project would provide temporary employment to the fence contractor and employees.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

The project is not expected to have an impact on taxes and revenue.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

No changes would be required for government services.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The proposed project would not interfere with any known government plans or zoning laws. The Dillon BLM office is currently working on a similar environmental assessment of the TEI electric fence being proposed to replace the barbed wire fence on BLM land to the North of the affected Trust Land tracts.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

This project would not alter recreational opportunities on the tract. The area is used extensively for public recreation. The bottom wire will be 18" off the ground providing clearance for people to go under the fence as well as gates at approximately half mile intervals to cross through for hikers and horseback riders. The issue has been raised that the proposed fencing project will restrict wildlife movement between pastures and thereby affect recreational opportunities of the general public in this area. See further discussion on this topic below in Section #24. **OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES.**

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

The proposed project would not require additional housing.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

The proposed project is located approximately 1 mile from the Northern boundary of the Robb-Ledford Game Range. The area is sparsely populated but serves as a primary destination for many recreationists living in the surrounding area. The replacement of the existing barbed wire fence with smooth electric wire along the same line would not significantly change or disrupt the traditional uses of the area.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

The project is not expected to alter any unique quality of the area

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

There would not be a dollar value return to the Common Schools Trust if Alternative B is selected. The older 4 strand barbed wire fence with a 16” bottom wire would be removed and a new 5 wire electric fence with an 18” bottom wire would be constructed on the same line. The lessee would benefit with improved containment of bison by the new fence.

During the process of evaluating the fencing proposal and distributing scoping notices for comment, three primary issues of concern surfaced regarding the proposed fencing project.

- 1) There is concern the proposed fence would present a barrier to wildlife and unnecessary hindrance from the state grazing lease to adjacent lands.
- 2) Concern was expressed by the proponent that the fence, if constructed, be effective in the containment of bison and to restrict other livestock from the bison pasture.
- 3) An opinion was expressed that only fence legally defined under state laws be authorized for use.

Background:

The project area and surrounding state, private and federal land provides year round habitat for a wide variety of wildlife and important winter range for deer and elk. The adjacent Robb-Ledford Wildlife Management Area (RLWMA) was purchased by the Montana Department of Fish Wildlife and Parks primarily for its value as elk winter range. Winter surveys conducted by DFWP have indicated more than 2500 elk congregate on the RLWMA and adjacent Blacktail Game Range during the winter months. Elk that winter in the area typically migrate seasonally, becoming more concentrated on the RLWMA in the winter and disperse over a large area to higher elevations primarily to the east and south over the spring and summer months.

The state and private land in the area has been grazed by livestock for many years and the portions owned or leased by TEI have been grazed by bison since 1994. There are existing fence lines used to contain livestock throughout the area. The existing fence lines are typically 4 strand barbed wire fences constructed to a height of 42 to 48 inches or a combination of barbed wire with a woven wire base. The existing 42” barbed wire fence along the proposed route has been found to be insufficient in keeping bison contained on the proponents State leased ground.

Potential Effects of Proposed Improvements

No Action (deny improvement request): If the request to construct the fencing project is denied, the lessee will be unable to contain bison on the state lease ground.

5-wire, 48" fence design: The 5-wire fence would be constructed with 1½ inch fiberglass line posts spaced approximately 50 feet apart with a bottom wire height of 18 inches and a top wire height of approximately 48 inches. The fence would have the capability of being electrified when bison or cattle are present in the adjoining pastures.

Installation of the 5-wire fence would not impede migration between the fenced pastures and the RLWMA for those species that prefer to cross under the fence such as antelope and young calves and some deer. The bottom wire height of 18 inches conforms to most biologist recommendations for minimum bottom wire height. The total fence height of 48" is higher than most barbed and woven fence designs and would be more of a hindrance than a typical barbed or woven fence for those species that would normally jump over a fence such as elk. Elk in particular are physically capable of jumping a 48" fence but may hesitate and delay doing so depending on the animal's motivation to cross the fence.

The 5-wire design provides a physical and psychological barrier to the bison. It has been used in other parts of the ranch and proven to be much more effective in containing bison than the typical 4-5 wire barbed and woven fence design located around this area. Bison however have been known to jump a 6 foot fence if they desire and are capable of going through even the strongest fence designs (Bison Breeders Handbook, American Bison Association, 1993). Electrifying the fence would increase its effectiveness in containing bison. Bison hair is similar to cattle in that it does not provide good protection from electrical shock. Bison if not sufficiently motivated to cross an electrical fence will avoid the fence after being trained by the electric shocks. Deer, elk and antelope on the other hand have hollow guard hairs having good insulating qualities and generally are not shocked by an electric fence unless they press hard enough to ground against the skin (Karhu and Anderson, 2002).

The five wire design does not present quite as substantial a physical barrier for containment of bison as the 6 wire design historically requested by TEI but relies substantially on the psychological barrier associated with electrification. Studies conducted in Wyoming (Karhu and Anderson, 2002) indicate electrification may be effective in containing bison particularly if bison are content with their location. However further study and documentation needs to be conducted regarding bison containment to be conclusive.

Legal fences defined by statute:

Montana Code Annotated 81-4-101 states that "any one of the following, if not less than 44 inches or more than 48 inches in height, shall be a legal fence in the state of Montana...". The statute is contained within a title of law relating to livestock and specifically Chapter 4 "containment of Livestock". The statute does not prohibit other types of fence from being constructed and used within the state. Numerous Montana Supreme Court rulings have addressed the interpretation of 81-4-101 and held that no duty is imposed upon an individual to maintain a legal fence as defined by the statute. However, anyone not constructing a fence as described by 81-4-101 is liable for all damages caused by injury to livestock. The statute therefore does not define what can legally be constructed but rather what can be subjected to liability if injury to livestock owned by others occurs.

References:

Karhu, Rory and Anderson, Stanley. 2002. Evaluation of High Tensile Electric Fence Designs on Big Game Movements and Livestock Containment. Final Report Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming, Laramie. 31 pages

American Bison Association. 1993. Bison Breeders Handbook, Third Edition. Denver Colorado.

EA Checklist Prepared By:	Name: Charles Maddox	Date: 5/15/09
	Title: Land Use Specialist	

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B) 2) Allow replacement of an existing 4 strand barbed wire fence with a five wire electric fence as proposed by TEI.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I have reviewed the Environmental Assessment prepared for the fencing improvement request proposed by Turner Enterprises Inc. (TEI) for the sections of state land leased by TEI in Sections 15 & 22 Township 9 South, Range 5 West. I have also reviewed the comments submitted by interested sportsmen, wildlife biologist Bob Brannon, with the Montana Department of Fish Wildlife and Parks, results of studies conducted by the Wyoming Cooperative Fish and Wildlife Research Unit (Karhu and Anderson) relating to the evaluation of high tensile electric fence designs on big game movement and discussed the proposal with, ranch managers with TEI and BLM representatives. The purpose of my review was to approve or deny the fencing improvement requested by TEI and to determine if significant impacts are likely to occur as a result of the proposed activity on state land.

I have decided to approve the improvement request proposed by TEI. I have also concluded that significant impacts are not likely to occur as a result of the proposed activity and therefore an Environmental Impact Statement is not required. The basis for my decision is as follows:

- 1) TEI has a clear legal responsibility to contain their livestock under Montana law on their fee land and state leased land. Montana Codes Annotated 84-2-201 through 84-4-220 describe the responsibilities of livestock owners to prevent livestock from running at large and trespassing on other properties and the liability of trespass. Montana codes 77-6-301 allows lessees of state land to construct improvements such as fencing on the leased land. There is no statute prohibiting any of the fence designs proposed by TEI for this project.
- 2) A length of existing fence will be removed as part of the project. The existing fence is currently not sufficient to keep the bison and cattle from mixing and needs to be replaced to prevent mixing of livestock species.
- 3) Wildlife biologist bob Brannon with the Montana Department of Fish, Wildlife and Parks (DFWP) has worked with TEI to ensure wildlife interests are considered in the design and location of the proposed fence. Wildlife mitigations such as installing wildlife gates at specific locations in the fence line, maintaining the bottom wire 18 inches off the ground, lowering the fence height to standard 48 inch height have been incorporated into the design of the fence.
- 4) TEI considered alternative fence designs upon receiving input from sportsmen and discussing the issue with Rory Karhu of the Wyoming Cooperative Fish and Wildlife Research Unit and with operators of several bison ranches in Wyoming. While other fence designs may indeed hinder wildlife to a lesser degree, there is insufficient data and application of those designs regarding their effectiveness to contain bison. If and when lower fence designs are proven to effectively contain bison, these designs will be given serious consideration in future fence construction.

- 5) While studies indicate wildlife species such as deer and elk are hindered by higher fence designs, they do have the capability to jump fences similar to the selected alternative in this proposal if sufficient motivation exists. With the current design wildlife can either go over or under the current fence design.

Upon execution, this Finding becomes part of the Final EA for the fencing improvement project proposed by Turner Enterprises on state land in Township 9 and 10 South, Range 4 West in Madison County.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Timothy Egan
	Title: Dillon Unit Manager
Signature: /S/ Timothy Egan	
Date: May 15, 2009	

Snowcrest Ranch Fence Request 09

