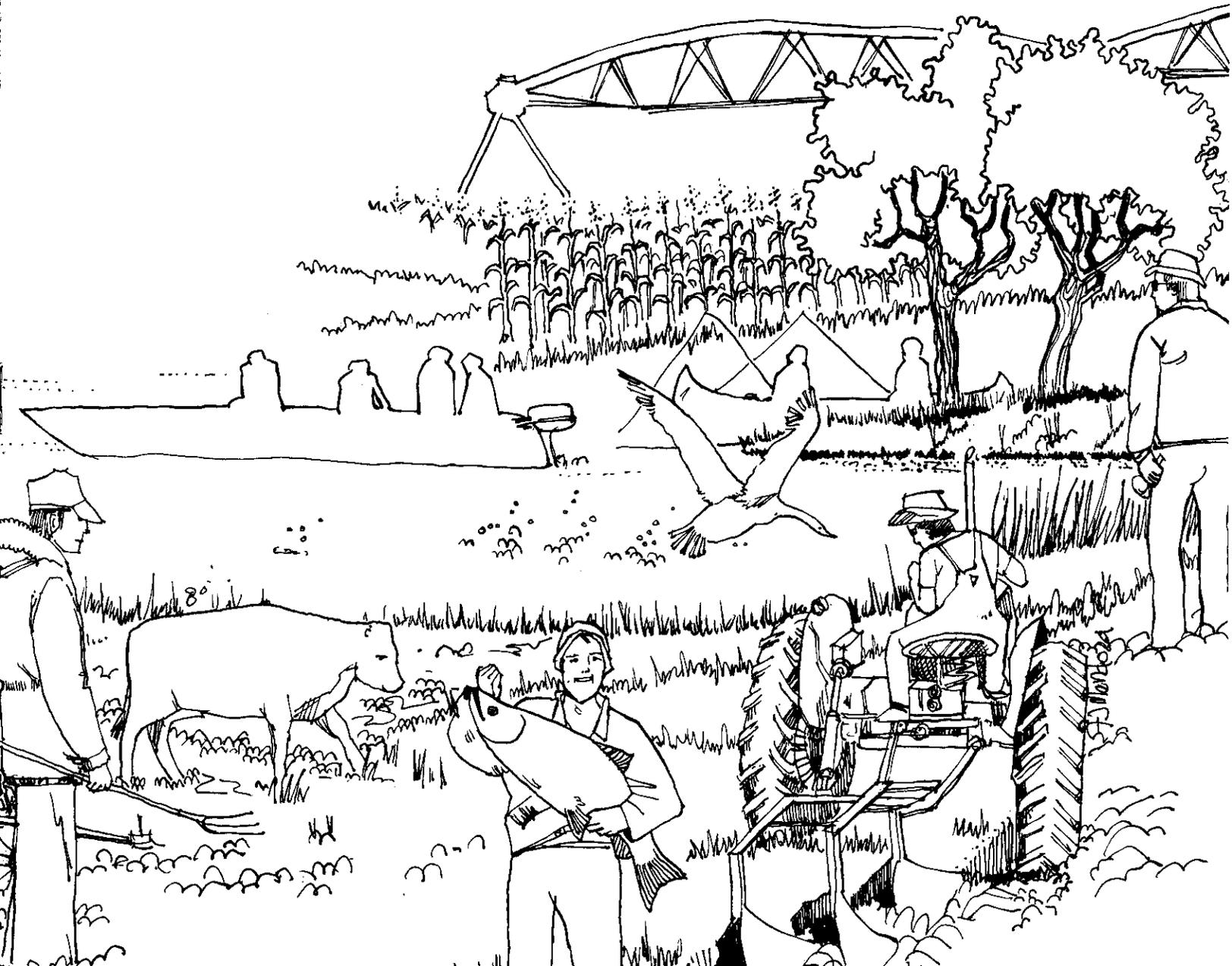


U. S. Department  
of the Interior  
Heritage Conservation  
and Recreation Service

# The Missouri River An Alliance for National Designation





"At one time, most people believed that the only consideration in using this extraordinary resource was technological—what could we do to harness and control the river to maximize its productivity while minimizing the danger of its flooding. Now we all understand much more clearly that there are limits to our tampering with the river's natural state."

Senator James Abourezk of South Dakota made this observation during his remarks in June 1977 at a presentation of the Army Corps of Engineers Missouri River Umbrella study concerning possible designation of the stretch from Gavins Point Dam to Ponca State Park, Nebraska, as a component of the National Wild and Scenic Rivers System.

The story of the river's values and an appreciation for those values are as old as the Missouri River itself.

The Missouri River, extending 2,300 miles from Three Forks, Montana, to its mouth near St. Louis, has been meandering across its flood plain since the river basin was formed. The river erodes, floods, and deposits new soil while it continues its course to the Mississippi. Although a natural process, it created many problems for farmers and

waterfront towns. Due to the losses incurred and the need for a reliable water source, legislation was passed in 1944 that would solve both problems. The legislation, known as the Pick-Sloan Act, directed the Army Corps of Engineers to build flood control dams and the Bureau of Reclamation (now the Water and Power Resources Service) to provide water for irrigation.

Important as the dams are, equally important are the river reaches which have not been impounded. One stretch granted designation as a Wild and Scenic River extends from Fort Benton to the Fred Robinson Bridge (U. S. Highway 191) in Montana. One hundred forty-nine miles long, it is one of the most appealing, interesting, and scenic segments of the free-flowing Missouri. The Bureau of Land Management, in partnership with Montana, manages this unique, and in places, primitive area as a component of the National Wild and Scenic Rivers System and a State Recreational Waterway.

Several other segments also have natural values worthy of preservation and management as recreational resources. One segment of 100 miles is the heavily used and historically important stretch between Garrison Dam and the headwaters of Lake Oahe in North Dakota. Another, some 40 miles in



Boating, one of the many recreational pursuits on the Missouri.

length with significant historical and esthetic values, is located between Fort Randall Dam and Lewis and Clark Lake in South Dakota.

The remaining portions of the Missouri that are free of impoundments also deserve attention and should be managed to maintain existing natural and cultural values and to enhance recreational, historic, and fish and wildlife resources.

An entirely unique section of the river exists in terms of historical significance, ecological importance, esthetic beauty, recreational potential, and proximity to several large population areas: the 59-mile stretch from Gavins Point Dam, South Dakota, to Ponca State Park in Nebraska, which has been designated as a recreational component of the National Wild and Scenic Rivers System. River segments can be classified in one of three ways as defined in Section 2(b) of the National Wild and Scenic Rivers Act: Wild Rivers, the most primitive in nature; Scenic Rivers, less primitive and more accessible; and Recreation Rivers, least restrictive with some development along their banks.

Earliest efforts to initiate protection of the segment date back to 1967 with the Missouri River Basin Comprehensive Framework Study. That study pointed out that the future water uses must take into account social and environmental considerations, as well as traditional developmental needs. The recreation task force report for the framework study specifically recommended that the Gavins Point Dam/Ponca State Park segment of the Missouri River be considered for inclusion in the National Wild and Scenic Rivers System or a State Rivers System.

Section 5(d) of the Wild and Scenic Rivers Act requires that studies be conducted to identify rivers with potential for national designation. Under that mandate, the Bureau of Outdoor Recreation (now the Heritage Conservation and Recreation Service) studied the Gavins Point Dam to Ponca State Park segment in 1971 and found that it did indeed possess values of national significance.

Efforts continued by various groups and individuals—Congressman Phillip Burton, Congresswoman Virginia Smith, and Senators James Abourezk and George McGovern among them—until November 1978

when President Carter signed P.L. 95-625, "The National Parks and Recreation Act of 1978," which added this segment to the National Wild and Scenic Rivers System.

The Missouri River has been the object of many studies, plans, and projects, including utilization of its water resources and preservation and enhancement of its historical, cultural, recreational, and biological resources. It was the route of explorers Lewis and Clark as they traveled toward the northwest. Their route up the river was designated a National Historic Trail within the National Trails System by the National Parks and Recreation Act of 1978.

The Boy Scouts of America recognized the Lewis and Clark Expedition by designating a boy scout canoe trail along the Missouri River from Picketown, South Dakota, to Sioux City, Iowa.

Early studies by the Army Corps of Engineers considered utilizing the entire river as a navigable waterway. By means of canals and locks to circumvent the dams, the river could be made an avenue of transport to shipping along its entire length; however, it has been made navigable to shipping only as far as Sioux City, Iowa. Interest in the river's resources has evolved from seeking economic justification of navigation to more concern for the environment and in the development of additional hydropower.

Other values considered were enhancement of cultural, historical, recreational, and fish and wildlife resources. As a result of these varied interests, a study, commonly referred to as the Umbrella Study, was initiated by the U. S. Army Corps of Engineers to explore the possibility of adding hydropower development to existing impoundments. The study indicated that the most severe problem, especially in the Gavins Point Dam/Ponca State Park stretch, was bank erosion. Bank protection was urgently and immediately needed. Individual landowners were experiencing losses due to erosion of up to 200 acres annually on highly productive agricultural lands and on lands valuable for recreation and/or wildlife habitat. Since construction of the main dams along the Missouri, the natural cycle of bank erosion balanced by bank building had been disrupted. The construction of the dams eliminated the threat of flooding, but intensified the riverbank degradation due to erosion and reduced the benefits of bank building. The effect of severe erosion has been an ever-widening zone of shifting sandbars and low banks which destroy much of the scenic value of the area.

One solution to the problem would be to extend



channelization of the river from above Sioux City to Gavins Point Dam. This, however, would result in irreparable environmental damage. To do nothing would also result in continuing loss of irreplaceable land and its resources, along with the loss of valuable riparian and cropland habitats and the wildlife they both support. A third alternative would be to stabilize the banks in such a way as to allow the river to meander freely across its present low bench while staying within its present maximum confines and, at the same time, making it suitable for inclusion as a component of the National Wild and Scenic Rivers System.

The HCRS 5(d) study came to the attention of the Army Corps of Engineers which viewed the recommendation as a probable alternative to channelization for navigation. The recommendation identified the values of the Gavins Point/Ponca Park stretch which made it eligible for inclusion in the National Wild and Scenic Rivers System. In previous plans, the Corps had considered stabilizing the riverbank all the way to Yankton, but these plans were abandoned as being environmentally unsound.

In 1971 the Missouri River Bank Stabilization Association (MRBSA) was organized by six families in Nebraska along the Missouri who were losing acreages to the river through erosion. The organization has grown to about 150 members from Nebraska and South Dakota. As the MRBSA grew, it became more involved with trying to find a solution to its severe bank-erosion problems.

Working with the Omaha District Army Corps of Engineers, the MRBSA was able to acquire some funding to allow the Corps to provide stabilization in the most critical areas of erosion. However, as notices of permits for bank stabilization were issued, conflicts surfaced as to the environmental impacts of the stabilization plans. The conflicts, involving a number of varied interests, led to the conclusion that a cooperative effort was needed to work out a satisfactory solution to bank erosion.

A Missouri River Task Force was created in 1973 with members of Natural Resource Districts, Game and Parks Commissions, Governors' offices of both states, Army Corps of Engineers, agencies of the Department of the Interior, and representatives



Continued erosion results in loss of wooded areas and agricultural lands.

from local environmental organizations and landowners. The objective of the task force was to work out a proposal that would satisfy all interests and at the same time protect and enhance the natural values of the river.

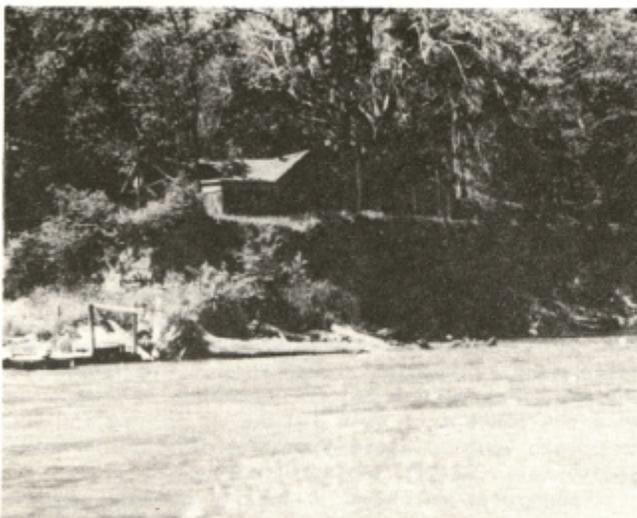
During this same period, a need for new techniques for controlling streambank erosion was being voiced in many areas through the review of notices for bank stabilization installations by the Army Corps of Engineers. As a result of widespread concern, the Streambank Erosion Control Evaluation and Demonstration Act of 1974 was enacted. The act authorized the Corps to conduct an evaluation of the extent of streambank erosion on navigable rivers and to develop new methods and techniques for bank protection and to establish demonstration projects. Largely through the efforts of the MRBSA, Congress selected this area for some of the demonstration projects.

Criteria, established for the selected sites and the demonstration projects, included consideration of comparative erosion rates and land use and environmental factors such as site adaptability to a variety of erosion control devices. Also included were considerations for using structures designed to make the best use of locally available materials which maximize construction, while remaining inconspicuous from both land and water.

The demonstration projects were selected according to the following guidelines:

- Solve a real problem, have general applications, create the least possible adverse environmental impact on the riverbank and the surrounding area.
- Improve, diversify, or add to the aquatic habitats.
- Enhance recreational opportunities.
- Have low expected maintenance costs.

On the basis of the individual characteristics of the potential sites needing stabilization, the type and availability of local materials, and from the standpoint of esthetics, three types of stabilization devices were considered to be appropriate:



Serious erosion required corrective action.

● **Windrow Revetment**—An artificial rock bank is created behind an eroding bank. As erosion takes place, the rock bank and soils fall into the river creating a natural appearing stabilized shoreline.



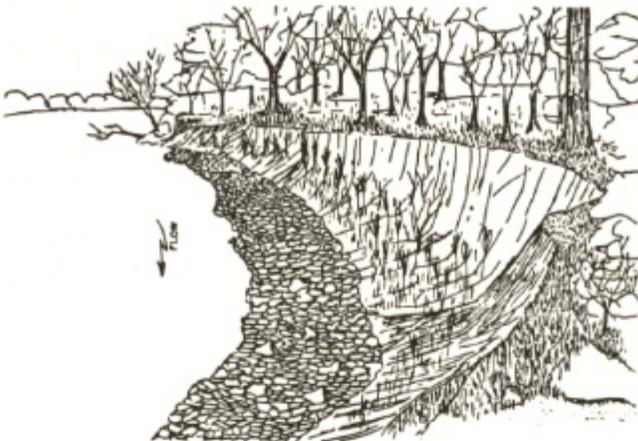
Windrow Revetment



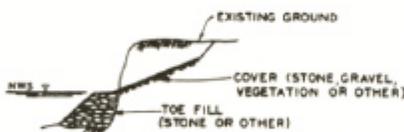
Section 1

Section 2

● **Composite Revetment**—The underwater slope is protected with material such as rock or precast blocks and the shoreline is treated with lighter materials. This causes minimal disturbance to the area.



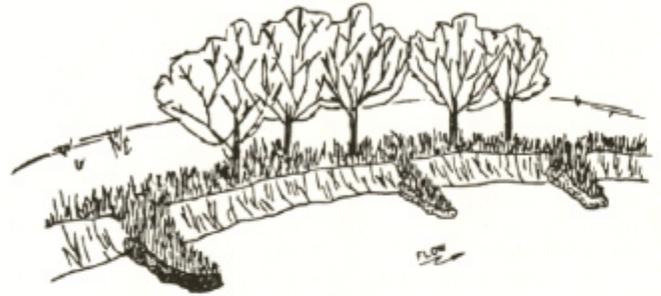
Composite Revetment



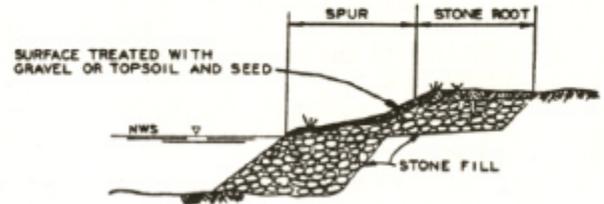
Typical Section

● **Artificial Hard Points**—A stone-fill bank and flank of bank are created. These are intermit-

tently spaced and covered with topsoil and seeded to vegetation natural to the area.



Hard Point System



Typical Section

Once agreement was reached on stabilization criteria and techniques, a streambank stabilization evaluation team with representation from the Heritage Conservation and Recreation Service, U. S. Fish and Wildlife Service, Army Corps of Engineers, Missouri River Bank Stabilization Association, South Dakota Department of Game, Fish, and Parks, Nebraska Game and Parks Commission, and the affected Natural Resource Districts was formed to make on-site inspection trips to determine if the erosion control devices were working as intended and were inconspicuous from both land and water. Access points for boating, picnic, and camping areas, pumping facilities for irrigation, zoning, and the potential of availability of scenic easements were also measures that had to be considered by those agencies and groups that had an interest in Recreation River designation. The bank stabilization techniques would be an essential element of a successful recreation river. Without bank protection devices, the river would continue to cut through the high banks, and valuable cropland, wildlife habitat, and recreational and cultural resources would be lost. With this in mind, demonstration projects were to be used to test the feasibility of such devices.

Different federal interests sometimes had opposite views on how many stabilization devices were authorized by legislation and how well these devices would protect the outstanding values which qualify the river for National designation. However, there was growing public support for gaining Recreation River status. Members of the Northwest Iowa Group Sierra Club, Siouxland Interstate Metropolitan Planning Council, and Northeast Nebraska Sierra Club met in December 1977 to discuss the concept of Wild and Scenic Rivers and how to obtain such a designation for the Gavins Point Dam to Ponca State Park stretch.

Implementation of the erosion control demonstration program proceeded as scheduled, and the



new techniques appeared to be working satisfactorily, based on the prognosis of the stream-bank evaluation team. However, the program was limited in the number of sites where erosion control could be applied, and no provision was made for enhancement of natural, recreational, cultural, and fish and wildlife resources outside the immediate areas of erosion-control work. Considerable interest was building to include the river in the National Wild and Scenic Rivers System and implement a more complete program of bank protection. As a result of the interest, that section of the Army Corps of Engineers Umbrella report which recommends designation of a component of the National Wild and Scenic Rivers System was utilized in developing separate legislation for adding the segment to the National Wild and Scenic Rivers System.

The role of HCRS was that of providing technical assistance to the Army Corps of Engineers, U. S. Fish and Wildlife Service, and the Missouri River Bank Stabilization Association—to name a few. The Missouri River Bank Stabilization Association was a major force in gathering local support and public sentiment necessary for the designation. The MRBSA spent time and effort working with their congressional delegations to generate support for legislation that would combine funding of stabilization projects with recreation and environmental enhancement.

Senator George McGovern was enthusiastic in his support in his remarks before the Senate:

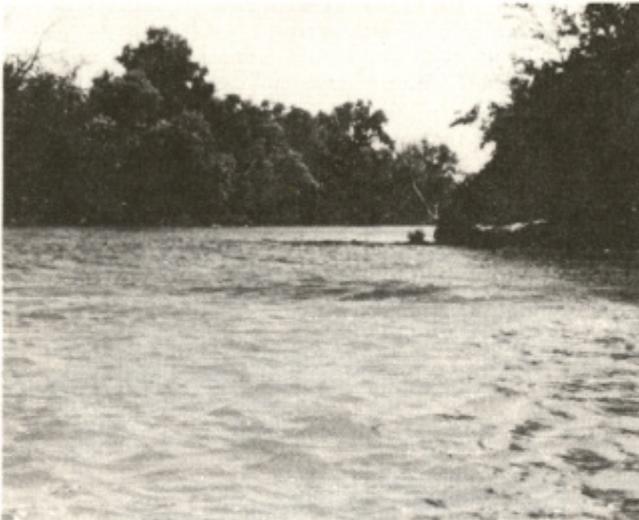
Mr. President, I am today urging adoption of this amendment because it is remarkable. In its way it is a first. Senators Zorinsky, Curtis, Abourezk, and I are excited

about it. It is a unique cooperative arrangement among diverse interests seeking to meet a variety of needs, while protecting a unique segment of the Missouri River. The potential for this to create a unique recreational experience is unquestionable. The segment's suitability for this designation is undeniable.

The legislation which was developed for designation had several unusual features: bank protection measures that are essential components of the National Recreation River, limited authority for condemnation proceedings, and the installation and maintenance of erosion control devices contingent upon the landowner making available lands for Recreational River management and maintenance.

All costs associated with river designation are to be borne by the federal government. The federal responsibility also covers such things as regulation of adjacent banks for compatible uses, providing for scenic easements, and for some access points. Funds not to exceed \$21 million were authorized to construct and maintain the bank erosion control devices and for acquisition of lands and interests in lands and for recreational development.

Through the use of zoning, scenic easement, and technical assistance on permits for irrigation pumping facilities, unsightly streambank development should be kept to a minimum. These approaches, along with bank protection, were meant to maintain river integrity so that important ecological, cultural, and recreational values could be preserved, at the same time permitting agricultural and other ongoing activities compatible with river designation.



The Missouri, one of the Nation's greatest and most productive waterways.

The culmination of all these efforts resulted in a proposal incorporating the stretch into the Wild and Scenic Rivers System. The proposal was included in Congressman Phillip Burton's Omnibus Bill, and that bill was passed by Congress and subsequently signed into law by President Carter in November 1978.

The designated area is administered by the Secretary of the Interior and managed by the Corps of Engineers under a cooperative agreement signed in January 1980. Administrators will be assisted by a Recreational River Advisory Group consisting of affected federal and state agencies and political subdivisions and such private groups as are deemed desirable by the Secretary of the Interior.

A management plan (based upon mutual cooperation of the landowners and the river management entities) which was adopted in March 1980 outlines administrative goals and responsibilities. A unique feature of the plan is that there are no provisions for extensive fee-title acquisition of land by the government. Interests in lands necessary for proper management of the river corridor will be accomplished by various other means to preserve or enhance the river's present values: scenic easements, recreational easements, purchase and resale, bargain sales, donations, zoning, and leases.

The Recreation River Advisory Group provided for in the legislation allows organized groups and private citizens, as well as state and local governments, a role in the management of the river. The success of this type of management rests in the continued cooperation of all parties.

The way in which this segment was incorporated into the National Wild and Scenic Rivers System was unusual in several ways. Compared to the average length of time of six and a half years to achieve designation, this designation took only a year and a half from the time the Army Corps of Engineers contracted with HCRS for an \$18,000-study until final passage. Full utilization of data from other studies and the cooperative efforts of those interested in achieving river

designation were major factors in keeping the cost low.

The management plan has identified approximately 19,000 acres of land as being desirable for preservation as a scenic corridor and about 600 acres for recreation development. Approximately 750,000 days of additional recreation opportunities will be provided annually. Provision is also made for protecting and enhancing this priceless resource.

The need to plan our use of water carefully has become increasingly obvious in recent years. The Missouri, one of the Nation's greatest and most productive waterways, provides . . . states in the river basin with water for energy, recreation, agriculture, municipal and industrial use, fish and wildlife habitat, and many other vital purposes. . . . The river is a major part of a complex and interrelated environmental system. Unwise use of the river can have disastrous effects on this system; effects that can often only be foreseen through the most careful study.

On the other hand, there are tremendous opportunities to manage the river in a way that can enrich all of our lives, both through the maintenance of a healthy environment and through the provision of much-needed water-based services.

These comments by Senator James Abourezk point out the multifaceted benefits from use of the Missouri River. One of the greatest benefits is the knowledge that cooperation for mutual benefit is alive and working in today's complex society.

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