DEPARTMENT OF THE INTERIOR

FINAL
ENVIRONMENTAL STATEMENT

78-3

Proposed

Inclusion of the Missouri River into the National Wild and Scenic Rivers System

Prepared by

Bureau of Outdoor Recreation
U.S. Department of the Interior

Director, Bureau of Outdoor Recreation

SUMMARY

( ) Draft (X) Final Environmental Statement

Department of the Interior, Bureau of Outdoor Recreation

1. Brief description of action:

The Missouri Wild and Scenic River Study was conducted pursuant to the Wild and Scenic Rivers Act, Public Law 90-542, and recommends legislative action to include a 128-mile segment of the Missouri River and 147,800 acres of adjacent land located in the State of Montana in the National Wild and Scenic Rivers System. Classification will be 72 miles wild, 39 miles scenic and 17 miles recreational under the administration of the Bureau of Land Management and Fish and Wildlife Service.

3. Summary of environmental impact and adverse environmental effects:

Inclusion of the 128-mile segment of the Missouri River and 147,800 acres comprising its immediate environment in the National System will have an overall effect of preserving the existing historic, scenic, recreational, and water quality values of the river. Adjacent lands would be retained in their present relatively undeveloped condition. Commercial and residential use within the proposed area that might otherwise occur would be precluded. Water resource development within the proposed area would be prohibited.

4. Alternatives considered:

In addition to the proposed action, other alternatives considered were (1) no action, (2) protection through existing authorities, (3) Lewis and Clark National Wilderness Waterway, and (4) different segments and boundaries.

5. Comments on the DEIS were requested from the following:

*Advisory Council on Historic Preservation
*Department of Agriculture
Department of Commerce
*Department of Defense
Department of Health, Education, and Welfare
*Department of Housing and Urban Development
Department of the Interior
*Bureau of Indian Affairs
*Bureau of Land Management
*Bureau of Mines
*Bureau of Reclamation
*Fish and Wildlife Service
Geological Survey
*National Park Service
Energy Research and Development Administration
*Environmental Protection Agency
Federal Energy Administration
*Federal Power Commission
*Department of Transportation
*Water Resources Council
*Missouri River Basin Commission
State of Montana Clearinghouse
*Montana Fish and Game Commission
Central Montana Historical Association
Friends of the Earth
Izaak Walton League of America
Montana Chapter of Sierra Club
Montana State Lewis and Clark Trail Committee
Missouri State Council of Trout Unlimited
National Wildlife Federation
*The Wilderness Society

*Comments have been received and are included

6. Date statement made available to CEQ and the public:

Draft -- July 29, 1975
Final --

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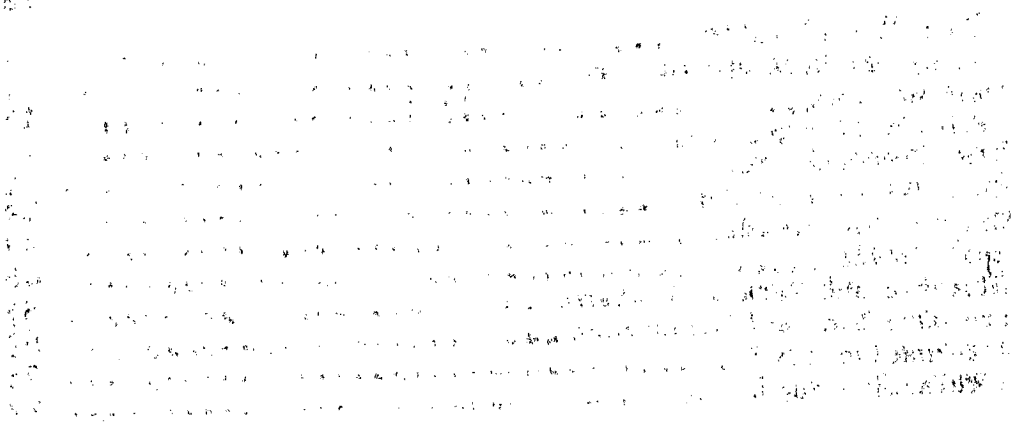
MAPS



I. DESCRIPTION OF THE PROPOSED ACTION

PROPOSAL

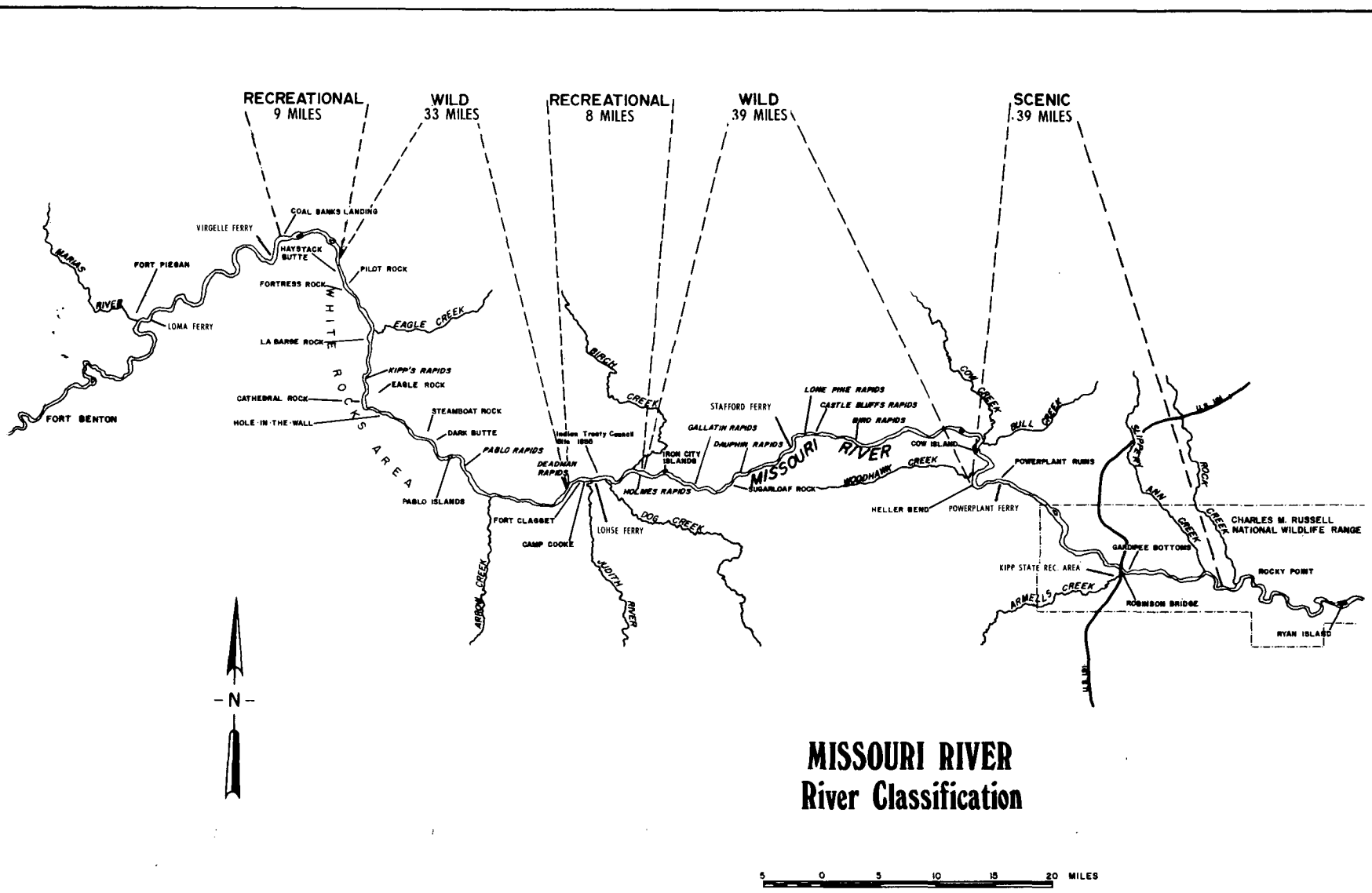
This statement concerns a proposal which recommends that a 128-mile segment of the Missouri River from Coal Banks Landing to Rocky Point Historic Site, along with 147,800 acres of land comprising the immediate environment of the river, be designated by Congress as a component of the National Wild and Scenic Rivers System; that 72 miles of the river would be classified as wild, 39 miles as scenic, and 17 miles recreational (see River Classification map); that the proposed corridor would be administered by the Bureau of Land Management and the Fish and Wildlife Service; and that a detailed management and development plan for the river corridor and detailed lateral boundaries would be filed with Congress within one year of inclusion in the National System. (Definitions of wild, scenic and recreational river classifications are included in the appended glossary of terms.)*

The proposal was developed in accordance with the Wild and Scenic Rivers Act (P. L. 90-542) which directed the study of the Missouri River between Fort Benton and Ryan Island as a potential addition to the National Wild and Scenic Rivers System. The proposal is based upon a comprehensive Federal-State study of the river.

PURPOSE

The Missouri Wild and Scenic River area would be managed under the following objectives:

*It should be noted that this proposal advocates the provision of rim to rim preclusion of mining and mineral activities on Federal lands in segments designated as "wild".



MISSOURI RIVER
River Classification

1. Preserve the river and its immediate environment in its present relatively undeveloped condition.

2. Assure preservation of historic and archeological values.

3. Preserve the free-flowing condition of the waters.

4. Prevent degradation of the water quality.

5. Provide high quality primitive recreation opportunities for present and future generations.

6. Provide recreational use of fish and wildlife resources, including hunting and fishing, within the framework of appropriate Federal and State laws.

7. Provide for the optimum utilization of resources in a way that will maintain the existing environment unimpaired for future generations.

8. Provide a variety of opportunities for interpretive, scientific, and educational uses.

PROPOSAL AREA

The proposed Missouri Wild and Scenic River is located in north-central Montana approximately 50 miles northeast of Great Falls, Montana. The recommended river segment would extend from Coal Banks Landing to Rocky Point Historic Site. The proposal is located within an area that has substantial Federal ownership.

Several interdependent factors would be used in determining the specific location of lateral boundaries. These include: providing the visitor an opportunity to experience a degree of solitude in a

primitive setting, protection of important wildlife habitat, protection of areas having historical significance, and preservation of the land area seen from the river's surface. Figure 1 illustrates how such boundaries might be located when the view is open, confined on one bank, or confined on both banks.

ADMINISTRATION - MANAGEMENT

Management of the river area would be based on the concept of protecting the values which make this segment of the Missouri River outstandingly remarkable.

The management plan for the Missouri Wild and Scenic River would be prepared by the Bureau of Land Management and the Fish and Wildlife Service, as mandated by the Secretary of Interior under the provisions of the Wild and Scenic Rivers Act. This plan would be completed with the full cooperation and active participation of other Federal and State agencies and local groups. The plan would be prepared within one year of inclusion in the National Wild and Scenic Rivers System.

In planning for recreation use and development of any natural area, a careful approach must be taken to insure that natural values and the quality of the recreation experience are not diminished through overuse or overcrowding. Protection of these values is of paramount importance. The number of recreationists accommodated would depend upon the capability of the resource base to withstand recreation use.

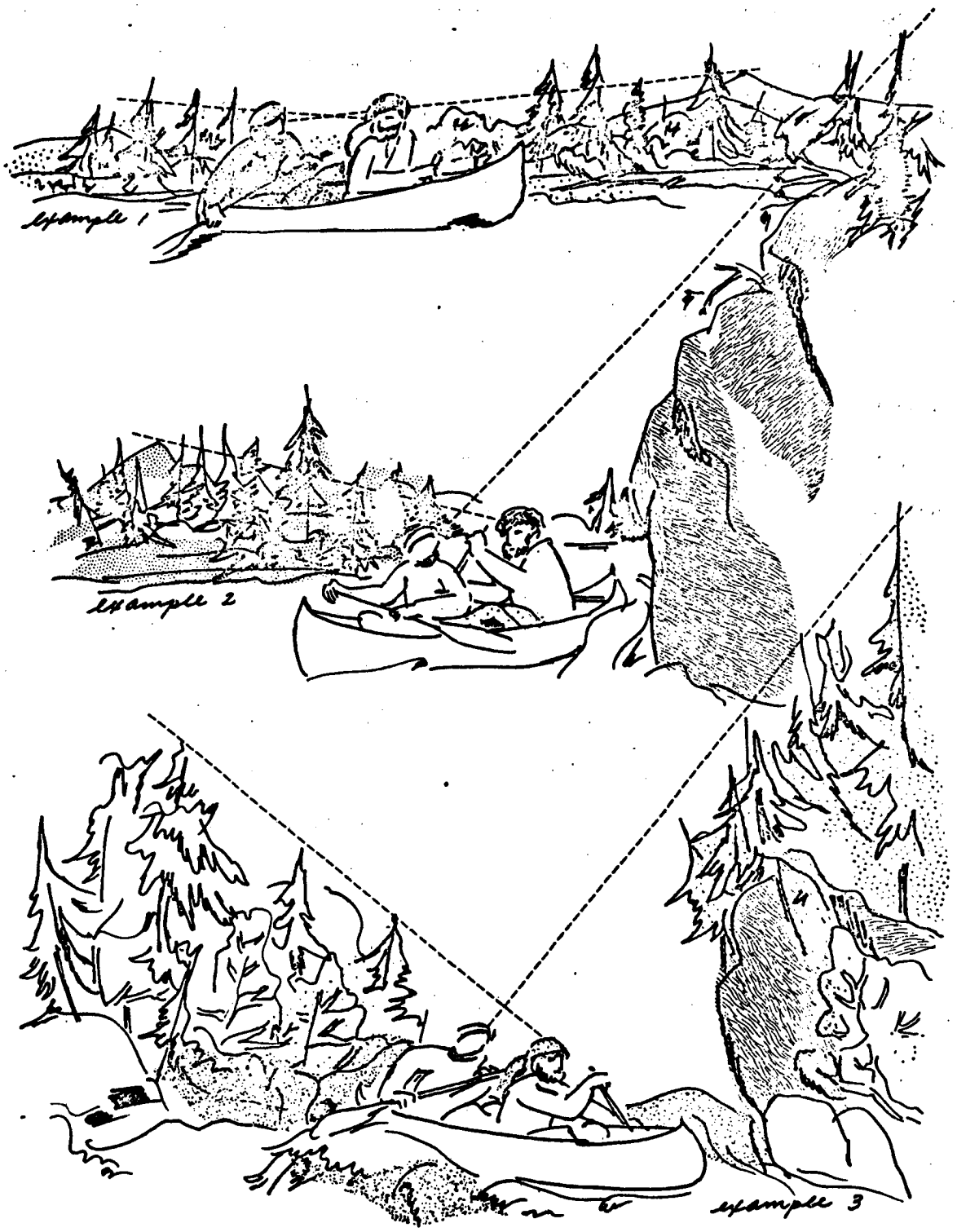
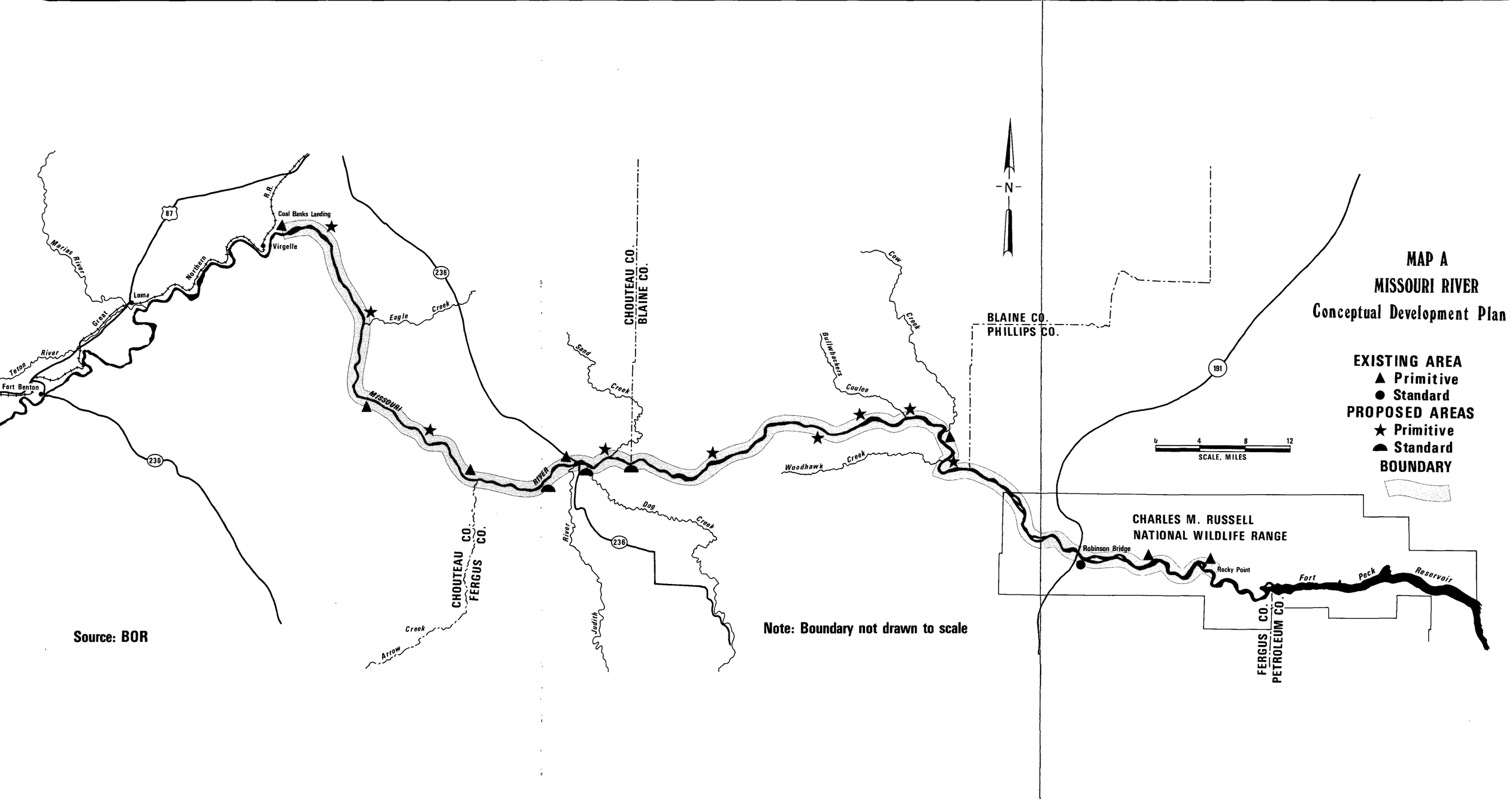


Figure 1 Topography Affects Sightline from the River

It is estimated that the optimum visitor use on the river would be 465 per day with a 90-day peak season (June, July and August). The optimum visitor carrying capacity for the season is estimated to be 41,850. Adjustments of these estimates would be made if actual use patterns so dictate.

The type and extent of controls necessary to preserve the existing integrity of the river and all land in the corridor would be determined in the preparation of the master plan. These controls would restrict future development and use of the land that would detract from the historical, cultural, recreational, scenic, or fish and wildlife values of the area. Such controls could include the prohibition of new commercial uses and the establishment of acreage, frontage, and setback requirements for new developments of private lands within the immediate environment of the Missouri Wild and Scenic River. Consideration would also be given to developing design standards which assure that structures, recreation facilities, or other necessary modifications of the existing environment are harmonious with their setting.

Both "standard" and "primitive" facilities are included in the conceptual development plan to properly accommodate visitors and obtain the desired distribution of use along the river. Twenty existing and potential recreation developments have been identified


MAP A
MISSOURI RIVER
Conceptual Development Plan
EXISTING AREA
Primitive
Standard
PROPOSED AREAS
Primitive
Standard
BOUNDARY
N
SCALE, MILES
0 4 8 12
Source: BOR
Note: Boundary not drawn to scale
Fort Benton
Loma
Virgelle
Coal Banks Landing
Marias River
Teton River
Great Northern R.R.
Eagle Creek
Sand Creek
Bullwhackers Coulee
Cow Creek
Woodhawk Creek
Dog Creek
Judith River
Arrow Creek
MISSOURI RIVER
CHOUTEAU CO.
BLAINE CO.
BLAINE CO.
PHILLIPS CO.
CHOUTEAU CO.
FERGUS CO.
FERGUS CO.
PETROLEUM CO.
CHARLES M. RUSSELL
NATIONAL WILDLIFE RANGE
Robinson Bridge
Rocky Point
Fort Peck Reservoir
87
230
236
191

(see Conceptual Development Plan Map). Standard campgrounds would contain drinking water, parking spurs, comfort facilities, tables, and fireplaces plus boat ramps and trailer space where appropriate. Primitive facilities would normally be limited to comfort facilities, fireplaces and garbage pits, thus insuring a minimal visual impact and providing the visitor with the feeling of "roughing it."

Six existing areas are owned and operated by the Montana Fish and Game Department. The James Kipp State Recreation Area at Robinson Bridge presently provides standard camping facilities. Two primitive campsites are presently provided along the river within the Charles M. Russell National Wildlife Range.

The other existing sites currently provide primitive camping facilities, although some have potential for upgrading to standard. These eight areas plus three additional standard facilities, which should be developed at the Community of Virgelle, on the south bank near Judith River, and at Rocky Point would serve as the initial recreation facilities for the river area upon its establishment as a component of the National System. Development of the three new standard facilities would be expanded as visitor use increases. The remaining sites would be developed later as they are needed, and after the ability of the environment to sustain increased impact has been assessed. The existing facilities would continue to be managed by the State.

Several of the development sites would have hiking trails of varying length. These trails would lead visitors to the many scenic side canyons, geologic formations, and historic and archeologic sites. Properly located trails would not only enhance the visitor's enjoyment but would serve as a method of visitor control. These trails could also serve as side trails to the proposed Lewis and Clark National Scenic Trail, if established (see Interrelationship with Other Projects and Jurisdictions).

Scenic roads and overlooks would be developed where appropriate, following studies by the managing agencies to determine the impact of such developments upon the river. Roads and overlooks easily seen from the river would not be developed.

To properly interpret the historic, geologic, and archeologic associations in this stretch of river, an interpretive plan would be developed as part of the master plan for the area in keeping with the undeveloped character of the river. Such associations would be interpreted primarily through brochures, pamphlets, and maps that can be easily carried by the visitor. Signs would be placed at standard campgrounds, but not at primitive campgrounds. The total area encompassed by this proposal is estimated to be 147,800 acres with current ownership as follows:

Federal	101,500
Bureau of Land Management	(81,600)
Fish and Wildlife Service	(19,900)
State	10,300
Private	36,000

Private lands considered by this proposal for acquisition are 6,100 acres in fee title and 29,900 acres of scenic easements. Federal and State lands would remain under their current management jurisdiction unless cooperative agreements are developed by the managing agencies. The figures used in this proposal are estimates and would be refined during master planning. Upon completion of a master plan for the river an environmental assessment would be prepared and all requirements of the National Environmental Policy Act met.

Off-road vehicle use and use of motorboats would be strictly regulated to meet the management objectives for wild, scenic, and recreational river classifications; to protect the primitive nature of the river area, soils, vegetation, fish and wildlife, geologic features, and historical and cultural values; and to prevent conflicts with other recreational uses. The management agencies would cooperate with State and local agencies and user groups in developing specific regulations governing such uses in the river area. Consideration would be given to specific uses, times of use, ability to protect the area's natural values, and the potential for using alternative means of transportation within the corridor.

Federal lands adjacent to the proposal area would be managed to protect the natural values of the Missouri Wild and Scenic River area. This would require the active cooperation of other Federal and State agencies to assist in the development and enforcement of land use

practices to protect the area from surface dumping of garbage, sewage pollutants, and other contaminants.

Fishing, hunting, and trapping would continue within the proposal under applicable Federal and State regulations. Although wild and scenic river designation does not affect the jurisdiction or responsibility of the State of Montana over fish and wildlife resources, the Secretary of the Interior may designate zones or periods that hunting would not be permitted because of public safety, administration, public use, or enjoyment. Such action would be undertaken only after consultation with the Montana Fish and Game Commission. No such actions are expected to be necessary in the proposed area.

The use of forage would be regulated to retain the visual and environmental values for which the area was designated. Grazing activity which would be detrimental to soil stability, natural vegetative patterns, wildlife distribution, water quality, or other natural values would not be permitted.

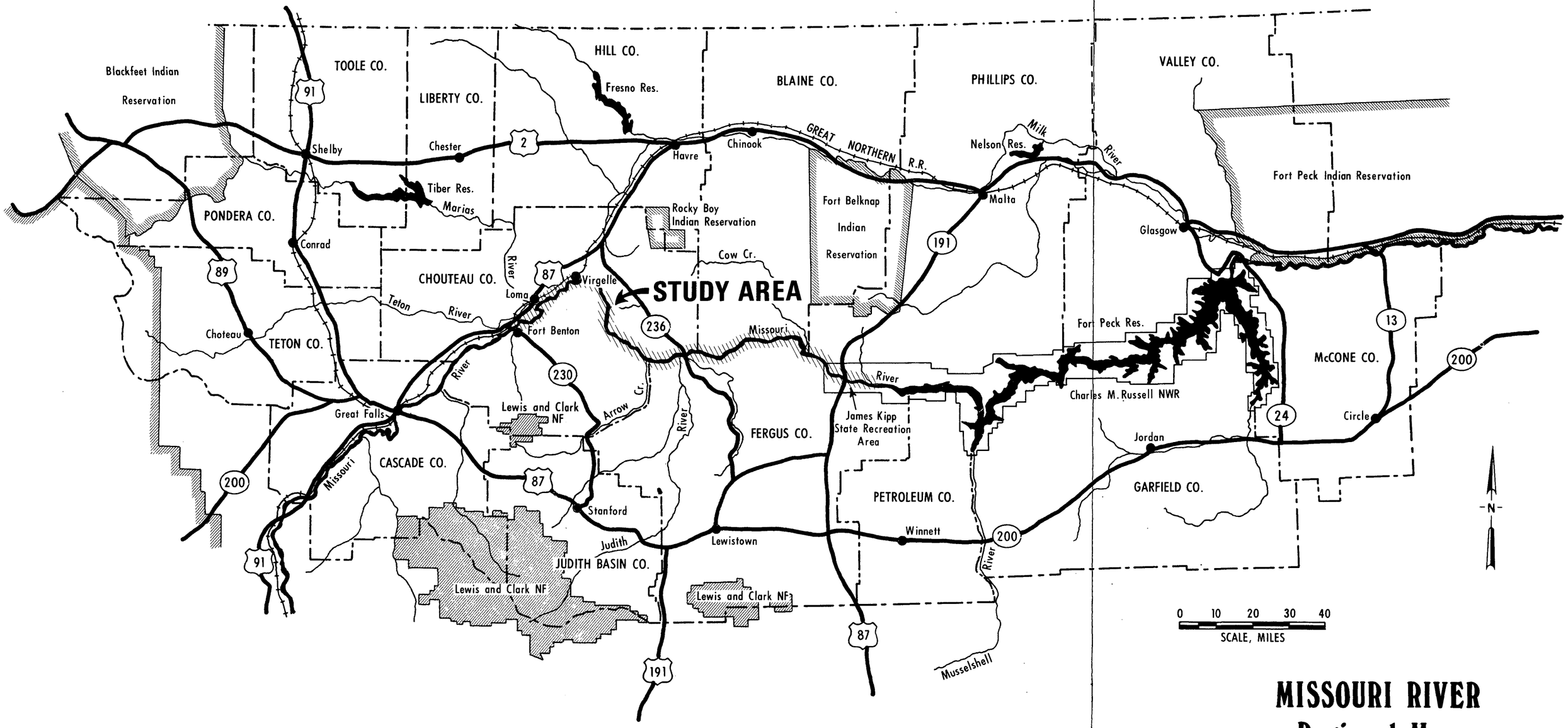
Management of the river area would be directed toward maintaining the existing condition of the soil, water, and vegetation. The natural processes presently occurring in the watershed would proceed unimpeded. No streambed or bank alterations by man would be permitted; but would be subject to minimal disturbance with the construction of public use facilities.

Timber harvest would be controlled within the proposed river corridor.

INTERRELATIONSHIP WITH OTHER PROJECTS AND JURISDICTIONS

Although exact figures would depend upon boundaries determined in the master plan, Federal land adjoins an estimated sixty to seventy-five percent of the proposal area (see Land Ownership Map). These lands are administered by the Bureau of Land Management and the Fish and Wildlife Service. Well over half of the Federal lands adjacent to the proposal but outside of the Charles M. Russell National Wildlife Range are public domain land managed by the Bureau of Land Management. The Bureau recognizes the existing and potential wild and scenic river values of the Missouri River and the proposal is compatible with management objectives for the adjacent public domain lands.

The 1,007,566 acre Charles M. Russell National Wildlife Range encompasses the lower 28 miles and 19,900 acres of the proposal (see Regional Map). This area was established on December 11, 1936, for the conservation and development of natural wildlife resources, and for the protection and improvement of public grazing lands and natural forage resources. The Department of the Interior has proposed that approximately 176,140 acres of the Wildlife Range be designated as a unit of the National Wilderness Preservation System. The proposed wilderness is made up of 13 tracts; the Antelope Creek and Fort Musselshell tracts, totalling 13,400 acres, lie within the wild and scenic river proposal. The Fish and Wildlife Service also recognizes



MISSOURI RIVER
Regional Map

INT: 1730-72

the existing and potential wild and scenic river values of the Missouri River. The management objectives for the adjacent wildlife range areas and the proposed wilderness designation of some of those areas are compatible with wild and scenic river designation.

The National Trails System Act (Public Law 90-543) requires study of the feasibility and desirability of designating as a National Scenic Trail the Lewis and Clark Trail from Wood River, Illinois, to the Pacific Ocean in Oregon following both the outbound and inbound routes of the Lewis and Clark Expedition. Should such a trail be established, it would pass through the proposal area and could connect with the proposed hiking trails in the development sites for the Missouri Wild and Scenic River.

The United States Army Corps of Engineers currently administers the Fort Peck Reservoir project that lies immediately downstream from the wild and scenic river proposal. The designation of the 128 miles of Missouri River upstream from the reservoir would not affect the reservoir operations.

Two water resources projects have been proposed that could affect the Missouri River segment included within the proposal: the Fort Benton Dam proposed by the Bureau of Reclamation one mile upstream from Fort Benton; and the High Cow Creek Dam proposed 23 miles upstream from the Fred Robinson Bridge (Highway 19 Bridge) by the Corps of Engineers (see Proposed Dams and Reservoirs Map). These

two projects were identified in the joint Department of the Interior-Department of the Army study and report on the feasibility of water and related land resource development for the Missouri between Fort Peck Reservoir and Fort Benton (1963). Construction of the Fort Benton Unit is not economically justifiable under existing market and rate conditions. The Governor of Montana has opposed the construction of the High Cow Creek Dam. This hydro project is inactive at the present time. (These proposals are discussed further in Section II under Water Resources Developments.) Designation of the Missouri River as a unit of the National Wild and Scenic Rivers System would cause the hydroelectric power potential of the High Cow Creek Dam to be foregone, and if constructed, the Fort Benton Dam would be required to maintain adequate flows below the dam.

The Rocky Boy Indian Reservation lies approximately 25 miles north of the proposal area; the Fort Belknap Indian Reservation is approximately 10 miles north. The proposal would not affect any of the lands on either reservation. The proposal to preserve the Missouri River for wild and scenic river purposes is consistent with the intent and purpose of the Montana Statewide Comprehensive Outdoor Recreation Plan, February 1973.

II. DESCRIPTION OF THE ENVIRONMENT

REGIONAL SETTING

The study segment of the Missouri River is situated in north-central Montana between the town of Fort Benton and Rocky Point Historic Site in the Charles M. Russell National Wildlife Range. For purposes of this report, the regional setting of the study river is considered to be an area in north-central Montana consisting of the following 15 counties: Blaine, Cascade, Chouteau, Fergus, Garfield, Hill, Judith Basin, Liberty, McCone, Petroleum, Phillips, Pondera, Teton, Toole, and Valley (see Regional Map).

A part of the Great Plains physiographic province, a land of mixed prairie grasses, the region consists primarily of high rolling plains (see Physiographic Contour Map). The Little Rockies and the Bear Paw Mountains are located approximately 27 miles and 22 miles north of the study area, respectively; the Highwood Mountains are located approximately 35 miles south. This highland plain has been dissected by the Missouri River and its tributaries. The Missouri flows through a relatively deep valley varying from 500 to 1,000 feet below the average elevation of the adjacent plains. The soils are extremely unstable. Erosion and tributary drainage have produced highly dissected, rough terrain, resulting in spectacular, varied, and scenic badlands and breaks ranging from 2 to 10 miles in width immediately adjacent to the river valley along both sides and of lesser width

along tributary streams. This greatly eroded section of the region is commonly known as the Missouri River Breaks.

The Marias River, including its tributary, the Teton, and the Judith River are the principal tributaries joining the Missouri River in the region. The Musselshell River flows from the south into the upper portion of the Fort Peck Reservoir. The Milk River parallels the Missouri to the north as it flows eastward through the region to eventually join the Missouri below Fort Peck Dam.

SOCIO-ECONOMIC CHARACTERISTICS

Population

The population of the 15 counties adjacent to the river corridor was approximately 171,000 in 1970. However, the population is scattered over an area of approximately 47,000 square miles, averaging only 3.6 persons per sq. mile. In 1970, the average number of persons per sq. mile in the State of Montana was 4.8. The total population of the 15 counties increased 14 percent between 1920 and 1970, however, if Cascade County, which includes the city of Great Falls, is excluded, the remaining 14 counties suffered a 20 percent decline in population during this 50-year period. For the 10-year period between 1960 and 1970, only Cascade County gained population while the total population of the 15 counties decreased 4.8 percent.

Present and Projected Population Statistics for the Larger Communities in the 15-County Region (1970 Data)

Urban Area	Population (in thousands) 1970	1980 (est)	2000 (est)
Great Falls (city)	60.0	66.0	85.0
Great Falls (metropolitan)	72.9	80.1	103.0
Havre	10.6	11.0	13.0
Lewistown	6.4	7.0	8.5
Glasgow	4.7	5.5	7.0
Shelby*	3.1	4.5	5.5
Conrad*	2.8	7.2	8.7
Malta	2.2	2.3	2.6

Source: Montana Department of Planning and Economic Development

*The Federal Anti-Ballistic Missile project, planned for the Conrad-Shelby areas and which accounted for the projected rapid population increases in those communities, has been discontinued by the Federal Government. As a result the projected populations for 1980 and 2000 probably will not be reached.

Economy

The economy of the 15-county area is based primarily upon the production of grain, hay, and livestock. The number of farms in the region has decreased while farm size and value has increased considerably. Between 1954 and 1969, the number of farms in the 15 counties decreased approximately 22 percent to a total of less than 8,400. However, during this same 15-year period, the average cash receipts per farm increased from $14,400 to $27,500.

The Montana Department of Planning and Economic Development expects no significant shifts in the economy of the region. Most of the region will remain agriculturally oriented and growth will be slow. Farm consolidation will continue, and excess labor will continue to migrate from rural to urban areas since alternate employment is limited in most of the counties.

Agriculture, predominantly livestock grazing and wheat growing, is the dominant land use in the region. Most of the cultivated land is devoted to dryland farming with a relatively small amount of irrigated farming on limited tracts of the river bottoms. Winter wheat, the basic dryland farming crop, is grown on the upland plateaus and plains. The remaining uplands and the rough lands are devoted to livestock grazing, with irrigated hay crops in the river bottoms supplementing the livestock industry.

Large tracts of public domain land administered by the Bureau of Land Management, portions of the Lewis and Clark National Forest, the Charles M. Russell National Widllife Range, and the Fort Peck Reservoir are located within the region. Also located here are the Rocky Boy and Fort Belknap Indian Reservations.

There has been an increasing amount of oil and gas exploration in the vicinity, especially north of the Missouri River. Although existing Bureau of Land Management stipulations provide protection for public domain lands within the region, no such protection exists for private land.

CLIMATE

The climate is semi-arid. It is marked by wide seasonal fluctuations in precipitation and temperature, recurring drought, a relatively short growing season, and a high proportion of sunny days.

Precipitation averages about 13 inches annually, 8.5 inches occurring from April through September. Summer temperatures are moderate and are usually hot in the daytime and cool at night. The fall months are generally cool and dry; very little snow falls before October. The Missouri River is usually frozen over by December and does not thaw until April. Winters are cold with light to moderate snowfall. Low temperatures are frequently dispelled by moderating winds known as "chinooks."

TRANSPORTATION

Major highways facilitate transportation throughout the region although some communities and ranches are not provided with surfaced roads (see Regional Map). The basic network of highways in the region consists of east-west highways, U.S. 2 and State 200; and north-south highways, U.S. 87, 89, 91, and 191, and State 19, 13, 24, and 236. The Missouri River area is the hinterland of the 15-county area and there is a general lack of access to the river. A hard-surfaced highway, U.S. 97, parallels the river from Fort Benton to near Virgelle, but from Virgelle to the Fort Peck Dam--261 miles--highways are located a considerable distance from the river. Only one bridge and four ferries cross the stretch of river between Fort Benton and Rocky Point and there are no crossings on the reservoir.

RECREATION RESOURCES

An abundant variety of recreation resources are available within the region. The area possesses outstanding qualities including spectacular scenery, historic associations of national significance, important archeological sites, interesting geology, a rich wildlife habitat with great diversity of species, and the free-flowing aspects of the Missouri River. These, in themselves, represent an important recreation resource.

The Missouri River is, by far, the most important single recreation resource in the region. Public domain lands administered by the Bureau of Land Management, mostly concentrated in Phillips, Valley, and Garfield Counties, greatly expand the potentials of this resource. River floating and related fishing, camping, and picnicking at undeveloped sites accounted for an estimated 3,000 visits in the summer of 1970 and have increased since then. Hunting, bank fishing, camping, and picnicking comprise most of the other recreation uses along the river.

In all, there are 6.5 million acres of public land and water resources available for general or dispersed recreation in the region. However, there are only about 170 acres which have been developed for formal public recreation use. Most of this developed acreage is adjacent to the river corridor. Public recreation use facilities which have been provided at the developed areas include tent and trailer camping sites, parking spaces, picnicking areas, playfields, boat access points, and foot and horse trails. Areas for hunting and fishing have been

Looking upstream from Coal Banks Landing Access Site

provided at relatively few locations. The recreation lands in the region receive about 1.4 million visitors annually, of which about 1.12 million (88 percent) are day visits. The segment of the Missouri from Fort Benton to the headwaters of Fort Peck Reservoir and the segment of the Smith River from its forks to the confluence with Hound Creek are two of the five components of the Montana Recreational Waterways System established by the Montana Fish and Game Commission in 1965.

The Montana Recreational Waterway System is a basic plan for the preservation and orderly development of Montana's remaining outstanding streams and rivers. The system was adopted with the intent to accomplish three major goals: to maintain the better streams as free flowing, productive waters; to improve somewhat less than prime streams to a level making them eligible for inclusion in the system; and to develop the waterways in a manner that will encourage and obtain optimum recreational use. The Missouri River was included in the system by Commission vote in 1966.

The recreational waterway concept has not received legislative recognition and has no legal status.

THE MISSOURI RIVER AND ITS SETTING

From Fort Benton, the river flows northeast to a point near Virgelle, then southeasterly to Arrow Creek and generally east to Rocky Point Historic Site, about 10 miles above the headwaters of Fort Peck Reservoir. Within this segment, the river flows through portions

of Chouteau, Fergus, Blaine, and Phillips Counties and receives the waters of its major tributaries, the Marias and Judith Rivers.

The initial 42-mile segment from Fort Benton to Coal Banks Landing has not been recommended for designation due to the large amount of private land ownership near the community of Virgelle. The river averages 600 feet in width along this segment and is dotted with picturesque islands and sandbars. Cultivated fields in the river bottom extend to the base of the river bluffs, but normally cannot be seen from the river. In general, the bluffs are grass covered and rise rather sharply from the flood plain to the flat prairie about 300 feet above the river. The flood plain is seldom more than a half mile wide on either side of the river. Occasionally, dark shale bluffs rise abruptly from the river up to 100 feet or more to the adjacent prairie. Although seldom visible from the river, the works of man are evident with the Great Northern Railroad grade, electric and telephone lines, roads, and ranches. Fort Benton, with a 1970 population of 863, and the much smaller communities of Loma and Virgelle lie in the flood plain, the only towns in the flood plain along the entire study segment. Ferries are located near Loma and near Virgelle. The Marias River enters into the Missouri a short distance downstream from the Loma Ferry.

From Coal Banks Landing downstream about 9 miles to Haystack Butte the scenery gradually changes. The flood plain narrows and the river becomes entrenched. Approximately 25 ranch and farm buildings on the bottom lands are in view from the river.

From this point downstream about 33 miles to approximately 4 miles above the mouth of the Judith River, man-made features are almost completely lacking. In this section, the landscape remains very much as it was when Lewis and Clark first saw it.

First, almost imperceptible outcroppings of white appear—the "white rock." As the river gouges its way downstream, more and larger sections of this rock are visible. In sharp contrast among the white sandstone are scatterings of pine and juniper. These formations are found not only on the main stem, but often extend up the canyons of several tributaries such as Little Sandy, Eagle, and Arrow Creeks.

The eroded sandstone formations become more unusual in shape and size, and often resemble castles, parapets, and other ancient structures. Outcroppings of dark intrusive rock thrust upward through the white sandstone, forming huge walls of rectangular blocks.

Rapids are encountered where these darker, resistant rocks cross the streambed. These rapids, more choppy than swift, offer a contrast to the placid flows characteristic of most of the river.

From about 4 miles above to about 4 miles below the Judith River, the canyon widens. The white rocks pass from view and the bluffs take on a grayish color and denser concentrations of evergreens are found. At its confluence with the Judith River, the valley is substantially wider on both sides of the Missouri. Here are the

historic sites of Forts Claggett and Chardon, and Camp Cooke. Here, too, is the Lohse Ferry, the first crossing of the Missouri downstream from the Virgelle Ferry. Large cottonwood, ash, and boxelder line portions of the banks, and the mouth of the Judith Valley appears thickly wooded. The largest concentration of deciduous trees is in this vicinity.

About 4 miles below the Judith River the canyon begins to close in again and the green vegetation fades into the earthy shades of barren country. From this point downstream to Cow Island, just below the mouth of Cow Creek, rugged badlands provide a backdrop for the Missouri for a distance of 38 miles. In places the massive sandstone formations, scattered with a few conifers, rise 1,100 feet above the river. Rapids along this section are generally swifter than those upstream.

Downstream from Cow Island, the harsh badlands gradually give way to a more open aspect; the flood plain becomes wider, the bluffs lower. There is more vegetation on the islands and along the banks. Wildlife is more numerous, especially deer. There are more evergreens long the bluffs in the vicinity of Cow Island than anywhere along the entire study segment. From the boundary of the Charles M. Russell National Wildlife Range downstream to Rocky Point the topography becomes still more open. The river has not cut deeply into the plains as in the badlands, and the river meanders in its flood plain, in

First view of White Rocks Area below Coal Banks Landing

Scenic view of rock formation found along the Missouri River

State-operated "Hole in the Wall" development area

places over a mile wide. More islands are found, covered with large groves of cottonwood or shrub willow and wildrose. This section of the river provides the best habitat for wildlife such as geese, ducks, beaver, and deer.

There are a few irrigated fields planted in cereal and forage crops for wildlife. In most cases, these fields are not visible from the river.

Flow Characteristics

The modern regimen of this reach of the Missouri River is not entirely normal, due to regulation and storage at several dams upstream from Fort Benton. The drainage area increases from 23,292 square miles at Morony Dam, the closest to Fort Benton, to about 41,000 square miles at the head of the Fort Peck Reservoir. The increase in streamflow, however, is only about 30 percent. Discharge records of the Missouri at Fort Benton, Montana, for the period 1891-1960 show the minimum annual discharge of 3,621 cubic feet per second occurred in 1937 and the maximum annual discharge of 11,850 cubic feet per second occurred in 1895. The average annual discharge for the overall period was 7,579 cubic feet per second.

Peak flows in this segment generally occur from late May to mid-June. and their usual source is snowmelt runoff from the mountain areas. Heavy rains often occur in the same period and their contribution may exceed that from snowmelt.

Stream gradient averages about 3 feet per mile and varies from about 12 feet in the extreme upper reaches to less than 2 feet per mile in many sections. Rapids are created by gravel bars at the mouths of tributaries or by ledges of bedrock. The velocity of the stream is closely associated with width and gradient. Mean velocities vary from about 3.5 to 2.0 feet per second at a discharge of 6,000 cubic feet per second.

During the normal recreation-use period, June to October, the river has an average width of 600 feet and a depth of 3-6 feet. But depths of less than 3 feet are not uncommon. Shallow draft boats such as canoes, kayaks, and johnboats are best suited for use on the river.

Water Quality

Water within this stretch of the Missouri has been designated by the State to require maintenance of water quality suitable for (1) drinking, culinary and food processing purposes after adequate treatment to remove naturally present impurities; (2) bathing, swimming and recreation; (3) growth and propagation of non-salmonid fish and associated aquatic life, waterfowl, and furbearers. Data on water quality are limited; however, the quality is considered generally good. Although turbidity and temperatures are high, they are a reflection on natural background conditions typical of the upper Missouri drainage (Ref: Please see Middle Missouri, Water Quality Inventory and Management Plan prepared under Section 303 (3) of the Federal Water Pollution Control Act Amendments of 1972). Only two small communities,

Loma and Virgelle, exist between Fort Benton and Fort Peck Reservoir. These small communities, plus present and expected recreational use, should cause little change in the water quality.

Water samples were taken by the Geological Survey over a 13-month period in 1969 and 1970. The average coliform bacterial count in his sampling process was 880/100 m.l. which is less than the 1,000/100 m.l. maximum level considered safe for swimming.

Major problems, however, may occur on both the Marias and Judith Rivers (tributaries to the study area). The primary degradation problems appear to be the heavy sediment loads due to natural erosion in the Marias River drainage and sulfate loads frequently contributed to the Missouri from the large irrigated areas in the Judith River drainage.

Land Ownership

As might be expected, many of the "breaks" areas in the four counties through which the river flows were passed over during the homesteading era, leaving considerable acreage in the public domain. The high rolling lands, north and south of the breaks, were more accessible, and were included in farming and stock raising homesteads.

As an illustration of the land ownership pattern near the river within the four county area, private ownership accounts for approximately 70 percent of all lands, with the remaining land in Federal and State ownership. The majority of the private land in the river valley is located between Fort Benton and Coal Banks Landing in the

Cattle using river and shade from cottonwoods near Arrow Creek

upper portion of the study area (see Land Ownership Map). The remaining tracts of private land are scattered along the river, usually on the bottomlands. State-owned lands are scattered throughout the entire stretch of river.

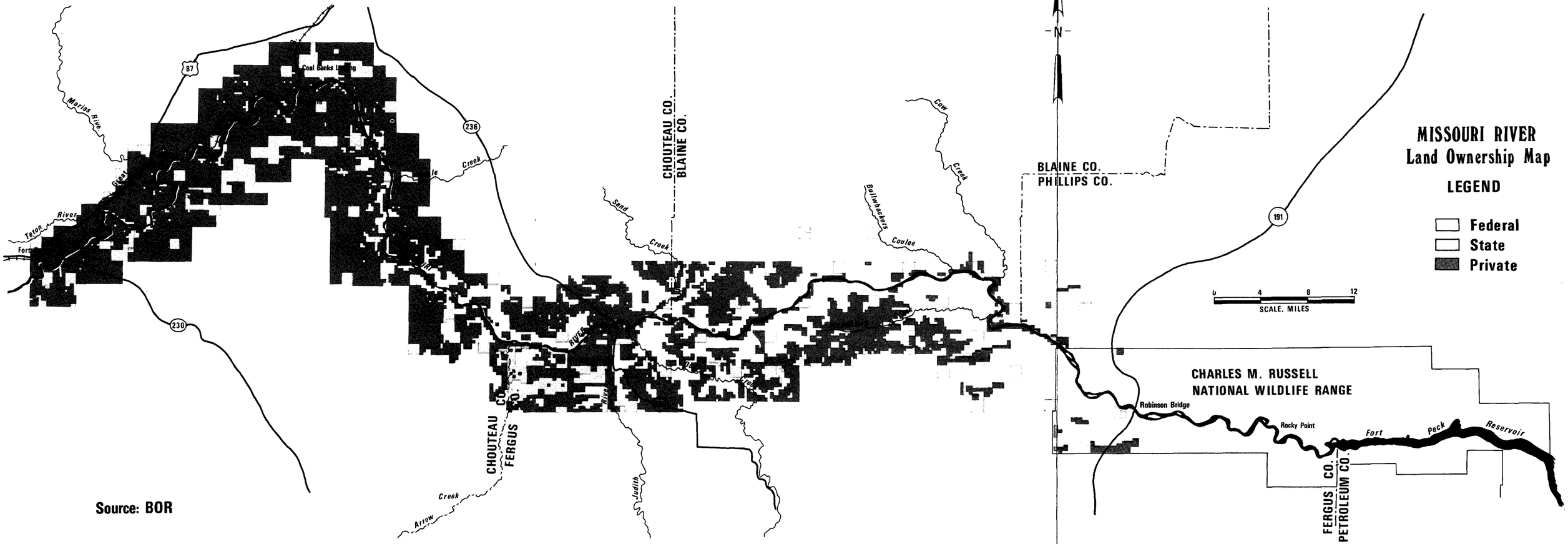
Land Use

Domesticated animals in the four counties totaled 370,000 animal units in 1960, according to statistics of the Montana Department of Agriculture. These included 326,100 cattle and calves; 166,800 sheep; and 10,600 horses.

Most of the range area is grassland, interspersed with large areas of sagebrush and smaller areas of conifer, saltbush, and greasewood vegetation types. A list of range types in the area includes: grass, meadow, sagebrush, conifer, broadleaf trees, saltbush, greaseood, annual weeds, waste, barren, half-shrub, and browse-shrub.

The ranches contain varying proportions of public domain land, depending upon their location. Some use only a few scattered isolated tracts. Others, closer to the river, may consist of less than 10 percent private land, which is used for wintering and hay production, while the balance of the ranch operation is on public land.

In contrast to the extensive areas of farmlands and ranches within the four county area, land use within the river valley is restricted almost


MISSOURI RIVER
Land Ownership Map
LEGEND
Federal
State
Private
N
SCALE, MILES
0
4
8
12
87
236
191
230
Marias River
Teton River
Sand Creek
Bullwhacker Coulee
Cow Creek
Judith River
Arrow Creek
Rocky Point
Robinson Bridge
Fort Peck Reservoir
CHOUTEAU CO.
BLAINE CO.
BLAINE CO.
PHILLIPS CO.
CHOUTEAU CO.
FERGUS CO.
FERGUS CO.
PETROLEUM CO.
CHARLES M. RUSSELL
NATIONAL WILDLIFE RANGE

Source: BOR

exclusively to the grazing of livestock on each bank of the river due to the unsuitability of the terrain for cultivation. In some areas access is so difficult that grazing is not possible. Most of the grazing is on Federal land administered by the Bureau of Land Management. There are 111 grazing permit leases on the Federal lands within the proposal. These lands support 8,876 animal unit months (a unit of measure for the amount of feed needed to feed one cow for one month). Although livestock grazing near the river is important, in many cases the greatest value for livestock is use of the river for drinking water and the cottonwood groves for shade. Livestock use along the river is predominantly spring-summer-fall cattle grazing with only a few ranches running cattle in the winter.

A trend toward cottage and residential development of the private lands adjacent to the river is being experienced.

Water Rights

The basic water law recognized in Montana is the prior appropriation doctrine. This doctrine is a "time-use" doctrine in which the concept of "first in time, first in right" is the principal criterion for determining or recognizing the relative status of alleged water rights.

The acceptance and development of the appropriation doctrine rather than the riparian doctrine was due first, to the climate and the frontier mining and ranching settlement which occurred in Montana and, secondly, to the fact that most of the land was in the public domain.

No person owns water in Montana. Rather, the State has ownership of water by virtue of the State Constitution (which holds that the use of water is a public right) and by the opinion of the Montana Supreme Court. An individual has (owns) the right to use the water as long as he does not infringe on rights of prior appropriators.

Within this stretch, from the records of the 1963 Montana Water Resources Survey, there are 22 filed appropriations and 10 use rights. All use rights and appropriations but one are by private operations with irrigation being the principle use. The remaining appropriation is for domestic use by the town of Fort Benton.

As the Missouri River was used for navigation on the date Montana was admitted to the Union as a State, the river is considered a navigable stream. Section 67-302 of the Revised Code of Montana, 1947, declares that the State is the owner of all land below the water of a navigable lake or stream.

Access

From Fort Benton to Rocky Point road access to the Missouri is very poor (see Regional Map). At the upstream boundary of the study area, U.S. 87 and State Highway 230 connect Fort Benton and the community of Loma to the region's peripheral highway system. Access to Virgelle is by improved county road connecting with U.S. 87. The north-south U.S. 191, the only paved highway within the study area, connects Malta and Lewistown, and crosses the Charles M. Russell National Wildlife Range at James Kipp State Recreation Area via the Fred Robinson Bridge.

One secondary road, State 236, bisects the area, its light traffic crossing the Missouri via the Lohse Ferry near the Judith River confluence. The Montana Department of Highways has plans to replace this ferry with a bridge. In addition to the crossings at the Robinson Bridge and Lohse Ferry, all other access and public crossings are by earth and gravel roads at Loma Ferry, Virgelle Ferry and Stafford Ferry.

There are many 4-wheel drive roads and jeep trails throughout the area. Some of these are county roads which receive minor maintenance, but most have come into existence merely through use by ranchers and hunters. Under ideal conditions, a passenger car may be used in driving some of these roads; however, the "gumbo" soil will turn into a sea of mud when moistened and cannot be travelled.

Soils

There are three major physiographic areas along the Missouri River with distinct soil patterns. Sedimentary uplands constitute the majority of the adjacent lands. These are characterized by undulating to steep landscapes, primarily the Missouri River breaks and the "badlands" associated with prominent sandstone and shale outcrops. Soils are generally shallow and sandy to clayey with slow permeability. Consequently, fertility is poor. The soil is droughty and difficult to manage and revegetate because of the narrow range of moisture conditions under which it can be worked. These soils are particularly subject to water and wind erosion, with relative erodability depending upon the amount and kind of vegetative cover, the shape and steepness of the slope, and the climatic features of drought and precipitation intensity.

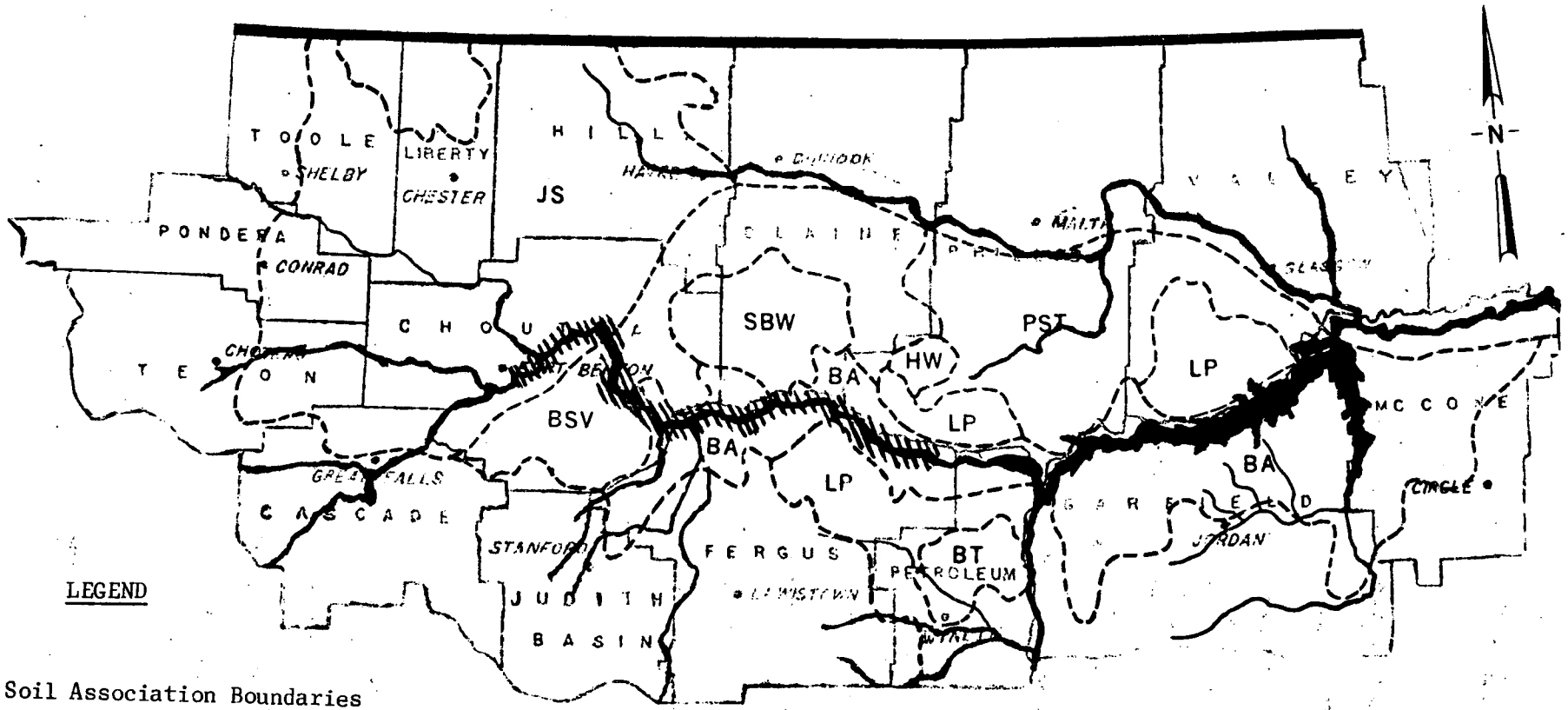
The second major soil pattern, the glaciated uplands, is characterized by undulating glacial plains. They were primarily developed in weathered clay loam material underlain by clay and clay loam subsoils. The clay subsoils are extremely hard when dry. These soils are highly susceptible to water erosion but generally fertile where soil depth is sufficient and deposits of lime and salt are not within the plow layer. They are commonly used for grain and hay production and grazing.

The third major soil pattern consists of alluvial terraces, toe slopes, and sloping fans of tributary drainages from the uplands and river breaks, as well as the flood plains of the Missouri River and its tributaries. These soils vary widely in depth and texture, ranging from deep sandy to clayey with variable internal and external drainage and flooding potential. Alluvium can contain high salinity and immature soils with no horizon development, but fertility is fairly high where these factors are low. Where protected from flooding, crops can be grown with irrigation.

Broad correlations can be made between soils and associated vegetation types. In general, conifers are found on the badland soils, but are not limited to this type. Sagebrush is found on the fine textured, heavy, clay soils while greasewood is located on alluvial type material near stream bottoms. Grasslands are widely scattered among the various associations and generally overlap with other vegetative communities.

More detailed soil information for the study area is contained in the following Soil Associations map and Soil-Properties chart, and in the narrative descriptions below. The large soil association areas, labelled with capital letters on the map, identify characteristic groupings of smaller soil series comprised of contrasting soils and occurring together in an intricate pattern. The letter symbols designate the names of the dominant soil series in that area. The

SOIL ASSOCIATIONS



LEGEND

Soil Association Boundaries

Study Area
(Not drawn to scale)

Scale in Miles
0 50
1:2,500,000

BA - Badlands(Bainville, Midway, Lismas, Pierre)
BSV - Bearpaw - Sprole - Vida(Landusky, Williams, Zahl, Thoeny, Elloam, Laurel)
BT - Bainville - Tullock(Cushman, Flasher, Midway, Thurlow)
HW - Hughesville - Woodhurst(Spring Creek, Blaine)
JS - Joplin - Scobey(Telstad, Kelvin, Zahl, Bew, Thoeny)
LP - Lismas - Pierre(Vananda, Promise)
PST - Phillips - Scobey - Thoeny(Zahl, Telstad, Zurich, Elloam, Laurel)
SBW - Spring Creek - Blaine - Woodhurst

Source: Montana Agriculture Experiment Station Bulletin 621, MSU, Bozeman, Feb. 1969.

Properties of Selected Soil Series

Soil Series	Thickness of Solum	Dominant Surface Textures*	Subsoil Textures*	Underlying Material (Substrata)*	Topography (Position)	Special Management	Range** Soil Group	1968 Classification Great Group
Bainville	***	sil	sil	*soft siltstone & sandstone*	*Convex slopes on ridge crests & valley sides*	Wind & water erosion	Si	Torriorthent
Bearpaw	15-26	cl	cl & c	cl glacial till	Undulating till plains	.....	Si-Cy	Argiboroll
Bee	14-21	cl & sicl	c	c & cl	Level & rolling fans, terraces & uplands	Water erosion	Cy	Haplargid
Blaine	10-31	sil, cl & c	sicl	sands of monzonite	Rolling & steep areas near highlands	Water erosion	Si-Cy	Argiboroll
Cushman	9-10	cl & l	cl	shale & sandstone	Nearly level to rolling uplands	Water erosion	Si-Cy	Haplargid
Elloam	7-13	cl & c	c	*cl glacial till with some gypsum*	*Micropits on sloping till plain*	.....	Cy-DC	Natrargid
Flasher	***	lfs & fsl	fs	fs or soft sandstone	Steep slopes on sides of plateau & valley	Wind & water erosion	Sy	Haploboroll
Hughesville	10-18	l & cl	cl & sicl	limestone	Moderately steep slopes below limestone ridges	Water erosion	Sv-Si-Cy	Cryoboroll
Joplin	7-12	l & cl	cl	l & cl till	Nearly level to rolling till plain	Water erosion	Si-Cy	Haploboroll
Landusky	12-24	cl	c	c glacial till	Nearly level to gently *sloping till plain*	Water erosion	Cy	Chromustert
Laurel	***	l & cl	l & cl	stratified l, sil & fsl	Level terraces, valley bottom & seeped areas	Drainage, control of water table & salts	SS	Salorthid
Lismas	7-18	c	c	shale	Rolling hills, uplands	Wind & water erosion	+SwC	Torriorthent
Midway	***	cl	cl	soft shale & sandstone	Convex slopes on ridge crests & valley sides	Wind & water erosion	Cy	Torriorthent
Phillips	7-27	l	cl & c	cl	Level to undulating till plain	Water erosion	Cy-Si	Paleargid
Pierre	12-18	c	c	shale	*Undulating to hilly uplands*	Water erosion	Cy	Camborthid
Promise	12-19	c	c	clay & shale	Nearly level to hilly uplands	Water erosion	Cy	Pelloxerert
Scobey	11-25	cl or l	c	cl glacial till	Nearly level to rolling till plain	Water erosion	Cy-Si	Argiboroll
Spring Creek	3-10	stgl	stgl	igneous and metamorphic rocks	Steep broken uplands	.....	SwN	Haploboroll
Sprole	9-18	l & cl	cl	l glacial till	Level to rolling till plain	Water erosion	Si-Cy	Argiboroll
Telstad	8-15	l & cl	c	cl glacial till	Undulating till plain	Water erosion	Cy-Si	Argiboroll
Thoeny	5-22	l & cl	c	cl glacial till	Nearly level till plain	.....	Si-Cy	Natrargid
Thurlow	17-28	cl	cl & c	cl	Nearly level to sloping fans & terraces	Water erosion	Cy	Haplargid
Tullock	8-15	fsl	fsl	lfs	Steep uplands	Wind erosion	Sy	Torripsamment
Vananda	***	c	c	saline-alkali clay	Level to sloping uplands	Massive, crusty surface, Water erosion	DC-SU	Camborthid
Vida	6-10	c	c	cl glacial till	Level to rolling till plain	Water erosion	Si-Cy	Argiboroll
Williams	20-35	l	l	l glacial till	Rolling till plains	Water erosion	Si	Haplustoll
Woodhurst	12-30	stl	stcl	quartz monzonite porphyry	Steep mountain slopes	.....	Forested	Cryoboroll
Zahl	5-10	l	l	friable glacial till	Rolling till plain	Water erosion	Si	Haploboroll
Zurich	less than 10"	cl	cl-c	firm glacial till	Rolling till plain	Water erosion	Si	Argiboroll

*fine sand.....fs
loamy fine sand.....lfs
fine sandy loam.....fsl
loam.....l
stony loam.....stl
stony gravelly loam....stgl
silt loam.....sil
clay loam.....cl
silty clay loam.....sicl
stony clay loam.....stcl
clay.....c

***These soils have limited solum development and thickness of solum has little meaning.
+Tentative classification.
SWC - [Author does not define. Presumably similar to SwN, a shallow clayey soil underlain by rock.]

SOURCE: Montana Agriculture Experiment Station Bulletin 621, Montana State University Bozeman, February, 1969.

**The following definitions for Range-Soil Groups are adapted from Technical Guide, Part II, E, Soil Conservation Service.

SS - SALINE SUBIRRIGATED: Subirrigated land where salt and/or alkali accumulations are apparent and halophytes occur over a major part of the area.
Sv - SAVANNAH SITE: Uplands on which grass cover with isolated trees is normal(climax). Do not confound with savannah type of cover resulting from overgrazing of natural grassland or the cutting of natural forest land. This site is common at margins of forest climates. Within grassland climates it occurs where soil moisture relations especially favor tree growth. Bedrock at the surface usually indicates a Very Shallow site.
Sy - SANDY: All normal coarse to fine sandy loams(not true sands) plus dark nearly level loamy fine sands, and loamy very fine sands; excepting relatively impervious(cemented) kinds which are better classed as Thin Sandy, or a type of Shallow or Very Shallow.
Si - SILTY: All normal very fine sandy loams, loams, silt loams, and silts.
Cy - CLAYEY: All normal relatively pervious sandy to silty clay loams and clays--normally granular.
SwN - SHALLOW NONLIMY: Shallow neutral to acid soils(10-20 inches) underlain by rock virtually impenetrable by roots.
DC - DENSE CLAY: Relatively impervious deep but dispersed clays--may be overlain by thin but ineffectual layers of other materials. The dispersed layer is Very Hard to Extremely Hard when dry and Very Sticky when wet.
SU - SALINE UPLAND: Uplands of ordinary depth where salt and/or alkali accumulations are apparent and halophytes occur over a major part of the area. Common only in arid climates.

NOTE: In this bulletin some soil series are placed into more than one Range-Soil Group. *This violates the intent of* the original article but appears to be useful when considering a soil series throughout its area of occurence.

first mentioned soil, for example Bearpaw, comprises the largest single soil area in the BSV delineation. These soils are described in the paragraphs below. Included soils, listed in parentheses on the map, occur in scattered areas too small to be separated, but comprising sizeable areas if taken collectively. Included soils are described in the Soil Properties chart.

The following descriptions are taken from Montana Agriculture Experiment Station Bulletin 621, Montana State University, Bozeman, February 1969: Bainville soils are formed on weakly consolidated sandstone and siltstone. The light brown, platy surface soil is underlain by a blocky silt loam subsoil. These soils are calcareous throughout. They occur on convex slopes on ridge crests and valley sides of the uplands. Depth to bedrock ranges from 4-24 inches.

Bearpaw soils are formed on firm clay loam glacial till. A granular clay loam surface soil rests on a prismatic clay subsoil which extends to depths of 10 to 20 inches where a lime accumulation is encountered. They occur on the undulating glacial till plains of north-central and northeastern Montana.

Blaine soils are developed on stony deposits (from basic and intermediate igneous rocks). The surface soil is a stony clay loam lying on a very stony clay subsoil. The gravels and stones make up 80 percent by volume of the subsoil and substratum. A lime zone is usually present at a depth of 15 inches. Hard bedrock is encountered at depths greater than 40 inches. They occur on rolling and steep landscapes.

Hughesville soils are developed on deep unconsolidated alluvium from limestone. A brown, platy and granular loam surface soil lies beneath the forest litter. The subsoil is a blocky silty clay loam. The lime horizon is encountered at about 2 feet. These soils occur on smooth fans and forested slopes.

Joplin soils are developed on calcareous glacial till. The brown, granular loam surface soil rests on a prismatic clay loam subsoil. A lime zone occurs at about 10 inches. The underlying glacial till is highly calcareous and friable. These soils occur on nearly level to undulating glacial till plains.

Lismas soils are developed on shale. These are clay soils that are very hard when dry, and sticky and plastic when wet. They are weakly calcareous and have some gypsum crystals just above the bedrock, which is usally encountered at less than 18 inches. The topography on which these soils occur is rolling, hilly and steep uplands.

Midway soils are formed on fine-textured sedimentary rocks. The brown granular clay loam surface lies on a platy clay loam subsoil. These soils are calcareous throughout. Bedrock occurs at 10-20 inches. They occur on convex slopes at crests of hills and ridges.

Phillips soils are develped on calcareous saline glacial till. The surface soils are light-colored loam and overlie brown prismatic clay subsoils which are very hard when dry. The lime layer is beneath

the clay subsoil at a depth of about 14 inches and may extend to 3 feet or more. Below the lime layer an accumulation of salt is encountered, usually below 3 feet. These soils occur on plane and concave slopes of nearly level to undulating glacial till plain.

Pierre soils are shallow to moderately deep clayey soils formed on shale. The textures are clay throughout and are very hard when dry. There may be a salt accumulation in the subsoil or substratum. The shale bedrock is encountered at less than 40 inches.

Scobey soils are developed on clay loam glacial till. The grayish brown, granular clay loam surface rests on a slightly darker prismatic clay subsoil. A lime zone is present at about 14 inches. These soils occur on nearly gently rolling glacial till plains.

Spring Creek soils are developed on igneous and metamorphic rocks. The surface soil is a brown, granular gravelly loam. The lime zone occurs at about 5 inches and bedrock at about 12 inches. These soils occur on steep and broken slopes with gradients in excess of 15 percent.

Sprole soils are developed on friable loam and clay loam glacial till. A dark, loam surface soil rests on a prismatic, clay loam subsoil. The lime zone is usually found at depths of 11-17 inches. These soils occur on undulating glacial till plains.

Thoeny (Tee-ne) soils are developed on calcareous glacial till. They have a platy, loam surface soil overlying a columnar clay subsoil. The combined thickness of the surface and subsoil ranges from 10 to 22 inches. A zone of lime accumulation occurs at about 12 inches and may extend to a depth of 4 feet. These soils occur on plane and concave slopes on the nearly level to rolling till plains.

Tullock soils are moderately deep and formed on weakly consolidated sandstone. The dominant textures are sandy loams and loamy fine sands. A thick brownish-gray, fine sandy loam surface soil lies on yellowish-brown fine sandy loam subsoil. The substratum is a fine sandy loam to loamy fine sand. They are sometimes underlain by sandstone at 24-36 inches. Tullock soils occur on undulating to sharply rolling uplands.

Vida soils are developed on friable glacial till. The thin clayey subsoil, which is prominent under range conditions, is incorporated in the plow layer in tillage. A lime layer is encountered at about 7-10 inches. Fertility problems may arise when large amounts of lime are incorporated in the plow layer, or where erosion has removed most of the surface soil and tillage is carried out in the lime zone. These soils occur on the nearly level to strongly undulating till plain.

Woodhurst soils are developed on fine-grained igneous rocks high in quartz. They have a thick, dark-colored surface soil over a stony clay loam subsoil. Bedrock is found at about 2 feet. These soils occur on sloping to very steep mountain slopes.

Geology

The landscape has been carved from a series of sedimentary rocks of Upper Cretaceous Age. The origin of the present course of the Missouri River is interesting and an important chapter in the area's geology.

The course of the river flows through a fine section of generally horizontal layers of Upper Cretaceous sedimentary rock crossing progressively younger beds of this series, covering ten million years or more. During the Upper Cretaceous Age (roughly between 70 and 80 million years ago), most of the present Great Plains and midwestern sections of the United States were beneath the waters of a great inland sea. This sea, however, did not cover the Missouri River country throughout this entire period. On the contrary, occasionally during the Upper Cretaceous period, this area had seashore conditions with deltas and coastal plain deposits laid down. Because the margin of the sea moved back and forth as the sea expanded and contracted over millions of years, the varied rock layers--some marine with sea animal fossils, other land deposits with coal and dinosaur fossils--represent a rather complete record of changing ancient geographical conditions.

White Rocks Area downstream from Eagle Creek

The present canyon of the Missouri is of recent origin, having been cut by the river in the past 1,000 years or so, during and after the retreat of the last continental glacier. Thus, the slopes are steep, the channel is well below the general elevation of the plains on either side, and the river is actively eroding its channel deeper.

From Fort Benton, the river passes river bluffs of thick marine shale of the Colorado Group. These beds represent a great flooding by the sea and are exposed across a vast expanse of territory to the west. At Coal Banks Landing, and for 15 miles downstream, the rocks of the Colorado Group lie beneath the surface except where thrust up along faults, and the overlying white Eagle sandstone makes up the canyon walls. The Eagle sandstone formation, commonly known as the "white rocks," caps the Colorado shale. This formation represents a shoreline depositional phase, having no marine fossils and a few thin coal veins and scattered plant fossils. About 15 miles below Coal Banks Landing to a point near the confluence of Arrow Creek, the soft shales of the Colorado Group, which have been thrust up along faults, form gently sloping valley walls, except where replaced by Eagle sandstone. Also in this stretch, conspicuous stocks and plugs and numerous dikes, all of igneous rock, rise above the surrounding sedimentary strata and add variety to the scenery.

Steamboat Rock formation within White Rocks Area

Below the confluence of Arrow Creek exposures of Claggett shale become conspicuous, and are more or less continuous below the Judith River until cut off by faulting near Stafford Ferry. Primarily a dark, marine shale, the Claggett represents another advance of the ancient sea.

In the same stretch of river the overlying Judith River formation, mostly sandstone, forms impressive cliffs and picturesque rock pillars. Of continental origin, the Judith River formation represents a period when deltas and expanding coastal plains "pushed" the sea eastward. Although this formation outcrops a few miles below the Judith River, it does not appear at water surface until below Powerplant Ferry. From this point downstream to the end of the area, faulting has produced an unusual mosaic outcrop pattern and the base of the Judith River formation appears as many as eight times. Here, too, numerous concretions and bentonite beds are exposed above the Judith River formation, representing one of the last great expansions of the Upper Cretaceous sea.

Paleontological interpretive values are little known. The continental beds might well be found to contain fossils of such dinosaurs as Ornithominus and Trachodon, and possible fragmentary remains of very primitive mammals.

The marine beds (Claggett shale and Bear Paw shale) may yield such typical fossils of this period as sea-going reptiles (Monosaurs and Plesiosaurs). Conspicuous invertebrates, such as Ammonites and Baculites, are known to be locally abundant.

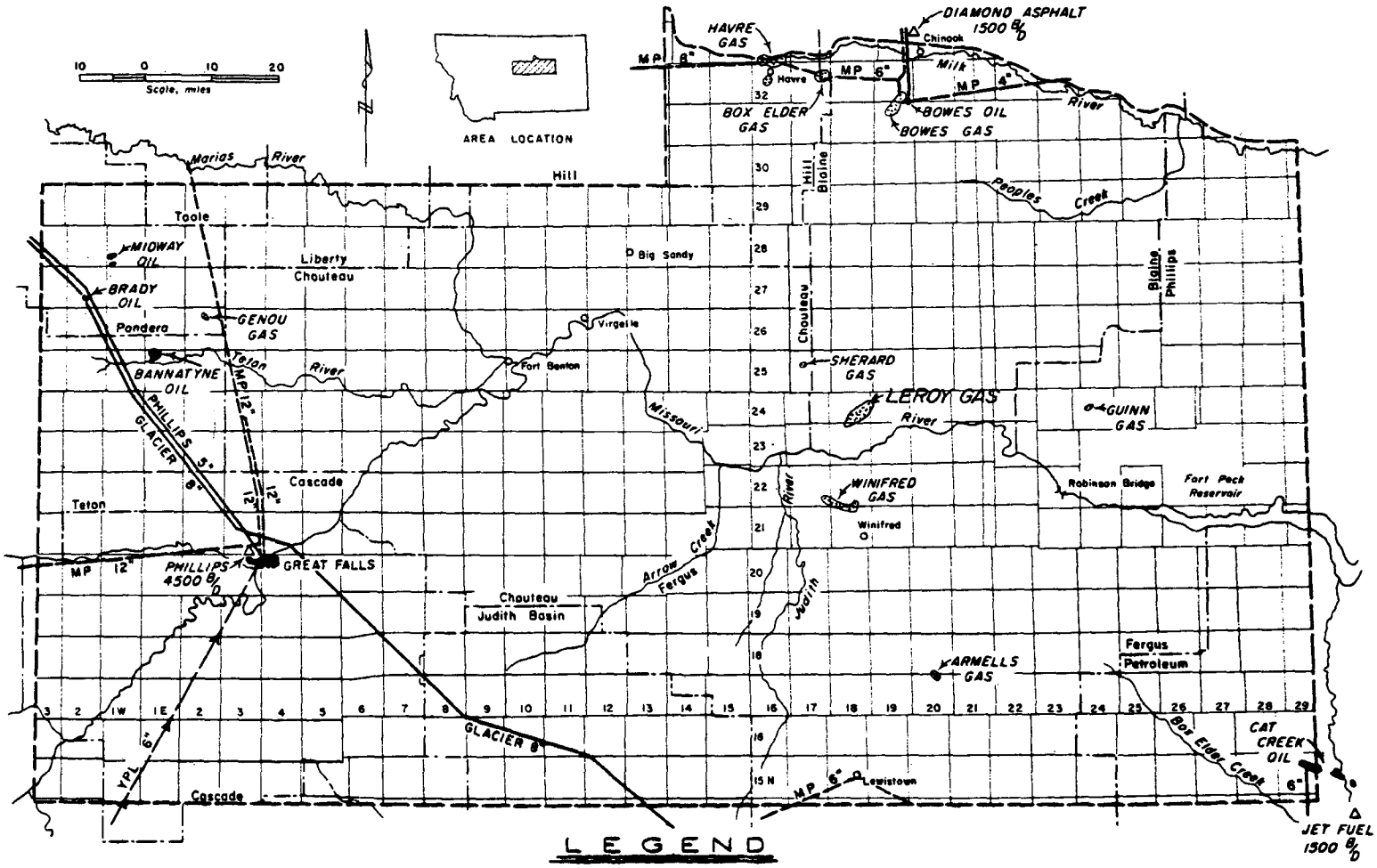
The geological resources which will have perhaps the greatest impact upon the visitor are the "white rocks" of the Eagle Formation and the faults which are so clearly exposed in the lower section of the river segment.

Minerals

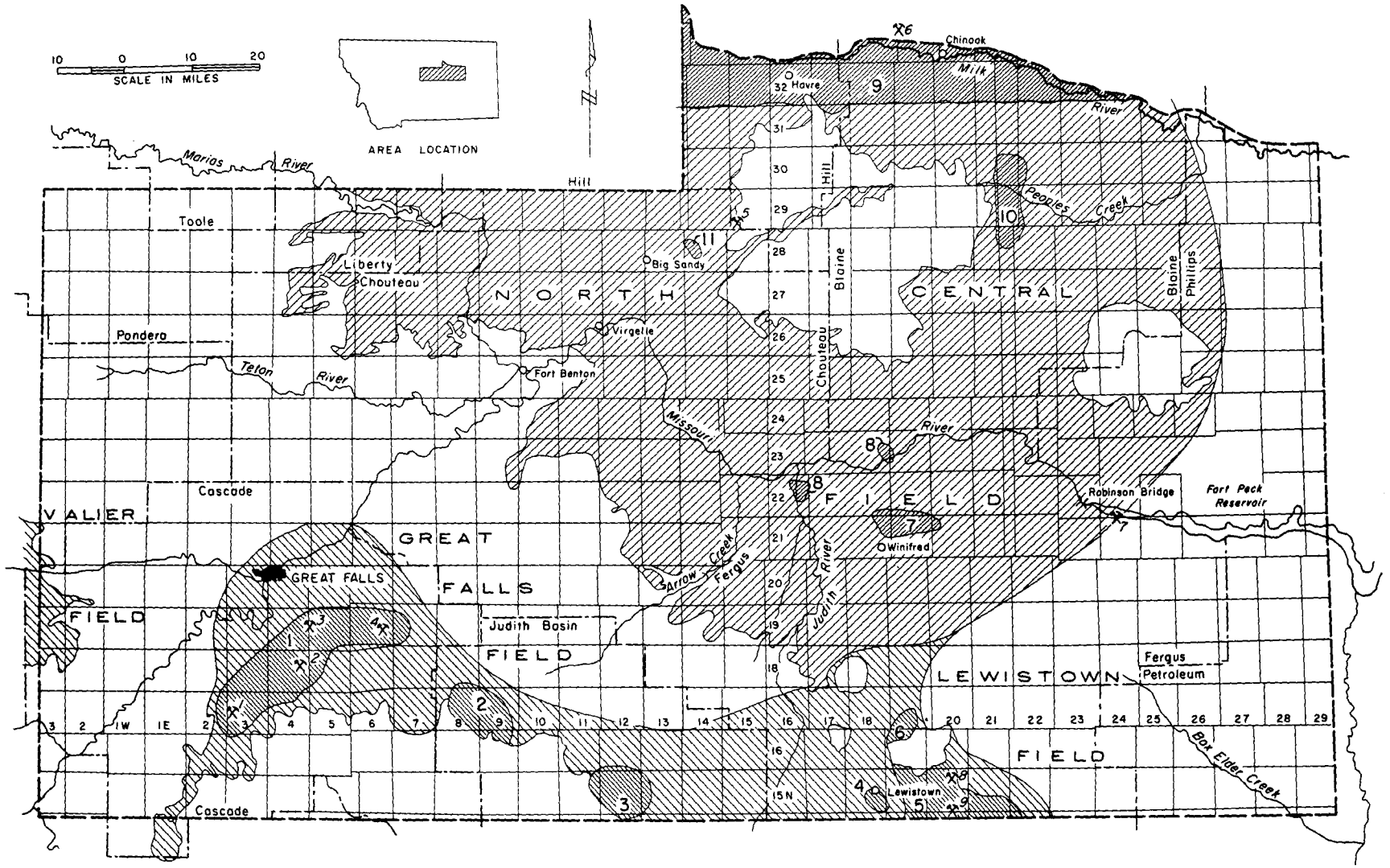
The area within or near the proposal is favorable for gas, thin beds of subbituminous coal, thin beds of bentonite, and possibly oil.

The area lies in a province that is regarded as favorable for shallow (less than 2,000 feet) natural gas accumulation due to the availability of structural and stratigraphic traps, the proximity of known near-commercial gas fields, and the maturity of potential source rocks. Shut-in natural gas fields are located close to the river. The Winnifred and East Winnifred fields are about 6 to 7 miles to the south and the Sherard field is about 14 miles to the north. Montana's newest, most productive, and fastest growing field is the Leroy Field and is located north of the Bearpaw Mountains. The area south of the mountains has a similar potential since the same reservoir rocks underlie the Missouri River (see Oil and Gas Fields Map).

Five potential oil-producing horizons underlie the proposal area, but insufficient information is available to determine the extent of commercially producible oil in this area.



MISSOURI RIVER STUDY AREA
Oil and Gas Fields



MISSOURI RIVER STUDY AREA
Coal Fields

SYMBOLS

- Bituminous
- Sub-bituminous
- Mine

The Eagle sandstone and Judith River Formations contain subbituminous coal from the vicinity of Virgelle to the eastern boundary of the area (see Coal Field Map). The coal has been mined for local use and to supply a small power plant, but no mines are known to have been active for 15 years or more. The coal in much of the area is less than 2½ feet thick, lenticular, and of variable quality. Some small areas that contain more than 2½ feet thick may warrant consideration at some future time, but most of the area has little coal resource potential.

Beds of bentonite are in three formations exposed within the proposal. Most beds are less than 18 inches thick and are covered by 50-100 feet of overburden. Samples from various beds were tested and some were found satisfactory for brick. Others were suitable for light weight aggregate and possibly for foundry molding sand. The beds are not economically important at the present time.

Vegetation

The study area is within one of the largest semi-arid grasslands in the world—the Great Plains. The riverine environment, however, has its own special characteristics. Vegetation is more varied with other vegetative communities scattered among the predominant forbs and grasses. Five major vegetative types are represented, though a variety of small habitats occur within and adjacent to these areas. The major vegetative communities include sagebrush, grassland, conifers, greasewood, and mixed deciduous hardwood-agricultural. Intermittent streams, ponds, canyons, bluffs, rock outcrops, seeps, dry

sites, etc., provide niches for other minor plant and animal communities.

Sagebrush and grassland communities normally overlap. They occur primarily on the upper benchland. Past land use has dictated whether sagebrush or grassland provides the dominant cover. A history of overgrazing by livestock generally increases the acreage of sagebrush domination; recent adoption of proper grazing practices may have reversed this trend in some areas. Where grassland predominates, the key species are perennial grasses such as blue grama, western wheatgrass, green needlegrass, buffalo grass, June grass, and prairie sandseed. Prairie forbs are common and include pasque flower, sageworts, Indian paintbrush, wild licorice, sunflowers, yellow sweetclover, phlox, prairie thermopsis, and many others. The forbs and grasses provide forage for domestic livestock and, seasonally, for some of the wildlife species.

Silver and big sagebrush predominate in sagebrush areas and provide critical winter food and cover for sage grouse, antelope, and mule deer. Other brush species include serviceberry, rubber rabbitbrush, chokecherry, skunkbrush, Arkansas rose, buffaloberry, and western snowberry. These browse species provide food for birds, antelope, deer, elk, and other wildlife, as well as adding beauty and a delightful fragrance to the breaks.

Conifers occur predominantly on the bluffs, usually in association with badlands soils. Native conifer species include Ponderosa pine, limber pine, Rocky Mountain juniper, and some Douglas fir on north-facing slopes. These species are generally slow growing and do not reach the level of development common to more ideal timber sites. Though they have little potential for saw timber, an estimated 25 percent of the timberland is harvested by the ranchers for fence posts. The native conifers are also of great value for wildlife, soil formation and stabilization, and esthetic and recreational benefit.

The greasewood vegetative community is found on highly alkaline, alluvial material near stream bottoms, especially on soils derived from weathered Bearpaw shale. In association with the greasewood may be found shade scale-saltbrush and other salt tolerant species.

The mixed deciduous hardwoods-agricultural community is relatively small in comparison with the others in the region, but it is extremely important within the study area. This community occurs along the river banks, on islands, and on the river bottomlands generally. Most of the bottomlands contain a mixture of alfalfa and small grains, bordered by deciduous trees and brush. The woody plants include several species of cottonwood and willow as well as green ash and box elder. This vegetative community is of great importance to wildlife as it provides year-round habitat for many species and influences wildlife use of the adjacent uplands as well.

Fish and Wildlife

Wildlife is one of the most important of the natural components of the Missouri River, particularly in the eastern part of the area beginning near the mouth of the Judith River. The rugged breaks and timbered coulees downstream from the mouth of the Judith River, and especially below Cow Creek, represent by far the most valuable units for big-game animals within the area. Because of its importance to several nationally significant, but diminishing species of wildlife, such as the golden eagle and the bald eagle, this remnant of a rapidly disappearing range type is considered of great importance. This area is also within the historic range of the black-footed ferret, a species included on the U.S. Department of the Interior's List of Endangered Fauna. However, there have been no positive sightings of black-footed ferrets in this area in recent years. Hopefully, ongoing scientific investigations of possible habitats will determine whether or not the species occurs in the river area.

Mule deer, white-tailed deer, antelope, elk, and bighorn sheep are all found along the segment of river below Cow Creek. White-tailed deer are distributed on the islands and wooded bottomlands along the river and major tributary streams. Elk are more limited in distribution and numbers, and are confined for the most part to the rougher breaks adjacent to the river in the Charles M. Russell National Wildlife Range.

Downstream view of Missouri River
near the Charles M. Russell National Wildlife Range

Rocky Mountain bighorn sheep have been introduced on the Range in the Two Calf Creek drainage. Antelope range mainly along the edge of the breaks and are seldom seen in the rougher portions or along the river bottoms. A few remnant colonies of prairie dogs still can be found along with associated species such as the burrowing owl and, possibly, the extremely rare black-footed ferret.

A variety of upland game birds is found in this area. Native species, such as sharp-tailed and sage grouse, are scattered along the breaks. Hungarian partridge occur adjacent to grainfields. Pheasants are found along the river bottom. Wild turkeys, which have been introduced along the breaks, complement native bird populations. Thousands of mourning doves are produced annually along this reach of the Missouri River, and numerous songbirds use the river bottom.

Golden and bald eagles, and other raptors, frequent this portion of the river, using the ledges in the more inaccessible badlands as nesting sites. The reach of river extending to the mouth of the Judith River is of particular value for Canada goose nesting. Heron rookeries also are present in many of the cottonwood groves.

The fisheries of this segment of the Missouri include yellow perch, goldeye, sturgeon, burbot, channel catfish, sucker, buffalo, carp, sauger, northern pike, and paddlefish. It should be noted that sturgeon and paddlefish are two fishes currently being considered as candidates for potential listing as either Endangered or Threatened Species.

History

This segment of the Missouri River is of exceptional national historical interest. It is the last important section where major aspects of the era of westward expansion can be commemorated in their original unspoiled setting. There are several major elements in American history represented here: The Lewis and Clark expedition, the mining era, the era of Upper Missouri steamboat navigation, and a later short-lived homestead era.

Lewis and Clark were in this area from May 23 to June 10, 1805, and more briefly on Lewis' return journey in 1806. The journals tell of back-breaking toil in ascending the Missouri at spring flood in canoes or pirogues, moved alternately by towline, sail, and oars. Between Fort Benton and Rocky Point are 14 Lewis and Clark campsites and most of the topographic and natural features which commanded their great admiration (see Historic and Natural Features Map). Their campsites of May 23 and May 24, 1805, have been determined to be eligible for inclusion in the National Register of Historic Places.

Every bend in the river contains features which are reminders of incidents on the great journey of discovery. Bullwhacker Coulee, then called Turtle Creek, marks the point where Captain Lewis ascended the highlands on May 26, 1805, and first caught a distant view of what he thought to be the Rocky Mountains, "the object of all our hopes and the reward of all our ambition." Arrow Creek was

MISSOURI RIVER
Historic and Natural Features

Source: NPS

called Slaughter Creek by the explorers because they found the remains of hundreds of buffalo nearby that had been stampeded by Indians over a cliff, or "buffalo jump." Lewis and Clark's camp at this location is listed on the National Register of Historic Places.

The Judith River was named by Captain Clark for a childhood sweetheart. One of the spectacular camps of the expedition was on Eagle Creek, which is centrally located in the area of the river called the White Rocks of the Missouri. The explorers commented enthusiastically on the striking geologic forms here which they likened to grotesque animal figures, sculptured columns and gallaries, the ruins and desolated magnificence of ancient cities, in all, a scene of "visionary enchantment."

The Marias River was named for a cousin of Meriwether Lewis. At the mouth of the Marias was one of the most significant encampments. The Captains remained here for over one week in early June in order to resolve a dilemma as to which was the principal stream to be followed; and they explored a considerable distance up the Marias before coming to the decision that the Missouri River was the correct channel which would lead them to their transcontinental goal.

The interior of the Missouri Breaks country was successfully penetrated by fur traders in 1831 when emissaries from Fort Union managed to establish a contact with a branch of the Blackfeet Nation called the Piegan. A trading post called Fort Piegan, also known as Fort

Lewis and Clark campsite at Eagle Creek

McKenzie, was established at the confluence of the Marias and the Missouri. After the first season, this original fort was destroyed and a second Fort McKenzie was subsequently built on Brule Bottoms. This flourished until 1843 when hostilities were renewed and the trader Chardon withdrew to establish a short-lived post, Fort Chardon, opposite the mouth of the Judith River.

The brief but violent era of Missouri fur trade is commemorated by several names which have survived, such as Gardipee Bottoms, Kipp's Rapids, and Dauphin Rapids. The latter name is a reminder of the visit in 1833 by Prince Maximilian and his retinue from Fort Union to Fort McKenzie. Karl Bodmer, artist in the employ of Maximilian, has left sketches of Fort McKenzie and Missouri River scenery which are of priceless historic value.

The flatlands opposite the mouth of the Judith River were the setting for two important Indian peace councils during the waning days of the fur trade. In 1846, the famous Catholic missionary, Father De Smet, and a band of Flathead Indians had a meeting here with the Blackfeet. In 1855, a large Indian treaty council assembled here, engineered by Washington Territorial Governor Isaac Stevens, including 3,500 representatives of the Blackfeet, Nez Perce, and Flathead Nations. As a result of this treaty, the Blackfeet ceased their incessant, bloody raids, and met their former enemies on friendly terms on common hunting grounds. Also, the treaty cleared the way for large settlements which were to spring up soon on the headwaters of the Missouri.

The first steamboat arrived at Fort Union in 1832, but the Missouri River above that point was considered unnavigable until 1859, when the steamboat Chippewa reached Brule Bottoms.

The discovery of gold near Bannack City and Virginia City in the early 1860's started a great gold rush to Montana. The Missouri River then became a major transportation route, with the amazing shallow-draft paddle wheel steamboat the principal mode of travel.

Fort Benton was established by Alexander Culbertson of the American Fur Company in 1846. Later it became a military post and Indian Agency. The first steamer arrived at this ultimate point of navigation on the Missouri River in 1860. In the peak year of 1869, there were 39 steamboat arrivals. For a time, Fort Benton was the commercial capitol of Montana with wagons radiating to the interior mountain towns and into Canada. The old riverbank landing where the steamers were once tied up remains, and much of the city is admirably preserved as it was in its heyday. Fragments of Fort Benton's adobe walls and the Grand Union Hotel are listed on the National Register of Historic Places, the former as a National Historic Landmark. Local planning calls for historic restoration and preservation of the remaining sections of the old town.

It was during the steamboat era that the Indian War had an impact on this section of Montana. In 1866, the Army established Camp Cooke at the mouth of Judith River. It was built of logs in the classic quadrangular pattern. The fort was abandoned in 1870, but the nearby Fort Claggett trading post, operated by T. C. Powers and Company, continued in operation for a few years longer. A large stone building which serves as a barn at the modern PN Ranch was built in 1880 as a warehouse for Judith Landing. Judith Landing Historic District also is listed on the National Register of Historic Places.

Rocky Point, at the downstream terminus of the study area, and the immediate surrounding area played a significant part in the early history of this section of the Missouri River. Lewis and Clark camped at this location on May 22, 1805. This area also served as an important crossing or ford of the river long before any buildings occupied the site. During the era of steamboat traffic, Rocky Point served as a steamboat landing, and during periods of low water freight was unloaded here to be hauled overland along the Carroll Trail to Fort Maginnis, the mines at Camp Maiden, and on to the gold fields further west.

During the early 1880's, Rocky Point often served as a rendezvous point for thieves and outlaws who moved their stolen property across the river at this location and drove them north for sale in Canada.

In about 1883 or 1884, Fort Carroll was moved about three miles upstream from its original site to Rocky Point where it grew into an important trading post. It later became a small town.

With the construction of the faster and more efficient railroad, boat traffic on the river came to a close. Rocky Point remained until about 1910, serving as a stopover between the mining towns in the Little Rockies and Kendall, and later as a line camp for cattle operators in the area. As the mines in the area were closed, Rocky Point was abandoned and succumbed to rot and decay. In 1965 the staff of the Charles M. Russell National Wildlife Range renovated the remaining building to preserve the remains of this once busy and now historic site. It is a registered National Historic Site.

A period of agricultural settlement beginning early in this century reached its peak in 1911. Based on false promotion tactics and speculation, the settlement boom was given a shocking blow by the post World War I recession, and final collapse by the Great Depression of the 1930's. Today, a number of abandoned cabins along the river bottom are bleak reminders of an inhospitable environment and economic conditions that are generally unfavorable to crop production and human settlement.

Archeology

During the summer of 1962, a cursory survey of the archeological potential of the Upper Missouri area between Fort Benton and Armells Creek at the east end of James Kipp State Recreation Area was made by the Smithsonian Institution. The results of this survey are included in a report entitled, An Archeological Appraisal of the Missouri River Breaks Region in Montana, October 1963.

In addition to the historic sites just described, three types of archeologic sites are found in the region: open camp, burial, and bison kill.

Of the various camps located, some twenty were marked by the presence of teepee rings. The predominant type of teepee ring is a single circle of stones ranging in diameter from 7 to 21 feet, with a median diameter of 9 to 12 feet. At a few of the sites, teepee rings composed of two concentric circles of stones occurred.

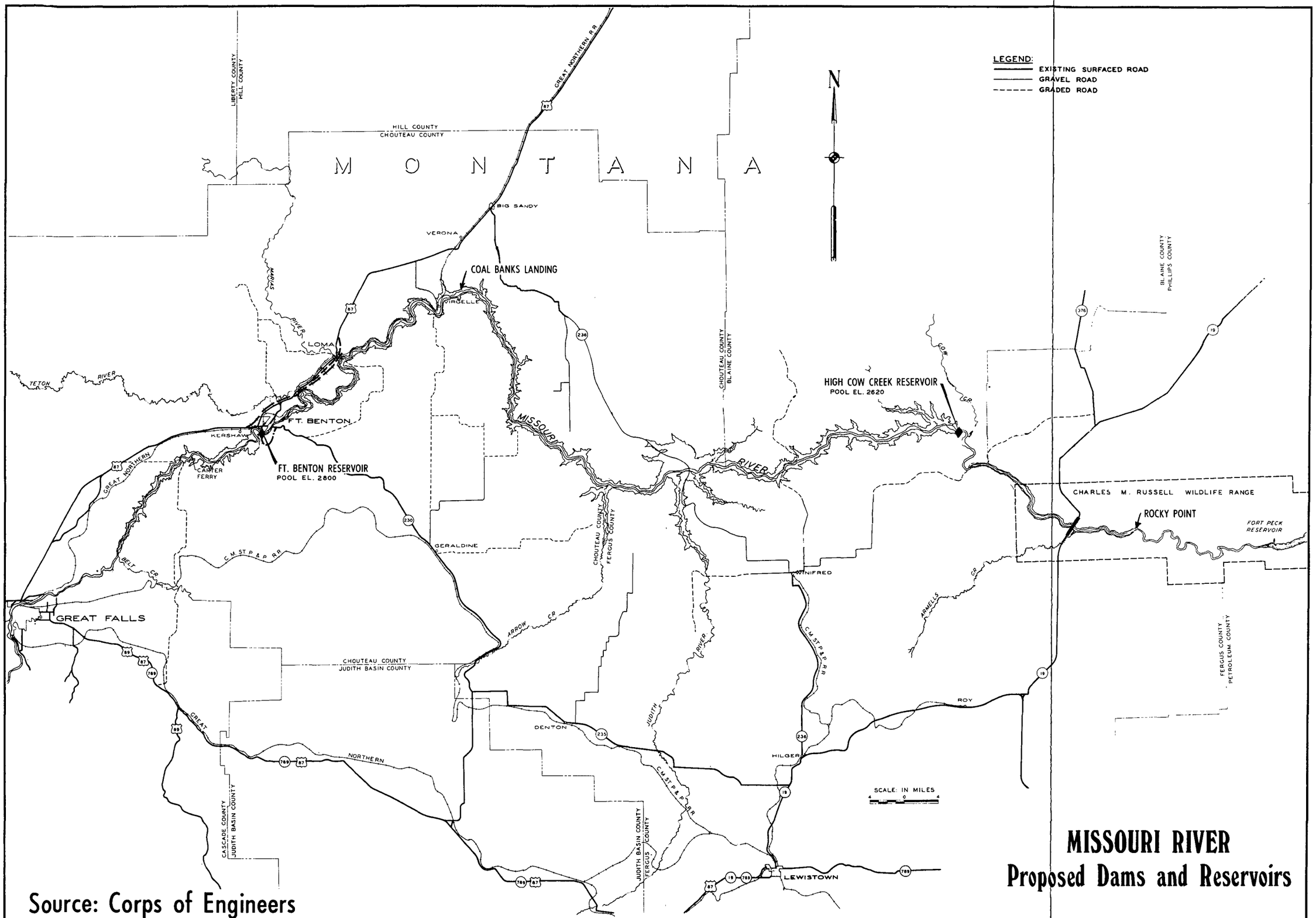
Since the majority of the campsites are small and have few cultural materials associated with them, it would appear that the prehistoric occupants of the upper Missouri River were nomadic bands of hunters and gatherers who carried few imperishable, material goods. This is further evidenced by the lack of any indication of horticulture or of village type dwellings.

Water Resource Developments

Two proposed water resource projects could affect the river segment within the proposal area--the Fort Benton Dam proposed by the Bureau of Reclamation and the High Cow Creek Dam proposed by the Corps of Engineers. These two projects were identified in the joint Department of the Interior/Department of the Army study and report on the feasibility of water and related land development (see Proposed Dams and Reservoirs Map).

Fort Benton Unit--This unit, part of the Pick-Sloan Missouri Basin Program, consists of the dam, reservoir, powerplant, afterbay dam, and irrigation facilities.

In addition to hydroelectric power production, irrigation, recreation, fish and wildlife, and flood control would be the project purposes. Fort Benton Dam would be located on the Missouri River about one mile upstream from the town of Fort Benton. The dam would be an earthfill dam about 204 feet high and 4,550 feet long, with a storage capacity of 880,000 acre-feet, and a water surface area of 10,200 acres at maximum operation elevation of 2,815 feet. The reservoir would back water upstream to the existing Morony Dam, a distance of about 30 miles. An afterbay dam would be located about 11 miles downstream for control of reservoir releases. The afterbay dam would be about 65 feet high, backing water to Fort Benton Damsite. Total installed hydroelectric capacity of the Fort Benton Unit would be 360,000 kw. with a dependable peaking capacity of 400,000 kw.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MONTANA
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HILL COUNTY
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BIG SANDY
VERONA
COAL BANKS LANDING
VIRGELLE
LOMA
MISSOURI RIVER
TETON RIVER
FT. BENTON
KERSHAW
FT. BENTON RESERVOIR
POOL EL. 2800
CARTER FERRY
GREAT NORTHERN
BELT CR
C.M.ST.P.&P. R.R.
GERALDINE
CHOUTEAU COUNTY
FERGUS COUNTY
CHOUTEAU COUNTY
BLAINE COUNTY
HIGH COW CREEK RESERVOIR
POOL EL. 2620
COW CR
BLAINE COUNTY
PHILLIPS COUNTY
CHARLES M. RUSSELL WILDLIFE RANGE
ROCKY POINT
FORT PECK RESERVOIR
WINIFRED
ARMELLS CR
FERGUS COUNTY
PETROLEUM COUNTY
GREAT FALLS
CHOUTEAU COUNTY
JUDITH BASIN COUNTY
ARROW CR
JUDITH RIVER
DENTON
HILGER
ROY
GREAT NORTHERN
CASCADE COUNTY
JUDITH BASIN COUNTY
JUDITH BASIN COUNTY
FERGUS COUNTY
LEWISTOWN
SCALE: IN MILES
4 0 4
Source: Corps of Engineers
MISSOURI RIVER
Proposed Dams and Reservoirs

The first detailed investigation of the Fort Benton Unit by the Bureau of Reclamation began in 1965 and was completed in 1971, with preparation of a Status Report. That report concludes that while the Unit had potential for peaking power for integration with base-load steam plants in the area, and while future consideration of the Unit might be warranted under conditions of increased regional power needs, construction of the Fort Benton Unit is neither economically justifiable under the present level of construction costs and at the present rate of interest nor financially feasible under existing market and rate conditions. This data was followed by further information in 1976 from the Department of Army. They indicated that, based on current information furnished by the Federal Power Commission and the Bureau of Reclamation on power benefits and financial feasibility, the Fort Benton project was not economically or financially feasible.

High Cow Creek Dam and Reservoir--Hydroelectric power production, flood control and recreation would be the essential project purposes of the dam and reservoir proposed for construction by the Corps of Engineers 23 miles upstream from the Fred Robinson Bridge.

The dam would be an earthfill dam approximately 365 feet high and 4,950 feet long. Elevation of the top of the dam would be 2,650 feet, providing 4,200,000 acre-feet of usable storage. The reservoir area at maximum elevation of 2,620 feet would be 77,500 acres.

The reservoir would back water upstream to the Fort Benton site. The total installed hydroelectric capacity would be 720,000 kw. with a dependable peaking capacity of 780,000 kw.

The Division Engineer's report was submitted to the Chief of Engineers in 1963 and was forwarded to Federal agencies and the Governor of Montana in 1964 for review and comment. The Governor of Montana opposed construction of the project.

Constructing the High Cow Creek in any form would completely eliminate approximately 130 miles of the free-flowing values of this river area.

It should be noted that information received from the Department of the Army in 1976 indicated that, based on current information furnished by the Federal Power Commission and the Bureau of Reclamation on power benefits and financial feasibility, the High Cow Creek Project was not economically or financially feasible.

Public Law - 566 Projects--There are no P.L. 566 projects underway or planned within the river study area. However, the Soil Conservation Service of the Department of Agriculture, working with the local Soil Conservation Districts, administers watershed projects under this program on tributaries of the Missouri in the 15-county region. These projects are designed to solve local watershed problems by improving water quality and reducing runoff and sediment production. These projects do not directly affect the section of the Missouri under study.

Recreation Use

Existing recreation uses in the study area consist chiefly of fishing, hunting and boating. Fishing in the river as a recreation activity is usually incidental to other recreation pursuits. There are, however, a number of spots that local residents consistently use for bank fishing. The abundance of wildlife and large tracts of public lands make hunting one of the area's principal recreation activities, attracting about 2,000 hunters a year. Good hunting is available throughout the entire stretch of the river for both mule deer and white-tailed deer. A limited number of bighorn sheep and elk are also harvested. Ducks, geese, and upland game species inhabiting the area provide excellent hunting.

Increasing numbers of people are enjoying boat trips down the Missouri. Latest estimates indicate about 3,000 boaters use the area annually, mostly in organized groups varying in size from 2-25 boats, the average stay being 3-5 days. Most trips begin at Fort Benton or Virgelle and end at Judith River or the Fred Robinson Bridge.

POSSIBLE FUTURE ENVIRONMENT WITHOUT THE PROPOSAL

Should the 128-mile segment of the Missouri River and its immediate environment not be included in the National Wild and Scenic Rivers System, it would continue under its present ownership and management. The Federal lands administered by the Fish and Wildlife Service in

the Charles M. Russell Wildlife Range would continue to be administered for wildlife production and preservation. The Federal lands administered by the Bureau of Land Management will continue to be managed for multiple-use, primarily for grazing, as they have been in the past.

The current laws available to the Bureau of Land Management for management of the area are probably not sufficient to allow adequate protection of the area's existing natural, scenic, historic and recreational values.

Increasing tourism and sport hunting along the Missouri River is inevitable since the country's population has more time, money, and opportunity to travel. Without some form of basic resource protection and land use control, increased recreational pressures will soon surpass the area's use capabilities.

A trend toward more permanent and seasonal residential development on private lands in this segment of the river is expected to continue.

III. ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

The following primary assumptions have been made in the evaluation of available data for the proposal area:

1. Public recreational use of the Missouri River and its immediate environment has been increasing and will continue to increase with or without designation as a component of the National Wild and Scenic Rivers System.

2. Designation as a component of the National System will accelerate the rate of recreation use, thereby shortening the time span when the capability of the environment to withstand use without substantial impairment is reached, and will provide administrative-management means to limit and disperse use, when necessary.

3. The Bureau of Land Management will continue to be the primary Federal land manager for 81,600 acres of the proposal segment and the surrounding Federal lands.

4. The Fish and Wildlife Service will continue to be the Federal land manager for the 19,900 acres of the proposal that lie within the existing Charles M. Russell Wildlife Range.

5. Agricultural use of the resources will continue at approximately the same level.

IMPACT ON RECREATION

The Missouri Wild and Scenic River Area provides a relatively primitive, spacious setting for high-quality outdoor recreation experiences, including boating, camping, hiking, hunting, fishing, nature study, and historical interpretation. An estimated 3,000 boaters use the area annually, mostly in organized groups varying in size from 2 to 25 boats. Hunting is one of the principal recreation activities, attracting an estimated 2,000 hunters a year. Good to excellent hunting is available throughout the area for both mule and white-tailed deer, ducks, geese, and upland game species.

It is estimated that the optimum visitor use on the total river segment included within the proposal would be 465 per day with an optimum visitor carrying capacity for a 90-day peak season of 41,850. The management master plan for the river corridor would further refine this estimate to determine the optimum carrying capacity of the river and provide regulations to limit use to that number and disperse it throughout the river segment.

The proposal is expected to have a beneficial impact on future recreation use by protecting the river's wild and scenic values through more closely regulated use and limited use when carrying capacity is reached. The additional standard and primitive development areas and facilities would enhance recreation use and serve as a means of dispersing use and controlling visitor impact.

Although fishing, hunting, and trapping would continue under applicable Federal and State regulations, the Secretary of the Interior may, in consultation with the Montana Fish and Game Commission, designate zones or periods when hunting would not be permitted because of public safety, administration, or public use and enjoyment. If game populations decline in the area over time, these regulations would have a substantial, beneficial impact on recreational hunting, or any wildlife-related recreation, since controls would be necessary to maintain population levels. No such action, however, is anticipated.

Some forms of recreation, such as snowmobiling or the use of all terrain and off-road vehicles, would be limited to designated areas and seasons of use. Areas suitable for this type of use would be designated during the preparation of the master plan. Powerboat use is expected to be restricted minimally, with such measures as the limitation of motor size and the establishment of no wake zones.

These regulations on specific uses and limitations imposed on total visitor use would, on occasion, limit personal freedom to recreate where, when, and how one chooses. On those occasions the proposal's impact would be adverse and significant to those affected. The limits imposed could ultimately cause some recreationists to seek alternate rivers. This transfer of use could cause overuse in other areas in the future.

The overall impact of the proposal on recreation use of the Missouri River is considered to be of major benefit due to the preservation of a high-quality outdoor recreation environment and the enhancement of river floating, fishing, hunting, and related recreation in the region.

IMPACT ON WATER QUALITY

Water quality data for this segment of the Missouri River are limited; however, water quality is considered good. Although turbidity and temperatures are high, they are a reflection of the natural erosion process typical of the Upper Missouri drainage.

Waters within this stretch of the Missouri have been designated by the State of Montana so as to require maintenance of water quality suitable for (1) drinking, culinary and food processing purposes after adequate treatment to remove naturally present impurities; (2) bathing, swimming, and recreation; (3) growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl, and furbearers.

Wild and Scenic River designation is expected to accelerate public use of the Missouri River. Increased use would create greater problems associated with the disposal of human waste.

Increased public use would also aggravate soil erosion, which is presently active along the streambank, through soil compaction and loss of vegetation from trampling and possible fire. These activities would also increase the amount of suspended sediment in the river.

Increased use of motorboats and snowmobiles would also degrade existing water quality through accidental oil and fuel spillage.

The amount and types of anticipated outdoor recreation use associated with the proposal are expected to have minor overall impacts on water quality.

IMPACT ON SCENIC QUALITIES

White sandstone breaks scattered with pine and juniper stand like an ancient wall against the pale copper of grass, the stark blue-grey of sage, and the rolling muted prairie greens. Below, in its verdant path, the Missouri meanders slowly past the meager shade of cottonwood groves. The Missouri River is, indeed, outstandingly remarkable for its scenery.

Wild and Scenic River designation would preserve this scenery by regulating human activities which would alter the existing natural setting. The level of activities such as road building, trail construction, and recreation facility development would be determined during master plan preparation and strictly regulated to avoid adverse effects on existing scenery. The impact of these regulations is significant to the extent that the regulations would alter existing or proposed land uses. The regulations are considered very significant as they relate to the use of 36,000 acres of lands in private ownership. Design standards to keep structures in harmony with the environment as well as acreage, frontage, and set-back requirements would be developed during master-planning. These regulations would have an impact on both the personal choice of the landowner and the economic potential of the lands.

An increase in public use within the proposal area would cause a deterioration of scenic quality through littering. This would occur with or without Wild and Scenic River designation and would be more strictly controlled under Wild and Scenic River management. To the extent the proposal would retain the existing scenic qualities of the immediate environment, the impact of the proposal is significant. To the extent land use regulations would be enforced over the 36,000 acres of private lands, the impact of the proposal is considered to be moderate at most, and in all likelihood, minor.

IMPACT ON MINING

The Missouri River flows through an area which is regarded favorably for the occurrence of shallow natural gas accumulations, thin beds of subbituminous coal, thin beds of bentonite, and possibly oil. The province generally is very favorable for commercial production of gas; five potential oil-producing horizons underlie the area, but little exploration has taken place. Subbituminous coal is present from the vicinity of Virgelle to the eastern boundary of the proposal. The coal in much of the area is less than 2½ feet thick, lenticular, and of variable quality. Beds of bentonite are present within the proposal, but most beds are less than 18 inches thick and are covered by 50 to 100 feet of overburden.

The State of Montana owns the mineral rights on most, if not all, of the State sections (10,300 acres out of 147,800 acres) within the proposal, and the land underlying the bed of the Missouri, including minerals. Therefore, Montana has a valid, existing right to the minerals within a considerable amount of the proposal area.

There has been moderate mineral exploration in the past; however, no active mining occurs presently within the proposal area. Current use of State lands within the proposal area is almost entirely grazing. Should this segment of the Missouri River be designated a component of the National Wild and Scenic Rivers System, all minerals on Federal lands within the bed, banks, or within a rim to rim boundary of segments designated wild would be withdrawn from appropriation, subject to valid, existing rights. All mining in the proposal area would be subject to regulations against pollution of the river and unnecessary impairment of the secnery. For these reasons, the impact of the proposal on mining, and vice versa, is considered moderate.

IMPACT ON SOILS AND VEGETATION

The soils in most of the area vary widely in depth and texture, ranging from deep sandy to clayey. The soils are particularly subject to water and wind erosion, and the only protection is the amount and kind of vegetative cover, such as grasses and trees, which stabilize the surface.

Wild and Scenic River designation would result in an increase of recreational use in the proposal area. This increase in use would

cause soil compaction and loss of plant cover due to trampling in and around campsites and access points, and thus would result in some loss of soil and plant cover along the more heavily used portions of the proposed Wild and Scenic River area.

When recreation facilities are developed, their presence tends to concentrate use, thus increasing the damage to soil and vegetation and wildlife habitat. The actual size, number, location, and design of the recreation developments would be determined in the management agencies' master plan. More precise impacts can be identified at that time; however, the proposal is considered to have only minor impact on soil and vegetation.

Increased use would also increase the threat of fire and the resultant loss of soil and vegetation, especially during the dry fall months. The increased threat of fire is considered moderate.

IMPACT ON HISTORICAL AND CULTURAL FEATURES

This segment of the Missouri River has outstanding national historical interests such as the Lewis and Clark Expedition, the early western fur trade, military and Indian affairs, the mining era, the era of upper Missouri steamboat navigation, and a later short-lived homestead era (see Historic and Natural Features map). In addition to these historical events, three types of archeological sites are found in the region: open camp, burial, and bison kill. A detailed discussion of these historical events is present in Section II, History.

The accelerated rate of annual visitation which would accompany designation of the proposal could cause serious damage through vandalism and artifact collection to any historical or cultural features not adequately protected. Overall, the impact of the proposal on protecting the historical and cultural features would be beneficial and significant.

IMPACT ON LOCAL ECONOMY

The dominant land use in the area is agricultural, consisting of livestock grazing and limited wheat growing. There are 111 grazing permittees/lessees on Federal lands within the proposal. These lands support 8,876 animal unit months. A small cattle feedlot exists near Coal Banks Landing.

Grazing of cattle would be restricted by the proposal in some areas, such as cottonwood groves and development sites, and thus would reduce the number of acres available for cattle production. The total acres to be removed from cattle grazing would be determined during master-plan preparation; however, it would be quite small in comparison to the total acres available. The number of grazing permittees/lessees would remain about the same. The economic impact on the local economy is considered minimal.

Expansion or establishment of cattle feedlots within the proposed boundary would be restricted. Operation of the existing feedlot would be controlled by regulations. Since feedlot operations within the proposal are limited to the one small feedlot, the impact on the local economy is considered minimal.

The 6,100 acres proposed for acquisition would result in a tax loss to Chouteau, Fergus, and Blaine Counties. The tax rate for the type of land involved averages an estimated $.07 per acre. Therefore, the total loss to these counties' tax base is only $420.00 annually. The impact of the proposal on the tax base is considered insignificant.

Businesses that offer recreation services, such as canoe liveries, will benefit from the increased recreational use of the area resulting from designation of the river as a component of the National Wild and Scenic Rivers System. Local commercial establishments such as motels, service stations and restaurants, will also benefit from increased visitor use.

IMPACT ON TRANSPORTATION

Existing road access to the proposed river corridor is limited. U. S. Highway 191 is the only paved road within the area. A secondary road, State Highway 236, bisects the area. The Montana Department of Highways has plans to replace the Lohse Ferry, on State Highway 236, with a bridge. In addition to these roads, there are many 4-wheel drive roads and jeep trails throughout the area that are used in ranching operations. Powerboats are also used to reach the area (no estimate has been made of this use).

The use of the 4-wheel drive roads and jeep trails within the proposal by 4-wheel vehicles would be regulated. Such use would be limited to designated trails, seasons of use, or specified areas to protect the soil, vegetation, and wildlife. The impact of designation of the proposed area as a unit of the National Wild and Scenic Rivers System is considered insignificant.

IMPACT ON FISH AND WILDLIFE

Wildlife is one of the most important features of the natural components of the Missouri River. The rugged breaks and timbered coulees represent by far the most valuable habitat for big game animals within the area. Mule deer, white-tailed deer, antelope, elk and bighorn sheep are found along the river downstream from Cow Creek.

A variety of upland game birds is found in the area. Native species, such as sharp-tailed and sage grouse are scattered along the breaks. Hungarian Partridge occur adjacent to grainfields and pheasants are found along the river bottom. Thousands of mourning doves are produced annually along this reach of the Missouri River.

Because of its importance to several nationally significant, but diminishing species of wildlife, such as the golden eagle and the bald eagle, this remnant of a rapidly disappearing range type is considered of great importance. The black-footed ferret, thought to be in this area, is included on the U.S. Department of the Interior List of Endangered Native Fish and Wildlife.

The fisheries of this segment of the Missouri included yellow perch, goldeye, sturgeon, burbot, channel catfish, sucker, buffalo carp, sauger, northern pike, and paddlefish.

The proposal will accelerate the rate of annual visitation to the immediate environment of the Missouri River which, in turn, will adversely increase impacts on fish and wildlife resources of the area. In particular, loss of habitat, especially in certain frequented locations, through soil compaction and destruction of vegetation will cause general disturbance to many species of wildlife presently existing in the proposal area.

Except as noted earlier, the proposal will not affect the jurisdiction or responsibility of the State of Montana over fish and wildlife resources associated with the Missouri River proposal.

Areas identified as nesting sites for golden and bald eagles would be protected. The impact of the proposal on the wildlife of the area is significant to the extent important habitat is included and preserved unimpaired for wildlife uses.

The portion of the proposal that lies within the Charles M. Russell National Wildlife Range will continue to be managed for the conservation and development of natural wildlife resources. The proposal's impact on the Charles M. Russell National Wildlife Range is considered minor.

IMPACT ON WATER RESOURCE DEVELOPMENTS

Two water resource projects have been proposed that could affect the Missouri River segment included within the proposal--the Fort Benton Dam proposed by the Bureau of Reclamation one mile upstream from Fort Benton; and the High Cow Creek Dam proposed 23 miles upstream from the Fred Robinson Bridge by the Corps of Engineers (see Section II Water Resource Development for details on these projects).

Designation of the Missouri River as a unit of the National Wild and Scenic Rivers System would cause the hydroelectric power potential of the High Cow Creek Dam to be foregone, and if constructed, the Fort Benton Dam would be required to maintain adequate flows below the dam to maintain the existing scenic, recreational, and fish and wildlife values present within the proposal.

IV. MITIGATING MEASURES INCLUDED IN THE PROPOSED ACTION

Within one year after designation of the Missouri River as a component of the National Wild and Scenic Rivers System, measures would be implemented to reduce or control adverse environmental impacts resulting from such designation. These measures would include the following actions:

1. Restriction of the amount and type of outdoor recreation use throughout the river area to the carrying capacity of the affected resources in order to prevent any impairment of those values which caused the river to be designated.

2. Implementation of protective measures to reduce the threat of fire. This could involve limiting the use of open fires or designating specific areas where open fires would be permitted during the dry summer months.

3. Reduction of litter by stressing a program of "Bring out what you take in." Should this prove ineffective, consideration would be given to banning cans, bottles, or other non-burnable containers.

4. Application of uniform regulations for the use of jeeps and 4-wheel vehicle roads. This would include specific regulations to provide for public safety and for the prevention of noise and water pollution, damage to soil and vegetation, the harass-

ment of wildlife, and conflicts of use with other people using the area.

5. Protection of the scenic qualities of the area by developing standards for the alteration of the existing environment within the proposal area. This would be accomplished through zoning or scenic easements which would require harmonious blending of structures in their natural setting, frontage setbacks, and permits from the managing agency to cut trees or clear the natural vegetation.

6. Identification of any nesting sites of the golden and bald eagle and any areas inhabited by the black-footed ferret in order to provide protection by restricting human encroachment. This action would be initiated early in the detailed planning process.

7. Identification of historical and cultural sites through survey in order to provide appropriate protection. This action would be initiated early in the detailed planning process. As master planning progresses to a more specific state, the criteria of effect as stipulated in Section 106 of the National Historic Preservation Act will be applied and all activities that affect

cultural resources will be coordinated with the Council on Historic Preservation and will follow the procedures outlined under Section 106 of the National Historic Preservation Act.

8. Provision of recreation facilities only to the extent necessary to protect health and safety. Construction of new facilities would be undertaken only after careful assessment of their location and probable environmental impacts.

V. ADVERSE EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

Some adverse environmental impacts would occur as a result of the designation of the Missouri River and its immediate environment as a component of the National Wild and Scenic Rivers System. These impacts would include the following:

1. Increased numbers of people visiting the proposal area annually would require the establishment of regulations on use to protect the existing environment and to maintain a level of use consistent with the carrying capacity of the area. These regulations on use and the potential limitation of use would cause some loss of visitors' personal freedom to recreate where, when, and how they might otherwise choose.

2. The amount of increased litter, pollution of water, and noise pollution associated with more people visiting the proposal area annually, which cannot be fully mitigated through management techniques, would adversely affect the area. These impacts are expected to be minimal.

3. The increased threat of fire resulting from increased human use of the proposal area cannot be fully mitigated.

4. Some soil and vegetation would be disturbed and some loss would occur at the proposed development sites. The extent of this impact cannot be fully determined until the master plan is prepared, but it is expected to be minor.

5. Limited disruption of wildlife would occur during the construction of the development sites.

6. The 6,100 acres proposed for acquisition would result in a tax loss to Chouteau, Fergus and Blaine Counties.

VI. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Inclusion of the 128-mile segment of the Missouri River and 147,800 acres comprising its immediate environment in the National Wild and Scenic Rivers System would insure maintenance of its free-flowing condition and the existing scenic, recreational, geologic, fish and wildlife, historic, cultural, and other natural values.

The existing environment would be essentially unimpaired for the use and enjoyment of present and future generations through specific rules and regulations governing all uses, including recreational and agricultural development. No major physical change is planned. The designation of the river segment would enhance the long-term productivity of the area for the above-mentioned values.

Existing short-term uses of the environment would remain substantially unaltered under the proposed plan. Short-term economic gain would be foregone from the development of additional homesites, the exploitation of mineral resources without appropriate measures to protect the wild and scenic river values, and any increased use of the area for agriculture or grazing. It is anticipated that any short-term loss resulting from the transfer of private land to public control would be offset by accelerated demand and new opportunities for recreation support businesses by local private enterprise.

VII. IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES INVOLVED IN THE PROPOSED ACTION

No major physical changes to the existing environment are planned. Accordingly, no resources will be irreversibly or irretrievably committed. By designating part of the Missouri River as a component of the National Wild and Scenic Rivers System, all natural resources in the river corridor are committed to the management objectives of preserving the river in its free-flowing condition, maintaining water quality, and preserving historic and cultural values and the immediate river environment for the benefit and enjoyment of present and future generations.

Designation of the 128-mile segment of the Missouri River by Congress to the National System can be modified or reversed by the Congress should it be in the national interest at some future time.

VIII. ALTERNATIVES TO THE PROPOSED ACTION

NO ACTION

The 128-mile segment of the Missouri River and 147,800 acres comprising its immediate environment would not be added to the National Wild and Scenic Rivers System under this alternative. The proposal area would remain in its current ownership: 101,500 acres are currently in Federal ownership, with 19,900 acres managed by the Fish and Wildlife Service and 81,600 acres managed by the Bureau of Land Management; the State currently owns 10,300 acres; the remaining 36,000 acres are in private ownership.

The lands presently administered by the Fish and Wildlife Service would continue to be managed for comprehensive wildlife management. The lands presently administered by the Bureau of Land Management would continue to be managed under authorities for multiple use and sustained yield purposes. Under this type of management, the lands could be managed for one or more of the following objectives:

Domestic livestock production
Fish and wildlife development and utilization
Industrial development and utilization
Mineral production
Outdoor recreation
Watershed protection

Under multiple use management, the Bureau of Land Management could classify portions of the lands they administer adjacent to the river for disposal under various public land laws.

Multiple use programs of the Bureau of Land Management are carried on under a myriad of laws and regulations. Management framework plans are developed for large blocks of public lands under its jurisdiction. These are prepared with public input and must comply with the provisions of the National Environmental Policy Act.

Land classifications for retention in Federal ownership or disposal into private ownership are discretionary. Likewise, the decision as to which of the several multiple uses, or combination of uses, will apply to the Missouri River and its immediate environment is discretionary.

The alternative of "no action" does not remove existing or provide new statutory authority. However, discretion to manage the river environment for recreation, scenery, and primitive character is significantly reduced.

Impacts

Specific examples of possible impacts associated with the "no action" alternative include the following:

1. Minerals--Full control or regulation of coal, gas, oil or bentonite exploration to prevent unnecessary impairment of the scenery is not possible now. Therefore, this impact would be very significant wherever mining would occur in the proposal area because the existing scenic, recreational, geologic, fish and wildlife, or other similar values would not be protected.

2. Commercial or Residential Homes or Cottages--The trend toward more permanent and seasonal residential development would continue on privately owned lands. Such development would probably be controlled only be economic conditions and natural limitations, such as terrain and flooding conditions. The increased development could result in more frequent incidences of erosion, the introduction of debris and sediment to the river and its tributaries, and increased probability of effluent entering the river from private septic systems. Vegetation and wildlife habitat would be disturbed and destroyed during the construction of these cottages and the auxiliary facilities necessary for residential development. This type of development would infringe significantly upon the scenic values of the river corridor. No such impact would result on the existing Federal lands.

3. Transportation--The short-range and long-range demand for improved and unimproved surface access to, from, and through the river corridor is expected to increase as private lands are developed for cottage and residential development. New roads and trails could compromise the scenic integrity of the river area.

There is no authority to regulate surface transportation required for mineral prospecting. Executive Order 11644 (Use of Off-Road Vehicles on Public Lands, February 9, 1972) provides only policy and procedures for regulating off-road vehicles.

The impact of allowing indiscriminate development of access roads or trails is considered major because the increased use accompanying this new access would probably result in the deterioration of natural resource values below acceptible levels in the absence of strong management authority.

4. Historical and Archeological Areas--Historical sites and areas of archeological significance on private lands, expecially those associated with the Lewis and Clark expeditions, could be destroyed by ranching operations, increased development, or vandalism by visitors.

It is anticipated that on the Federal lands the provisions of the National Historic Preservation Act of 1966 (80 Stat. 915) will be implemented and that cultural features worthy of preservation will be identified, adequatly protected and interpreted.

PROTECT THE RIVER THROUGH USE OF EXISTING AUTHORITIES

Under this alternative, the Bureau of Land Management, the Fish and Wildlife Service, and the State of Montana would implement and enforce existing laws and range management practices to maintain the quality of the resources of the area. These would include the implementation of a flood plain management program, as envisioned in the Montana Flood Plain Management Act of 1972, and various range management programs on public domain lands.

Impacts

This alternative would cause some changes in existing land uses and practices, but the overall effect of these changes would be to enhance ranching activities while, at the same time, improving the natural and aesthetic conditions in the river area. Existing land ownership patterns would not be affected and no public expenditure, beyond that required for range management planning, would be required. However, adoption of this alternative would not preclude alteration or impoundment of the river at some future time, nor would it provide any significant degree of protection for historic and archeological values, overuse by recreationists, or incompatible developments and use of private lands outside the flood plain.

LEWIS AND CLARK NATIONAL WILDERNESS WATERWAY

Under this alternative, approximately 181 miles of the Missouri River and 159,053 acres of land between Fort Benton and the backwaters of Fort Peck Reservoir in the Charles M. Russell National Wildlife Range would be set aside as the Lewis and Clark National Wilderness Waterway under National Park Service administration (see Alternative Map A).

Impacts

The major differences between the proposal and the Lewis and Clark National Wilderness Waterway alternative would be the addition of 52 miles of the Missouri River and a focusing upon the important historic elements that are located in and around Fort Benton. This proposal also physically connects with the boundary of the Fort Peck Reservoir. Impacts associated with this alternative are expected to be the same as those described for the Alternative No. 2 in Section II "Environmental Impact of the Proposed Action." However, it should be recognized that the problems of trespass and vandalism associated with the private lands in the upper reach would be largely offset by professional management of the natural, historical and archeological resource.

DIFFERENT SEGMENTS AND BOUNDARIES

Under this alternative, three major boundary changes with varying lateral boundaries have been considered. Two are for increasing the length, and one is a reduction in length.

ALTERNATIVE SEGMENT NO. 1:

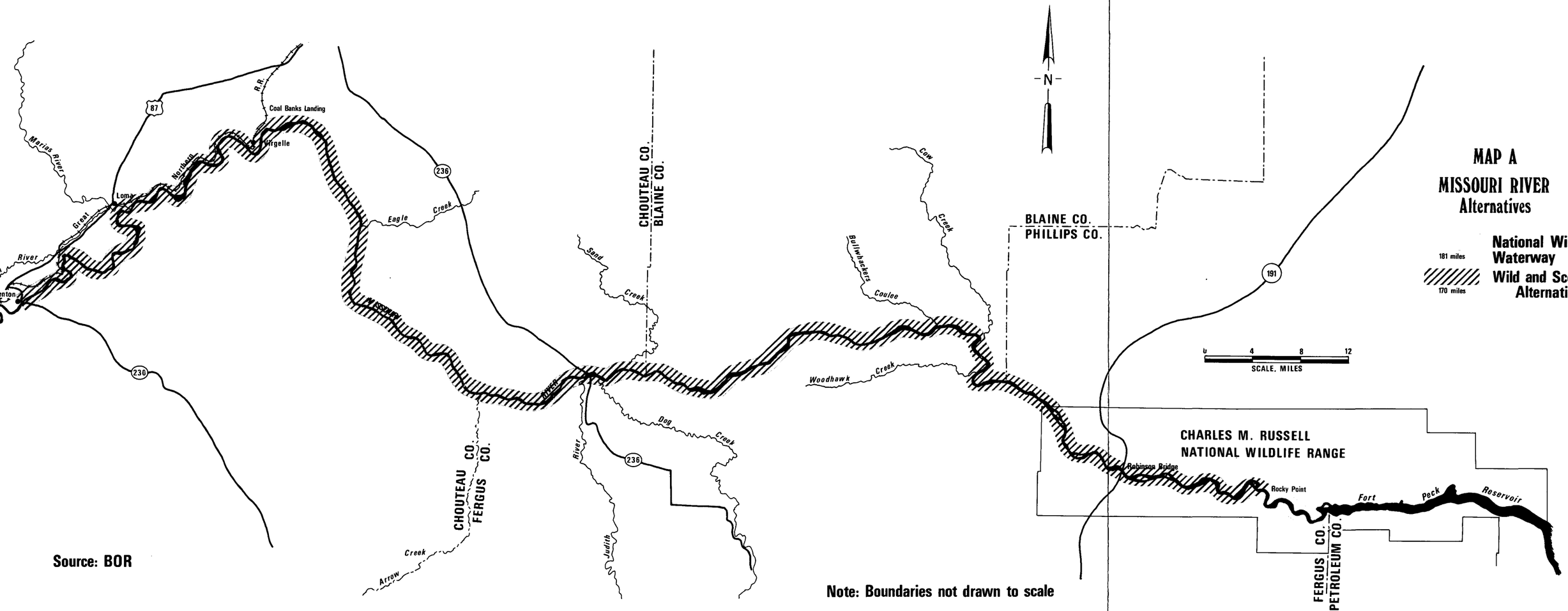
Designate Missouri River from the Vicinity of Fort Benton to Rocky Point Historic Site (boundary - first ridgeline)

Under this alternative, approximately 170 miles of the Missouri River and 72,200 acres of its immediate environment would be designated as a component of the National Wild and Scenic Rivers System. The lateral boundaries are placed at the first ridgeline. This alternative would average approximately 425 acres per mile over the entire 170-mile segment (see Alternative Map A).

Impacts

Impacts from this alternative are expected to be essentially the same as those described for the proposal except that:

1. The development of lands lying within the sight line of the river (approximately 100,000 acres) but outside the lateral boundaries would not be controlled. Development of the lands adjacent to this would have a significant impact on the scenic values of the river corridor.


MAP A
MISSOURI RIVER
Alternatives
National Wilderness
Waterway
181 miles
170 miles
Wild and Scenic River
Alternative #1
N
SCALE, MILES
0 4 8 12
Source: BOR
Note: Boundaries not drawn to scale
CHOUTEAU CO.
BLAINE CO.
BLAINE CO.
PHILLIPS CO.
CHOUTEAU CO.
FERGUS CO.
FERGUS CO.
PETROLEUM CO.
CHARLES M. RUSSELL
NATIONAL WILDLIFE RANGE
Coal Banks Landing
Virgelle
Loma
Eagle Creek
Sand Creek
Cow Creek
Bullwhackers Coulee
Woodhawk Creek
Dog Creek
Judith River
Arrow Creek
Robinson Bridge
Rocky Point
Fort Peck Reservoir
Marias River
Great Northern R.R.
87
236
230
191

2. The historic and archeological sites on lands adjacent to the boundary considered in this proposal would not be protected from adverse use. This could have a significant impact on these values.

3. Recreationists using the proposal area are likely to increase the incidence of trespass and vandalism, especially in the upper 42-mile segment of this alternative as more private lands are involved.

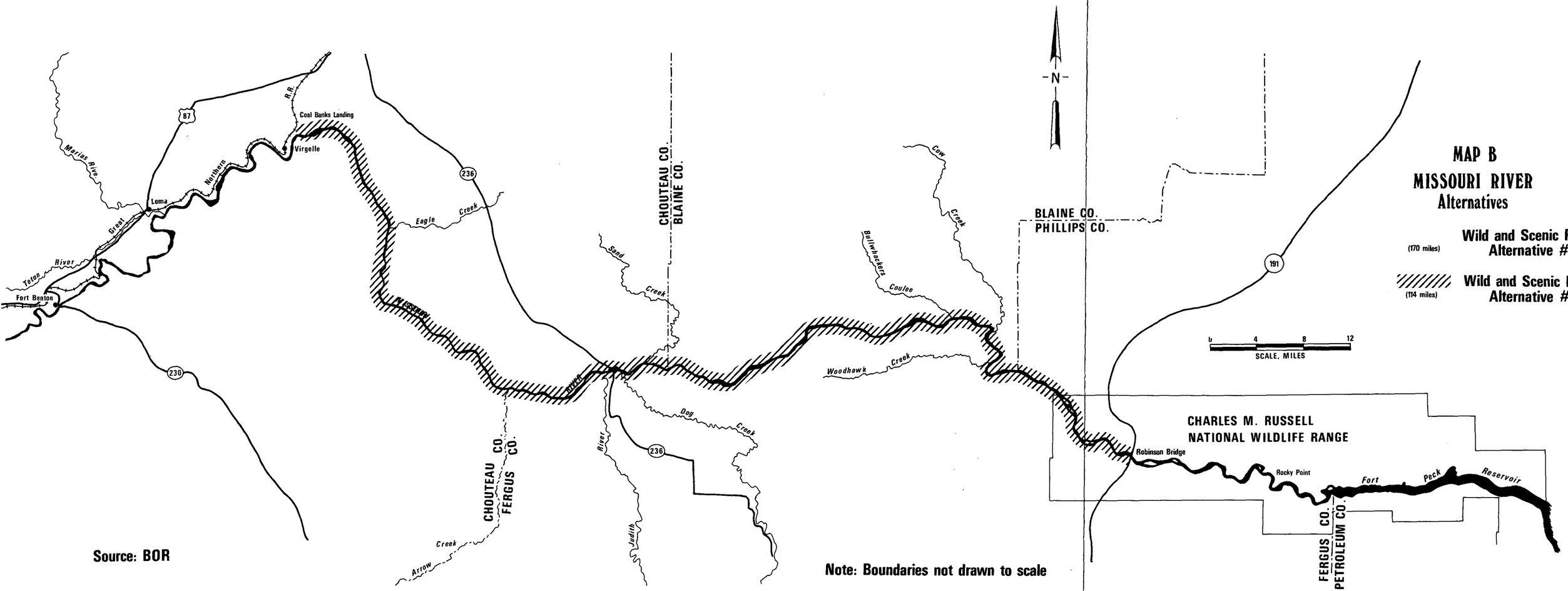
ALTERNATIVE SEGMENT NO. 2:

Designate Missouri River from Vicinity of Fort Benton to Rocky Point Historic Site (boundary - sightline)

Under this alternative, approximately 170 miles of the Missouri River and 173,600 acres of its immediate environment would be designated as a component of the National Wild and Scenic Rivers System. The lateral boundaries would include almost all of the land that can be viewed from the river. This alternative would average approximately 1,015 acres per mile over the entire 170-mile segment (see Alternative Map B).

Impacts

Impacts from this alternative are expected to be essentially the same as those described for the proposal except that:



Source: BOR

Note: Boundaries not drawn to scale

Recreationists using the proposal area will increase the incidences of trespass and vandalism, expecially in the upper 42-mile segment of this alternative as more private lands are involved.

ALTERNATIVE SEGMENT NO. 3:

Designate Missouri River from the Vicinity of Coal Banks Landing to Robinson Bridge (boundary - first ridgeline)

Under this alternative, approximately 114 miles of the Missouri River and 55,500 acres of its immediate environment would be designated as a component of the National Wild and Scenic Rivers System. The lateral boundaries are placed at the first ridgeline. This alternative would average approximately 487 acres per mile over the entire 114-mile segment (see Alternative Map B).

Impacts

Impacts from this alternative are expected to be essentially the same as those described for the proposal except that:

This alternative eliminates a 42-mile segment of the Missouri upstream from Coal Banks Landing and a 14-mile segment from the Robinson Bridge downstream to Rocky Point Historic Site. The impact of eliminating the segment upstream from Coal Banks Landing reduces the amount of private land that would be controlled by scenic easements and is considered significant.

The following table provides a comparison of existing ownership, approximate acreage, and estimated costs for the proposal, National River, and the three alternatives of different segments and boundaries.

COMPARISON OF EXISTING OWNERSHIP, APPROXIMATE ACREAGE AND ESTIMATED COSTS FOR THE PROPOSAL AND OTHER ALTERNATE PLANS

Alternative 1 - From Fort Benton to Rocky Point Historic Townsite (width - from river to first series of hills or bluffs).
Alternative 2 - From Fort Benton to Rocky Point Historic Townsite (width - includes lands which can be viewed from river).
Alternative 3 - From Coal Banks Landing to Robinson Bridge (Hy. 191) (width - same as Alternative 1).
Proposal - From Coal Banks Landing to Rocky Point Historic Townsite (width - same as Alternative 2).
National Wilderness Waterway - From Fort Benton to backwater of Fort Peck Reservoir (width - sightline)

	Alternative 1	Alternative 2	Alternative 3	Proposal	National Wilderness Waterway
River Miles	700	170	114	128	181
Total Acres 1/	72,200	173,600	55,500	147,800	159,053
Acres/Mile	425	1,015	487	1,154	879
Ownership (acres)					
Federal	34,200	103,100	28,700	101,500	56,553
State	4,100	12,400	4,100	10,300	10,300
Private	33,900	57,100	22,700	36,000	62,200 3/
TOTAL	72,200	172,600	55,500	147,800	159,053
Land Acquisition (acres)					
Private	33,900	57,100	22,700	36,000	33,200
(Fee)	(5,700)	(5,700)	(5,400)	(6,100)	(5,200)
(Easement)	(28,200)	(51,400)	(17,300)	(29,900)	(28,000)
Land Costs	$1,696,500 2/	$2,539,000 2/	$1,155,700 2/	$1,747,000 2/	$2,957,000 4/
Developments	$835,200	$835,000	$505,000	$556,000	$2,240,000
Annual O & M	$143,500	$143,500	$91,000	$130,500	$198,500 (average first 5 years)

1/ Includes Islands.
2/ Cost per acre: Land areas - $80/acre Fee, $40/acre Easement; Island areas - $170/acre Fee, $80/acre Easement. (1972 cost estimates supplied by BLM)
3/ This figure includes 29,000 acres of private lands in the Fort Benton - Virgelle Unit which are to be subject to locally enacted zoning.
4/ April 1971 Prices. Includes fee, easement, administrative, severance, and relocation costs.

IX. CONSULTATION AND COORDINATION WITH OTHERS

A. Consultation and Coordination in the Development of the Proposal and Preparation of the Environmental Statement.

The study of the Missouri River as a potential addition to the National Wild and Scenic Rivers System was a cooperative effort. A task force under the leadership of the Bureau of Outdoor Recreation was formed in 1971 with representatives from the State of Montana, Bureau of Land Management, Fish and Wildlife Service, National Park Service, Bureau of Reclamation, U.S. Forest Service, and the U.S. Army Corps of Engineers. Of these, representatives of the State of Montana, Bureau of Land Management, Fish and Wildlife Service, National Park Service, and the Bureau of Outdoor Recreation conducted the on-site inspections.

Public information meetings in Fort Benton, Havre, and Lewistown, Montana, were held by the task force in November 1972. Comments received as a result of the meetings were given careful consideration by the task force in the preparation of this proposal.

Although there has been close coordination and consultation on the resource information incorporated in the analysis of the Missouri River, the conclusion and recommendations are those of the Bureau of Outdoor Recreation.

B. Coordination in Review of the Draft Environmental Statement

Copies of this draft environmental impact statement have been submitted to the following:

*Advisory Council on Historic Preservation
Department of Agriculture
*Forest Service
Soil Conservation Service
Department of Defense
*Corps of Engineers
*Federal Power Commission
Energy Research and Development Administration
*Environmental Protection Agency
Department of Commerce
*Department of Housing and Urban Development
Department of Health, Education, and Welfare
*Department of Transportation
Department of the Interior
*Bureau of Indian Affairs
*Bureau of Land Management
*Bureau of Mines
*Fish and Wildlife Service
*Bureau of Reclamation
**Geological Survey
*National Park Service
Federal Energy Administration
*Missouri River Basin Commission
State of Montana, Office of the Governor
*Montana Fish and Game Commission
National Audubon Society
Montana Chapter of Sierra Club
National Wildlife Federation
Friends of the Earth
*The Wilderness Society
Izaak Walton League of America
Montana State Lewis and Clark Trail Committee
Central Montana Historical Association
*Water Resources Council

*Comments Received
**Reviewed, but no comment. Confirmed 11/21/77.

C. Summary of Correspondence Received Following Review of the Draft Statement

A total of 18 letters were received on the draft environmental statement: 13 from Federal agencies; 1 Federal-State agency; 2 State agencies; 1 organization and 1 individual. All letters received are printed in the following pages. Correspondence which provided additional data or raised questions concerning the adequacy of the draft statement are followed by a response, and where appropriate, changes were made in the text.

Comments are numbered in consecutive order on each letter. The numbered responses on the pages which immediately follow each letter correspond to these numbers. Similar questions were posed by more than one reviewer. In these cases, the comment is addressed the first time it appears with following or similar comments referred to by number and comment to the first response. To facilitate this referral system, the letters are organized alphabetically in the following categories: Federal agencies, State agencies, organizations and individuals.

D. Summary of Changes from Draft Statement

A number of editorial and factual changes have been made as a result of suggestions offered by other agencies. Additional data were used as supplied by other agencies whenever it was felt that these data would contribute to a better evaluation of impacts of the proposal or alternatives. However, some questions must await the Master Planning process for answers.

E. Correspondence Received

Advisory Council
On Historic Preservation
1522 K Street N.W.
Washington, D.C. 20005

September 22, 1975

Mr. James G. Watt
Director
Bureau of Outdoor Recreation
U.S. Department of the Interior
Washington, D. C. 20240

Dear Mr. Watt:

This is in response to your request of August 1, 1975, for comments on the environmental statement for the Missouri Wild and Scenic River Study in Montana. Pursuant to its responsibilities under Section 102(2)(C) of the National Environmental Policy Act of 1969, the Advisory Council on Historic Preservation has determined that while you have discussed the historical, architectural, and archeological aspects related to the undertaking, the Advisory Council needs additional information to adequately evaluate the effects on these cultural resources. Please furnish additional data indicating:

I. Compliance with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470[f]). The Council must have evidence that the most recent listing of the National Register of Historic Places has been consulted (see Federal Register, February 4, 1975 and monthly supplements each first Tuesday thereafter) and that either of the following conditions is satisfied:

   A. If no National Register property is affected by the project, a section detailing this determination must appear in the environmental statement.

   B. If a National Register property is affected by the project, the environmental statement must contain an account of steps taken in compliance with Section 106 and a comprehensive discussion of the contemplated effects on the National Register property. (36 C.F.R. Part 800 details compliance procedures.)

1

II. Compliance with Executive Order 11593, "Protection and Enhancement of the Cultural Environment" of May 13, 1971.

A. Under Section 2(a) of the Executive Order, Federal agencies are required to locate, inventory, and nominate eligible historic, architectural and archeological properties under their control or jurisdiction to the National Register of Historic Places. The results of this survey should be included in the environmental statement as evidence of compliance with Section 2(a).

B. Until the inventory required by Section 2(a) is complete, Federal agencies are required by Section 2(b) of the Order to submit proposals for the transfer, sale, demolition, or substantial alteration of federally owned properties eligible for inclusion in the National Register to the Council for review and comment. Federal agencies must continue to comply with Section 2(b) review requirements even after the initial inventory is complete, when they obtain jurisdiction or control over additional properties which are eligible for inclusion in the National Register or when properties under their jurisdiction or control are found to be eligible for inclusion in the National Register subsequent to the initial inventory. 2

The environmental statement should contain a determination as to whether or not the proposed undertaking will result in the transfer, sale, demolition or substantial alteration of eligible National Register properties under Federal jurisdiction. If such is the case, the nature of the effect should be clearly indicated as well as an account of the steps taken in compliance with Section 2(b). (36 C.F.R. Part 800 details compliance procedures.)

C. Under Section 1(3), Federal agencies are required to establish procedures regarding the preservation and enhancement of non-federally owned historic, architectural, and archeological properties in the execution of their plans and programs.

The environmental statement should contain a determination as to whether or not the proposed undertaking will contribute to the preservation and enhancement of non-federally owned districts, sites, buildings, structures and objects of historical, architectural or archeological significance.

III. Contact with the State Historic Preservation Officer. 2

The procedures for compliance with Section 106 of the National Historic Preservation Act of 1966 and the Executive Order 11593 require the Federal agency to consult with the appropriate State Historic Preservation Officer. The State Historic Preservation Officer for Montana is Mr. Ashley C. Roberts, Administrator, Recreation and Parks Division, Department of Fish and Game, Mitchell Building, Helena, Montana 59601.

Should you have any questions or require any additional assistance, please contact Brit Allan Storey of the Advisory Council staff at P. O. Box 25085, Denver, Colorado 80225, telephone number (303) 234-4946.

Sincerely yours,

Louis S. Wall
Assistant Director, Office
of Review and Compliance

Response to Comments Received
From the Advisory Council on Historic Preservation

1. The most recent listing of the National Register of Historic Places (through September 6, 1977) has been examined. All sites listed on the National Register, or which have been determined to be eligible for listing, are now identified in the text. As stated on page 82 of the FEIS under "Mitigating Measures", compliance with Section 106 of the National Historic Preservation Act of 1966 will be implemented in the master planning phase.

2. As the administering agencies, the Fish and Wildlife Service and the Bureau of Land Management will comply with all provisions of the National Historic Preservation Act of 1966 and Executive Order 11593 during and subsequent to the master planning process.

   One goal of the master plan will be to protect and enhance the historical values of the wild and scenic river; consequently, designation will not result in the demolition or substantial alteration of sites with historic or cultural value.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Washington, DC 20250

8420

November 11, 1975

Mr. James G. Watt
Director, Bureau of Outdoor Recreation
U.S. Department of the Interior
Washington, DC 20240

Dear Mr. Watt:

The draft environmental statement for the Proposed Inclusion of the Missouri River into the National Wild and Scenic Rivers System was referred by Secretary Butz to the Forest Service for review.

Our greatest concern with the draft statement is that the description of impacts associated with the fee or easement acquisition of 36,000 acres of private land does not address such impacts on agricultural production and use. If the proposal is implemented and the management objectives as stated in the river study report are carried out, the effects on ranching operations could be substantial. For example, the fencing of cottonwood groves for exclusion of livestock and the need to develop off-river stock watering facilities, would undoubtedly impact private landowners along the river. 1

We are also concerned that the environmental statement does not discuss the social impacts of the proposal. There is mention that public information meetings were held, but little or no evidence is given as to the desires of the local residents, or of the impacts of the proposal on their way-of-life. 2

We appreciate the opportunity to review and comment on the environmental statement.

Sincerely,

for R. MAX PETERSON
Deputy Chief

6200-11 (1/69)

Response to Comments Received
From the Department of Agriculture

1. Based upon available land use data and the conceptual plan, there will be little alteration in agricultural use and production. Only about 6,000 acres will be acquired in fee, while easements will be sought on about 30,000 acres to assure no basic change in land use in scenic areas. Due to the unsuitability of the terrain for cultivation, land use in the river valley is restricted almost exclusively to grazing. Existing Federal lands within the proposal support only 8,876 animal unit months, about 2.4% of the four county total of 370,000 AUM's (1960 statistics). Implementation of the management plan will reduce this total only slightly.

   Livestock grazing will be recognized as a compatible land use. This use will be continued except in areas of visitor use, wildlife propagation, scenic, scientific and historic values. Grazing restrictions will be necessary around some cottonwood groves, mainly where campsites are developed. These groves, which provide the best shade for livestock, wildlife and visitors, have little protection to insure their continued existence. In areas where livestock concentrations are undesirable, priority will be given to management rather than a total exclusion of livestock. The latter can be accomplished through fencing of coulees and development of watering facilities away from the river. The objective is not to remove all livestock from view of the river, but to provide increased control adjacent to the river. Although it is anticipated that there will be only a few instances when off-river stock watering facilities will be needed, a determination cannot be made until the management plan is implemented. Presumably, the ranches would bear the development costs.

2. Most of the private landownership along the river between Fort Benton and the Charles M. Russell National Wildlife Range occurs between Fort Benton and Coal Banks Landing. This segment is not recommended for designation due to the feelings of the people in this area. Because of the very modest impact on agricultural use in the area downstream of Coal Banks Landing, as described above, no change of the local residents' way-of-life is expected even though the total number of AUM's in the proposed boundaries will decrease slightly.

DEPARTMENT OF THE ARMY
MISSOURI RIVER DIVISION, CORPS OF ENGINEERS
P. O. BOX 103, DOWNTOWN STATION
OMAHA, NEBRASKA 68101

MRDPD-ER

17 September 1975

Mr. James G. Watt, Director
Bureau of Outdoor Recreation
U. S. Dept. of the Interior
Washington, D. C. 20240

Dear Mr. Watt:

Your attention is directed to the comments of the Department of Army on the proposed report, "Missouri River - A Wild and Scenic River Study", dated 28 July 1975, addressed to the Honorable William W. Lyons, Deputy Under Secretary of the Interior. In summary, those comments expressed the current view that there is a potential conflict between the need for water resource development and for preservation of the same resources. A possibly difficult choice among alternative uses of the resource will have to be made by the public and Congress and ought to be grounded on complete and up-to-date information concerning the alternatives. In this regard, both your report -- and consequently your draft EIS -- and the Corps "Umbrella Study" of the Missouri River - South Dakota, Nebraska, North Dakota and Montana need to make the fullest possible disclosure of information about the resources and their potential uses. The Corps study is scheduled for completion in 1977. Consequently, this date is the earliest that the base line information and the Corps assessment and evaluation of the information will be assembled. The Army's letter requested the delay of your report until 1977 when the Corps' report will be complete. In this way your display of water resource development as an alternative to resource preservation in your report and EIS can be adjusted as necessary to present complete and up-to-date information on the development alternative. Likewise, the Umbrella Study will present up-to-date information on the wild and scenic river alternative. 1

The uniqueness, wildness and historical importance of the Missouri River between Fort Benton and Fort Peck reservoir are not questioned. It is our belief that your EIS would be much clearer if it would identify the specific attributes of the river and adjoining lands within the five designated areas that determine their particular classification (recreational, wild, and scenic). Without this specificity the reader of the EIS cannot compare the effects of the proposal with the effects of the 2

17 September 1975

stated alternatives. It would also seem desirable, for the sake of clarity and full disclosure, for the draft EIS to present the specific needs for the 147,800 acres of the proposal and the Federal interest necessary to accommodate the specific needs as they relate to the particular five designated areas and their classification. That is, what lands and what interest in those lands are necessary for the Federal Government to acquire to fulfill the objectives of the classified areas? 2

Although water resource development would not holistically be an alternative to preservation of the resource, a significant effect of your no action alternative would be not to deter in any way such development. Also, certain aspects of water resource development could provide recreation benefits which would be a benefit held in common by your proposal. Similar benefits attributable to the wild and scenic classification may also be held in common with water resource development. These aspects of the proposed project and appropriate alternatives should be assessed and evaluated in your EIS and your report. 1

Sincerely,

Carlyle H. Charles

CARLYLE H. CHARLES
Colonel, Corps of Engineers
Deputy Division Engineer for Civil

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D.C. 20310

24 FEB 1976

Mr. Douglas P. Wheeler
Deputy Assistant Secretary
for Fish, Wildlife and Parks
Department of Interior
Washington, D. C. 20240

Dear Mr. Wheeler:

This letter is a follow-up to my letters of 28 July 1975 and 7 November 1975 concerning your Department's proposed report on inclusion of the Upper Missouri River in the national wild and scenic river system.

The Division Engineer, Missouri River has completed sufficient studies of the High Cow Creek and Fort Benton projects to determine that, based on current information furnished by the Federal Power Commission and the Bureau of Reclamation on power benefits and financial feasibility, neither project is at this time economically or financially feasible.

Consequently, this letter constitutes a withdrawal of our request that your Department's proposed wild river report be held in abeyance until completion of the Corps on-going study of the Upper Missouri River has been finalized.

Sincerely,

Charles R. Ford

Charles R. Ford
Deputy Assistant Secretary of the Army
(Civil Works)

Response to Comments Received
From the Department of the Army

1. We thank the Department of the Army for their review of the Statement. The comments in paragraphs one and three have been superseded by attached letter dated February 24, 1976.

2. Some additional specific data have been added to the FEIS. We believe sufficient data have been provided both to support classification of the five segments and to identify lands needed for protection purposes.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGIONAL OFFICE
FEDERAL BUILDING, 1961 STOUT STREET
DENVER, COLORADO 80202

REGION VIII

August 26, 1975

IN REPLY REFER TO:
8DE

Mr. James G. Watt
Director
Bureau of Outdoor Recreation
Department of the Interior
Washington, D.C. 20240

Dear Mr. Watt:

The copies of the draft Environmental Impact Statement for the Missouri Wild and Scenic River Study were forwarded to this Office from our Central Office August 1, 1975.

As you may know, this Department's primary concern in responding to a draft Environmental Impact Statement include (1) the consistency of an action with the comprehensive planning for the area and (2) the action's impact on housing, particularly in an urban environment.

Within these parameters, we find that this document has been forwarded to the appropriate agencies and that there will be no effect on housing in the area.

Sincerely,

for David L. Witt
Director, Environmental Quality Division
Community Planning and Development

Response to Comments Received
From the Department of Housing and
Urban Development

We appreciate the review by the Department of Housing and Urban Development.

C O P Y

Environmental Quality
(DES 75/45)

September 19, 1975

Memorandum

To: Director, Bureau of Outdoor Recreation
Washington, D.C. 20240

From: Office of the Area Director

Subject: Review of Environmental Statement, Missouri Wild and Scenic River (DES 75/45)

We have reviewed the subject statement and have no comments to submit from a jurisdictional standpoint. The proposed designation of 128-mile segment of the Missouri River as a component of the National Wild and Scenic Rivers System appears to involve no adverse effects to either the Indian people or their natural resources.

Paragraph three, page 11, states in part that "Management of the river area would be directed toward maintaining the existing condition of the soil, water, and vegetation." Inasmuch as the statement previously mentioned that grass lands have been encroached on by sage because of overgrazing we would suggest that a management goal should be established to improve existing conditions rather than maintaining status quo. 1

(Sgd) Maurice W. Babby

Assistant Area Director

cc: Commissioner of Indian Affairs
Attention: Trust Facilitation Code 210

Response to Comments Received From the Bureau of Indian Affairs

1. The Bureau of Land Management is expected to work on improving rangeland through its rangeland management program.

IN REPLY REFER TO:
6223/1792(370)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

OCT 8 1975

Memorandum

To: Director, Bureau of Outdoor Recreation

Through: Assistant Secretary, Land and Water Resources

From: Director, Bureau of Land Management

Subject: Review of Draft E.S. on Upper Missouri River Wild and Scenic River Proposal

We have reviewed the draft environmental statement (DES) for the proposed Upper Missouri Wild and Scenic River and have the following comment:

1 Two pages of this draft have been altered to reflect a new National Park Service (NPS) alternative (pages 99 and 105). This is a new alternative which is not reflected in the parent Wild and Scenic River report which was released for the mandated 90-day review on May 29, 1975. The DES and report should have been released simultaneously for review. We now have a situation where the DES does not accurately reflect all data presented in the wild river report even though the NPS was the author of their own report alternative. The final environmental statement (FES) should be amended to accurately reflect data presented in the report.

We have no other comments and urge that the FES be completed as soon as possible. If we can be of any assistance, please call on us.

Curt Berklund

CONSERVE AMERICA'S ENERGY

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Response to Comments Received
From the Bureau of Land Management

1. The changes identified have been incorporated into the FEIS.

OFFICE OF THE DIRECTOR

United States Department of the Interior

BUREAU OF MINES
2401 E STREET, NW.
WASHINGTON, D.C. 20241

September 23, 1975

DES 75-45

Memorandum

To: Director, Bureau of Outdoor Recreation

Through: Deputy Assistant Secretary--Energy and Minerals OCT 2 1975

From: Director, Bureau of Mines

Subject: Draft environmental statement, proposed inclusion of the Missouri River into the National Wild and Scenic River System, Bureau of Outdoor Recreation

The Bureau of Mines Western Field Operation Center, Spokane, has reviewed the draft environmental statement concerning the proposed inclusion of a 128-mile segment of the Missouri River and 147,800 acres of adjacent land located in the State of Montana. Of the 128-mile segment of the Missouri River, 72 miles are proposed as wild, 39 miles as scenic, and 17 miles as recreational.

The sections on geology and minerals in this draft (pages 50-58) are essentially adequate. In the minerals section, resources including gas, coal, bentonite, and possibly oil are recognized as occurring in close proximity to the Missouri River. The draft refers specifically to the Sherard and Winifred gasfields. More importantly, however, mention is not made of the recently discovered and developing Leroy gasfield which is centered in the southwest corner of Blaine County and extends across the Missouri River into parts of Fergus County. The Leroy gasfield includes a 12-mile stretch of the Missouri designated as "Wild" in the proposed management plan.

The Leroy gasfield is in the Bearpaw Arch area, large portions of which are prospective for oil and gas. According to information provided by Fuelco of Denver and by the Billings office of the Montana Board of Oil and Gas Conservation, the Leroy field is being developed and shows production from shallow (1,200 to 1,300 feet) wells. A pipeline outlet which follows a northerly route has been built. Wells south of the Missouri are not in production but a pipeline to serve them is contemplated and may be completed next year, so production from them can be anticipated.

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

So far, the Leroy field includes 15 producing or potentially producing gas wells. Test production rates for them range from 0.1 million cubic feet per day to 3.5 million cubic feet per day with a mean of 1.2 million cubic feet per day. Exploration and development is continuing to the east and southeast on both sides of the Missouri. 1

The proposed management plan outlined in this statement reflects the terms of Senate Bill S. 1506, Section 6(iii) which, subject to existing rights, withdraws "all Federal lands which are part of the river area or are situated within 1/4-mile of the river bank from all forms of appropriation under the mining laws and from operation of the mineral leasing laws, including, in both cases, amendments thereto." These proposals to withdraw lands prospectively valuable for gas near or adjacent to the Leroy field are difficult to justify especially in view of the continuing national shortage of natural gas. Such potential reserves, even within the 1/4-mile limit, could be developed with minimal long-term environmental impact, as the wellheads and distribution systems could be made inconspicuous by camouflage or burial.

A compromise of leasing the natural gas with no surface disturbance within the 1/4-mile limit would not be satisfactory in this case. Directional drilling from sites outside the 1/4-mile limit would not be technically or economically feasible because of the characteristically shallow depth to the producing horizons. 2

Although this withdrawal appears to be relatively small, we cannot help but view this withdrawal in the context of the cumulative affect of many such withdrawals, especially where they can affect oil and gas recovery. Recently, Assistant Secretary Carlson indicated to members of Congress that no less than 50 percent of all Federal lands in the United States has been withdrawn or severely restricted from appropriation under the mining laws and from operations under the mineral leasing laws. In view of our Secretary's responsibility for minerals adequacy, we hope that your agency can provide for continued exploration and development of natural gas, and potentially oil, in its proposal for this section of the Missouri River.

Thomas V. Falkie
Director

United States Department of the Interior

BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY
REFER TO: 746
121.

AUG 29 1975

Memorandum

To: Director, Bureau of Outdoor Recreation

From: Assistant Commissioner of Reclamation

Subject: Review of Draft Environmental Statement - Missouri Wild and Scenic River (DES 75/45)

We have reviewed the subject report and offer the following observations.

The proposal would have no effect on any existing Bureau projects. The proposed Fort Benton Unit, which is upstream from the river reach under study, is adequately described as are the characteristics of the Missouri River.

We appreciate the opportunity to review the report.

Response to Comments Received
From the Bureau of Mines

1. Map locations and textual information on the Leroy gasfield have been included in the FEIS.

2. The ¼-mile withdrawal from all forms of mineral appropriation on Federal lands in segments classified as wild is required by Section 9(a)(iii) of the Wild and Scenic Rivers Act. In addition to the ¼-mile withdrawal, the conceptual plan in the final environmental statement calls for withdrawal of all Federal lands located in a rim to rim boundary in the wild segments. This is a distance of 72 miles and involves approximately 3,500 acres. This withdrawal is considered necessary to assure preservation of the values which qualify the river as wild. No mineral activity presently occurs on these lands.

ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/OBS/EA

SEP 30 1975

Memorandum

To: Director, Bureau of Outdoor Recreation

From: Deputy Associate Director, Fish and Wildlife Service

Subject: Missouri River (Montana) Wild and Scenic River Study--Comments on Draft Environmental Statement (DES 75-45)

In response to Mr. Underhill's memorandum of August 1, we offer the following comments on the subject environmental statement. EIS comments which are the same as or similar to those made on the Department's proposed report are herein referenced to our report comments (copy enclosed), in order to avoid undue repetition.

1. Administration-Management Section (pages 4-11). To aid the reader in more fully understanding the proposal, this section could be expanded to summarize very briefly the specific legislative authorities, and the related responsibilities and management practices of the Federal and State agencies involved. Few people are knowledgeable about the administration of a National Wild and Scenic River and the roles carried out by the administering agencies under their legislative authorities. Any potential land use conflicts to be encountered by the administering agencies in carrying out their managerial roles should be recognized in the Environmental Impacts chapter. Detailed treatment of this subject is not being suggested, since the master plan would be a better vehicle for a more complete discussion. 1

2. Recreational Use Data (pages 24, 25, 73, elsewhere). While the EIS is replete with reference to recreational use, specific figures relating to present and projected levels of use are difficult to locate. It is suggested that a table depicting this would be most helpful in analyzing the recreational use impact, if available data permit tabulation. 2

3. Cottage and Residential Development (page 39). In a single sentence on this subject, it is stated that "A trend toward cottage and residential development of the private lands adjacent to the river is being experienced." 3

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Response to Comments Received
From the Bureau of Reclamation

We appreciate the review by the Bureau of Reclamation.

ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/OBS

MAY 21 1976

Memorandum

To: Director, Bureau of Outdoor Recreation
Deputy Associate

From: Director, Fish and Wildlife Service

Subject: Supplemental Comments on Secretary's Proposed Report and Draft Environmental Statement (DES 75-45), Missouri River (Montana) Wild and Scenic River Study

These comments supplement those of our memorandum of September 18, 1975, on the subject report and our memorandum of September 30, 1975, on the draft environmental statement.

They are occasioned by the recent enactment of Public Law 94-223, which places the Charles M. Russell National Wildlife Range under the sole jurisdiction of the U.S. Fish and Wildlife Service. The proposed report and draft environmental statement were prepared and circulated for review during the period between February 1975 and enactment of P.L. 94-223, when sole management responsibility for the range was assigned by Secretarial order to the Bureau of Land Management. Understandably, several passages of text in the documents which were related to the range reflect the BLM responsibility.

We now request changes in the texts which harmonize with the legislative authority for change in administrative responsibility for the range. At a recent meeting, most of the changes listed below were discussed informally by Messrs. Eastman and Bradley of your staff and Kline and Beach of ours.

A further discussion of this trend would appear to be warranted. Our concern over this is evidenced by the associated impacts of the "No Action" alternative found on page 96. Data on the extent and magnitude of this development activity should be included, if available. 3

4. Impact on Fish and Wildlife (pages 84-86). This section is too generalized and largely consists of reiterating facts on species and their distribution which have already been stated in the report. More on impact should be included. For example, we believe that increased visitation will cause loss of habitat especially in certain frequented locations, through soil compaction and destruction of vegetation, and will cause general disturbance to the forms of wildlife presently existing on the proposal area. Canada goose nesting sites, heron rookeries, and production of mourning doves, could be significantly affected by additional visitors. Information in the text is insufficient to determine the degree to which these, and other species, might be affected. It is suggested that this impact be made more specific. 4

In addition, the following comments which we made on the Missouri River Report, also apply to the EIS: (a) Map (page 7)--Report Comment No. 2; (b) Water Quality (pages 33-34)--Report Comment No. 2, and Report Comment No. 4 which relates to this section, Land Use, or other sections as appropriate; (c) Black-Footed Ferret (pages 60-61, etc.)--Report Comment No. 5; (d) Water Resource Developments (pages 69-72)--Report Comment No. 7; and (e) Potential Endangered or Threatened Species (page 61, bottom)--Report Comment No. 6. (To Report Comment No. 6, we herein add for precise identification purposes the scientific names of the two named fish species: Scaphirhynchus platorynchus - shovelnose sturgeon, and Polyodon spathula - paddlefish. Neither species would be adversely affected by inclusion of the Missouri in the National Wild and Scenic Rivers System.) 5

We appreciate the opportunity to comment on the draft environmental statement.

W. J. Olds, Jr.

Enclosure

DRAFT ENVIRONMENTAL STATEMENT

There are several changes similar in vein to those pertaining to the report which should be made in the EIS. They include deletion of the Notice (attached to EIS), and changes on page 12 (1st paragraph), on page 20 (3rd complete paragraph), and on page 39 (2nd complete sentence). 6

If we have overlooked other places in both documents where changes similar to those mentioned have been made, we would appreciate your incorporating them in the texts.

W. J. Olds, Jr.

Response to Comments Received
From the Fish and Wildlife Service
(2 memoranda)

1. Information concerning legislative responsibilities has been added in the statement. We expect your last suggestion on the master plan expansion to be accomplished.

2. Please see paragraph 5 of the State of Montana, Department of Fish and Game letter.

3. Quantitative data in second home development is not presently available.

4. Additional information has been added to the Impact on Fish and Wildlife Section in the FEIS. It should be mentioned, however, that impact analysis is in large part based on recreation data analysis which, in the case of the Missouri, are largely estimates.

5. These corrections have been completed in the FEIS.

6. These changes have been made, except for the one suggestion concerning page 39 of the DEIS which we believe remains accurate.

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
L7619-MQ

SEP 22 1975

Memorandum

To: Director, Bureau of Outdoor Recreation

Through: Assistant Secretary for Fish and Wildlife and Parks GB 9/30

From: Associate Director, Park System Management

Subject: Review of Draft Environmental Statement, Proposed Inclusion of the Missouri River into the National Wild and Scenic Rivers System (DES 75-45)

We have reviewed the subject statement and offer the following comments.

General Comments

The proposed project area is rich in human history and although the statement contains an informative and interesting sampling of human events, insufficient information is contained concerning extant cultural resources evidencing these activities. We suggest that positive steps be taken to identify cultural sites and that provisions be added to the proposal to ensure their preservation.

Specific Comments

Page 7

The statement that "development of the three additional standard facilities would be expanded as visitor use increases" should be modified or qualified to indicate that expansion will be determined after the needs of the public and the ability of the environment to sustain increased impact have been assessed. 1

Page 11

The statement indicating that no man-caused alteration of streambed or banks will occur should be corrected to recognize that boat ramps, campgrounds and associated public use are proposed. 2

Actions to preserve cultural resources should be added to the proposal.

Pages 62-69

The identification and determination of significance of cultural resources is inadequate.

The fact that the National Historic Landmark, Fort Benton Historic District, is also listed on the National Register of Historic Places should be stated. Whether other National Register properties are located within the project area should be made clear.

The State Historic Preservation Officer (SHPO) who is Administrator, Recreation and Parks Division, Department of Fish and Game, State of Montana, Mitchell Building, Helena, Montana 59601, should be consulted to determine if he is aware of cultural resources wthin the project area in addition to those identified and to obtain his advice concerning the need to perform further preliminary surveys to locate presently unknown cultural resources that may be subject to impact by the proposal. He should be further consulted to ascertain whether any of these resources potentially meet National Register criteria. The Secretary, through the Assistant Director, Archeology and Historic Preservation, National Park Service, will determine eligibility for the National Register for questionable properties. 3

Page 82

Through consultation with the SHPO the Advisory Council on Historic Preservation procedures (36 CFR Part 800) should be followed in regard to the Fort Benton Historic District and to any other listed or eligible National Register properties within the project area.

Since cultural resources upon Federal land presently receive considerable protection it is probable that increased public use of the area will have an adverse effect upon these resources. As stated previously, those measures taken to identify cultural resources and a description of those preservation measures proposed should permit a more accurate assessment of project impacts. Since the private land proposed for inclusion will receive increased protection impacts to cultural resources therein should be beneficial. 4

Page 88

It is stated that detailed measures to mitigate adverse impacts and enhance beneficial effects will await detailed planning in the future. However, those measures necessary to ensure proper assessment of impact

Response to Comments Received
From National Park Service

1. The Statement has been so revised.

2. The Statement has been so revised.

3. The Statement has included additional information on the points listed. The administering agencies will work with the State Historic Preservation Officer during the master planning phase.

4. Please refer to response item #1 to the letter from the Advisory Council on Historic Preservation. The Fort Benton Historic District is outside the area proposed for designation.

5. Recognition of the unlikelihood of reaching the projections and the reason for it is considered adequate. Total population in the counties is and in all likelihood will remain small.

at this stage of decision making should be completed prior to taking action on the proposal. Consultation with the SHPO and completion of those other preliminary steps outlined above should ensure that this occurs.

We would also like to suggest that the population increase projection for the future, stated on page 19, be reconciled with the historical trend of population decline over the last half century which is noted on page 18. It may be appropriate to revise the projections for Shelby and Conrad counties to reflect the discontinuance of the ABM project. 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80203

Ref: 8W-EE

SEP 12 1975

Mr. James G. Watt, Director
Bureau of Outdoor Recreation
Washington, D.C. 20240

Dear Mr. Watt:

The Environmental Protection Agency has reviewed the draft environmental impact statement on the proposed inclusion of a 128-mile segment of the Missouri River into the National Wild and Scenic Rivers System. EPA feels that the draft EIS has adequately assessed the environmental impacts that can be reasonably determined at this time. We recognize that many of the potential environmental impacts would be a function of the management plan developed for the area. If this section of the Missouri River does become part of the National Wild and Scenic Rivers System, EPA would like consideration given to the following concerns in the development of a management plan.

Special attention should be given to recreational uses that would be abusive to the soils and vegetation. In a semi-arid climate damage to the terrain resulting from overuse or the use of off-road vehicles could be extensive and long term and could aggravate erosion and water quality problems. Additional management options that could affect water quality should be adopted in accordance with the "Middle Missouri Water Quality Inventory and Management Plan" prepared under Section 303(e) of P.L. 92-500.

Noise impacts should be a major concern in the management of such an area. Public use and enjoyment could be considerably lessened by the inclusion of noisy, annoying activities in the designated wild and scenic areas and many people might object to such activities in designated recreational areas. Activities involving trail bikes, snowmobiles and power boats are noisy and frequently annoying to the nonuser. Consideration should be given to excluding such activities from those areas classified as wild and scenic.

EPA's comments on this environmental impact statement are rated LO-1. A copy of EPA's rating system is enclosed.

Thank you for providing EPA the opportunity to comment on this draft statement. If my staff or I can be of any assistance in developing further information concerning our comments please contact our regional office.

Sincerely yours,

John A. Green
Regional Administrator

Response to Comments Received
From the Environmental Protection Agency

1. During development of the management plan, the administering agencies will carefully consider the potential adverse impacts identified here and recommend appropriate management options. We appreciate these comments by the Environmental Protection Agency.

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

Mr. James G. Watt
Director, Bureau of Outdoor Recreation
Department of the Interior
Washington, D.C. 20240

SEP 18 1975

Reference: D4219-Missouri River

Dear Mr. Watt:

This is in reply to your letter to Chairman Nassikas, dated August 1, 1975, inviting comments on the draft environmental statement on the Missouri River wild and scenic river study. The draft statement discusses the environmental aspects of including a 128-mile segment of the Missouri River in Montana in the National Wild and Scenic Rivers System.

These comments of the Federal Power Commission's Bureau of Power are made in accordance with the National Environmental Policy Act of 1969 and the August 1, 1973, Guidelines of the Council on Environmental Quality. Our principal concern with proposals affecting land and water resources is the possible effect of such proposals on bulk electric power facilities, including potential hydroelectric developments, and on natural gas pipeline facilities.

The Commission has recently considered the proposed report of the Department of the Interior on the Missouri River wild and scenic river study. In its letter to the Acting Secretary of the Interior, dated August 18, 1975, (copy attached) the Commission noted that there were two potential conventional hydroelectric power developments, High Cow Creek and Rocky Point, within the segment of the Missouri River proposed for wild, scenic, and recreational designation. It also noted that the operation of a potential upstream Fort Benton hydroelectric development could require modification if the river segment downstream were included in the national system. The Commission concluded that the proposed scenic, recreational and wild river designations would conflict with the possible development of major amounts of hydroelectric power. 1

The Commission staff notes that the power that could be developed at the High Cow Creek, Rocky Point, and Fort Benton projects, if constructed by the Federal government, presumably would be marketed by the Bureau of Reclamation as part of its Pick-Sloan Missouri Basin Program. The Bureau

of Reclamation is a party to the Mid-Continent Area Reliability Coordination Agreement (MARCA). In its recent report, MARCA estimated that its peak summer power loads would increase from 15,213 megawatts in 1975 to 28,797 megawatts in 1985. It would appear that the power that could be produced at these potential hydroelectric projects could find a place in MARCA's future power loads. 1

The opportunity to review the draft environmental statement is appreciated.

Very truly yours,

T. A. Phillips
Chief, Bureau of Power

Enclosure: Copy of letter to the Acting Secretary of the Interior, dated August 18, 1975.

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

AUG 18 1975

Honorable Kent Frizzell
Acting Secretary of the Interior
Washington, D.C. 20240

Reference: D4219 - Missouri River

Dear Mr. Secretary:

This is in reply to Deputy Under Secretary Lyons' letter of May 29, 1975, transmitting for the Commission's comments, pursuant to the provisions of the Wild and Scenic Rivers Act, (P.L. 90-542), the proposed report of your Department on the Missouri River, Montana.

The cited report recommends that the 128-mile reach of the Missouri River from the town of Virgelle downstream to the Rocky Point "Historic" Site be included in the National Wild and Scenic Rivers System. Two segments totaling about 17 miles are recommended for recreational designation, two segments totaling 72 miles are recommended for wild designation, and one segment of 39 miles is recommended for scenic designation. It is also recommended that the area, delineated by boundaries to be determined at a later date, be administered and managed by the Bureau of Land Management.

The Federal Power Commission staff has reviewed the proposed report of your Department to determine the effects of the recommended actions on matters affecting the Commission's responsibilities. Such responsibilities relate to the development of hydroelectric power and assurance of the reliability and adequacy of electric service under the Federal Power Act, and the construction and operation of natural gas pipelines under the Natural Gas Act.

The Commission staff review shows that there are no existing or no known current plans to construct electric generating plants or major power transmission facilities within the reach of the Missouri River proposed for inclusion in the National Wild and Scenic Rivers System. The staff notes, however, that there are important possibilities for the development of hydroelectric power within this river segment. The possible High Cow Creek multiple-purpose project and the possible Rocky Point project have the potential for the development of 720,000 and 94,000 kilowatts of capacity, respectively. Also, the operation of a possible 300,000-kilowatt hydroelectric development at the upstream Fort Benton multiple-purpose reservoir site could require modification if the river segment downstream were included in the National System. It is understood that studies are currently under way by the Corps of Engineers concerning possible water resources developments on this portion of the Missouri River.

By letter of June 12, 1964, to the Chief of Engineers, the Commission commented on the Corps of Engineers' proposed report on the Missouri River, Fort Peck Reservoir to vicinity of Fort Benton, Montana. The Commission concluded that the proposed Fort Benton and Cow Creek multiple-purpose reservoir projects were economically justified and would constitute desirable units in the development of the Missouri River basin. The letter also noted that additional power could be developed at the Rocky Point site. Recent increases in the cost of power from alternative sources as a result of rising fuel prices would appear to enhance the economics of these potential hydroelectric power developments.

Your Department's proposed report recognizes that, although generally no future utility transmission lines should cross the river segment proposed for wild or scenic river classification, such essential facilities would be permitted if designed and located to minimize the impact on the environment of the area.

There are no existing and no known plans to construct natural gas pipelines across the river segment proposed for inclusion in the National System. As stated in the report, however, there has been an increasing amount of oil and gas exploration in the vicinity. Shut-in natural gas fields are located six to seven miles to the south of the river and some 14 miles to the north.

Response to Comments Received
From the Federal Power Commission

1. Please see updated information in the FEIS relating to feasibility of potential power projects. In addition, please see the February 24, 1976, letter from the Department of the Army, attached to comments received on the DEIS from the Missouri River Division of the Corps of Engineers.

Based on its consideration of the proposed report of your Department and the studies of its own staff, the Commission concludes that the proposed scenic, recreational, and wild river designations of the 128-mile reach of the Missouri River would conflict with the possible development of major amounts of hydroelectric power, and recommends that the power benefits foregone be thoroughly considered in deciding whether or not to include this reach of the river in the National Wild and Scenic Rivers System.

Sincerely,

John N. Nassikas
Chairman

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION EIGHT
BUILDING 40, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

October 7, 1975
IN REPLY REFER TO:
08-00.21

U.S. Department of the Interior
Bureau of Outdoors Recreation
Washington, D.C. 20240

REF: D4219-Missouri River, dated 8/1/75

ATTENTION: Mr. James G. Watt, Director

Dear Mr. Watt:

We appreciate the opportunity to review the referenced draft EIS.

We have no comments to offer.

Sincerely,

F. S. Allison

F. S. Allison, Director
Office of Environment and Design

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
U.S. COAST GUARD (G-WS/73)
400 SEVENTH STREET SW.
WASHINGTON, D.C. 20590
PHONE: (202) 426-2262

1 OCT 1975

Mr. James G. Watt
Director
Bureau of Outdoor Recreation
Department of the Interior
Washington, D. C. 20240

Dear Mr. Watt:

This is in response to your letter of 1 August 1975 addressed to Mr. Benjamin O. Davis concerning a draft environmental statement on the Missouri Wild and Scenic River Study.

The Department of Transportation has reviewed the material submitted. We have no comments to offer nor do we have any objection to this study.

The opportunity to review this draft statement is appreciated.

Sincerely,

D. J. RILEY
Captain, U. S. Coast Guard
Deputy Chief, Office of Marine
Environment and Systems
By direction of the Commandant

Response to Comments Received From the Department of Transportation

We appreciate the review by the Federal Highway Administration and the Coast Guard.

UNITED STATES WATER RESOURCES COUNCIL

SUITE 800 • 2120 L STREET, N.W. WASHINGTON, D.C. 20037

SEP 9 1975

Mr. James G. Watt
Director
Bureau of Outdoor Recreation
U. S. Department of the Interior
Washington, D. C. 20240

Dear [redacted]:

I am replying to your letter of August 1, 1975, requesting review of the draft environmental statement on the Missouri Wild and Scenic River Study.

Since member agencies of the Council will comment directly to your office on this statement, it is Council policy not to provide comments. The Council will consider this statement, however, in its review of the proposed report on the "Missouri River, A Wild and Scenic River Study."

Sincerely,

Warren D. Fairchild
Director

Response to Comments Received From the Water Resources Council

We appreciate the response by the Water Resources Council.

STATE OF MONTANA

DEPARTMENT OF FISH AND GAME

Helena, Montana
September 10, 1975

Re: D4219 - Missouri River

Mr. James G. Watt, Director
Bureau of Outdoor Recreation
U.S. Department of the Interior
Washington, D. C. 20240

Attention: A. H. Underhill

Dear Mr. Watt:

Reference is made to your letter of August 1, 1975, forwarding a copy of the environmental impact statement on the Missouri Wild and Scenic River Study, prepared by the BOR in accord with the National Environmental Policy Act of 1969.

You requested that we comment upon the adequacy of the draft statement as forwarded, and accordingly we are limiting our response to that aspect in this reply. This letter does not infer either approval or disapproval of any of the alternatives discussed in the report.

We are pleased to note that the report is generally well prepared and we feel you have addressed the issues in an objective, factual manner. The several indeterminate aspects of the proposal render it difficult to be specific at this stage of the preparation.

We do have several suggestions as you continue the work on the final statement, however.

We would suggest that it be acknowledged that current visitor use data on the river is estimated (although carefully), since no records are feasible for this recreation resource area (the length of the river). 1

Perhaps more emphasis might be given to the fact that the river is truly unique in its overall aspect. While all of the component information on history, unspoiled natural areas, wildlife, etc., is there, it could possibly be emphasized somewhat more strongly. 2

At this time, our agency is doing some extensive work in the inventorying of habitat areas, and inventorying of game populations throughout the state. We would suggest that we correspond again

to ascertain whether this more specific information would be useful to you, and whether our agency could provide this within the framework of time which you have allotted to this effort.

Thank you for the opportunity to review this document.

Sincerely,

Ashley C. Roberts
Administrator
Recreation and Parks Division

ACR/bd

Response to Comments Received
From the Montana Department of Fish
and Game

1. This reference to "estimates" has been included in the FEIS.

2. An attempt has been made in the FEIS to give greater emphasis to the unique character of this stretch of the Missouri River.

STATE OF MONTANA

DEPARTMENT OF STATE LANDS

STATE CAPITOL HELENA 59601 (406) 449-2074

October 1, 1975

Mr. James G. Watt, Director
Bureau of Outdoor Recreation
U.S. Department of Interior
Washington D.C. 20240

Re: Proposed Inclusion of the Missouri River

Dear Mr. Watt:

Enclosed are the Department of State Lands criticisms of the draft environmental impact statement entitled "Proposed inclusion of the Missouri River into the National Wild and Scenic Rivers System". I realize the agency review period of the draft statement has passed; personnel changes and a heavy work load prevented a more prompt review by this department. It is hoped however that our comments will still be considered. The Department of State Lands has jurisdiction over 10,300 of the acres encompassed by your proposal and our interest is therefore quite large.

On page 10 it is stated that federal and state lands would remain under their current management jurisdiction unless cooperative agreements are developed by managing agencies. Later, on page 75, it is stated that agricultural use of the resources will continue at approximately the same level. These two statements, as well as others, leave it unclear as to how management conflicts between the Federal Government and the State of Montana will be resolved. If the proposal is approved, the Federal Government will have at least partial management control over all private lands within the proposal area by either purchasing such lands outright or by acquiring scenic easements. The Federal Government will have similar management control over other non-state lands because they are currently managed by the Bureau of Land Management or the Bureau of Sport Fisheries and Wildlife. In the case of private or federal lands therefore, the resolution of management problems seem to be minor. This does not appear to be the case however with the state lands involved in your proposal. Will such conflicts as bank alterations or wildlife disturbances upon state lands be resolved solely by cooperative agreements between the Department of Interior and the Department of State Lands? 1

State lands are managed under a school trust doctrine (Section 81-103 R.C.M. 1947), a multiple use concept (Section 81-103 R.C.M. 1947), and a resource development act (Section 81-2401 R.C.M. 1947). It is likely that the management of the state lands under wild and scenic river status may conflict with such statutory mandates. 2

Perhaps in your final E.I.S. you might address this problem at greater length.

On page 80 there is the statement; "Should this segment of the Missouri River be designated Wild and Scenic River System, all minerals within one-quarter mile of the banks would be withdrawn from appropriation, subject to valid, existing rights". The state of Montana owns the mineral rights on most, if not all, of the state sections included within your proposal. Furthermore, the state owns the land underlying the bed of the Missouri River including the minerals found therein. Montana has a valid, existing right therefore to a considerable amount of the minerals within the proposal area. This is another conflict area which needs to be addressed at greater length. 3

On page 85 the report states that areas identified as nesting sites for golden or bald eagles and areas where the black footed ferrets are found would be protected. How will the federal government protect such areas in view of the fact that usage of the river by recreationists will increase significantly as a result of wild and scenic river status. Eagles and ferrets do not adapt particularly well to man's increasing presence in their habitat. Buffer zones about eagle eeries and prairie dog towns would have to be of considerable size to afford these animals adequate protection. 4

On pages 87 and 90 the impact statement addresses the issue of overuse by recreationists beyond the "carrying capacity" of the proposal area. By regulations, I assume that the B.O.R. is referring here to either some sort of reservation or quota system in order to regulate usage. The B.O.R. should consider giving private land owners and federal or state lessees preferential usage of the river so that the agricultural and range activities on lands adjacent to the river are not hampered. 5

In 1973 the Department of State Lands conducted a recreation inventory on 10 state tracts within the wild and scenic river proposal area. We would gladly furnish the B.O.R. with this information should they desire to utilize it at some future point.

The State Land Department remains receptive to the idea of preserving the proposed section of the Missouri in its current wild and scenic status. These critisisms are submitted with the intent that you will more thoroughly consider the management conflicts that such a proposal presents to us.

Please write if we can be of further assistance.

Sincerely,

Brace Hayden

Brace Hayden
Environmental Coordinator

Response to Comments Received
From the Montana Department of State Lands

1. Potential management conflicts between state and federal lands in the proposal area could be resolved by a variety of actions. One of these is certainly by use of cooperative agreements between the Department of the Interior and the Department of State Lands. Additionally, we would expect that during the development of the master plan such actions as Federal Program assistance, fee simple acquisition, and land exchange would be addressed in detail.

2. Please see above response.

3. The Impact on Mining section has been revised in the FEIS to recognize the State's existing mineral rights and to alter the area to be withdrawn from mineral entry. A potential conflict exists, but because current use of State lands within the proposal area is almost entirely grazing (suggesting but not guaranteeing that economically exploitable deposits do not exist), and mining would be subject to regulations against pollution of the river, it is not expected to be serious.

4. Nesting sites of the golden and bald eagle and any areas inhabited by the black-footed ferret will be identified. Potential protective measures such as a limited permit system and buffer zones will be investigated for effectiveness. Even more restrictive measures will be implemented if necessary, but adequate protection is expected to revolve around providing sufficient buffer.

5. We do not anticipate that a reservation or quota system would have an adverse effect on agricultural and/or range activities on lands adjacent to the river. If either of these measures were instituted, control would be exercised at designated access points along the river.

John W. Neuberger
Chairman
William C. Brabham, Iowa
Vice-Chairman

Missouri River Basin Commission

Suite 403 • 10050 Regency Circle • Omaha, Nebraska 68114

"A Presidential State-Federal River Basin Commission"

August 22, 1975

Mr. James G. Watt
Director
Bureau of Outdoor Recreation
U.S. Dept. of Interior
Washington, D.C. 20240

Dear Mr. Watt:

Chairman Neuberger has asked that the MRBC staff review the Bureau of Outdoor Recreation's draft environmental statement (DES) on the "Missouri River, a Wild and Scenic River Study" in response to your letter request dated August 1, 1975, and that I submit comments to you.

The Missouri River Basin Commission depends upon its member agencies for technical comments on specific water and related land resources proposals, projects, and programs. The MRBC staff role is to: (1) review the extent and adequacy of coordination in multidisciplinary, multiagency, and multipurpose planning; (2) review for possible cumulative impacts of proposed or other pertinent actions within a given area; and (3) insure that member agencies, federal and state, are given timely opportunity to comment on matters of concern to them. In the current DES we are, in addition, concerned with Sec. 4 of the National Wild and Scenic Rivers Act which provides that "every such study and plan shall be coordinated with any water resources planning involving the same rivers which is being conducted pursuant to the Water Resources Planning Act."

The MRBC staff review indicates that, although comments could be made concerning the technical adequacy of the EIS, concerns over adequacy of multiagency and multipurpose planning are paramount to the Commission and are the issues that are addressed by staff. While there is evidence of coordination with some federal and state agencies in terms of the wild and scenic river study, the report prematurely dismisses (by using outdated information) the possible economic feasibility of multipurpose water resources projects (including hydropower) at Fort Benton and High Cow Creek, now being re-evaluated by the Corps of Engineers' Umbrella Study. 1

In recent years the value of clean and renewable energy resources has risen dramatically, and several regional studies are now underway which are addressing water and related energy issues in the Missouri River Basin. Some of these studies scheduled for completion in 1977, include the 1975 National Water Assessment and the Missouri River Basin Framework Studies of the Missouri River Basin Commission, the Umbrella Study of the Corps of Engineers, and the Total Water Management study of the Bureau of Reclamation. The results of these studies and of others to be undertaken over the next several years will permit more objective and comprehensive evaluations of alternative uses of upper Missouri water resources. Without a sound analytical basis, equitable decisions on resource allocations cannot be made with regard to environmental quality control and enhancement and instream uses and with regard to national and regional objectives and economic developments relating to power, flood control, irrigation, municipal and industrial water use, and other functions.

Based on the foregoing considerations I have previously recommended to Chairman Neuberger and MRBC members that multiagency, multiobjective planning has not been completed for the Upper Missouri River and that no adequate bases exist at this time for the MRBC to act upon the BOR recommendation for designating a 128-mile corridor of the Upper Missouri River for inclusion in the National Wild and Scenic River System. However, the BOR study recommendation should be presented as a part of the Environmental Quality plan alternative for that reach of the Upper Missouri River.

We appreciate the opportunity to review your report.

Sincerely,

Nicholas L Barbarossa

Nicholas L. Barbarossa
Director of Planning

NLB/seh

cc: John W. Neuberger, Chairman, MRBC
Members and Alternates, MRBC
Warren D. Fairchild, Director, WRC

Response to Comments Received
From the Missouri River Basin Commission

1. Please see the February 24, 1976, letter from the Department of the Army attached to comments received on the DEIS from the Missouri River Division of the Corps of Engineers.

The Wilderness Society *1901 Pennsylvania Avenue N.W., Washington, D.C. 20006*
Western Regional Office: 4260 East Evans Ave., Denver, CO 80222

August 19, 1975

Mr. James G. Watt, Director
Bureau of Outdoor Recreation
U.S. Department of the Interior
Washington, D.C. 20240

Dear Mr. Watt:

This is to comment briefly on the draft Environmental Impact Statement of the Bureau of Outdoor Recreation on the proposal to include 128 miles of the Missouri River in central Montana into the National Wild and Scenic Rivers System.

The Wilderness Society is pleased that the BOR has recommended Wild and Scenic River designation for a major part of this outstanding reach of river. We have long supported its national recognition and protection, as have the Montana Wilderness Association and the Montana Wildlife Federation.

We strongly agree with the aforementioned Montana conservation organizations, however, that the BOR proposal is inadequate, in that it does not include the reach of free-flowing river from Fort Benton to Coal Banks Landing. The opportunity to protect this additional, historically and recreationally important segment of the mighty Missouri should not be overlooked. It would also facilitate establishing an interpretative center and headquarters for the river area at Fort Benton.

Thus we firmly believe that the BOR should adopt either 1) the proposal of Senator Lee Metcalf as provided in S. 1506, 2) the Park Service's proposal for a Lewis and Clark National Wilderness Waterway, or 3) the BOR's Alternative Segment No. 2. Each of these plans would encompass essentially the entire reach of free-flowing river from Fort Benton to the Robinson Bridge, and include the wide (rim-to-rim) boundary so essential to the protection and enhancement of nationally significant wildlife, historical, archeological, geological and recreational values. 1

In Chapter I, Description of the Proposed Action, the BOR states that "scenic roads and overlooks would be developed where appropriate." The Wilderness Society knows no part of the river area where these would be appropriate, except for the possible 2

improvement of the road which approaches the Missouri near its confluence with the Judith. It is understood that a bridge is planned across the Missouri replacing the ferry at this sector. However, we do not support the bridge or road improvement.

One of the major outstanding aspects of the Wild Missouri is its remoteness. This aspect is of prime significance to recreationists enjoying a wilderness-type float trip down the river. It must not be destroyed by additional access roads and overlooks. The wild White Rocks and Badlands areas especially must be protected from further development. 2

Thank you for the opportunity to comment on this important matter.

Sincerely,

Clifton R. Merritt
Western Regional Director

cc: BOR Regional Office
Denver

Response to Comments Received
from The Wilderness Society

1. The segment of the Missouri River from Fort Benton to Coal Banks Landing was not included in a segment classification due to the extensive amount of private ownership involved and the associated cost of providing protection.

2. Your comment regarding "scenic roads and overlooks" will be given consideration in the master planning phase.

August 27, 1975

Mr. James G. Watt, Director
Bureau of Outdoor Recreation
U.S. Department of the Interior
Washington, D.C. 20240

Dear Mr. Watt:

Would you please include these comments in your consideration of the Wild and Scenic River proposal for the 128 miles of the Missouri River in central Montana.

The Bureau of Outdoor Recreation should be commended for its recognition of the Wild and Scenic qualities of the Missouri River and its thorough studies for protection of this beautiful area. I am familiar with this last wild stretch of the Missouri (having floated it by canoe) and enthusiastically urge the BOR to adopt a proposal that includes the entire reach of free-flowing river from Fort Benton to the Robinson Bridge, with a rim-to-rim boundary.

Such a proposal for adequate protection of the River would be that of Senator Metcalf as provided in S. 1506, the Park Service proposal for a Lewis and Clark National Wilderness Waterway, or your Alternative Segment No. 2.

Further, I would urge that no further developments be constructed along the River. Any more regimentation along the route would greatly deter the feeling of remoteness and the historical essence that is so important to this stretch of river. It is interesting to surmise where Lewis and Clark camped, to find the scenes that Karl Bodmer painted, and the area where Chief Joseph crossed in flight. Any interpretive structures would take away these pleasant challenges. In particular, a bridge across the river at the Judith River would alter the character of the region, as well as degrade the beautiful campground and its magnificent cottonwood trees, some of the few largest in the vicinity.

Thank you for the opportunity to comment on the environmental impact statement for this important proposal on the last wild segment of the Missouri River.

Cordially,

Jean Widman

Response to Comments Received
From Ms. Jean Widman

We appreciate the review by Ms. Widman.

XI. GLOSSARY OF TERMS

1. Carrying capacity: That level of use which a recreation resource can sustain without degradation of the values which caused it to be designated.

2. Free-flowing: Existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.

3. Recreational river areas: Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

4. Scenic river areas: Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

5. Wild river areas: Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

6. Scenic easement: The right to control the use of land (including the air space above such land) within the authorized boundaries of a component of the Wild and Scenic Rivers System, for the

purpose of protecting the natural qualities of a designated wild, scenic, or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement.

GPO 924-226

purpose of protecting the natural qualities of a designated wild, scenic, or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement.

GPO 924-226