

STATE OF MONTANA

DM



DEPARTMENT OF

FISH AND GAME

Helena, MT 59601

February 8, 1979

**RECEIVED**  
FEB 13 1979  
ENVIRONMENTAL QUALITY  
COUNCIL

Mr. Terry Carmody, Executive Director  
Environmental Quality Council  
Helena, MT 59601

Dear Terry:

Enclosed are two copies of preliminary environmental reviews covering minor improvements at the following fishing access sites:

FG-N-98 Willow Creek Reservoir  
FG-N-100 Martinsdale Reservoir ✓  
FG-N-104 Far West Fishing Access Site ✓  
FG-N-106 Cameron Bridge Fishing Access Site

We hope these documents will satisfy the requirements of the Environmental Policy Act. Copies have been sent to the county commissioners where these projects are located. If you have any questions, please feel free to contact me.

Sincerely,

  
James A. Posewitz, Administrator  
Ecological Services Division

sd

Encs

cc: Water Quality Bureau  
Department of Highways  
Division of Architecture & Engineering  
County Commissioners: Lewis & Clark County  
Meagher County/Wheatland County  
Rosebud County  
Gallatin County

PRELIMINARY ENVIRONMENTAL REVIEW

FOR

MARTINSDALE RESERVOIR

FISHING ACCESS SITE

FG-N-100

AUGUST 1978

MONTANA DEPARTMENT OF FISH AND GAME

PARKS DIVISION

## SUMMARY FOR HERITAGE CONSERVATION AND RECREATION SERVICE PURPOSES

Martinsdale Reservoir was constructed by the State of Montana in 1939. At the time of construction it was intended for strictly irrigation purposes. Since then the area has received heavy fishing pressures from the local vicinity as well as from Yellowstone County residents. The site is presently undeveloped and as a result is difficult to control or manage. The Department proposes to develop the site as a day use area with boat launching facilities.

Martinsdale Reservoir is located approximately 1 mile south of the town of Martinsdale and lies on the border between Meagher and Wheatland counties.

This request for financial assistance is preceded by a need for more facilities. The quality of the recreation environment in Montana depends on the proper development of facilities.

Contracts will be let in 1979 to allow construction to begin in the fall. Contract and progress compliance will be monitored by the Department of Fish and Game.

There is no relationship between this project and other work planned or underway with federal assistance. There are no historic or archeological sites located on or near the site as listed in the Register of Historic Places. An archeologist will inspect the site prior to construction.

This PER addresses the probable effects of developments at Martinsdale Reservoir will have upon the existing environment.

### I. Description of the Proposed Action

This project will consist of the construction of an entry road, parking areas, boat access, boat trailer parking, sanitary facilities, signing and fencing.

Road construction will be accomplished in a manner to create as little impact as possible. Cuts and fills will be minimized to the extent commensurate with the establishment of proper grades. The area is gently rolling and, therefore, it is anticipated that cuts and fill will not exceed 3 foot in any instance.

The area to be developed as a boat access has existing solid base and has been used over the years for boat launching. Minor shaping will be required to improve this area so circulation and grades are better for the visiting public.

Two double latrines with sealed fiberglass vaults and wood super structures will be installed. These sealed vaults will be pumped periodically as required.

Directional, entrance, regulation and credit signs will be installed on wood posts. Signs will be painted to blend with the environment and will be mounted as low as practical.

Fencing will be installed to exclude trespass livestock and will be of the four strand barbed wire farm type.

## II. Existing Environment

### A. Geology

The area surrounding Martinsdale Reservoir is underlain by the Judith River formation of the Montana group. These formations are of upper cretaceous age.

### B. Surface Water

Martinsdale Reservoir is fed by a diversion canal from the south fork of the Musselshell River and also from a diversion canal from the north fork of the Musselshell River. These streams both originate within Meagher County within a few miles of the reservoir. Therefore, the water quality and temperatures are excellent for the production of trout.

### C. Ground Water

No investigations of the exact depth to ground water have been conducted. However, it is presumed that the ground water levels are at the approximate elevation of the reservoir surface.

### D. Soils

The soils are light greyish brown to dark greyish brown gravelly loams and stony loams.

### E. Climate

Precipitation averages at Martinsdale are 15.57 inches. The average temperature is 42.1° F. with a record high of 104° and a record low of -52°. The average frost free period is 96 days.

### F. Air Quality

The Martinsdale area lies many miles from the nearest industrial centers. Therefore, the air quality is excellent with only minor pollutants from farming and vehicle travel.

### G. Aquatic

The principle game fish species in Martinsdale Reservoir is rainbow trout.

### H. Wildlife

Principle big game species within the area are mule deer with a few antelope, and elk in the higher mountains to the north.

### I. Vegetation

Vegetation surrounding the reservoir consists of grass lands with the primary species being wheatgrasses.

### J. History

Meagher County was created in 1867. It was during this period that the gold mining was taking place in the Castle Mountains. Prior to the coming of the white man to the area, the River Crows were the primary Indian tribe inhabiting the region.

#### K. Transportation

The area is served by U. S. Highway 12 which traverses the Musselshell valley. From U. S. Highway 12, Secondary Highway 294 extends through the town of Martinsdale. From Martinsdale to the reservoir is an unimproved dirt road.

#### L. Utilities

There are no utilities on site.

#### M. Economy

The primary industry of both Wheatland and Meagher counties is agriculture with livestock production predominating.

### III. Environmental Impacts of Proposed Action

#### A. Biological Impacts

Approximately 6.75 acres will be utilized for road and parking areas. Much of this area is already disturbed by existing vehicle trails. Therefore, less than one acre of vegetation will be disturbed as a result of construction. Increased use will also result in deterioration of vegetation.

Alteration of the composition and amount of vegetation brought about by increased recreational use and related cultural treatments will create an impact on the wildlife population. Increased human visitation will also have a detrimental effect on the wildlife.

#### B. Physical Impacts

Exhaust fumes and dust will result during the construction period and will be prevalent during periods of peak use after the construction is completed. This will be due to increased automotive traffic based upon demand and access to the site.

Increased noise levels will result during the construction period. Noise levels will also increase as increased use of the site is realized.

Temporary disruptions to the landscape will occur as a direct result of the construction activity.

No appreciable effect on water quality is expected. Construction and boat launching activities will introduce minor amounts of sediment to the lake.

Increased use of the site will increase the amount of solid waste and littering. Increased use of the site will create soil compaction on areas of high use.

Vehicular traffic will be increased resulting in greater possibilities for conflict and associated increase surveillance and maintenance.

As new areas are developed more open space will be occupied with some impacts to the aesthetics of the area. This plan, however, emphasizes aesthetics as being an important value in the planning process. Management direction stipulates the application of landscape design principles to all surface disturbing projects.

### C. Socio-Economic Impacts

The preservation and enhancement of outdoor recreation activities would be the most significant beneficial impact. Economic impacts upon the area are expected to be very slight. However, it is anticipated that much of the use of this area will be by residents from out of the local vicinity. This will tend to create a small economic increase to some of the local businesses.

### IV. Planned Measures to Minimize Adverse Environmental Impacts.

Dust pollution will be reduced by such diverse methods as dust oiling, sprinkling and restructuring use.

Generally, road developments will be designed to fit into the natural terrain as much as possible. Cuts and fills will be kept to a minimum with backslopes as flat as practicable. Ditches will be shallow and will only be used where necessary.

Vegetation will be removed only where absolutely necessary. Fencing will preclude livestock trespass and allow the grass to recover from over grazing.

During construction, equipment will be confined to road surfaces. No traffic will be allowed outside the construction limits in order that other land forms and vegetation will be left unmarred. Turning around on areas outside of construction areas will not be tolerated. Top soil will be stock piled before construction and will be replaced on road cuts, fills and road shoulders.

A pack-in pack-out policy will be encouraged at this site. However, there will be periodic pick up of solid waste by parks personnel.

All areas disturbed as result of construction methods used will be loamed, fertilized and seeded with indigenous grasses. Barriers will be placed at critical areas to prevent vehicle traffic from disrupting vegetation. Barriers to be used will consist of a native landscape stones or wooden posts.

Noise levels will be some what reduced by keeping vehicle speeds to a minimum.

The latrine will have a sealed fiberglass vault and will be installed above ground water.

As use increases, various degrees of vegetation trampling will occur resulting in compaction of soil and mechanical injuries to trees. Controlled use patterns will help keep use within ecological carrying capacities.

### V. Unavoidable Adverse Impacts.

Air quality will deteriorate to a slight degree during periods of construction due to mechanical equipment operation. Some deterioration will also occur during periods of peak recreational use due to vehicular traffic.

Regardless of controls exercised some damage to soils will occur due to increased use. Soil will also be disturbed during period of construction activity.

Any proposed change will alter the natural appearance of the area. However, landscape management principles will be applied to lessen the impacts of the area.

As use increases, noise impacts will be felt in areas of heavy use during peak periods. Noise impacts will derive primarily from vehicular traffic and group concentrations as well as construction equipment during the development period.

Litter will be a problem and could be expected to increase with use despite public education campaigns, use of litter barrels, enforcement and encouragement of a pack-in pack-out policy.

Regardless of controls exercised, some damage to soils and vegetation will occur due to increased use. Vegetation will be disturbed during periods of construction.

#### VI. Relationship Between Local Short Term Uses of Man's Environment and the Maintenance and Enhancement of Long Term Productivity.

Recreation use of the Martinsdale Reservoir area is expected to increase in the future whether the project is undertaken or not.

Under a no action program, use will increase in direct relationship to population, leisure time and word-of-mouth advertising. A no action program will result in noncontrolled use due to increased demands. Accessibility to the site could be made with no controls.

If the project is undertaken, visitor use will accelerate but will be subject to control.

Short term use, therefore, does not conflict with the long term use relative to recreation. Recreation use leaves more options open than most other single land use options.

#### VII. Irreversible and Irretrievable Commitments of Resources

The area will be committed to recreational use in perpetuity under the terms of the federal Land and Water Conservation Fund agreements. Therefore, the potential for other uses of the property will be eliminated. Fuels consumed by the construction equipment, paving materials and funding used for the project are irretrievable.

#### VIII. Alternatives to the Proposed Action.

##### A. No action

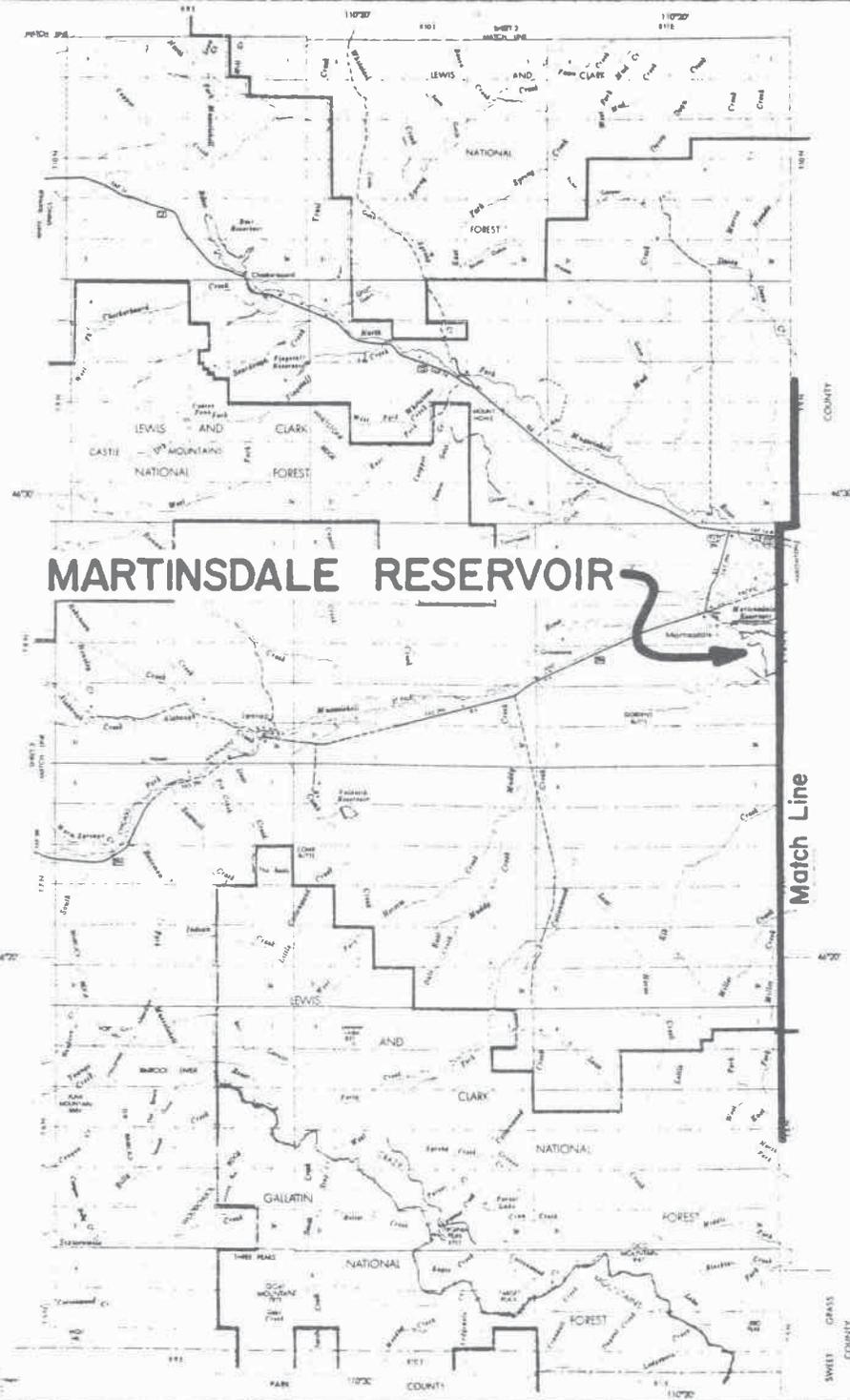
One option that the Department of Fish and Game has is to leave the development of Martinsdale as is. This option would create impacts ranging from the uncontrolled use of the entire area and unsanitary conditions to the loss of recreational opportunity.

B. Design Alternatives

The plan could also be adjusted by implementing the range of design options from little or no development to more than is now shown. Neither extreme is a sensible answer. If the recreation area is basically left as is, use will cause a degradation in quality of recreation. If the area is over developed, monetary and environmental costs will out weigh the benefits to society.



SHEET #  
10  
17  
CHINA



SCALE FOR INSETS  
0 1 2 3 Miles

# GENERAL HIGHWAY MAP MEAGHER COUNTY MONTANA

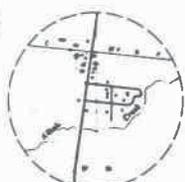
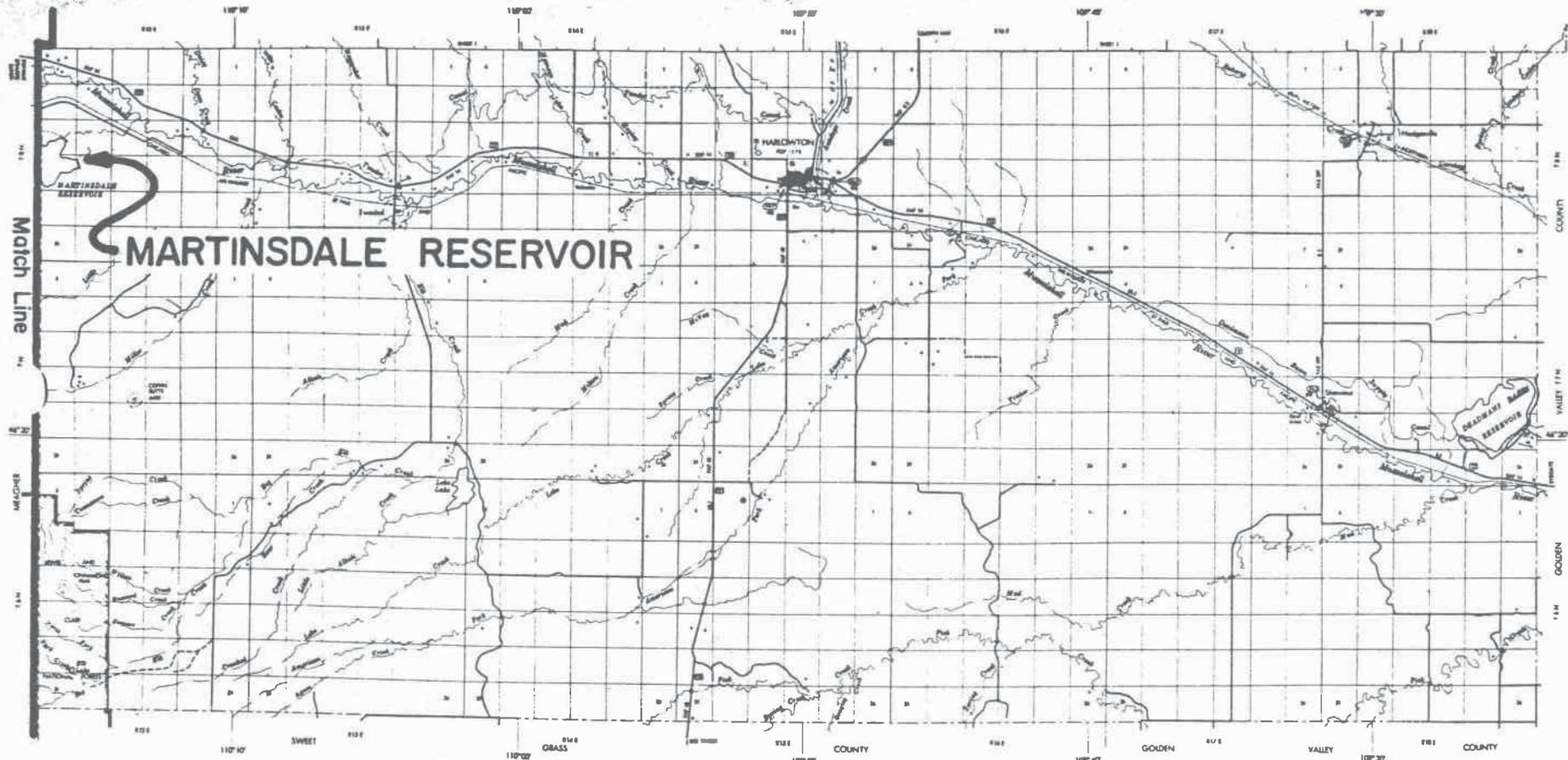
PREPARED BY THE  
MONTANA DEPARTMENT OF HIGHWAYS  
PLANNING AND RESEARCH BUREAU

IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

SCALE  
0 1 2 3 4 5 Miles

BASE COMPILED BY  
AERIAL PHOTOGRAPHY 1954 BS  
FIELD INVESTIGATION 1975  
REVISED 1978  
APPROVED 1978

POLYCONIC PROJECTION 8000' - AMERICAN DATUM  
SHEET # 04 - MAP SHEETS



TWOOOT  
SEC 28 & 27 T6N R2E



DIVISIONS OF HARLOWTON  
SEC 23 22 21 20 27 T6N R2E



MEDGESVILLE  
SEC 20 7 T6N R2E

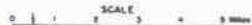


SPARROWSBURG  
SEC 26 25 22 21 20 19 18 17 T6N R2E



# GENERAL HIGHWAY MAP WHEATLAND COUNTY MONTANA

PREPARED BY THE  
MONTANA STATE HIGHWAY COMMISSION  
PLANNING SURVEY SECTION  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION.



BASE COMPILED 1950  
AERIAL PHOTOGRAPHY 1940  
FIELD INVESTIGATION 1973  
DESIGNED 1972  
APPROVED 1980

POLYCHROME REPRODUCTION 80%+ ANTI-CORROSION COATING  
SHEET 2 OF 2 MAP SHEETS

Center of the map was selected for a  
control point of the Montana Department  
of Highways - Planning, Research, Design