CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Elliott Ranch Proposed Pivot – Lease 5204
Proposed Implementation Date:	April 1, 2006
Proponent:	Elliott Ranch, LLC (surface lessee)
Location:	Lots 1,4,5, N½NE¼, section 16, T5N, R2E
County:	Broadwater

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LEGISLATIVE ENVIRONMENTAL POLICY OFFICE

I. TYPE AND PURPOSE OF ACTION

Elliott Ranch, LLC. proposes to break up approximately 124 acres of native rangeland, install a water pipeline, and install a short power line in order to develop a pivot irrigated hayfield. The proposal would consist of breaking ground and then seeding it to an annual crop the first year then into alfalfa hay crop rotation sequence. The purpose of this project is to make the land more productive and produce more revenue for the school trust.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

DNRC, Joe Nelson, Elliott Ranch, LLC, Montana Fish, Wildlife, & Parks (Tom Carlsen), Montana Audubon Society, and National Wildlife Federation

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

None

3. ALTERNATIVES CONSIDERED:

Grant Elliott Ranch, LLC permission to break up the land, install a pivot, pipeline, and power line on state land.

Deny Elliott Ranch, LLC permission to break up the land, install a pivot, pipeline, and power line on state land.

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 soils vary from silt loams to cobbly loams and are well drained. The prevalent soil type, comprising 84% of the affected acreage, is the Scravo cobbly loam. This has a class 4 capability and is mainly used for rangeland purposes, but with irrigation and good land management the soils are capable of producing high yielding irrigated crops (4 -6 tons per acre alfalfa production). This is what the land has produced to the east of the proposed area with similar soils. The Fairdale silt loam comprises 8% of the affected acreage. This has a class 3 capability that is mainly use for crop production. The other soils have a class 4 capability, but are suitable for irrigated crop production. There are no fragile, compactable, unstable soils, or unusual geological features. The proposed action would disturb the top 10 inches of the soil profile where the plow depth would be. Irrigation would ensure that sufficient plant production and residue is present to protect the soils from wind erosion. Even though the soils do not perfectly meet the Department's guidelines for breaking, the proposed land management and irrigation would mitigate these concerns. Long-term negative impacts to the soil resources are not expected.

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.

The Missouri River flows within 60 feet of the proposed project area. A concern is pollution caused from agricultural chemicals. There would be a 60 foot buffer between the proposed project and the river. The proponent is planning on cropping this to alfalfa mainly which would act as a filter, soil stabilizer, and would not require high amounts of chemicals or fertilizer. There is very little potential for violation of water quality standards. Cumulative effects to water resources are not expected as a result of the proposed action.

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.

None

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 existing range condition is fair and is only at 31% of its climax community. The species are dominated by sandberg bluegrass, blue grama and fringed sagewort. Overall, forage production is very low compared to the site's potential production. Plowing up the existing vegetation and converting it to irrigated alfalfa, using small grain crops as a rotation, would alter the plant community. Following land preparation, the proposed action is expected to significantly improve the site's overall productivity. There are no rare plants or cover types that would be affected by the proposed action.

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.

This tract is used by whitetail deer, mule deer, various songbirds, raptors, upland game birds, rodents, and predators. Use of the affected acreage by wildlife is limited due to lack of security cover on the proposed project area. The proposed project would improve the forage production and cover for most of these species.

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.

Endangered species such as the bald eagle and peregrine falcon are found along the Missouri River. This proposed project is not expected to adversely affect these species or any other threatened or endangered species. There are no other species of special concern, nor are there any sensitive habitat types associated with the proposed project area.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

One cultural resource site, 24BW966 (a series of 49 tipi ring size stone circles), is within the proposed project's area of potential effect (APE). However, modifications to the original plan of operations have been made to lessen the extent of physical impacts to the extent practicable. As currently proposed, as many as 11 stone circles could be severely impacted or destroyed with hay production activities. A series of onsite inspections, DNRC staff meetings, and meetings between DNRC and SHPO staff, have resulted in the following compromises and stipulations to lessen known and potential future impacts to site 24BW966 and still maximize revenues to the School Trust. First, no tillage will be allowed south of the outside pivot wheel route within the arbitrarily defined site boundaries. This will require the DNRC archaeologist to mark the no tillage zone with flagging and or wooden lathe. Second, the outside sprinkler head is electronically controlled and will be shut off at the point the arc approaches the site boundary and will not be re-activated until it has passed over the defined site boundary. This

will also require DNRC staff to physically mark, in the field, valve activation and shut off points along the center pivot arc. Third, the DNRC will designate dump sites for rock picked and cleared from the proposed cultivated field. These dump locales will be well outside of defined boundaries for site 24BW966. Fourth, a stipulation will be written into the lease agreement that parking, driving or otherwise moving vehicles, farm implements and other heavy equipment within the defined site boundary is prohibited. Fifth, a minimum of two of the stone circles within the area of potential effect (in this case, the area north of the center pivot's outside wheel route) will be test excavated and mapped prior to their destruction. Mapping and test excavation work will serve to mitigate adverse effects to site 24BW966 if it is subsequently determined that the cultural resource qualifies as a state Heritage Property.

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 area surrounding the proposed project contains pivot irrigated agricultural land. This land breaking proposal would correspond with the existing adjacent land uses.

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 irrigation water would be provided from either Joe Nelson's Toston canal water or Elliott Ranch's Spring Ditch water.

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.

None

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.

None

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

This project would increase the amount of irrigated acres and hay production on state land. This would increase revenues for both the lessee and the school trust.

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.

None

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.

A small amount of additional income tax would be created by the proposed project. This would come from the lessee selling hay and grain from this land.

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

None

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.

None

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.

The area is not of high recreational value. There is legal access to this land from the Missouri River and may receive a small amount of recreational use from floaters and hunters. No impacts on recreational activities are anticipated as a result of the proposed action.

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.

None

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

None

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

None

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.

The income generated to the school trust would be significantly increased as a result to the proposed action. The current revenue on the affected acreage (124 acres) is $125.82 per year (18 AUMs x $6.99/AUM). This is only producing $1.02 per acre annually. Whereas converting this acreage to pivot irrigation for crop production would greatly increase the income. Income would increase to $30/acre ($3,720) annually for the first five years of the proposal and further increased to $45.00/acre ($5,580) annually thereafter. The long term increase in revenue would be approximately 40 times greater compared to what is currently being generated. The proposed project is the highest and best use for the land.

EA Checklist Prepared By:	**Name:**	Casey Kellogg	**Date:**	March 21, 2006
	Title:	Land Use Specialist		

V. FINDING

25. ALTERNATIVE SELECTED:

Grant Elliott Ranch, LLC permission to break up the land, install a pivot, pipeline, and power line on state land.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The proposed project area consists of fair condition native rangeland that is located in a remote area. This project would disturb about 124 acres of native rangeland and change the land use to irrigated crop production. The proposed action would be beneficial for both the lessee and the Department. Impacts to the cultural sites are mitigated by modification of the affected area, to reduce overall extent and by excavation and mapping to confirm site information. If significant features should be unearthed, the field boundaries would be further modified.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ]	EIS	[ ]	More Detailed EA	[X]	No Further Analysis

EA Checklist Approved By:	**Name:**	D.J. Bakken,
	Title:	Helena Unit Manager, CLO
Signature: /S/ Darrel J. Bakken		**Date:** 3/21/2006

Lease 5204 - section 16, T5N, R2E