

September 6, 2002

1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Division
Endangered Species Coordinator
Great Falls Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Lewis and Clark County Conservation District
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
John Wilson, Montana Trout Unlimited, 405 Monroe Avenue, Helena, MT 59601
Missouri River Fly Fishers, P.O. Box 1985, Great Falls, MT 59403
Pat Barnes Chapter Trout Unlimited, 805 Mill Road, Helena, MT 59601
Sterling Ranch Company, 2925 Craig Frontage Route, Wolf Creek, MT 59648

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for a Future Fisheries Project tentatively planned to repair and modify a bank stabilization project that was completed on a 2,000-foot reach of the Missouri River in 1997. The proposed project is located on property owned by Sterling Ranch approximately 1.1 miles northeast of the town of Craig in Lewis and Clark County.

Please submit any comments that you have by 5 P.M., October 7, 2002 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
e-mail: mlere@state.mt.us

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Missouri River Bank Stabilization Repair Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 that directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purposes of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. This project is being proposed to repair and modify a past bank stabilization project conducted on approximately 2,000 feet of the Missouri River. A portion of this past work (about 650 feet) is showing continued instability and accelerated erosion rates. The purpose of this project is to modify the original project design and repair the eroding river bank by adjusting the existing instream structures, sloping eroding river banks to a stable angle of repose, and extensively trans-planting woody riparian vegetation and salvaged sods at appropriate elevations along the toe of the slope. Once completed, the project will re-install an electric fence to protect the riparian vegetative community. The proposed project is located on property owned by the Sterling Ranch Company approximately 1.1 miles downstream from the town of Craig in Lewis and Clark County (Figures 1 and 2).

I. Location of Project: This project will be conducted on the Missouri River located approximately 1.1 miles northeast of the town of Craig within Township 15 North, Range 3 West, Section 2 in Lewis and Clark County.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year plan of operations for the fisheries program is to “restore and enhance degraded habitats” by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help achieve this goal.

The original design implemented on this reach of the Missouri River in 1997 appears to have been inadequate for maintaining long-term bank stability. Portions of the stabilized bank have eroded back to near vertical conditions. The slope of the bank on the original project apparently was too steep to maintain stability. Additionally, the installed rootwads are substantially perched above base flow and the installed rock vanes exhibit profiles that are too high and slopes that are too steep. Car bodies that were historically used for bank protection remain in the active channel and appear to exacerbate the ongoing bank erosion. The effort to re-establish woody riparian vegetation has been mostly unsuccessful. This proposed project would repair approximately 650 feet of eroding bank, modify existing bank protection structures and extensively transplant woody riparian vegetation and salvaged sods on treated areas.

III. Scope of the Project:

The proposal calls for repairing and modifying a past bank stabilization project conducted on approximately 2,000 feet of the Missouri River in 1997 (Figure 3). The eroded river bank (approximately 650 feet) within the former treatment area will be sloped back to a stable angle of repose. Treated areas will receive transplanted mats of salvaged sod and would be protected with staked Bon Terra erosion control fabric. Willow clumps, obtained from the opposite side of an adjacent field near Wegner Creek, will be extensively transplanted at an appropriate elevation along the toe of the bank. Willow clumps

would be selected in a manner to insure the rejuvenation of donor stands. Previously installed rootwads and rock vanes will be modified to improve effectiveness and function. Perched rootwads will either be repositioned to a lower profile or simply cut-off with a chainsaw to eliminate erosive back eddies. The existing rock vanes will be lowered in profile such that the slope approximates 5 to 7%. The remnants of existing car bodies buried in the active channel will be removed by walking a tracked excavator up a shallow, inundated gravel bar. The existing electric fence will be replaced along the riparian corridor once the project has been completed. Oversight of the project construction will be provided by personnel from Montana Fish, Wildlife and Parks. This project is expected to cost \$14,383.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$11,653.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Restoring and re-vegetating approximately 650 feet of eroding stream bank on the Missouri River is expected to create a more diverse and healthy habitat for aquatic life by reducing sediment input and by providing overhead cover and holding water for fish. Habitat for riparian dependent wildlife also would be improved by re-establishing a healthy willow community.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 310 permit will be obtained from the local Conservation District and the U.S. Army Corp of Engineers will be contacted for requirements needed to meet the federal Clean Water Act (404 permit). In the long term, restoring and re-vegetating the existing stream bank would reduce the sediment contribution to downstream areas, thereby improving the overall quality of downstream waters.

3. Geology and soil quality, stability and moisture.

Soils along the river margin would be disturbed during the period of construction, but would be stabilized with proposed re-vegetation efforts and erosion control fabric. Overall, the project is expected to reduce bank erosion by restoring vertical banks to a stable angle of repose, modifying existing bank stabilization structures to eliminate erosive back eddying and by promoting the recovery of the woody riparian vegetative community.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover, primarily grasses, would be disturbed along the river margin during

the period of construction. However, the riparian vegetative community would be improved by stabilizing eroding banks and by extensively transplanting salvaged sod and mature willow clumps within the treated area. One goal of the project is to restore the riparian vegetative community, with a focus on the woody vegetation component.

5. Aesthetics.

Aesthetics would be negatively impacted during project construction due to ground disturbance and the presence of heavy equipment. In the long term, aesthetics would be enhanced by restoring and re-vegetating approximately 650 feet of eroding stream bank on the Missouri River.

9. Historic and archaeological sites

Prior to the work that was conducted in 1997, this site was surveyed for the presence of cultural resources. The conclusion from this survey was that the project would have a low likelihood of impacting any cultural resources (Attachment 1). This proposed project is simply a repair and modification of the original work that was conducted. As a result, there is a very low likelihood that cultural resources are present.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

The Missouri River is one of the most heavily fished bodies of water in the state. This proposed project will have minimal impact on fishing opportunity. During the period of construction fishing opportunities along the construction area would be negatively impacted. Since the project will be completed in approximately 5 days, however, the effects on recreational activity are short term and impact a very short reach of river.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, this former bank stabilization project on the Missouri River will continue to degrade and the river bank will become more unstable. Bank erosion will accelerate and will continue to contribute fine sediment into the river, resulting in a loss of fish habitat. In addition, habitat for riparian dependent wildlife will remain in a degraded condition.

2. Rip-rap alternative

Rock rip-rap could be placed along 2,000 feet of river bank to prevent further erosion. However, armoring the river bank with rock would eliminate the riparian vegetation and degrade the aesthetics of this very popular recreational river. Additionally, rock rip-rap could cause hydrological changes to the river resulting in greater erosive pressure on the treated bank and could pass erosion energy downstream to unprotected areas. The cost associated with this alternative would be approximately ten times greater than the proposed alternative due to the expense of

importing and placing the rock. Alternative sources of funding would have to be obtained since a general policy of the Future Fisheries program is to not fund rip-rap projects.

3. The Proposed Alternative

The proposed alternative is designed to repair and modify a gradually failing stabilization project that was completed on a 2,000-foot reach of the Missouri River in 1997. The original design for this past stabilization work appears to be inadequate for maintaining bank stability. The proposed alternative calls for sloping back eroding banks to a stable angle of repose and extensively transplanting the treated areas with salvage sod and willow clumps. The alternative also calls for modifying existing stabilization structures in an effort to eliminate erosive forces caused by back-eddies. These activities would enhance the overall health of the riparian corridor and reduce sediment loading into the river. Additionally, the project would create more diverse habitat for riparian dependent wildlife by establishing woody riparian vegetation on the treated banks.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on Montana Fish, Wildlife and Parks web page: fwp@state.mt.us.

3. Duration of comment period?

Public comment will be accepted through 5 P.M. on October 7, 2002.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue
Helena, MT 59620

Telephone: (406) 444-2432
e-mail: mlere@state.mt.us

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
 1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
 (406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Missouri River Bank Stabilization Repair Project

Division/Bureau Fisheries Division -Future Fisheries Improvement
 Description of Project The project is being proposed to repair and modify a bank stabilization project that was completed on a 2,000-foot reach of the Missouri River in 1997. The work would involve sloping the eroding river bank to a stable angle of repose, extensively re-vegetating the treated banks with salvaged sod and mature willow clumps, modifying existing bank stabilization structures to prevent erosive back eddies and removing the remnants of old car bodies from the active channel. The project site is located on property owned by the Sterling Ranch Company approximately 1.1 miles northeast from the town of Craig in Lewis and Clark County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction: Lewis and Clark County Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

Individuals or groups contributing to this EA: George Liknes, Montana Fish, Wildlife and Parks

Recommendation concerning preparation of EIS: No EIS required.

EA prepared by: Mark Lere

Date: September 4, 2002

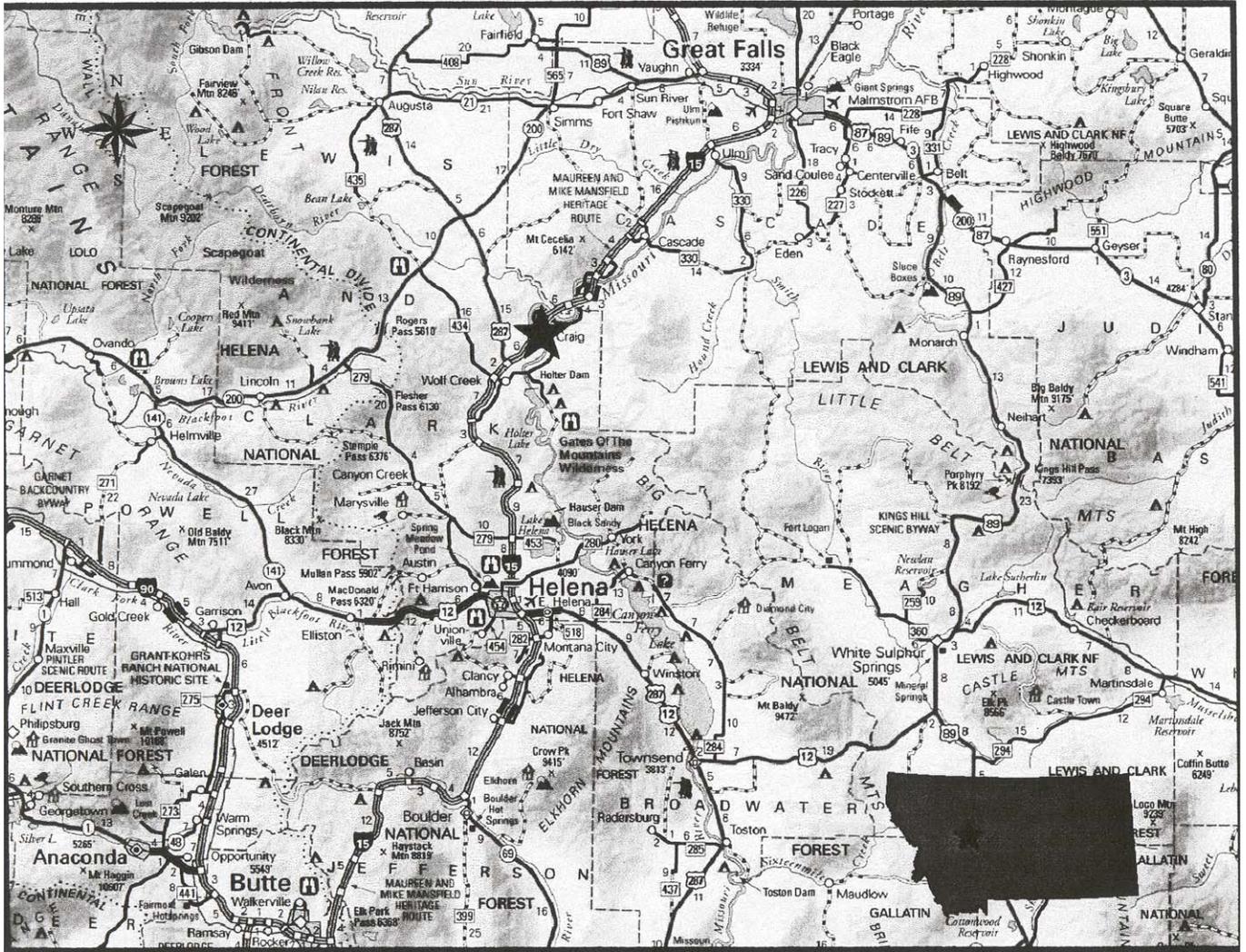


Figure 1. Map of Central Montana showing general location (large red star) of the Sterling Ranch Bank Repair & Restoration project site on the Missouri River, Montana.

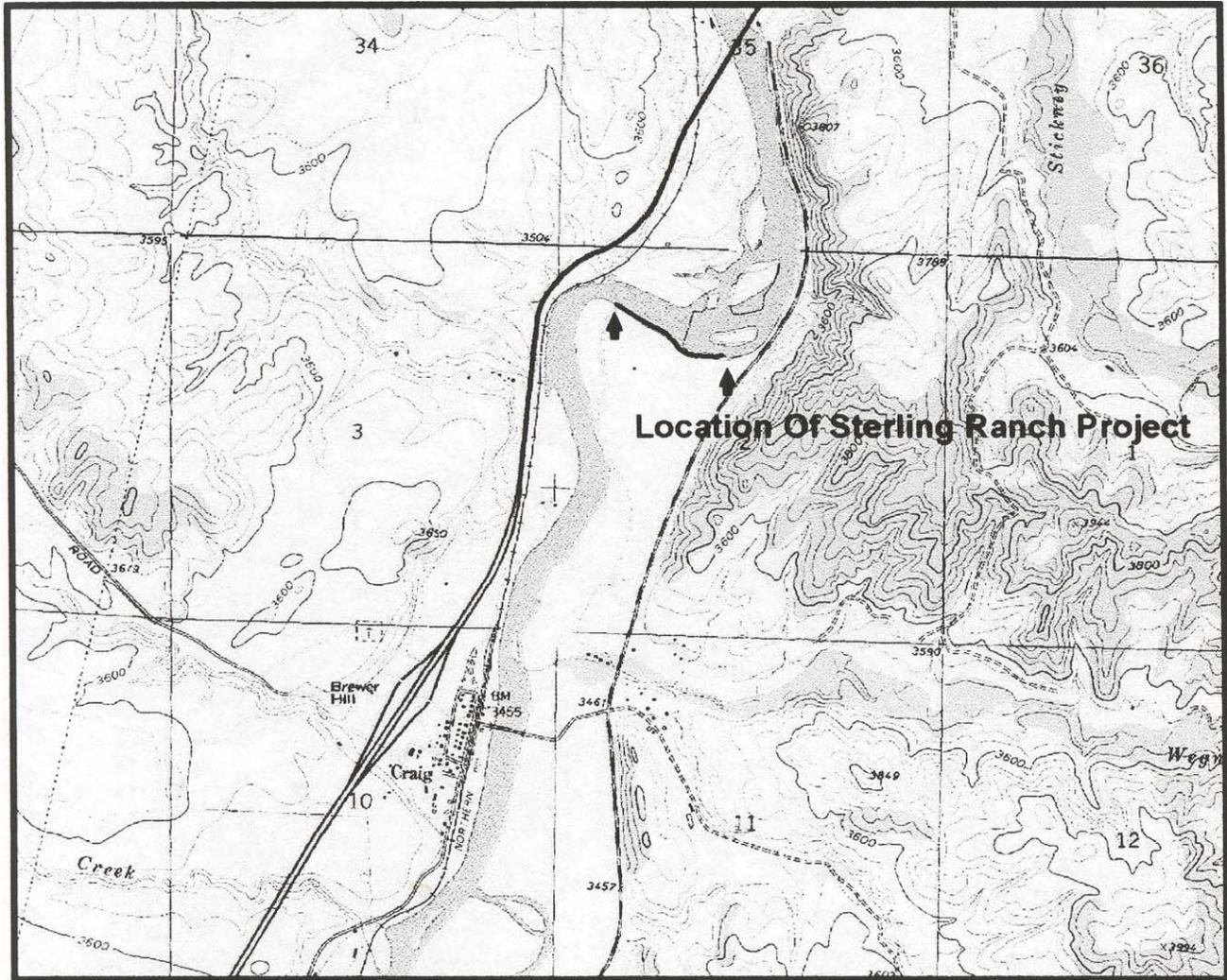


Figure 2. Topographic Map of the Craig area showing the location (red line and arrows) of the Sterling Ranch Bank Repair & Restoration project site on the Missouri River, Montana.

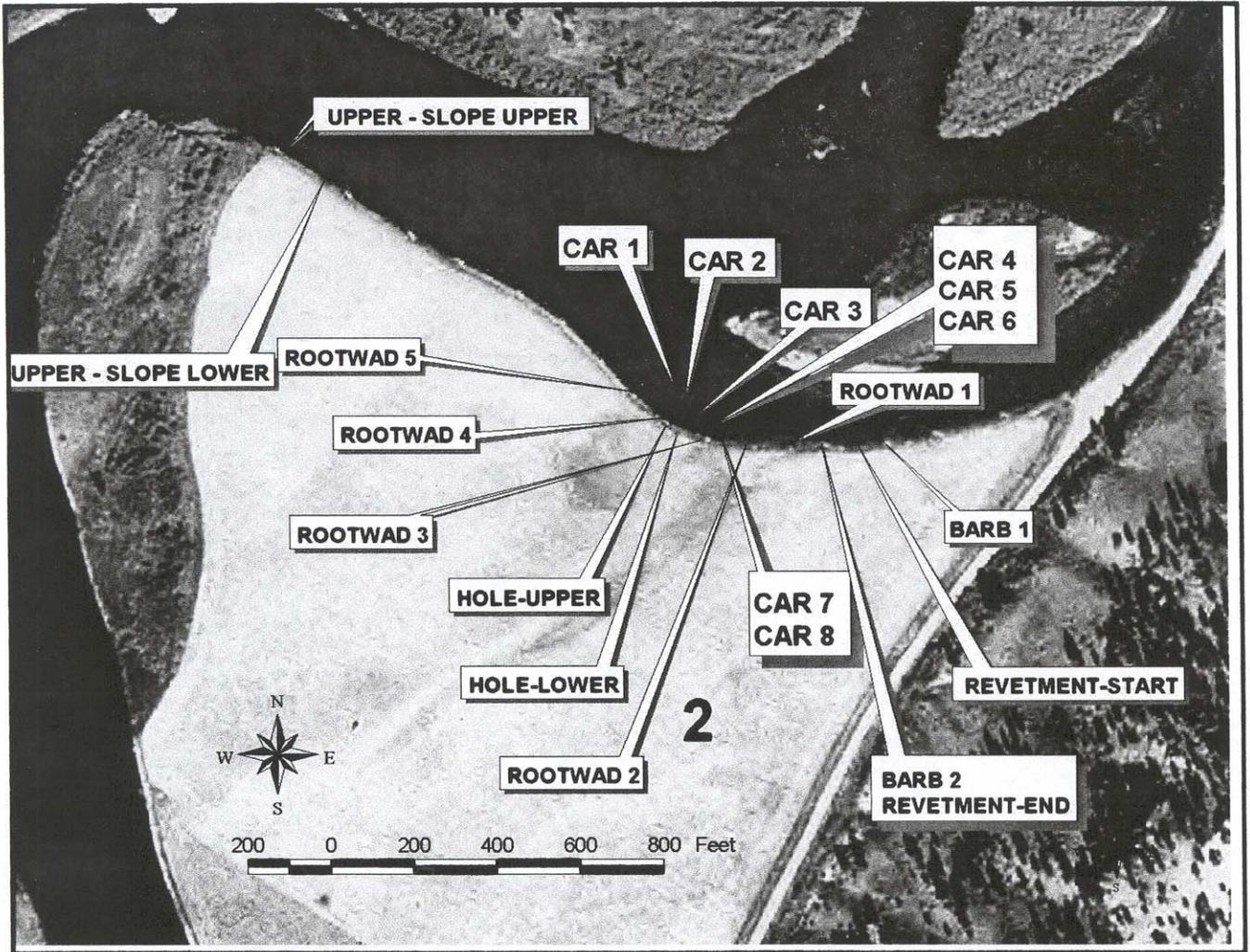


Figure 3. Aerial Photograph of the Sterling Ranch Bank Repair & Restoration Project showing the location of features that will be modified or removed on the Missouri River, Montana.

FILE: 611.1

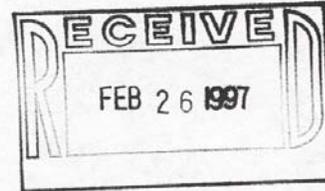


Montana Fish, Wildlife & Parks

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STW

1420 East Sixth Avenue
P.O. Box 200701
Helena, Montana 59620-0701



Mr. Paul Putz
State Historical Preservation Officer
State Historical Preservation Office
1410 8th Avenue
Helena, Montana 59620

RE: Bank Stabilization

February 24, 1997

Dear Paul:

The Department of Fish, Wildlife and Parks is proposing to do some stream bank stabilization on two separate location on the Missouri River. Attached for you review and records is a CRABS form and Cultural Resource Inventory Report for these sites. The Department is in agreement with the recommendations of this report and feel that this project will have a low liklyhood of impacting any cultural resources.

Sincerely,

MICHAEL D. HORN
Assistant Cultural Resources Coordinator
Design & Construction Bureau
Montana Fish, Wildlife & Parks

CONCUR:
NO PROPERTIES ON OR ELIGIBLE
FOR NRHP APPEAR LIKELY TO
EXIST WITHIN PROJECT IMPACT AREA
MONTANA SHPO

2/28/97

c: File 1018.3

