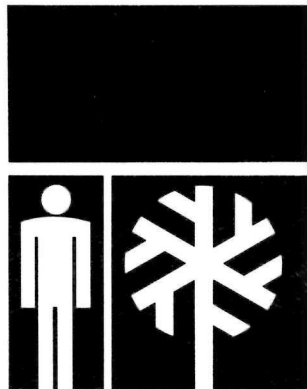


environmental statement

FES 74-31

YELLOWSTONE

NATIONAL PARK / WYOMING-MONTANA-IDAHO



DEPARTMENT OF THE INTERIOR


FINAL
ENVIRONMENTAL STATEMENT

Yellowstone Master Plan
YELLOWSTONE NATIONAL PARK
WYOMING

FES 7 4 - 3 1

Prepared by

Midwest Regional Office
National Park Service
Department of the Interior


Acting Director, National Park Service

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FES 74 - 31

Notice of Availability of Final Environmental Statement

Master Plan for
Yellowstone National Park, Wyoming
Montana and Idaho

Pursuant to Section 102(2)(C) of the National Environmental Policy Act, the Department of the Interior has prepared a final environmental statement for the Yellowstone National Park master plan.

The environmental statement considers the social, economic, and ecological effects of the master plan recommendations for future management activity and visitor use of Yellowstone National Park, Wyoming, Montana, and Idaho.

Copies of the final environmental statement are available from or for inspection at the following locations:

Rocky Mountain Regional Office
National Park Service
655 Parfet Street
Lakewood, Colorado 80215

Superintendent
Yellowstone National Park
Yellowstone National Park, Wyoming 82190

Regional Director
Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dated: JUN 11 1974

151 Stanley D. Doremus
Secretary of the Interior

FINAL
ENVIRONMENTAL IMPACT STATEMENT
MASTER PLAN
YELLOWSTONE NATIONAL PARK

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Summary

() Draft (X) Final Environmental Statement

Department of the Interior, National Park Service, Midwest Region,
Yellowstone National Park

1. Type of action: (X) Administrative () Legislative

2. Brief description of action: To provide a master plan for future management activity in Yellowstone National Park, including proposals to minimize visitor impact and provide a quality park experience.

3. Summary of environmental impact and adverse environmental effects: Environmental impacts discussed include ecological, social, and economic considerations. The values of these impacts are more beneficial than detrimental. Adverse effects of visitor use, utilization of park lands for roads and visitor use facilities, and related noise and pollution problems are generally offset by true favorable environmental effects.

4. Alternatives considered: Alternatives are considered for the seven basic proposals; coordinate planning, restructure visitor use, access and circulation, expanded interpretation and information, restoration of the natural regime, visitor protection, and research needs.

5. Comments have been requested and received from the following:

Department of Agriculture

*Forest Service

Soil Conservation Service

Department of the Interior

*Bureau of Sport Fisheries and Wildlife

*Geological Survey

Bureau of Mines

*Bureau of Land Management

*Bureau of Outdoor Recreation

*Bureau of Reclamation

Department of Transportation

Federal Highway Administration

*Environmental Protection Agency

*Wyoming State Clearinghouse

*Idaho State Clearinghouse

Montana State Clearinghouse

*State Historic Preservation Officer, Wyoming

*State Historic Preservation Officer, Idaho

State Historic Preservation Officer, Montana

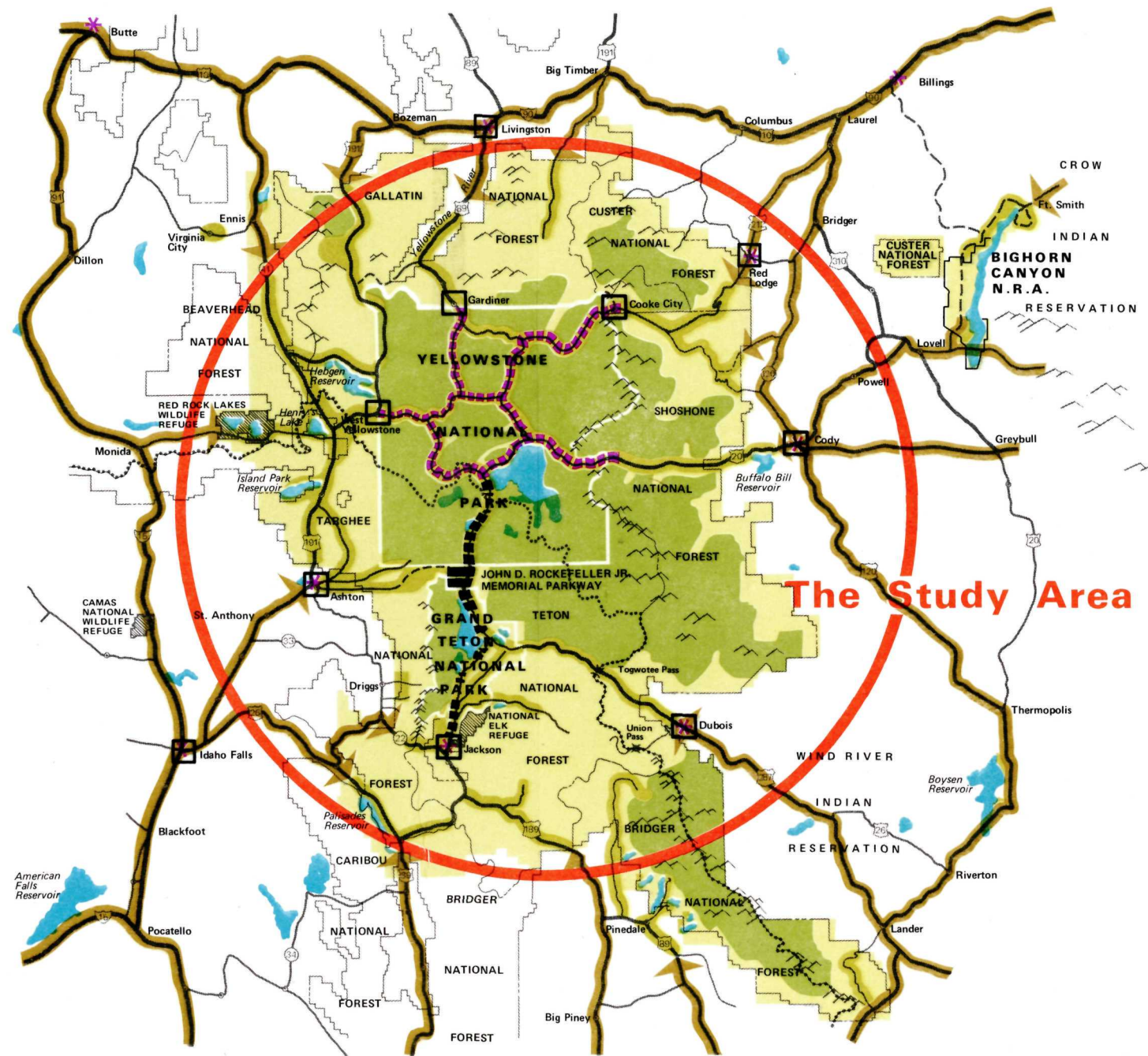
6. Date made available to CEQ and the public:

Draft statement: February 7, 1972

Final statement:

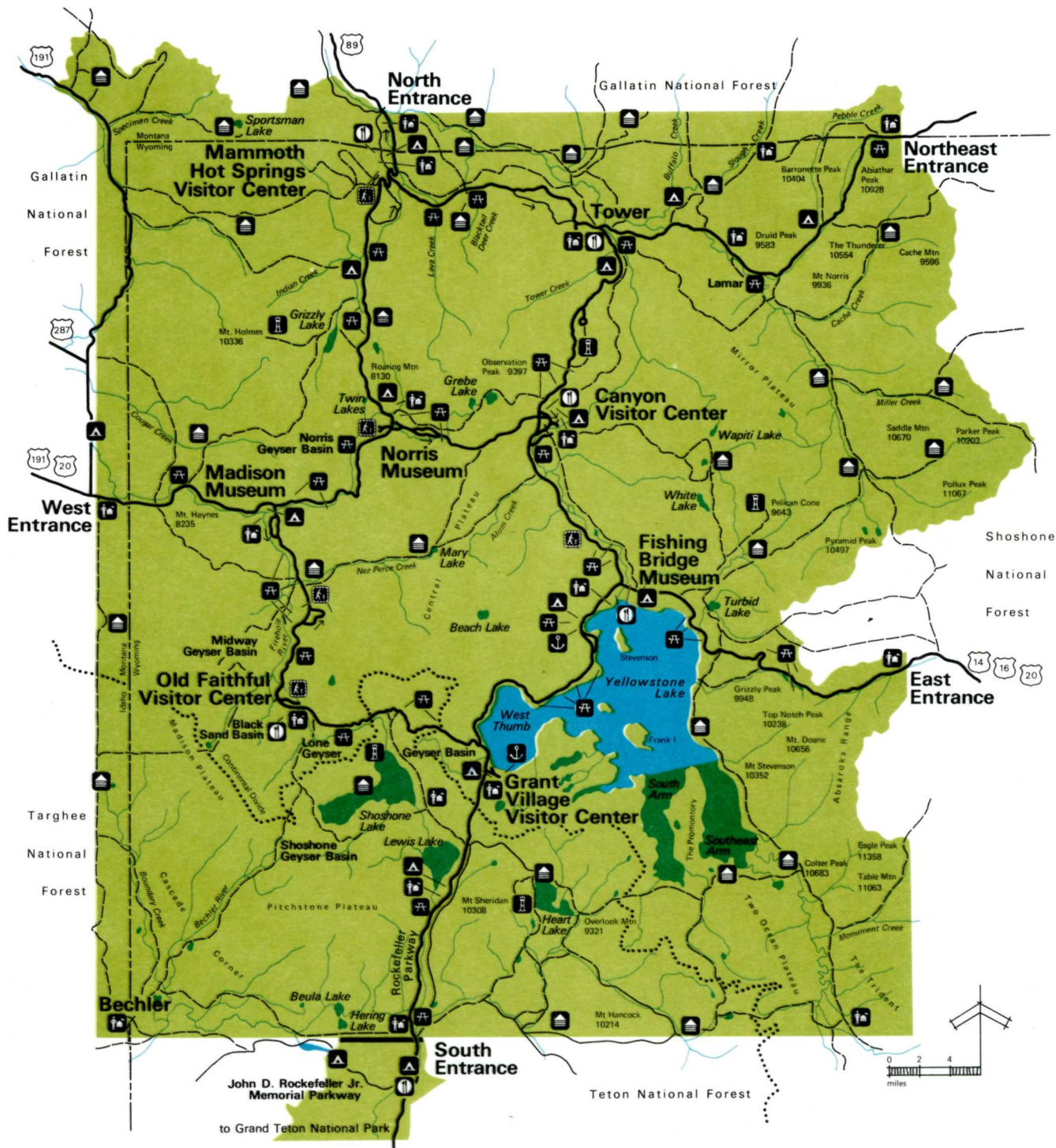
JUN 11 1974

*Comments received and attached



-  VISITOR IMPACT ZONE
-  PRIMITIVE / WILDERNESS ZONE
-  RECREATION / UTILIZATION ZONE
-  PRINCIPAL ACCESS ROUTE
-  ACCOMMODATIONS CENTER
-  COOPERATIVE INFORMATION CENTER
-  SUPPLEMENTAL INTERPRETIVE SYSTEM
-  JOHN D. ROCKEFELLER JR. MEMORIAL PARKWAY

**The
REGION**



The Park

YELLOWSTONE NATIONAL PARK

I. DESCRIPTION OF THE PROPOSAL

"A master plan is the conceptual planning document which, consistent with congressional and administrative policies, establishes the guidelines for the overall use, preservation, management, and development of an area in the National Park System. It identifies the purposes of the area; its resource values; its relationship to regional environs; what human needs it should meet; the objectives for its management; management category; a land classification plan; and the general development plan for its management and interpretation."

Yellowstone National Park by its Establishment Act of March 1, 1872, (17 Stat. 32), was "dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people" and "for the preservation, from injury or spoilation, of all timber, mineral deposits, natural curiosities, or wonders...and their retention in their natural condition."

The original purpose must be translated in terms of contemporary connotations; as such it should read:

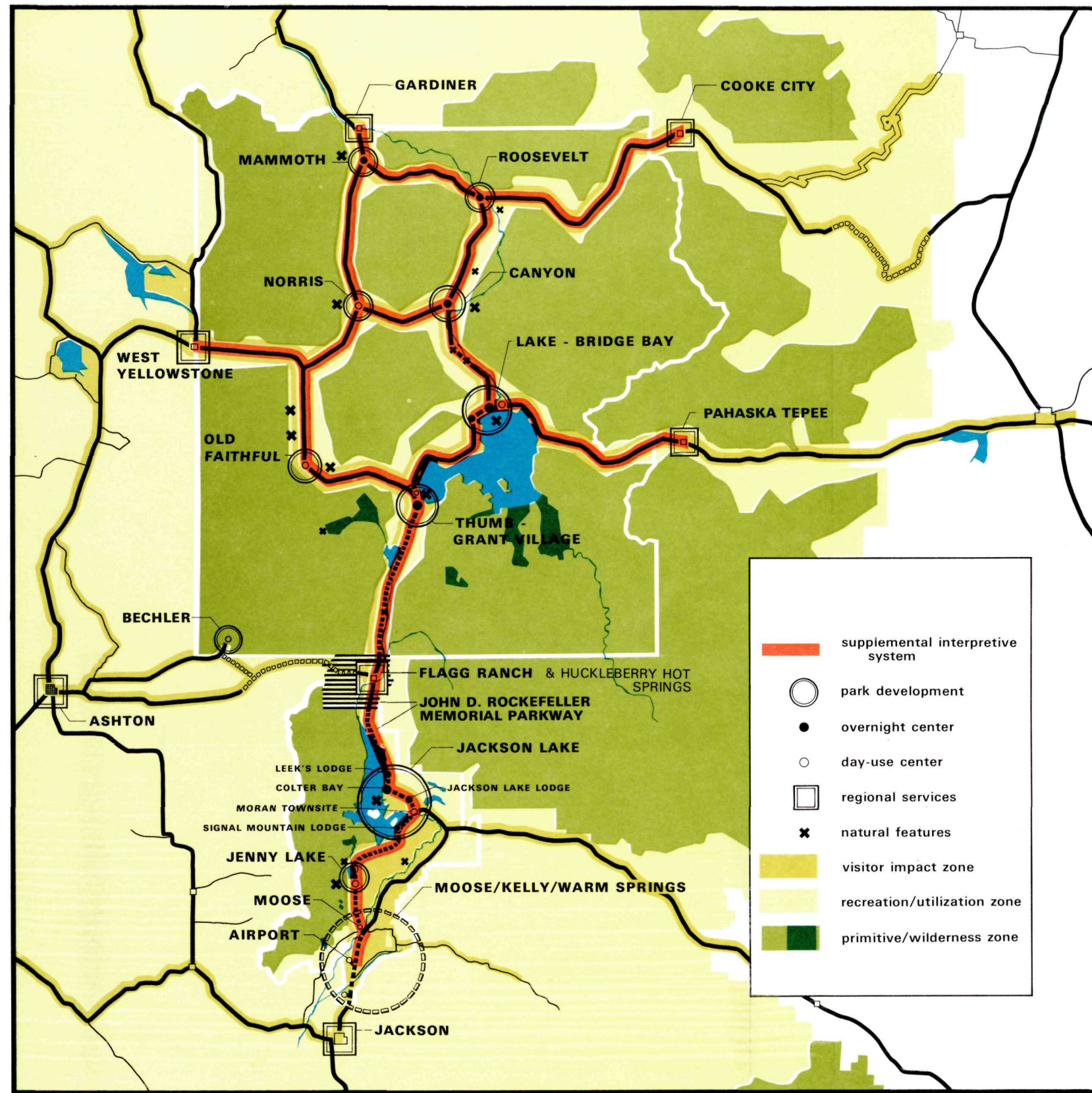
To perpetuate the natural ecosystems within the park in as near pristine conditions as possible for their recreational, educational, cultural, and scientific values for this and future generations.

This plan gives priority to the preservation and maintenance of natural values. A moratorium on stopgap expansion is advised and regional considerations are emphasized. It should be emphasized that the master plan presents concepts; as planning progresses, specific recommendations will be made in subsequent planning documents such as developed area plans and resource management plans. Environmental assessments will be prepared; if significant impacts will result from the proposals, then environmental impact statements will be filed with the Council on Environmental Quality (CEQ).

It should be noted that the master plans for Yellowstone and Grand Teton National Parks were prepared concurrently.

A. Coordinate Planning

In the face of visitor projection figures, all planning for public use of national parks must give priority to the preservation and maintenance of the natural values for which each park was established.



GARDINER

- Accommodations / Services
- Information / Interpretation

MAMMOTH

- Administration — Operations
- Interpretation
history
geology
- Visitor Services

ROOSEVELT

- Dude Ranch
- Wilderness Trips

COOKE CITY

- Accommodation / Services
- Information / Interpretation

NORRIS

- Interpretation
geology
history

CANYON

- Accommodations / Services
- Interpretation
geology

WEST YELLOWSTONE

- Accommodations / Services
- Information / Interpretation
- Park Operations

LAKE - BRIDGE BAY

- Accommodations / Services
- Water Recreation
- Interpretation
wildlife

OLD FAITHFUL

- Interpretation
geology
history
- Visitor Services

THUMB - GRANT VILLAGE

- Accommodations / Services
- Water Recreation
- Interpretation
geology
backcountry
- Wilderness Trips

PAHASKA TEPEE

- Information / Interpretation
- Accommodations / Services

BECHLER

- Wilderness Trips

ASHTON

- Information
- Accommodations / Services

FLAGG RANCH & HUCKLEBERRY HOT SPRINGS

- Accommodations / Services
- Information / Interpretation
- Operations

JACKSON LAKE

- Water Recreation
- Accommodations / Services
- Interpretation
recreation
Indian culture
wildlife

JENNY LAKE

- Interpretation
geology
alpinism
- Visitor Services

MOOSE

- Interpretation
history

AIRPORT

- Information / Interpretation

MOOSE/KELLY/WARM SPRINGS

- Administration — Operations

JACKSON

- Information
- Accommodations
- Services

Visitor Use Concept THE CORE PARKS

Inherent in this concept is the basic need for regional planning; national parks do not exist in a vacuum. The creation of a national park and its subsequent development and public use have a significant impact on the regional community. Conversely, the location, availability, and the quality of services and accommodations within the region have an effect on the park. Efforts must be intensified to upgrade coordinated planning for land and water resources within the region surrounding each park, and these efforts should involve the states, counties, municipalities, and appropriate federal agencies.

Steps have already been taken toward the resolution of mutual resource-management problems. A "Joint National Park Service and Forest Service Coordination Committee", including representatives of five adjacent forests, and Grand Teton and Yellowstone National Parks, already exists; however, a broader system of cooperative planning should be developed to coordinate regional problems. This cooperation is necessary to optimize the region's collective capacity to serve the requirements of the public, many of which can and should be accommodated outside the parks.

B. Restructuring Visitor Use

1. Present plans call for centering the major visitor services at Lake and Grant Village, with services at other areas being reduced or eliminated. Overnight accommodations at Thumb and Old Faithful are being removed, with the last accommodation base to be replaced at Lake and Grant. Replacements would be of the wilderness threshold type, with capacities determined according to program function rather than visitor demand.

A paramount consideration is that the public must be made to recognize that there is a limit to the ability of the park to withstand open-ended overnight use. Ultimately, the public must recognize that unlimited development signals eventual destruction of park values.

2. West Thumb

The master plan recommends removal of all accommodations and services from the area because of their encroachment on natural features. The existing store and gas station should be retained until such services are no longer deemed essential at this location. Ultimately, this area will function as a major interpretive area, including trails and exhibits, and will become a day-use area for visitor observation of the lakeside thermal features.

3. Fishing Bridge

Current planning proposes ultimately to remove all accommodations and service from this existing developed area. This action is proposed to facilitate restoration of critical wildlife habitats at the Lake Yellowstone outlet. The existing campground, trailer village, store, and service station will, however, be retained for an interim period.

4. Canyon Village

Existing capacities will be adhered to. Unstable soils as well as peripheral regional developments will ultimately decide the fate and character of this developed area.

5. Roosevelt Lodge

A "western camp" featuring rustic accommodations and family-style meals within acceptable ceilings should be considered. Although the facility will function as the focal point for traditional horse use within the park, only minimum stock required for day-use riding will be accommodated onsite. Special stock required for extended packtrips will be trucked in as needed by suppliers located outside the park. The structures are outmoded and should be replaced.

6. Old Faithful

Environmental restoration of this area containing the park's most famous attraction already has been accomplished with road obliteration and rerouting of vehicular traffic around the fragile thermal zone, coupled with the removal of the campground and some concessioner accommodations. Ongoing planning which proposes gradual conversion of this area into a scenic day-use area should be given high priority.

7. Mammoth

Ongoing planning proposes removal of through-traffic from this principal administrative and residential enclave. As this is achieved, some minor restructuring to accommodate present and future needs will be required. Specifically, restoration of Fort Yellowstone should be accelerated. Realistically, however, such restoration should be responsive to this complex's functional mission, which is to house the park administrative and support facilities.

8. Wilderness

A proposal to establish some 2,016,181 acres of the park as wilderness has been submitted for public review. The principle exclusions are corridors along the roadways and part of Yellowstone Lake. The proposal consists of ten separate segments, and two of the larger segments, on the east side of the park, adjoin Forest Service wilderness areas and will form the largest blocks of wilderness in the contiguous 48 states.

C. Access and Circulation

The existing traffic problem results from the fact that the visitor must utilize his private automobile to see the park. In this respect, some type of supplemental interpretive transit system should be considered, tailored to the visitor's interpretive and sightseeing needs on the primary road system. This service should not be mandatory, but should be advertised adequately and made as attractive and convenient as possible. Complementary secondary systems that utilize smaller units can be added as required within such heavily traveled areas as the lower geyser basin and on the west side Canyon Rim Drive. For both these systems, service should be frequent with numerous stops. The vehicle must be quiet, attractive, and suitable for scenic viewing, with loading and unloading, simple and rapid. Seating should be designed to keep family groups together, and especially important, is that the service be either free or inexpensive. Existing roadways will provide the necessary circulation pattern. The transit system would ultimately tie into the accommodation centers on the periphery of the park and would offer an attractive alternative of providing all family members a scenic interpretive overview of Yellowstone.

Equally important is the removal of through traffic from the centers of development and natural features via bypass routes, several of which are underway.

The first of these reroutings at Norris has proven successful not only in improving the flow of traffic, but in removing an intrusion. A similar rerouting at Old Faithful, West Thumb and Lake has just been completed, together with the anticipated construction of the bypass at Mammoth will facilitate the proposed supplemental tour service and will encourage use of mini-systems within prime visitor zones.

D. Expanded Interpretation and Information

Existing interpretive devices such as limited-range radios that transmit messages to car radios throughout the park help encourage visitors to take greater advantage of the park's numerous nature trails and conducted services, but for the first-time visitor more is needed.

This master plan proposes that the Service complement ongoing interpretive programs with a comprehensive system of supplemental interpretive vehicles. Such a system permits us to communicate with the visitor as often as he wishes throughout his visit.

Both services and facilities must be on a brief introductory level, but publications and other special facilities and services would be offered to those who are interested in further depth. Within this category, programs would periodically be oriented toward specific themes such as photography, wildlife-viewing, geology, wildflower displays, army life and early visitors, etc.

E. Resource Protection

Well-intended protection, which seeks only to correct or eliminate "undesirable" resources or conditions, seriously interferes with natural processes, thus altering and, in many cases, endangering the resources that the park was established to preserve.

Since repeated forest fire in the post-glacial period determined present species distribution and successful levels available within the park, fire must ultimately be re-introduced into the environment, through allowable natural fires, controlled burning or both.

Insects, like fires, have been in intimate association with the park flora since the glacial period and before. Accordingly, except for judicious control within developed areas where protection of the vegetative motif is of primary importance, insect populations should be allowed to play their natural role in the park environment. However, even within these limits no residual pesticides should be tolerated.

Accumulated knowledge on the organization of life in natural ecosystems tells us that Yellowstone's wildlife occurred in dynamic

balance with their food sources and environment over the eons before western man arrived on the scene. As such, ongoing and future management actions, insofar as wildlife species are concerned, will be generally directed toward reducing and/or eliminating disruptive human influences, relying, whenever possible, upon natural controls to regulate animal numbers. An important element in this approach is the reestablishment of natural predators within the range of the northern Yellowstone elk herd.

The different races of native cutthroat trout and the rare grayling found within Yellowstone require special protection. Here too, management efforts have recently evolved toward regulating man's influence rather than in manipulating the resource (stocking) to suit his purposes. To this end, bait restrictions, creel limits, size limits, and catch and release fishing should be implemented as the situation warrants.

F. Visitor Protection--Interim and Future

Challenge in some degree is a fundamental ingredient of a wilderness experience. The Service must come to see its role in visitor protection as one of featuring varied levels of risk.

Above all the visitor must be made to see that if Yellowstone's unique wilderness essence is to survive he must in turn be willing to accept nature on her own terms, not his, contrived within the framework of contemporary ethics.

The proposed land classification plan provides a logical framework for developing varied and manageable visitor-use options. Proposed is a well-defined system of visitor-use corridors, categorized as natural environmental zones, which will provide a vital introduction to wilderness. Here, the visitor can test not only his desire but also his muscles.

Rounding out his hierarchy of backcountry use will be an effective network of scenic trails in relatively low-risk portions of the backcountry. In this respect, much of the existing trail system, evolved during the park's early history primarily to serve management needs, is not suitable and should be abandoned from the standpoint of visitor use.

No visitor protection concept can be considered complete if it did not address itself to the rapidly emerging phenomena of winter use. To this end, present and proposed programs diagrammed in the following sketch suggest the hierarchy of challenge possible within the park proper. A fleet of 12 passenger snow machines (bombardiers) provide daily scenic introductory tours along prime wildlife winter

ranges. For the more hearty individual, snowmobiling along designated and maintained road corridors is available. Proposed for those willing to test their mettle against the Yellowstone winter will be a number of cross-country ski or snowshoeing routes.

G. Research Needs

It is a basic tenet of this plan that Yellowstone National Park once again stands at the threshold of a new and exciting era of national park use. Unfortunately, as was the case in 1872, there is little knowledge to aid management in charting a course.

Research projects to aid management efforts are designed to provide answers in the following fields:

1. Some form of mass transportation system must be introduced to reduce the traffic congestion which develops during the peak visitor season. It is difficult to predict the type of system which would be appropriate. Research is needed to determine cost, public acceptance, and the availability of equipment.
2. Backcountry and developed area carrying capacities need to be determined. Each landscape has a capacity beyond which resource deterioration begins. The public should be made to recognize that there is a limit to the ability of the park to withstand open-ended use.
3. Standards have been established to assure protection of the public's health with regard to the design of waste disposal and water treatment systems. Knowledge, however, is lacking on the long-term effect of such systems on stream ecosystems and wildlife. A continued water quality surveillance to detect and monitor problems is needed.
4. Since present research indicates that wildfire played an important role in shaping the environment of the park, it should be restored. Results from the park's new fire management plan which permits unsuppressed natural wildfires should be carefully monitored to determine if the plan can be expanded.
5. Reference knowledge is required for a comprehensive management program, not only involving the natural sciences, but also the behavioral sciences, landscape design, sanitation, and education.

Cooperation and coordination in the study of these fields will be expanded between various resource management agencies and the academic community.

II. DESCRIPTION OF THE ENVIRONMENT

General

Yellowstone is known throughout the world as the first national park. Its establishment in 1872 by Congress marked the initial manifestation of a revolutionary idea of preserving natural environment in public ownership for future generations. This concept, kindled around a wilderness campfire, has now spread to most of the nations of the world.

When established on March 1, 1872, Yellowstone National Park was dedicated and set apart for the benefit and enjoyment of the people. It was also dedicated, however, for the preservation of the resources in their natural condition. The intent of Congress and the original purpose of the park was to perpetuate the natural ecosystems in as near pristine conditions as possible for the enjoyment of this and future generations.

The park covers approximately 3,400 square miles and is characterized by several broad, forested volcanic plateaus. Elevations in the park range from 5,000 feet near Gardiner to 11,358 feet at Eagle Peak in the southeastern corner. Numerous ponds and lakes lie in pockets of the mountain plateaus, including the 139-square mile Yellowstone Lake, and are drained by several rivers. The park's name is derived from the Yellowstone River. Geysers, hot springs, fumaroles, pots, terraces, and warm ground--all directly related to volcanic activity--give the area its singularity and are the natural wonders most frequently mentioned by early explorers and visitors. This is the only area on this continent where such a broad spectrum of outstanding natural features and unspoiled biological communities may be seen.

History

The park has a long, little-explored history of human occupation, including being traversed by Chief Joseph and his band of Nez Perce on their epic flight to avoid capture by United States troops. No tribes lived here permanently, but conflicts with roving bands of Indians began with the first explorers and trappers in the early 1800's and persisted even into the period after establishment of the park.

Trappers searching for furs were among the first of European origin to penetrate the region, and their sometimes vivid stories of what they found spurred other explorers and eventually led to the Washburn-Langford-Doane expedition that generated the legislation to establish Yellowstone National Park.

In compliance with Executive Order 11593, Protection and Enhancement of the Cultural Environment, an inventory and evaluation of cultural resources was accomplished in 1972. Among the historic properties nominated to the National Register of Historic Places are: Fort Yellowstone, the Norris Soldier and Ranger Stations, the Washburn-Langford-Doane Expedition Campfire Site, and the Gardiner Entrance Arch. Already listed on the register is the Old Faithful Inn.

The description of these properties is as follows:

Fort Yellowstone:

Fort Yellowstone, established in 1891, served as the administrative headquarters for Yellowstone National Park at a time when the U. S. Army was charged with the park's protection and development. From here, the Army administered the nation's first national park at an early time in the history of conservation. It is located at the Mammoth Headquarters area. The post is still relatively intact and the handsome architecture of its structures presents in a vivid manner the historical appearance of a major permanent army post in the West at the turn of the century.

When the National Park Service took over the administration of the park in 1916, the fort consisted of approximately 70 structures, including barracks, officers quarters, a chapel, a hospital, water reservoirs, stables, storerooms, a guard house, etc. Construction began in 1891 and was substantially completed by 1910. The buildings were primarily of either frame or stone masonry construction. The stone structures were the last to be built and are particularly noteworthy architecturally. These were of cut sandstone with tile roofs, unusual both in terms of durability and appearance. The stone buildings still standing are: U. S. Engineer's Office (HS 39), Bachelor Officers Quarters (HS 1), Officers Quarters, Duplex (HS 2), Commanding Officers Quarters (HS 3), Two-company Barracks (HS 36), Blacksmith Shops (HS 37), Cavalry Stables (HS 34 and HS 38), and Chapel (HS 17).

The surviving structures today house the administrative offices and maintenance functions of the park and serve as residences of park personnel.

A complete listing of structures and their historic and present uses is to be found in Battle and Thompson, Fort Yellowstone, Historic Structure Report (1971).

The Norris Soldier and Ranger Stations:

The present Norris Soldier Station (the third) at Norris Junction was constructed in 1908 to replace a building destroyed by fire. The T-shaped log structure housed a detachment of soldiers whose duties included the management and protection of the resources of Yellowstone National Park. Now restored, it is the best surviving example of the fifteen soldier stations established by the U. S. Army in Yellowstone National Park.

Containing a living room, sergeant's room, bunk room for enlisted men, two officers rooms, a dining room, a kitchen, and a store-room, it was one of the better built soldier stations that were scattered throughout the park. While it generally followed a plan for such stations developed by Maj. John Pitcher, Acting Superintendent, it apparently benefited from an interest in its design by the architect who designed Old Faithful Inn, Robert C. Reamer.

The Norris Soldier Station has recently undergone extensive restoration that returned it to its historical appearance. Plans presently call for exterior interpretation only.

When the Army left the park, first in 1916, then permanently in 1918, the Norris Soldier Station became a ranger station. At present it is unused.

The Washburn-Langford-Doane Expedition Campfire Site:

The 1870 Campfire Site stands as a symbol of the National Park idea. At the junction of the Firehole and Gibbon Rivers on September 19, 1870, members of Washburn-Langford-Doane Expedition gathered around a campfire the last evening of their historic exploration of the Yellowstone country and discussed the astounding natural wonders they had seen. There emerged an idea, expressed by Cornelius Hedges, that there should be no private ownership of these wonders but that the area should be preserved for public enjoyment. Others shared these views, and on March 1, 1872, President Ulysses S. Grant signed the Act establishing Yellowstone as the world's first National Park.

No physical remains of the historic campsite or other manmade evidences exist here. The nearest road is approximately 1/8 mile to the east. Few people visit the site, but many view it from an overlook across the river in front of the Madison Explorers Museum which was completed in 1972.

Gardiner Entrance Arch:

This unique arch marking the north entrance to Yellowstone National Park, the nation's first national park, was designed and built by Hiram M. Chittenden, then the U. S. Engineer Officer assigned to the park and in charge of road development. At this same time, 1903, Chittenden had already begun his immensely successful career as a historian of the West.

The arch consists of two large stone towers closed over by an arch 30 feet high, capped with a concrete roof shingled with stone clippings. President Theodore Roosevelt, in a visit to the park in 1903, laid the cornerstone. The arch has become a symbol that commemorates not only the contribution of Roosevelt and Chittenden in history and conservation, but also the National Park idea.

Old Faithful Inn:

This property is already listed on the National Register of Historic Places. The present and original appearance of Old Faithful Inn is that of a great log hostelry, its configuration individualistic but nevertheless easily traceable to Tyrolean influence. Its significance stems from its location near Old Faithful Geyser, its interesting architecture, and its historic value. Construction took place in 1903-1904.

The building faces north. Viewed from that direction it presents a tall and massive middle block dominating wings that extend to the east and west. The wings, themselves a full three stories high, appear dwarfed in comparison with their central core. The overall length of the building as originally constructed was 360 feet.

The Yellowstone Park Company owns the right of possession and continues to provide accommodations for the park visitor.

Archeological sites within the park have been identified and described in the report, "Preliminary Archeological Investigations in Yellowstone National Park," by Dr. Dee C. Taylor. There are about 170 sites inventoried in the park. Six archeological areas have recently been considered for nomination to the Register: the Gardner River Valley-Black Canyon of the Yellowstone Archeological District; Lamar River Valley Archeological District; Yellowstone Lake Archeological District; Obsidian Cliffs Archeological District; Gallatin River Archeological District; and Yellowstone-Hayden Valley-Grand Canyon of the Yellowstone Archeological District.

The districts reflect the history of sporadic archeological surveys rather than true distribution of archeological sites within the park. Additional studies are needed and will be programmed as funding allows. Professional evaluation will be required before actual nomination of the districts to the register. In compliance with Executive Order 11593, Protection and Enhancement of the Cultural Environment, all sites will be evaluated for national register nomination as they are inventoried.

A brief description of these archeological districts is as follows:

Gardner River Valley-Black Canyon of the Yellowstone: This district is defined as the drainage of the Gardner River below Bunsen Peak and the Black Canyon of the Yellowstone River below its confluence with Oxbow Creek. The majority of the known archeological sites are located along these drainages and their major tributaries which include Lava Creek and Blacktail Deer Creek. The district contains a total of 50 occupation sites, rock alignment sites (tipi rings), and wickiup sites. The sites are significant in that they represent a sampling of occupational sites utilized by the Yellowstone Indians.

Lamar River Valley: This district includes the Lamar River Valley and Specimen Ridge. Archeological sites include occupancy sites, quarrying sites and a campsite with rock walled animal compounds. There is strong evidence that there are many additional archeological sites of major significance.

Obsidian Cliffs: The Obsidian Creek-Indian Creek area contains both in place, outcrops of massive glassy obsidian and obsidian-boulder-rich moraines which have been quarried extensively for the manufacture of implements. Early explorers found large numbers of stone implements at the site; today there is still an abundance of chips and flakes over the entire area.

Gallatin River: The north-south trending main valley of the Gallatin River contains 26 known Indian occupation sites or artifact manufacturing sites dispersed along 13 miles of its course. The sites are predominantly located on terraces at the confluence of smaller streams with the Gallatin. One wickiup site is located on Wigwam Creek; it remains intact and contains approximately 130 aspen poles.

Yellowstone Lake: This district is defined as a one-mile strip of land surrounding the 110 miles of shoreline of Yellowstone Lake, and the islands within the lake. The district contains 42 known occupational sites including two, the Fishing Bridge Peninsula Burial Site, and "The First Blood Site", an excavation area on the north shore of West Thumb Bay.

Yellowstone Valley-Hayden Valley-Grand Canyon of the Yellowstone: This district contains 25 reported occupational sites along the Yellowstone River between Yellowstone Lake and Canyon Village. The large number of known occupancy sites indicates that the potential for major archeological discoveries along this portion of the Yellowstone River is great.

Four definite periods of aboriginal occupation are found in Yellowstone National Park. These four periods are viewed as both cultural and temporal periods. Early Prehistoric people (8,000-10,000 years ago) in Yellowstone were few in number and apparent wanderers from adjacent plains and broad, mountain valley areas. The fourth period, Historic, began in 1870 and still continues. The beginning of this period is marked by the use of the northern area of the park as an east-west passage by the Nez Perce, Crow and possibly Bannock.

Geology

The cores of magma below the lava flows are still hot from the relatively recent volcanic activity, and since in this region they are comparatively close to the earth's surface, the park has an extensive system of fumaroles, boiling springs, and geysers. There are nine major "basins" of geyser and hot spring activity in the park, and over 100 clusters of hot springs spread through an area of 1,800 square miles.

The geysers and hot springs are among the major attractions in Yellowstone, and probably were responsible more than any other feature for the park's establishment. While such phenomena are found elsewhere in the world, their association with plants and animals, particularly as regards winter distribution of the latter, is probably unique. The warm ground regions associated with thermal activity provide areas relatively free of snow during the colder periods of winter, thus enabling herds of bison and elk to survive in remote corners of the park. Hot springs entering rivers and lakes keep stretches of water open even in temperatures of minus fifty degrees, enabling large numbers of ducks, Canada geese, and trumpeter swans to spend the entire winter here. The growth of aquatic plants is stimulated year round by the warm water, thus providing food for these birds.

As a result of numerous ancient eruptions of volcanic ash, the park and adjacent lands contain petrified trees which were buried by ash while still standing. The trees are unique in that they are petrified in an upright position.

Minor earthquakes are common in Yellowstone. Seismographs in the park normally record several tremors daily. The largest recorded earthquake took place in August 1959 and caused over a million dollars in damage to roads and structures in the park.

According to the Geological Survey little investigation on mineral possibilities has been undertaken since the area has been a national park for more than a century. Most of the information is based on extrapolation from adjoining areas. (See A-28). A thin subbituminous coal field impinges into the park from the south for about a two township area. At the northwest corner of the park, there is also some known coal and at least several townships within the park in that vicinity are considered to have possibilities. Other possibilities include oil and gas, phosphate, bentonite, and some copper, gold and silver.

Climate

Weather extremes in Yellowstone have ranged from a recorded high of 98 degrees to a low of 66 degrees below zero. Summer temperatures generally range from 50 degrees at night into the 70's in the daytime, during the period of highest visitor use. However, freezing temperatures have been recorded at all stations during all months of the year. Precipitation averages about 25 inches per year, mostly in the form of snow. Snowfall varies with the elevation, those areas along the Continental Divide and on the Absaroka Range along the east boundary getting 200 to 400 inches, the Mammoth area at 6,000 feet receiving only about 90 inches.

Flora

Yellowstone National Park has a rich flora considering that all the plants of today have moved into the area since the retreat of the last ice caps, about 10,000 years ago. Glaciers completely covered the park during the Ice Age. At one time, 40-60 million years ago, a much different vegetation including Giant sequoias, magnolias, oaks, walnuts, beech, elms, and hickories occurred here. The ancestor of our lodgepole pine also grew in these Tertiary forests.

Most of the forested area of the park is covered with lodgepole pine (Pinus contorta). In the upper elevations it occurs as a successional species but over much of Yellowstone Park it can be considered the stable climax species. Whether this is a fire climax or a climax controlled by soil and climatic conditions is not clearly understood. However, from about 7,500 feet to 8,500 feet lodgepole pine will probably remain the dominant forest tree, unless a major change in climate occurs. In many areas an understory of whitebark pine has developed, as low as

8,000 feet elevation. Douglas-fir tends to grow only at lower elevations, as does the aspen, the one significant broad-leaved species. Limber pine and Rocky Mountain juniper occupy sites detached from the regular forest in the lower elevations.

The nonforested territory is apt to be one of five types: wetland meadow, sagebrush/grassland, subalpine/alpine meadow, thermal area, or talus. The alpine and subalpine meadows seem to have much in common, perhaps because elements of true alpine vegetation were eliminated from the higher peaks during the warm, dry altithermal period about five thousand years ago. Grasslands occur at all elevations but cover large areas only in the northern portion of the park. Major exceptions are two very large meadows in Hayden Valley and Pelican Valley on Ice Age lake deposits.

A specialized plant community has developed around the geysers and hot springs with common monkey flower (Mimulus guttatus), and hairy golden-aster (Chrysopsis villosa). Several kinds of algae and bacteria are adapted to living in the hot water of the thermal springs, and the mineral-rich cooler runoff waters provide excellent habits for other kinds of algae.

Factors that influence vegetation in the park include climate, the effect of elevation on climate, and the rocktypes from which the soils are developed. Lodgepole pine is associated with volcanic rhyolites and tuffs; Douglas-fir and grassland with the sedimentary rocks. The spruce-fir forests grow in the higher elevations on either type of geologic formation, but especially on the east flank, of the park where early volcanoes created the high Absaroka Mountains. They also occur on the Pitchstone Plateau in the southwest corner of the park. Here winds from Idaho first meet the higher elevations and deposit 50 or more inches of moisture per year. The rest of the park is in a rain shadow of varying intensity. Over most of the park on the volcanic plateaus, the rainfall averages 15 to 20 inches. Mammoth and Gardiner are shielded by high mountains on all sides and only 10 to 11 inches per year makes it into these areas. As air rises and expands it becomes cooler, thus air temperature at the higher elevations is much lower.

Natural fires have also played an important role in shaping certain patterns of vegetation in the park. Studies suggest that the grasslands in the northern portion of the park burned at intervals of less than 50 years and probably as frequently as 25-35 years. Most of the forest areas of the park show evidence of past fires, but at intervals of at least a century or longer between fires in lodgepole forests.

Fauna

Larger plant-eaters include such ungulates as the bison, moose, elk, mule deer, pronghorn antelope, and the bighorn sheep; and are among the park's greatest attractions. The elk are also particularly important in management programs because their large numbers create a significant

impact upon park vegetation and because they are migratory. Most of the herds range outside the park, which places them under the management jurisdiction of other agencies. One resident elk herd is naturally regulated, numbers about 1,000 animals, and is found in the upper Madison drainage. The northern and Gallatin herds, which in winter move partially into Montana and the southern herd, which descends into Wyoming, have traditionally been controlled through hunting in the bordering states.

Past concerns for park range conditions that were based on the economics of domestic meat production, led to artificial controls of park elk populations in a main effort to keep them in "balance" with their food supply. Hunting is still used as a control measure for elk migrating outside the park, primarily to provide recreation for hunters in adjacent states. But most recent studies have indicated that wide fluctuations in both elk populations and range conditions are entirely natural and for the time being at least, artificial control measures within the park have ceased. Artificial controls may be resumed if, in the judgment of the park biologists, irreversible range damage appears imminent or other species appear endangered by lack of forage.

Large grassland areas, found principally on the Alluvial soils of the river valleys, and maintained by periodic fires, provide the bulk of the forage on which these herds of ungulates depend. Certain segments of these grasslands are kept free of snow by subterranean geothermals and provide the vital food supply that permits certain herds of bison and elk to survive the harsh winters. Those that are excessively weakened or die from starvation form the next link in the food chain, enabling predators such as wolves, bears and mountain lions to find easy prey, and helping rare scavengers like the bald eagle to maintain their position here.

Predators such as the wolf and mountain lion, depleted to near extinction before the thirties, are here in low numbers. The grizzly bear and black bear are in sufficient numbers to be an important factor in the overall ecosystem. Others such as the coyote, bobcat, lynx, martin, weasel, and wolverine are maintaining stable population levels.

Only remnants of the extensive bald eagle population remain, but other avian scavengers such as the raven and the magpie are common. Using the aquatic plants for food but not altogether restricted to water, are waterfowl such as the trumpeter swan, Canada goose, and many species of ducks.

Species considered endangered here are the osprey and grey wolf. Others in a precarious position elsewhere or in limited numbers in the park are the grizzly bear, the bald eagle, the mountain lion, and the wolverine. All of these conflict with man in one way or another, and their greatest hope of survival is within large tracts of wilderness where man's influence can be lessened.

Yellowstone's fishery is comprised of both native and introduced fish and holds a high degree of interest for the visitor as a recreational resource - the catching of varied species of fish in a wilderness environment. In addition, as mentioned earlier, fish are an essential part of the diet for several species of birds and mammals.

Under park objectives, carefully regulated fishing is permitted, but is vastly different from non-park use. The preservation of native fish populations and associated aquatic life in a natural environment is of utmost importance if the visitor is to enjoy the full complement of park resources.

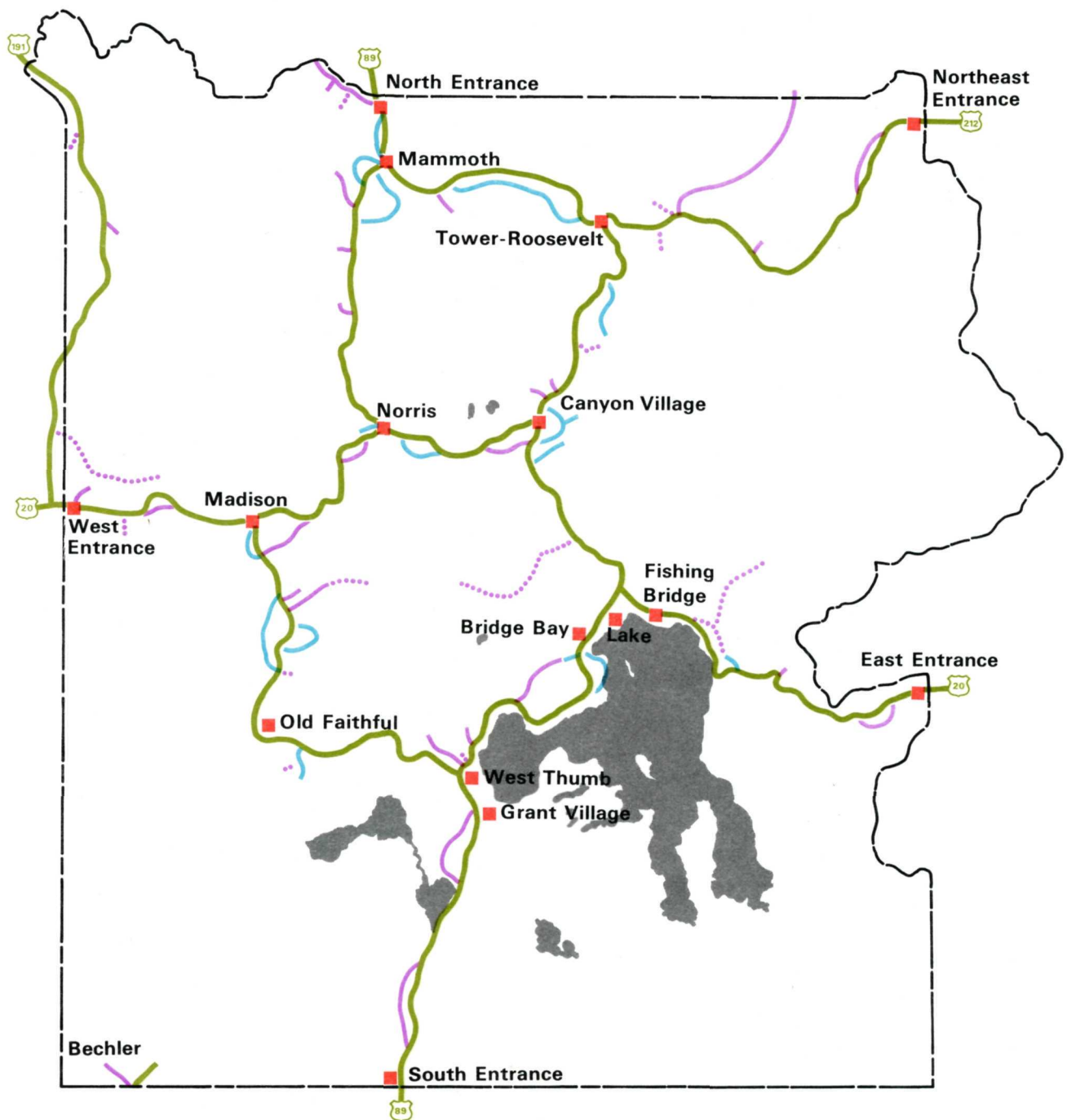
While the faunal ecosystems within the park are still relatively intact, man's sometimes well-intentioned efforts have made serious alterations in their basic structure. Larger predators have been depleted in number, migration patterns have been disrupted, and the distribution of some large ungulates have been changed. Feeding habits have been seriously altered by the presence of unnatural food sources, and one community, namely the aquatic, has been completely changed in some respects by the introduction of exotic species that now completely dominate many portions of our rivers. Thus, management efforts in future years must be twofold: to restore the basic balances that have been upset by the activities of modern man and to encourage the maintenance of natural, environmentally regulated ecosystems.

Transportation Network

Modification and improvements initiated since the turn of the century have transformed what was conceived and remains, in both standard and design, essentially a secondary road circulation system into a primary through-system.

Developed for the most part in the railroad-stagecoach era by the Army, the park's road system is now overburdened due to the phenomenal growth of automobile travel and the implementation of a "do-it-yourself" method of park interpretation, for which it was never designed. Auto travel is now over 600,000 vehicles per year, with all predictions indicating further increase. The end result is congestion and delay, all detracting from the visitor's experience. Complicating the problem and frustrating a unilateral solution is the fact that Yellowstone National Park's interior roads also serve as the strategic keystone to the Region's limited internal transportation network.

A primary, year-round road system circles that park at a distance of 50 to 100 miles from the park boundary. Summer access is possible via the north, northeast, east, south, and west entrances; but conventional vehicles may enter only via the north entrance during winter months. The road between the north entrance and Cooke City, Montana, is plowed during the winter, but other park roads are open to snowmobile traffic only.



Public Use Roads		Miles
	Primary & Secondary	343.0
	Developed Areas	193.6
	Interpretive	63.9

Management Roads		Miles
	Park Operations	119.1
	Roads To Be Obliterated	

0 5 10
Miles



EXISTING CIRCULATION

The south and west gates each handle about 30% of the summer travel, with the east, north, and northeast, in descending order, carrying the remainder. Grand Teton National Park has a strong influence on Yellowstone travel, with the two parks so closely related they are often associated by the visitor as the Grand Teton-Yellowstone area. The heavy proportion of travel through the south, east, and west gates indicates that a large percentage of Teton travelers visits Yellowstone in the same trip, and vice-versa.

Resource Use

Visitation has surpassed two million visitors per year since 1965 and is generally increasing, although there was a slight drop in 1971. Winter visitation has been increasing at a rate of 20 percent per year since 1963, a trend which is expected to continue.* In 1972 travel was 2,246,827, an increase of six percent over 1971.

There are approximately 2,700 designated individual campsites; group camping areas that will accommodate 200; and 8,300 concessioner provided "pillow spaces", including hotels, lodges, cabins, and trailer villages. From a total of 1,448,106 overnight visits in 1972, 42 percent stayed in concession facilities, while 58 percent camped. In recent years both campgrounds and concessioner accommodations have been filled to capacity during most of the visitor season; although a slight drop in the use of concession facilities has occurred in the past two years.

Use statistics for 1972 are as follows:

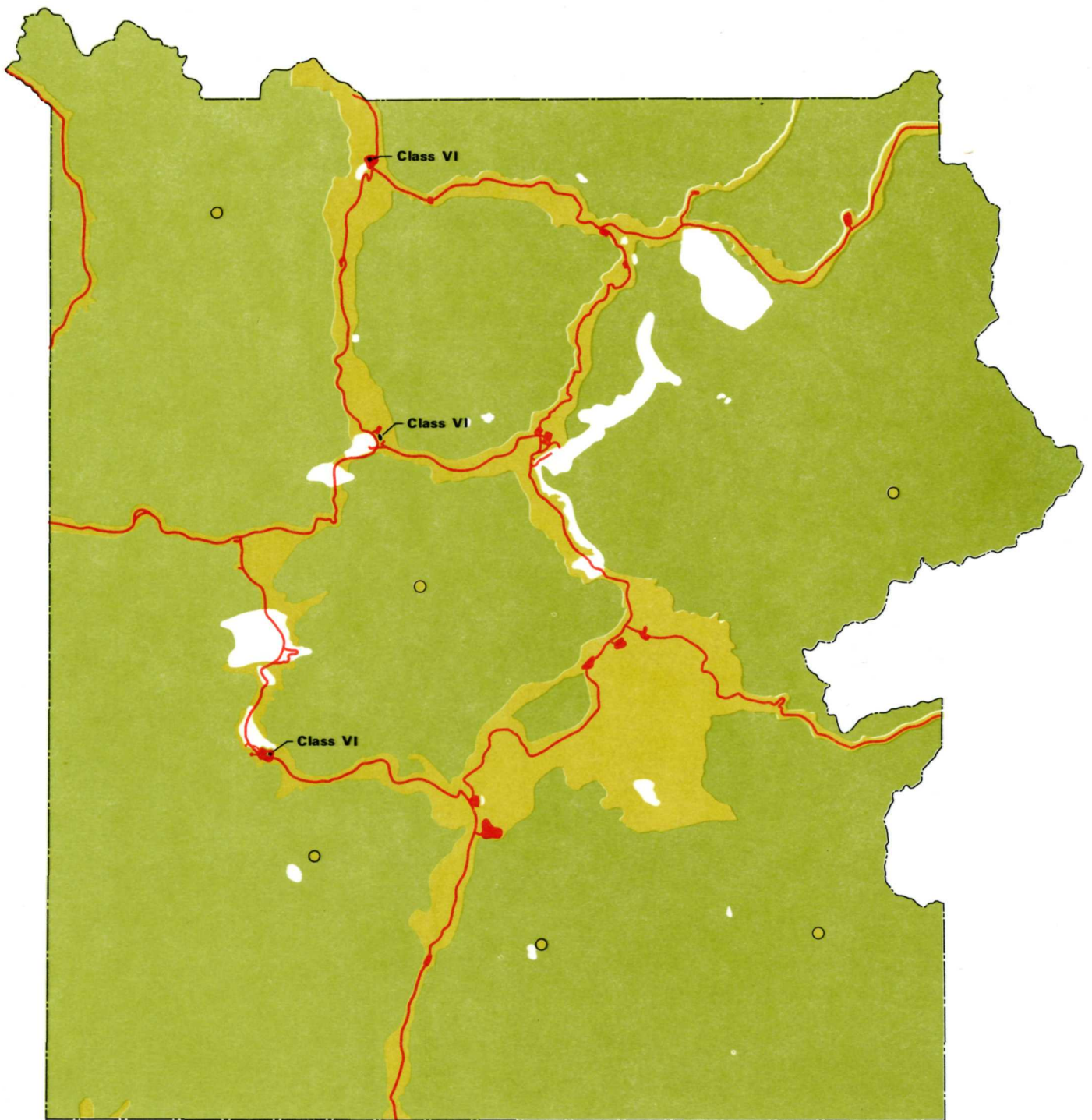
Overnight Use:

Concessioner: rooms and cabins	496,597
camping	108,909
Tent camping	259,883
Recreational vehicle camping	565,439
Group camping	7,846
Backcountry camping	52,767
Camping - boats	965

Resource Use:

Boating permits	4,340
Fisherman days (estimated)	350,000
Backcountry use (people)	19,514
Snowmobile use (private)	17,817 (20,568 pass.)
Snowcoach use (concessioner)	651 (5,071 pass.)
Oversnow foot travel (number of visitors)	391
Day hikers (estimated)	47,451

*As a result of the energy crisis, travel may decrease in subsequent years.



LEGEND

- I High-Density Recreation none
- II General Outdoor Recreation ■
- III Natural Environment ● & ■
- IV Outstanding Natural Area
- V Primitive ■
- VI Historical Area — Class VI

LAND CLASSIFICATION

The most significant change in visitor use in recent years is that of private over snow machines. Statistics during the past three years are as follows:

1970	9,188 snowmobiles	12,095 passengers
	548 coaches	4,388 passengers
1971	12,326 snowmobiles	15,175 passengers
	629 coaches	5,447 passengers
1972	17,817 snowmobiles	20,568 passengers
	651 coaches	5,071 passengers

The focal point of use is the Old Faithful area. On some week-ends, 500-600 oversnow machines reach the area, primarily (87%) from the West Entrance. The concession operates a 25-room lodge at Old Faithful. Visitors reach the Old Faithful area on the concessioner's snow coaches, which operate primarily from West Yellowstone, but also from the Mammoth and the South Entrances. The overnight use by those utilizing the coaches has stabilized and appears limited by the number of accommodations at Old Faithful. The concessioner provides snowshoes, skis, cross-country skiing or snow-shoeing instruction, and cross-country tours. The snow coaches carry cross-country skiers, drop them off at certain locations on established snowmobile routes, and pick them up at a later time.

Snowmobile use is restricted to unplowed roadways, all of which are excluded from the proposed wilderness by corridors one to two miles wide. Grooming of the snowmobile trails by an oversnow machine equipped with a front-end bulldozer attachment and a drag-type planing device has eliminated wandering from the established route. In previous years when the trails became rutted and bumpy, snowmobilers would move over into the uncompacted and smoother area. A series of parallel trails developed over a period of time, thus encouraging some cross-country jaunts and increasing the possibility of wildlife disturbance. Recent observations by the park rangers revealed no indication that snowmobilers were leaving the roads or chasing animals.

The noise emission levels are significant near the vehicles, but are contained within the corridor excluded from the wilderness proposal. As a result of recent state regulations on noise level emissions and enactment of the Federal Noise Control Act of 1972, manufacturers are redesigning the engines to reduce noise output. One snowmobile company has already designed an engine with an output of 73 decibels at 50 feet from the machine. Observations along the current use areas indicate that elk, bison, moose, coyotes, and geese pay no attention to the snowmobilers as they pass. They appear conditioned by the presence of conventional vehicles during the summer months.

Oversnow machine use has introduced greater numbers of visitors into the previously serene winter landscape. As can be seen by the visitor use statistics, only 391 visitors enjoyed the park by oversnow foot travel. As a result of the significant increase in oversnow machine use in the park, an interdisciplinary research program is being programmed at the Yellowstone Environmental Study Center, a cooperative research unit between the National Park Service and the University of Wyoming.

Resource Considerations

Extreme numbers of people on foot compact and erode soil and destroy vegetation. The hydrothermal features receive impact by visitors wandering off the boardwalks, and by vandalism of the geysers and pools. A common problem is throwing litter into the features. Feeding and harassment of wildlife and heavy fishing pressure have direct effects on wildlife ecosystems. Road scars, poorly planned buildings, overhead power and phone lines, smoke, noise, and litter all contribute to the symptoms of "urban sprawl" so familiar to the visitor at home but an offense to his sense of esthetics in the park. Restrictive controls on visitor numbers and activities have the social impact of disrupting plans and lowering the general degree of enjoyment the visitor expected to achieve. Some temporary disruption of economy may occur by alteration of the concession operation in the park, and additional ecological and esthetic effects will occur from concentration of these operations.

John D. Rockefeller Memorial Parkway

In August of 1972, Congressional Action created the John D. Rockefeller, Jr. National Memorial Parkway between Grand Teton and Yellowstone National Parks, a distance of 6.8 miles, and between Forest Service lands on each side of the road bounded by the Targhee National Forest on the west and the Teton National Forest on the east. The Forest Service is considering the establishment of wilderness status for those forest lands remaining between the proposed eastern boundary of the Memorial Parkway and the present Teton wilderness. This would add 29,000 acres to the existing wilderness.

In addition it was designated by Secretarial action that the portion of the present park roads from near Moose to the northern boundary of Grand Teton National Park and from the South Entrance of Yellowstone National Park to West Thumb, are an in-park extension of the Memorial Parkway. Establishment of the Parkway is not expected to have an impact on the master plan since an existing road system is involved, and management of the lands within the parks will remain the same. Management of the Parkway between the two parks are under the policies of a National Recreation Area, with existing uses and activities essentially continuing in their present patterns.

Thus, the proposed Parkway ties Yellowstone and Grand Teton National Parks into a continuous management unit. Administration of the 6.8 mile strip between the parks, comes under National Park Service jurisdiction, and is administered through Grand Teton National Park.

Regional Considerations

Yellowstone National Park and its neighbor to the south, Grand Teton National Park, serve as a destination for the great majority of out-of-state travelers visiting the tri-state region in the summer. About 85 percent of park visitors travel from more than 100 miles distance. The local economy is strongly tourist-oriented, annually receiving 60 million dollars of gross expenditures from Yellowstone visitors.

Populations of all adjacent counties, essentially rural and encompassing about 25,000 square miles, total 75,000 people or about three per square mile. Today, recreation surpasses the agricultural and livestock industries as the economic base of the region. In Teton County, tourist expenditures rose from \$6 million to \$13 million between 1958 and 1964. Although summer recreation has been the basic pattern, the increasing popularity of winter sports is leading to a stable year-round tourist economy. Teton Village, adjacent to the town of Jackson, the region's southern gateway, has nearly achieved such a status. West Yellowstone, emerging as a mecca for snow-mobiles on the region's western portal, and other nearby ski areas in Montana and Idaho have a similar potential.

III. ENVIRONMENTAL IMPACT

The plan takes into consideration the impact of present day visitation as well as that of the future, together with the probable effects, both favorable and unfavorable, of the facilities proposed to handle this visitation.

A. Environmental Effects of Visitor Use

The entry of over two million visitors per year into the park, mostly in personal vehicles, creates an impact of noise, air pollution and congestion quite out of place in an otherwise natural environment.

1. Foot travel by those who leave their vehicles is often concentrated in small areas, leading to compaction and erosion of soils and destruction of vegetation. Degree of impact is directly related to numbers of people, and is lessened only by installing walkways and fences. These to some people are more of an esthetic intrusion than the trampled earth. Impact is greatest at the more popular geothermal areas or scenic spots.
2. Feeding and other harrassment of wildlife leads to the possibility of dangerous contact with wild animals. The feeding habits of bears may be altered, and ungulates may be at least temporarily driven from their feeding areas by persistent attempts of visitors to get close enough for photographs. Chances of other visitors to see wildlife is often spoiled by this activity. Continuing education and law enforcement efforts are helping, and an interpretive transit system, by closer communication with visitors, may greatly reduce the problem.
3. Littering continues to be a serious problem, although public attitudes seem to be changing. It is necessary to keep the area scrupulously clean in order to ease the problem. Increased educational efforts may help in the future.
4. Heavy use by fishermen (350,000 fishermen days per year) of park lakes and streams depletes the fishery resource, requiring careful regulations. In some areas, streambank vegetation has been damaged by fishermen's trails, and portions of the Yellowstone River are closed to fishing to protect the chances to view wildlife. The trend in management is toward emphasizing fishing quality rather than large catches.
5. Use of saddle and pack stock in the backcountry damages trails and campsites and competes with wildlife for available forage. Controls are currently limited to regulating total number of pack stock in any one party and in restricting horses from certain trails during wet spring months. Use is expected to increase, as will the controls.

6. Visitor use in the winter is essentially that of a "winter wilderness" since park roads will not be snowplowed in winter except for the Gardiner-Northeast Entrance Road. Oversnow vehicles are restricted to unplowed roadways. A fleet of 12-passenger snow buses provide daily scenic introductory tours along prime wildlife winter ranges. The primary impact here is on the wildlife populations which were previously isolated by the winter conditions. Critical elk winter range is sometimes affected, primarily from harassment of large numbers of visitors and oversnow vehicles. Noise, especially from small machines, is undoubtedly an impact factor, but is difficult to measure or evaluate. Ungulates in the vicinity of the Madison-Firehole River where most oversnow traffic occurs, appear accustomed to the presence of vehicles and seem unaffected by oversnow vehicles traveling the roadways.

Cross country skiers and snowshoers, when their travel takes them near the roads, object to snowmobile noise as an intrusion on an otherwise quiet winter scene.

B. Social Impact

The real paradox of maintaining a natural area for public use is that in order to successfully identify with and appreciate the natural surroundings; a visitor must be able to remain long enough to absorb the aura of wilderness that characterizes the area. His very presence, in any great numbers, dims this aura in direct proportion to the visitor volume. The master plan seeks to direct visitor use in such a way as to permit the maximum appreciation and enjoyment with the minimum impact, but the increasingly urban orientation of the average visitor makes the adjustment to park environment extremely difficult.

Restricted overnight use means that many visitors will have to spend their nights outside the park, when their natural inclination and desire would be to stay as close to their objective as possible. Some who have to camp closer to gateway tours may find their experience less primitive than they had hoped. Since the master plan calls for reduced overnight use within the park, this situation may become more common. Gateway communities will benefit economically, but to some visitors, a cherished dream of camping in Yellowstone may not be realized.

Overnight concession accommodations are limited to 8,300 "pillows" and campgrounds are limited to 2,700 sites or approximately 11,000 people. The concession limit has had little economic or social impact as these facilities have not been full since the limit was imposed three years ago. Campground limits, however, have resulted in many people being turned away from the park in the afternoon because all of the available campsites were taken. Campgrounds were full an average of 56 nights during the summer of 1971, with most camps filling about three

pm. This provided at least a temporary benefit to concessioners in nearby communities and will provide long range economic benefits through provision of camping facilities outside the park.

Use of mass interpretive transportation, even though made attractive as possible, means separating the visitor from the "security module" that is his personal automobile. The type of transportation to be used for the interpretive transit system has not been decided. Several kinds may be tried on a limited basis before one or more systems best suited for the park operation are adopted. Regardless of the system used certain social impacts will occur and must be considered. The following advantages of personal transportation will be lost:

- a. Privacy of the personal automobile.
- b. Convenience of starting, stopping at will.
- c. Access to personal equipment which cannot be carried on a public conveyance.
- d. Options of taking alternate routes or directions.

Beneficial social effects of this system are:

- a. A more complete interpretive experience is available.
- b. The strain of driving will be eliminated.
- c. A more comprehensive overview of the park will be available, especially to those with limited time.
- d. The system will either be free or will be inexpensive enough to be to the visitor's monetary advantage to use it.

The mere entry into a wilderness environment calls for a tremendous adjustment on the part of many people. Used to the hazards of city life, they are suddenly confronted with hot pools that scald, unfettered animals that can maim or kill, and broken terrain that shows no mercy to the uninformed or ill-equipped. Our informational efforts are critically important to these people, who are expecting a more urban situation.

C. Environmental Effects of Visitor Facilities

The road and trail system in Yellowstone developed during the days of army administration in the park, and the present day system is little more than improved surfaces on the original routes. Bypasses around some of the areas of visitor concentration have been constructed and others are planned, and while these are relatively insignificant compared to the more than 250 miles of primary roads now in existence, they represent the first new road construction in the park in many years. Of all park facilities, roads are probably the most permanent in their effects on the environment and come closer than any other to an irrevocable commitment of the land resource.

Major road construction completely removes vegetation, recontours the land and alters drainage patterns in such a way as to influence adjacent vegetation. Also, at least a partial barrier is created to normal wildlife movements, which are affected by the recontouring, the change in surface and the noise, appearance, and odor of moving traffic.

Some roads no longer in use can and have been restored to original contours and vegetation, but the degree of success depends both on the location and on the planning and care used in the restoration. The bypasses currently under construction should be the last of the major roadwork in the park. Other means, such as mass transit, may be used in the future to absorb further increases in traffic.

Environmental effects of the proposed wilderness threshold communities, particularly at Lake and Grant, are unknown; design and programming have not been accomplished. The proposal to develop a new kind of program oriented community is based on the supposition of getting the visitor off the road and into the park in people-oriented or social spaces to accommodate him. The design is suggested by such qualifying criteria as pedestrian orientation and minimal encroachment on park resources per maximum density. This could result in a tightly knit development creatively interspersed with plazas or green spaces. The master plan proposes a nationwide competition for search of such a design idiom. A probable impact is that of space utilization, but the social benefits of a pleasant, functional setting would be mitigating.

Eating and overnight accommodations, stores and gas stations, interpretive and other information facilities all require support areas for parking and walkways much larger than the actual size of the building, and for the most part, these areas are paved. In addition, water, phone and power lines must be directed to the structures and disposal of solid and liquid wastes must be provided.

The actual acreage involved seems almost insignificant compared to this latter problem, for not only are powerline rights-of-way and sewer ditches and garbage pits involved, but the effect these wastes have on the ecosystems is tremendous.

D. Environmental Effects of Park Management Activities

Elk which were formerly removed by live-trapping and transplanting to ranges in adjacent states will no longer be available. Hunting success in these areas may be reduced somewhat, but most of these ranges were already stocked to capacity. The general trend of park range conditions may go downward and other species dependent on grass may suffer as a result.

Maintenance activities require the use of heavy equipment, and these vehicles and machines contribute to the noise and air pollution problem. Maintenance of roads requires the extraction of rock for crushing from gravel pits within the park, creating large scars that are difficult to restore, and the preparation of asphalt paving material presents the intrusion of mixing sites, access roads and black smoke from the hotmix plant. A dozen such sites are currently in use in the park, involving some 60 acres of land. Consolidation is underway, however, to only one such site in each of three districts within the park. Eventually, all such material is to be obtained outside the park.

Structures for housing equipment, maintenance shops and offices and residences for employees all require space, both for the buildings and their attendant utilities. Such installations in effect resemble small towns, and while some are seasonal in occupation, the large installation at Mammoth Hot Springs is occupied year-round. Effect on wildlife is less than might be expected, since feeding, nesting, and predation activities continue, within the unit as well as on the periphery. The esthetic effect to the visitor is tremendous, however, in spite of the fact that he may be expecting the presence of at least basic facilities.

E. Environmental Impacts of Wilderness Designation

Establishment of wilderness will preclude development of roadways and permanent structures in the backcountry. Wilderness also precludes the use of motorized equipment other than that required for emergencies. Proposed management practices, however, which require the use of tools, equipment or structures will be allowed if these practices are necessary for the health and safety of wilderness travelers, or the protection of the wilderness areas. The manager will use the minimum tool, equipment or structure necessary to successfully, safely, and economically accomplish the objective.

As a result of these restrictions, a large section of Yellowstone National Park will remain undeveloped and inaccessible for the majority of the park visitors. Those that do manage to enter the backcountry, either by foot or on stock, will be denied the comfort and convenience of trail shelters or other permanent camping facilities. In addition certain forms of research requiring installation of permanent structures and equipment will be curtailed. A draft environmental statement assessing the effects of wilderness has been filed with CEQ.

F. Environmental Effects of Park Management Decisions on Gateway Communities

For the gateway communities such as Gardiner and West Yellowstone, Montana and the other nearby towns furnishing supplies and services to park visitors, the establishment of limits on overnight use in

the park may effect both the economy and the environment. Those visitors unable to stay in the park must find lodging or camping space somewhere and the overflow is shunted to outside facilities. With park campgrounds full during most of July and August, almost all of any future travel increase during these months will have to stay outside the park. Many area businessmen welcome this influx, asking only that the National Park Service guarantee to maintain these limits so they can invest in facilities without fear of losing their market.

Others, looking further ahead, see impacts similar to those about which the park is concerned.

1. Additional facilities require space, which in some gateway areas is at a premium.
2. The additional crowding and noise are objectionable to those who prefer the quiet of a small town. Traffic flow limitations within the park will create in adjoining areas concentrations of automobiles with problems of space for parking, esthetics, air pollution from engine emissions, traffic concentration and regulation, and health and safety problems associated with concentrations of people.
3. Solid and liquid waste disposal facilities will very likely have to be upgraded to handle the increased load thus imposing a heavier tax burden. Available government technical and financial assistance may ease the load of developing sanitation facilities and planning business sites.
4. Municipal fire and law enforcement services will have to be increased, placing additional economic burdens on gateway communities.

Restrictions on the use of the road system for interstate through traffic could place environmental impacts upon the physical and economic resources of adjoining areas through construction of such through-traffic facilities.

Restoring the natural regime within Yellowstone may have environmental implications outside the park: removal of artificial food sources for bears inside the park may cause them to range outside the park until natural food habits are restored. Reestablishment of natural predators within the park may have some adverse effects on domestic animals adjacent to the park.

Elimination of gravel pits and hot mix operations within the park will transplant their environmental impacts of air pollution and esthetic intrusions to communities outside the park.

Encouragement of visitor use facility development outside the park may result in intrusive developments along the access routes into the park, detracting from the visitor's introduction to the park experience.

G. Effects of Master Plan Proposals on Cultural Resources:

The master plan identifies those cultural resources that qualify for the National Register of Historic Places. Included at this time are Fort Yellowstone; the Norris Soldier and Ranger Station; the Washburn-Langford-Doane Expedition Campfire Site; and the Gardiner Entrance Arch. In accordance with Executive Order 11593, Protection and Enhancement of the Cultural Environment, the master plan proposals will not result in the sale, transfer, destruction, or substantial alteration of any of these properties.

In the Mammoth area the master plan proposes restoration of Fort Yellowstone, removal of through-traffic from this principal administrative and residential enclave, and restructuring of visitor use facilities. A development concept plan and environmental statement are currently under preparation; full consideration is being given to the protection and enhancement of the archeological resources as well as the historic structures of Fort Yellowstone. Gardiner Arch near the North Entrance will not be affected by any of the master plan recommendations.

The Norris Soldier and Ranger Station at Norris Junction is already restored and none of the master plan proposals will effect it. The 1870 Campfire Site is identified by a simple marker. Since the nearest road is approximately 1/8 mile to the east, few people visit the site. Many view it from an overlook across the river near the Madison Explorers Museum completed in 1972. The master plan has no further proposals for the area.

Since the Old Faithful Inn is already on the register, Section 106 of the National Historic Preservation Act was considered. The objective of the master plan is to convert the Old Faithful development into a scenic day-use area; environmental restoration already accomplished include road obliteration and rerouting of vehicular traffic around the fragile thermal zone, and removal of the campground and some concessioner accommodations. With conversion of

Old Faithful to day use, the opportunity will exist for restoring the Inn to its historic and architectural integrity. It will be stripped of its more recent wings and refurnished in its turn-of-the-century decor. Food services, similar to those of the park's early days, will be provided for the park visitor. Since this master plan proposal will alter the property, the National Park Service will consult with the State Historic Preservation Officer and the Advisory Council on Historic Preservation as the restoration plans develop. A Historic Structures Report, prepared by professional historians, will be provided prior to these consultations.

Sufficient data is unavailable to determine the impacts of the master plan proposals on archeological resources since comprehensive plans have not been developed. As subsequent planning develops, consideration will be given to the known 170-plus archeological sites inventoried by Hoffman (1961) and Taylor (1964). Since the master plan proposes no major developments, the probability of impact on these cultural resources is considered minimal. In the Mammoth area, a development concept plan and environmental statement under preparation consider the archeological resources of the area. Nine sites are in the vicinity of the development proposal. Since the proposals of the plan may affect three of the sites, further information and study of specific locations are needed before adverse effects can be determined. A detailed archeological appraisal will be accomplished prior to approval of the conceptual plan.

In addition to the development concept plan and environmental statement for the Mammoth area, these planning documents are also under preparation for the Fishing Bridge-Bridge Bay area. The impact of the proposals upon archeological resources will be unknown until specific proposals are recommended. Where archeological data is inadequate, surveys will be conducted concurrently with planning activities.

Archeological salvage necessitates an irrevocable commitment of the resource since cultural remains are non-renewable and once disturbed are altered forever. Although mitigating the direct effects of construction or increased visitation, salvage should also be considered an adverse effect. In accordance with Executive Order 11593, however, none of the sites will be inadvertently destroyed or altered.

IV. MITIGATING MEASURES

- A. Educational efforts via publications, press releases, interpretive contacts and limited range radio transmitters and compliance with park regulations can help reduce trampling, littering, feeding and teasing of animals and other impacts of visitor use.
- B. Paved or graded footpaths, wooden boardwalks and signs guide visitors along selected routes to avoid trampling and destruction of vegetation or delicate thermal features and to prevent their being injured in falls or burned in hot pools.
- C. Restrictions on overnight concessioner and campground accommodations reduce the impact of sewage and garbage disposal, result in less crowding in the campgrounds and aid the economy of nearby communities.
- D. Keeping roadsides and developed areas as clean as possible helps reduce the total accumulation of litter, since visitors seem to hesitate to litter a clean area.
- E. Cooperation with gateway communities in planning visitor accommodations upgrades the quality of the service offered and alleviates disappointment of being unable to stay in the park.
- F. Making the interpretive transit system as attractive and convenient as possible will encourage its use, thus removing more vehicles from the road and enabling personal interpretive contact with more visitors.
- G. Bypasses route the mainstream of traffic congestion at these points, making the visitors experience there much more pleasant.
- H. Muffler regulations and noise restrictions for small engines as well as automobiles and snowmobiles and quiet hours in campgrounds help reduce the sounds of urban life our visitors try to avoid.
- I. Emission control regulations for park vehicles, and smoke control devices on incineratory stacks and hot mix plants will eliminate the fouling of air that might otherwise ruin a park visit.
- J. Controlling numbers of pack and saddle stock and periods of use on certain trails avoids excessive damage to trails and campsites and prevents overuse of forage which depletes vegetative cover and competes with wildlife.
- K. Rigid enforcement of bear feeding laws prevents alteration of the bears' feeding habits and eliminates the possibility of injury to visitors by bears begging on roadsides.

L. Transplanting bears from developed areas to remote parts of the park gives them the opportunity to adapt to natural foods.

M. Installation of bear-proof cans, closing garbage dumps, and enforcement of food storage regulations removes the attraction that holds bears in and around developed areas.

N. Closing the Hayden Valley portion of the Yellowstone River to fishing removes an intrusion from prime wildlife habitat and enables visitors to see many birds and animals that might otherwise be driven from the river bottom.

O. Regulating seasons, tackle, and limits for fishing improves the number and quality of fish caught but reduces the number of fish killed, thus raising the overall level of the fishing experience.

P. Careful design of roads avoids excessive cut and fill operations, minimizes vegetational damage and reduces the visual impact of a road in an otherwise natural area.

Q. Restoration of old road beds and building sites is commenced as soon as possible after abandonment, with the sizes carefully contoured and reseeded to conform as closely as possible with pre-existing conditions.

R. Phone and power lines are placed underground wherever possible to avoid the sight of poles and wires against the sky and to avoid the right-of-way clearing necessary for an overhead line.

S. Design and capacity of sewage treatment facilities is being upgraded to avoid the contamination or destruction of delicate aquatic ecosystems by effluent by-products. In compliance with Executive Order 11507, the National Park Service will consult with the Environmental Protection Agency and the related state agency to assure compliance with federal and state standards.

T. Gravel pits and hot mix plants are being consolidated in each district and old pits restored. Eventually all this material is to come from outside the park.

U. Cultural resources surveys will be continued. Prior to construction activities, archeological surveys will be conducted to help assure that no materials will be altered or destroyed. In the event previously unknown materials are discovered, work will cease immediately and the Midwest Archeological Center notified to obtain professional determination for disposition or salvage. In addition to these measures protective management practices will be developed; included will be ranger patrolling, fencing, interpretation/education, technical treatment, and salvage activities.

A Historic Structures Report for the Old Faithful Inn, a register property, will be prepared prior to restoration activities. The State Historic Preservation Officer and the Advisory Council on Historic Preservation will be consulted as this planning progresses. In accordance with Section 106 of the National Historic Preservation Act, the National Park Service will meet in joint consultation with them to determine whether or not the effect of restoration will be adverse. Any finding of adversity will be mitigated prior to actual restoration.

Present development within the park will accommodate 8,300 persons in concessioner lodging facilities and 11,000 persons in National Park Service campgrounds. Concessioner and National Park Service employee accommodations house 3,000. These general levels will be maintained through the effective life of the master plan.

The present average daily visitation on high use days is 45,000 persons. The total capacity of the park to sustain the impact of visitor use is not known. A comprehensive study to determine this carrying capacity is programmed and, depending upon the availability of funds, should be completed in 5-7 years.

When it is apparent that an individual area is being used beyond its carrying capacity the use will be curtailed and redirected to other areas where it can be sustained.

V. ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

- A. Removal of overnight facilities at Thumb, Fishing Bridge, and Old Faithful will reduce the operating base of the park concessioners. Within the park, some inconvenience to the visitor will result from not having as many options for overnight accommodations. It will result in some inconvenience in planning their park experience.
- B. Centering of overnight facilities at Lake and Grant Village will concentrate the entire load (currently some 8,300 "pillows") at these two areas. Sewage and garbage disposal operations will be increased as will the level of service truck traffic. Additional acreage will be required for buildings, parking areas, access roads and walks. Additional traffic from buses and private vehicles will occur over and above the normal sightseeing load.
- C. Some of the pressures of crowding, pollution, and environmental degradation barred from the park is likely to be brought to bear on other areas nearby. Additional facilities will be required, municipal fire and law enforcement services will have to be increased, solid and liquid waste disposal will have to be upgraded, and additional lands will be needed.
- D. Replacement of the Roosevelt Lodge facilities will require little change of the current acreage requirements, although newer structures will probably increase the percentage of visitors stopping here. Horse corral requirements will be reduced, but additional truck traffic will result from having to haul stock in from outside the park.
- E. Restricted overnight campground use means that many visitors will have to spend their nights outside the park, when they would prefer to stay as close to their objective as possible. Some will find their experience less primitive than they had been seeking.
- F. Restrictions on use of the private vehicle in lieu of the mass transportation system will limit visitor options and will result in some inconvenience in planning their park schedule of activities.
- G. Visitor use impacts such as soil compaction, destruction of vegetation, littering, disturbance of wildlife, and stock use will continue. The entry of over two million visitors per year will result in some resource deterioration, especially at visitor concentration points.
- H. Wilderness designation will preclude development of visitor use facilities or road networks, thus limiting use of the backcountry to a small percentage of the park visitation. Preclusion of motorized equipment will increase maintenance costs.
- I. Archeological salvage necessitates an irrevocable commitment of the resource. While mitigating the direct effects of construction or increased visitation, once cultural remains are disturbed they are altered forever.

VI. SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

The essence of Yellowstone National Park is that it is a spiritual as well as a natural landmark in the relationship between man and his environment. It is a dynamic equilibrium of the ecosystems that are not modified by man and his works. Each year Yellowstone becomes more valuable as an island of wilderness serenity in an era of environmental crisis. Use by man is nonconsumptive. He enjoys a glimpse of the wildlife feeding in their natural surroundings; the beauty of valleys, lakes, rushing streams, and dense forests; the great geysers and thermal pools of world renown. He enjoys all of these, then passes on, leaving the beauty for others' inspiration. The master plan proposes continuance of current activities, but restricts this use within a carrying capacity of the environment. Such use as camping, picnicking, fishing, sightseeing, nature study, wildlife observation, snowmobiling, and other activities will be allowed. These short-term uses, however, will be regulated to assure that the resource will not deteriorate. The long-term productivity, from the standpoint of a natural area of the National Park System, is in permitting the evolvement of indigenous ecosystems without interference by man. Thus, any alteration for man's comfort or convenience in the park may be considered a short-term use. The long-term productivity of the park as a natural landscape for the enjoyment of man will continue under the management proposed by the master plan.

VII. IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS

The construction of roads, especially on sidehill areas or in steep canyons, creates a scar which cannot be completely eliminated. While little if any such sidehill construction is contemplated in the planned bypasses, these together with the present road system will be as permanent as we can presently contemplate, and the acreage involved should be considered an irretrievable commitment of the park resource. Almost all vegetative types are affected, but fortunately the gross acreage involved is small. The primary effect is esthetic and intrusive. Intrusive in the sense of breaching a segment of primitive America with its huge herds of native wildlife and its sense of solitude.

Other construction, such as minor roads and buildings, can and have been completely obliterated and the sites restored to natural conditions. Congress can always relegislate the mandates under which the Service operates, thus no administrative commitment is irretrievable. Restrictions on overnight and private vehicle use, however, will result in a foregone opportunity for some visitors to enjoy a park experience without curtailment of use options. Archeological salvage, while mitigating the direct effects of construction or increased visitation, necessitates an irrevocable commitment of the resource. Due to their non-renewable nature, once cultural remains are disturbed they are altered forever.

VIII. ALTERNATIVES TO THE PROPOSED ACTIONS

In developing a master plan for the future of Yellowstone National Park all possible courses of action must be considered. Alternatives for the seven basic proposals presented by the master plan were considered during the planning process and are discussed below:

- A. Coordinate Planning
- B. Restructure Visitor Use
- C. Access and Circulation
- D. Expanded Interpretation and Information Services
- E. Restoration of the Natural Regime
- F. Visitor Protection
- G. Research Needs

A. Coordinate Planning: The only alternative considered was that of unilateral planning by the National Park Service. In the face of visitor projection figures, however, all planning for public use of Yellowstone National Park must give priority to the preservation and maintenance of the natural values for which the park was established. The master plan recommends a moratorium on further development of accommodations and support facilities within the park and a thorough study of alternatives. Since Yellowstone is not an isolated entity, there is a basic need for regional planning. The creation of a national park and its subsequent development and public use have a significant impact on the regional community. Conversely, the location, availability, and the quality of services and accommodations within the region have an effect on Yellowstone National Park. Without coordinated planning for land and water resources within the region surrounding the park, mutual resource management problems would not be resolved and the region's collective capacity to serve the requirements of the public would not be realized. Disorganized, inefficient, and noncompatible use of the lands could result in adverse results such as visual intrusions, pollution problems, traffic congestion, resource deterioration, and similar impacts.

At the public meeting on the master plan, there was an intense interest of many surrounding communities in furnishing supplies and services to the park. This interest prompted the National Park Service to consider an expanded system of accommodation/information centers and the need for encouragement of the private sector in adjacent communities to provide these needed services. Without coordinate

planning, a comprehensive solution to regional needs could not be accomplished. Planning assistance by the National Park Service would enable the gateway communities to develop their long range potential as integrated overnight centers for the park and the surrounding forests.

B. Restructure Visitor Use: The master plan proposes to restructure visitor use since the physical facilities elaborated since World War II are grossly inefficient, inharmonious with today's visitor needs, and wasteful of the parks finite resources. The plan recommends removal of some facilities from the park, relocation of others, and renovation of those at essential visitor service sites.

1. Remove all facilities from the park and restrict park use.

The extreme preservationist attitude, as practiced in some countries, dictates that a national park is for scientific purposes only. This is tantamount to saying that the layman simply does not have the mental capacity to appreciate what he sees here. Preservation of the natural ecosystems would be assured, but removal of 3,400 square miles from any possible recreational benefit would put a tremendous strain on already crowded facilities elsewhere. Some two million of the visitors now using the park would have to find other means of fulfilling their needs to visit wild areas. In this era of developing environmental awareness, the national parks serve as prime examples of clean air and water, and natural biotic communities. To the urban dweller, these words mean little without the opportunity to see such things for themselves. Esthetic and inspirational benefits to the public would be restricted to photographs and written words, each affected by the interpretation of the producer.

Although the surrounding communities have a recreational base in the terms of snowmobiling, hunting, fishing, camping, hiking and sightseeing, the primary economic base for tourism is the attraction of Yellowstone National Park. In 1972, 2,251,667 people visited the park; overnight use totalled 1,448,106.

The tourist industry in the surrounding states grosses some \$60,000,000 from the presence of Yellowstone National Park. It is difficult to estimate the loss that would occur, but a large percentage of the visitor-oriented businesses near the park gates and all the park concessions would fail.

Exclusion of visitor use from the area would help to assure preservation of the natural ecosystems and the vast wildlife populations. Impacts of soil compaction, vegetation destruction, wildlife disturbance, littering, and pollution would be eliminated without visitor use. The social impact of removing visitor use from this significant area would be overwhelming and not in compliance with the intent of Congress "...dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people."

2. Allow unlimited expansion of facilities.

Yellowstone National Park covers over 3,400 square miles, and it is possible that additional roads and facilities might be built without immediately obvious adverse effects. From an engineering standpoint and purely for the purpose of siphoning excess traffic off the main roads, it would be possible to treble the existing road mileage. Since roads now carry traffic to all the major points of interest in the park, however, it is questionable what effect additional roads would have on reducing the traffic on present roads. The Northeast Entrance, extended over Beartooth Pass in the 1930's, is easily the most beautiful approach to the park, yet carries only about five percent of the total traffic. Roads to less attractive areas would certainly carry a much smaller percentage of the traffic, thus obviating their purpose to reduce the total load.

Additional developments, such as campgrounds, might be used as a device to lure visitors from main roads; but these would have little effect during the high-use hours of midday. The principal attractions, such as Old Faithful, Yellowstone Lake, and the Yellowstone Canyon, will continue to be visited by the majority of visitors regardless of other options open to them. It is the long-range effects of these facilities such as power and sewage disposal that are of the greatest concern. Disposal facilities are already overloaded, and the effluent from these has caused significant alteration of aquatic communities in the streams and in Yellowstone Lake. It is the considered opinion of many ecologists that the park's capacity to absorb more facilities has already been exceeded. Additional developments would intensify all of the adverse impacts listed and would lessen or eliminate the effects of the beneficial.

Possible benefits to local economy that might be achieved by increases in travel would be lost to the lure of park-based accommodations.

with the gateway communities and adjacent federal lands providing expanded overnight accommodations. The use of mass transit, however, would still be encouraged during the peak visitor season to reduce traffic congestion at the primary attractions of the park.

C. Access and Circulation: The master plan stresses that the park's road system, developed during the railroad-stagecoach era by the Army, is now overburdened due to the phenomenal growth of automobile travel for which it was never designed. The plan recommends bypasses around the congested focal points and consideration of a supplemental interpretive shuttle system.

1. One alternative presented at the public meeting was to widen the existing major roadways to at least 45 feet to allow uninterrupted traffic in both directions with a parking lane on each side. This would permit traffic to flow evenly and at the same time provide an opportunity for roadside parking which would help relieve congestion at the more popular attractions. Roadside parking would increase the problem of littering, and could result in some sanitation problems, since facilities could not be provided along the entire road system. The primary features would continue to attract visitor concentrations, however, and these are the problem points of traffic congestion. Widening the roads would provide some temporary relief from this problem, but does not appear to be a solution to the long-term problem. Removal of traffic flow limitations within the park would remove some of the impacts on adjoining areas of parking problems, air pollution, traffic congestion, and health and safety problems associated with masses of people; these impacts would be relocated in Yellowstone National Park.

Another point of consideration was that facilitating regional or interstate through traffic is not a legitimate use of park roads.

Another alternative considered was the dualizing of the roads into independent directional roadways similar to an interstate system. Since more than 250 miles of primary roadways would be involved, the construction disturbance and cost would be significant impacts. Estimating a right-of-way of 100 feet, about 3000 acres would be affected; in some areas extensive clear cutting of lodge pole pine would be required.

2. A second alternative considered was conversion of the Grand Loop to one-way traffic. This action would approximately double the carrying capacity of the existing road system, but would accomplish little in resolving congestion at the focal points. Most of the more than 640,000 vehicles using the road system utilize it during mid-June to Labor Day; thus the one-way system would need to be implemented only during that peak use period. Since the Loop is almost 100 miles in length, serious logistical problems for both park visitor and management would result. The flexibility of use would be eliminated; in order to return to his point of origin the visitor or the park ranger would have to travel the complete loop.

D. Expanded Interpretation and Information Services: The master plan proposes that the National Park Service complement ongoing interpretive programs with a comprehensive system of supplemental interpretive vehicles and to cooperate with gateway towns on regional information centers. The only reasonable alternative would be to maintain the current services at their current levels and locations.

Without an interpretive shuttle system there would be no attractive transportation alternative for the park visitor. With the system, which would tie into the gateway accommodation centers, he would have the option of a scenic interpretive overview without the driver's concern for route-finding and traffic-negotiating. Road congestion would not be reduced nor would the quality of park experience be improved.

Without highway hospitality centers and gateway visitor centers, the recreation potential inherent in the proposed interrelationship of gateway towns, forests, and parks would not be realized. No integrated information system would be available for the regional visitor. Each entity would function independently and inefficiently in relation to the regional needs. Development costs, unavailable at this time but estimated in the several million dollar category, would probably not be assumed without a coordinated interagency effort.

E. Restoration of the Natural Regime: The master plan proposes non-interference with natural fires and insect epidemics; reestablishment of natural predators within the range of the northern Yellowstone elk herd; removal of artificial food sources for grizzly and black bears; and protection of native cutthroat trout and the rare grayling. When considering alternatives to these proposals, it became obvious that the options were limited. The alternatives are basically to continue the present management programs or to reinstitute.

1. Continued interference with natural fires and insect epidemics:

Continuance of past efforts directed to protecting the forest from fire and insect losses would perpetuate an unnatural vegetative-animal complex. Since repeated fire on a 30 to 100 year cycle determined the present species distribution and successional levels within the park, prevention of fire would result in artificial ecosystems - in conflict with the purpose of the park to retain natural conditions.

The control of insect infestation would also result in unnatural conditions. Insects, like fire have been in intimate association with the park flora even before the glacial period.

Continued control of natural fires and insect epidemics would result in the usual high costs of suppression.

2. Maintain the northern Yellowstone elk herd at its current ecosystem composition:

Elimination of the natural predators from the northern Yellowstone elk herd since establishment of the park has required unnatural methods of population control such as live-trapping and transplanting outside the park, and hunting outside the park. Predators like the wolf and mountain lion, depleted to near extinction before the thirties, are in low numbers. Their reestablishment would be an important element in controlling ungulate animal numbers. Without reestablishment, disruptive human influences would continue. Conversely, the potential of predation on domestic animals adjacent to the park would not be increased.

3. Maintain artificial food sources for bear populations:

The current bear management program, especially for grizzly bears, is highly controversial among biologists. Among the alternatives considered in developing the current program are:

a. Phase-out garbage dumps over a 10-year period

As compared to rapid closure, a gradual "phase-out" of dumps over a 10-year period could have resulted in a greater total number of bears intruding into campgrounds and being destroyed

over time. This was considered likely because (1) young grizzlies would have continued to learn to use artificial food, (2) unnatural concentrations of socially-interacting bears would have continued to be attracted to dumps that were within critical distances of campgrounds, and (3) prolonged competition among grizzlies for progressively reduced amounts of garbage would cause a yearly influx of weaned young and other subordinate bears into park campgrounds. The scheduled closure of park dumps within a 2-year period had the option of employing the phase-out procedure if it was needed.

b. Maintain artificial food sources for another 10-years

The increased injuries and property damage from the relatively few bears that habitually used park campgrounds during the 1960's was leading to conditions where the feasibility of maintaining a grizzly population in Yellowstone Park was being questioned. Accepting an increased incidence and number of injuries, with the potential for fatalities, from a relatively few "semi-domesticated" bears seemed certain to jeopardize the park's attempts to preserve wild free-ranging grizzlies which rarely cause injuries to humans.

c. Fence campgrounds or restrict overnight camping in park

Some combinations of providing substitute camping outside of grizzly habitat, or fencing large campground developments are under study as long-term solutions to the problem of most visitors not knowing how to camp in bear country.

d. Transplant garbage dump bears

Attempts to donate grizzlies which returned from park transplants for more distant transplants that would reestablish bear populations in suitable historical habitats were unsuccessful. It appears likely that very few bears will be available for transplants to outside areas in future years because of the decreased number of bears visiting park campgrounds, and the recent high success rate of park transplants.

4. Remove protective fishing regulations on the native cut-throat trout and grayling:

The master plan proposes bait restrictions, creel limits, size limits, and catch/release fishing. Without protective regulations these fish populations may diminish. The Arctic grayling is already considered a threatened species in Montana; one reason for the declining population in Montana is the competition with other species, including brook trout, rainbow trout, and suckers. The fishing management objective within Yellowstone National Park is vastly different from that in areas outside the park. The principal objective is the preservation of native fish populations and associated aquatic life in a natural environment. Regulations are needed to accomplish this objective.

The resource management programs are designed to perpetuate the natural ecosystems within the park in as near pristine conditions as possible for their recreational, educational, cultural, and scientific values for this and future generations. Without the resource management proposals recommended by the master plan, the purpose of establishing the park would not be accomplished.

F. Visitor Protection: The master plan recommends that visitor protection must consider varied levels of risk and hardship, rather one that promotes ease and comfort. The objective was to separate the visitor from exposure to real hazards, especially those he is unaccustomed to experiencing at home. There are no reasonable alternatives to this approach, visitor safety is a prime consideration in the management of the park. Consideration for visitor safety is a full-time consideration in park management. The recommended standards for safety and public health prescribed by Federal, State, or local authorities having jurisdiction is observed in providing for the health, safety, and well-being of visitors and those employed in natural areas.

G. Research Needs: The master plan proposes studies on mass transportation; waste disposal; park carrying capacity; wildfire management; and behavioral sciences, landscape design, and education. Without the research results, there would be no determination on what interpretive shuttle system would be the most efficient and convenient; the long-term effect of waste disposal and water treatment systems on stream ecosystems and wildlife would remain unknown; the carrying capacity beyond which the resource would deteriorate would not be identified; restoration of the ecosystems through the influence of natural fires would not be realized; and the philosophical thrust of the master plan would never materialize.

Research is essential to accomplish the purpose of the park - the perpetuation of the natural ecosystems for the inspirational, educational, cultural, and scientific values for this and future generations. There is no reasonable alternative to the research programs proposed.

CONSULTATION AND COORDINATION WITH OTHERS

A. Consultation and coordination in the development of the proposal and in the preparation of the draft environmental statement:

Prior to, and during preparation of the master plan and the draft environmental statement, many interested individuals and organizations were consulted. Public hearings were held in conjunction with the Wilderness Hearings in Jackson, Wyoming, on March 11, 1972; in Idaho Falls, Idaho, on March 13, 1972; and in Livingston, Montana, on March 15, 1972. Before, during, and after these hearings many federal, state, and private organizations were asked for input and their testimony and written comments weighed heavily in the final preparation of the master plan and this environmental statement. The following is indicative of the types of groups contacted:

- Department of Agriculture
 - Forest Service
- Department of the Interior
 - Bureau of Sport Fisheries and Wildlife
 - Bureau of Outdoor Recreation
- Department of Transportation
 - Federal Highway Commission
- Wyoming State Clearinghouse
- Wilderness Society
- The Sierra Club
- State and Local Chambers of Commerce
- State Highway Commissions
- Dude Ranchers and Outfitters Associations
- Newspapers, Radio, and Television Stations
- Federation of Western Outdoor Clubs
- Idaho Environmental Council
- Montana Power Company
- Park Concessioners
- Other Interested Organizations and Individuals

The analysis of the record of the public hearing and written responses is as follows:

State of Wyoming

A statement by Governor Stanley K. Hathaway indicated basic agreement with the plan. Wider roads and winter snowplowing on some roads were suggested along with recommendations for increased staffing and better planning coordination with surrounding states.

Senator Clifford P. Hansen

The Hon. Clifford Hansen, U.S. Senator, State of Wyoming, through his representative, Mr. Ed Webster, indicated approval of this kind of planning and expressed an interest in orientation of visitors and upgrading of facilities. He also encouraged

integrated planning with nearby communities and government agencies.

Wyoming Chambers of Commerce

Mr. Robert Frisbee, who represented some twenty Chambers of Commerce and Civic Organizations throughout Wyoming, presented a statement calling for upgrading of the park road system, concession operation of campgrounds and increasing the summer staff. Wilderness classification was opposed, and caution was recommended in the adoption of a mass transit system.

General Public

Many private individuals expressed approval of the plan, with most indicating a desire for fewer roads and accommodations, a mass transit system and wilderness classification.

B. Coordination in the review of the draft environmental statement:

The draft environmental statement was distributed to the following state and federal agencies for their comments concerning areas of their expertise, jurisdiction, or interest. Their comments, as applicable, were incorporated into the final environmental statement; those that responded are identified with an asterisk.

Department of Agriculture

*Forest Service

Soil Conservation Service

Department of Commerce

Department of the Interior

*Bureau of Sport Fisheries and Wildlife

Bureau of Mines

*Bureau of Outdoor Recreation

*Bureau of Land Management

*Geological Survey

*Bureau of Reclamation

Department of Transportation

Federal Highway Commission

*Environmental Protection Agency

*Wyoming State Clearinghouse

*Idaho State Clearinghouse

Montana State Clearinghouse

*State Historic Preservation Officer, Idaho

*State Historic Preservation Officer, Wyoming

State Historic Preservation Officer, Montana

Specific comments concerning the draft environmental statement were received from nine federal and state government agencies. The pertinent comments are summarized below and copies of these letters are attached to the environmental statement.

Forest Service

Comment: Limiting visitor accommodations within Yellowstone National Park will have environmental effects outside the park in terms of visitor concentrations, needs for accommodations including sanitation, water, power, fire protection and police protection. Problems relating to water, air, and esthetic qualities must be weighed against improving these environmental qualities within the park.

Response: The discussion of these impacts on the gateway communities has been strengthened in this final statement.

Comment: Traffic flow limitations within the park will create in adjoining areas concentrations of automobiles with problems of space for parking, esthetics, air pollution from engine emissions, traffic concentration and regulation, and health and safety problems associated with concentrations of people. The rejection of the use of Yellowstone's road system for interstate through traffic could place environmental impacts upon the physical and economic resources of adjoining areas through construction of such through-traffic facilities.

Response: The discussion of these impacts are now included in the final environmental statement.

Comment: Restoring the natural regime within Yellowstone has many environmental implications outside: removal of artificial food sources for bears inside the park may cause outside communities to improve their garbage facilities; bears may frequent outside communities creating safety hazards; reestablishment of natural predators, such as wolves, may have environmental impacts on domestic animals outside; elimination of gravel pits and hot mix operations within the park transplants the environmental impacts of black smoke, dust, and excavation to lands outside the park.

Response: These points are now discussed in the environmental impact section.

Comment: The contiguous National Park and Forest Service areas will form the largest blocks of wilderness in the contiguous 48 states. It is not all designated wilderness at present.

Response: Editorial correction made.

Comment: Enclaves destroy the integrity of wilderness.

Response: The wilderness proposal was revised to exclude the majority of enclaves originally proposed. The current proposal recommends six one-acre enclaves used by the public. The wilderness impact statement acknowledges the impact of enclaves on both the integrity and continuity of the wilderness units.

Comment: Cabins in the wilderness stocked with food which can be replaced or paid for appears to be a commercial enterprise prohibited by the Wilderness Act.

Response: This proposal is now deleted in the discussion.

Comment: The Teton Wilderness boundary is not the eastern Parkway boundary.

Response: Editorial correction made.

Comment: Removing problem bears to remote areas removes a threat to visitor safety in areas of concentrated use, but could increase the threat of bears to the backcountry visitor.

Response: The statement was revised accordingly.

Comment: The unavoidable impact of shifting impacts outside the park is superficially treated.

Response: The discussion of shifting impacts to the communities outside the park has been strengthened in the environmental impact section.

Comment: The last sentence of alternative number 1 indicates that Yellowstone is the only recreational aspect of the region.

Response: The statement now acknowledges that the surrounding communities have a recreational base. The statement stresses, however, that the primary economic base for tourism lies in the attraction of Yellowstone National Park.

Comment: It is not clear how alternative three differs from the proposed action.

Response: The statement now specifies that the reduction of facilities is beyond that proposed by the master plan.

Corps of Engineers - Omaha

Comment: It is noted that part of the proposal is to slow down road building and possibly even remove some traffic ways. The statement should address the impacts of this proposal in the event of an uncontrolled fire.

Response: The only public roads planned for closure are short sections being replaced with bypasses. The few service roads being closed are narrow, one-lane dirt roads with dubious value as firebreaks.

Corps of Engineers - Walla Walla

Comment: There should be more discussion of the effects on the surrounding area of the policy of moving development outside the park.

Response: The discussion of this situation has been strengthened in this final statement.

Bureau of Outdoor Recreation

Comment: The statement adequately discusses the environmental impacts of the master plan.

Response: None required.

Bureau of Land Management

Comment: Restriction of use may shift the impacts to adjacent lands at present ill equipped to cope with increased use. Recognition of the effect shifting use can have on adjacent lands is needed.

Response: The discussion of this situation has been strengthened in this final statement.

Bureau of Reclamation

Comment: The statement adequately discusses the environmental impacts of the master plan.

Response: None required.

Environmental Protection Agency

Comment: Use of private motorized vehicles should be restricted to access and goods transportation within defined corridors. Sightseeing should be restricted to mass transit. Use for pleasurable experiences should be prohibited.

Response: Wilderness designation prohibits the use of all motorized equipment, including snowmobiles and motorboats. As discussed in the statement, snowmobile use is restricted to unplowed roadways. There are no current restrictions on the use of aircraft as in the Boundary Waters Canoe Area in Minnesota. Special Congressional legislation would be required.

Restrictions on the pleasurable use of motorized equipment are not proposed by the master plan. It would be difficult to determine what separates sightseeing and a pleasurable vehicle experience. It would also be difficult to enforce these restrictions. Restrictions should be based on resource deterioration, even including that of stock use which is a pleasurable experience in itself.

Comment: Discussions on water quality could be expanded to acknowledge the need for continued water quality surveillance to detect and monitor problems.

Response: The statement has been revised accordingly to acknowledge the need for continued water quality surveillance.

Comment: It would be important to provide information on the approximate implementation schedule for various elements of the master plan.

Response: The plan is a conceptual document with many facets not yet even on a budget proposal. Items such as the interpretive transit system are dependent on the testing of various types of equipment to find that most suited to the park situation. Other parts of the plan are so dependent on available funding that a time schedule now would be premature.

Comment: The environmental impacts on the communities outside the park should be discussed.

Response: The discussion has been strengthened accordingly.

Comment: The statement should provide a discussion on the desirability of adopting a regional coordinating structure to minimize impacts resulting from regional planning.

Response: The discussion on the Gateway Communities has been revised to include additional consideration of Coordinate Planning as requested.

Wyoming State Clearinghouse

Comment: The statement does not adequately treat the concerns of proposed wilderness designation, adequate highway planning, adequate park staffing, year-round park utilization and coordinated planning for facilities inside and outside the park.

Response: The proposed wilderness designation is discussed in a separate environmental statement. The discussion in the master plan, however, has been expanded.

The request for widening the road system to at least 45 feet is not within the standards for National Park road design. A nationwide standard of two eleven-foot traffic lanes and three-foot parking lanes was established by the Director, National Park Service, and wider roads were not considered as an alternative. With the projections of park visitation currently being estimated, widening the road system would only be a temporary solution of the problem. Roadside parking without the attendant facilities would lead to a significant littering and possibly a sanitation problem. The alternatives section, however, now discusses this proposal.

The year-around park use of the road system would provide an interstate road system during the winter at significant cost. In addition, in any average year the snowpack on the roads between the south and west entrances via the Canyon route varies from four to twelve feet. Snowbanks formed from plowing these roads would spoil most of the viewing opportunity.

The impact of inadequate staffing is recognized, but the degree of this inadequacy is related entirely to annual appropriations and personnel ceilings.

As stated in responses to other comments, the problem of development planning outside the park has been discussed more fully in this statement.

Comment: The statement should include some discussion of the implications of the Rockefeller Memorial Parkway for Yellowstone National Park.

Response: Other than its designation as a Memorial Parkway, this section will be managed as it was under Forest Service administration. Any implications that might occur would be purely speculative. The final environmental statement on the Memorial Parkway identified no adverse impacts upon Yellowstone National Park.

State Liaison Officer for Historic Preservation, Wyoming

Comment: Yellowstone, a natural park, also possesses a substantial historic and cultural legacy. The National Park Service is aware of these secondary attributes; however, it seems proper to make record of these historic interests.

Response: The discussion on the cultural resources was expanded, including mention of nominations to the National Register of Historic Places.

State Clearinghouse, Idaho

Comment: Implementation of the plan further limiting overnight use of the park could cause major problems for local governments to provide adequate services. The National Park Service should take into careful consideration the capabilities and desires of the surrounding communities to provide accommodations to park visitors. It should work directly with local governments to insure that park plans are coordinated with local plans.

Response: The discussion on coordinate planning now stresses that efforts must be intensified to upgrade coordinated planning for land and water resources within the region surrounding the park, and that these efforts should involve the states, counties, municipalities, and appropriate federal agencies.

Idaho State Parks and Recreation Department

Comment: Additional facilities will have to be developed by the National Park Service such as quality campgrounds in and around the border of the park. Private developments along the routes into the park do not provide the necessary experience to the visitor as Yellowstone. One possible solution is to expand existing camping facilities on adjacent National Forest land close to the major entrances to the park.

Response: The statement discusses the need for coordinated planning for land and water resources within the region surrounding each park. It stresses that cooperation is necessary to optimize the region's collective capacity to serve the requirements of the public, many of which can and should be accommodated outside the national parks. The statement addresses the impact of intrusive developments along access routes to the park.

Comment: Consideration must be given to providing large parking areas for visitors while they utilize the mass transit system within the park. Use of the system should be free.

Response: The statement specifies that research is needed to determine the type of transportation system most appropriate. Information is needed on the cost of the system, public acceptance, and availability of equipment. The system will be subsidized at no cost to the visitor. It is recognized that large parking areas will be needed for the private vehicles while the visitors tour the park on the mass transit system. A transportation study will be needed before any recommendations for a specific proposal are made.

State Liaison Officer for Historic Preservation, Idaho

Comment: Management of Yellowstone will have an indirect effect upon Idaho, but not upon the historical resources of that part of the state.

Response: None required.

Bureau of Sport Fisheries and Wildlife

Comment: No specific comments on the Yellowstone statements other than to note that in DES 72-30 (DES 72-28) the bald eagle is named as a "species considered endangered here..." Such wording could be misleading, particularly to the uninitiated reader since the northern bald eagle is not considered as endangered.

Response: Statement DES 72-28, Yellowstone National Park Service Wilderness Proposal has been corrected as indicated. DES 72-30 did not have this discussion.

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Washington, D.C. 20250

MAY 3 1972

1940



Mr. J. Leonard Volz
Director, Midwest Region
U.S. Department of the Interior
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

Thank you for the opportunity to review the environmental statements on Yellowstone and Grand Teton Park Master Plans.

The Yellowstone and Grand Teton National Parks' Master Plans make a strong case and justification for coordinated planning for the National Parks and the surrounding areas including five National Forests, three States, and several local units of government. Then, the Master Plans make unilateral recommendations or decisions relating to National Park objectives for restructuring visitor use, access to and circulation within the Parks, resource management, and visitor protection. These unilateral recommendations or decisions, when implemented (some are being implemented at this time), have direct and sometimes major effects upon the National Forests, States, and local jurisdictions with which such decisions should have been made if coordinated planning had taken place.

The draft Master Plans just mention regional planning and then evaluate the effect of their decisions upon the National Park environments with little attention being given to the environmental effect of their decisions on areas outside the Parks. We believe the Master Plans cannot stand alone. They must be coordinated on a regional basis. Until such coordination is achieved, along with coordinated objectives for management of the entire area, it will not be possible to evaluate the environmental effects of the Master Plans except upon the limited area within the Parks. We believe the essence of environmental statements is in evaluating the effects of an action upon as much of the total environment as can be reasonably discerned. Thus, the environmental impacts of the Yellowstone and Grand Teton National Parks' Master Plans must be considered upon the surrounding region.

The draft Environmental Statement for Yellowstone points out (page 1) that the Act of March 1, 1872, established Yellowstone

N.P. "as a public park or pleasuring-ground for the benefit and enjoyment of the people" and "for the preservation, from injury or spoilation, of all timber, mineral deposits, natural curiosities, or wonders . . . and their retention in a natural condition." The Environmental Statement then says that this language must be translated in terms of contemporary conditions and should read, "to perpetuate the natural ecosystems within the Park in as near pristine conditions as possible for their recreational, educational, cultural, and scientific values for this and future generations."

We see the administrative interpretation of the Act as de-emphasizing its "public park or pleasure-ground" direction and emphasizing strongly the preservation of its resources and wonders "in their natural condition." Such interpretation has immediate and serious implications for areas surrounding Yellowstone and GTNP because the Master Plans' proposals are being implemented already. The objectives of the Master Plans and the actions taken to implement them may well have preempted much meaningful coordination of management objectives with the adjoining lands upon which the environmental impacts of such actions will fall.

We believe that the draft Environmental Statement should consider the environmental effects outside the National Parks of the following:

1. Limiting visitor accommodations within the National Parks. Such action has environmental effects outside the Parks in terms of concentrations of people, need for accommodations including sanitation, water, power, fire protection and police protection. Problems relating to water, air, and esthetic qualities must be weighed against improving these environmental qualities within the Parks.

2. Traffic flow limitations within the Parks will create in adjoining areas concentrations of automobiles with problems of space for parking, esthetics, air pollution from engine emissions, traffic concentration and regulation, and health and safety problems associated with concentrations of people. The Master Plans' rejection of the use of Yellowstone's road system for interstate through-traffic could place environmental impact upon the physical and economic resources of adjoining areas through construction of such through-traffic facilities.

3. Restoring the natural regime within the Parks has many environmental implications outside: Removal of artificial food sources for bears inside the Yellowstone may cause outside

communities to need expanded garbage disposal facilities; bears may frequent outside communities creating safety hazards; re-establishment of natural predators, such as wolves, inside Yellowstone may have environmental impacts on domestic animals outside; elimination of gravel pits and hot mix operations within Yellowstone transplants the environmental impacts of black smoke, dust, and excavation to lands outside.

These evaluations must be made if the Master Plans' impacts are to be assessed upon the environment of the region in which the Parks are located.

The following specific comments apply to the two environmental statements for the draft Master Plans:

Yellowstone draft Master Plan:

Page 3, item 9 - The contiguous NP and NF areas will form the largest blocks of Wilderness in the contiguous 48 States. It is not all designated Wilderness at present.

Page 5 - We have pointed out in our comments upon the Wilderness proposal that enclaves destroy the integrity of wilderness.

Page 6 - Cabins in the Wilderness stocked with food which can be replaced or paid for smack of commercial enterprises prohibited by the Wilderness Act.

Page 11, first full paragraph, describes the proposed John D. Rockefeller, Jr., Memorial Parkway erroneously. The Teton Wilderness boundary is not the eastern Parkway boundary. The eastern Parkway boundary leaves, at present, about 29,000 acres between it and the Wilderness boundary.

Page 19, item L. Removing problem bears to remote areas removes a threat to visitor safety in areas of concentrated use but could increase the threat of bears to the back-country visitor.

Page 20, item C, is superficial treatment of an important and complex subject--the effects of the proposed action on the regional environment.

Page 23, Alternative No. 1, last sentence indicates that Yellowstone is the only recreational aspect of the region. This is not factual. Surrounding communities have a recreational base in terms of snowmobiling, hunting, fishing, camping, hiking, sightseeing, etc., that would still provide an economic base for the communities even without the National Parks.

Page 23, Alternative No. 3. It is not clear how this alternative differs from the proposed action.

Grand Teton draft Master Plan

Page 7, next to last paragraph, states that existing ski lifts on the National Forest have this effect: "Human erosion has thus brought less than 600 feet from the proposed Trois Tetons Wilderness area." If this is of concern, it is certainly feasible and timely to alter the boundary of the proposed wilderness before it is established. Thus, the wilderness characteristics of the proposed area will not be endangered.

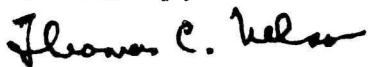
Page 8, paragraph 1, contains the same factual error as noted for the Yellowstone environmental statement on page 11 relating to the proposed John D. Rockefeller, Jr., Memorial Parkway.

Page 8, first paragraph under III, should read "The impacts of the measures called for by the master plan are preponderantly favorable within the National Park but have not been evaluated fully outside the Park."

Page 10, Item 7, states, "Restoration of natural fire and insect regimes will have salutary ecological effects inside the National Park in meeting its objectives." The effects of natural fire and insect regimes have not been evaluated for lands outside the Park.

Page 14, Item V(D), notes an adverse environmental effect of Park actions on the lands outside. This is very superficial treatment of major impacts created by unilateral setting of National Park objectives and implementation of management practices to meet the objectives.

Sincerely,



Thomas C. Nelson
Deputy Chief



DEPARTMENT OF THE ARMY
OMAHA DISTRICT, CORPS OF ENGINEERS
7410 U.S. POST OFFICE AND COURT HOUSE
OMAHA, NEBRASKA 68102

MROED-PE

8 May 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

This letter transmits our comments on your environmental impact statement for the proposed Yellowstone National Park Master plan. Generally speaking we consider the subject statement well written. However, the following general comment is offered with the hope that it will help you improve your environmental statement. It is noted that part of the proposal is to slow down road building and possibly even remove some traffic ways. In light of this, the statement should address the impacts of this proposal in the event of an uncontrolled fire.

We thank you for the opportunity to comment on your master plan proposal.

Sincerely yours,

R. G. Burnett
R. G. BURNETT, P.E.
Chief, Engineering Division



DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS

BLDG. 602, CITY-COUNTY AIRPORT
WALLA WALLA, WASHINGTON 99362

NPWEN-PL

30 March 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

Thank you very much for the opportunity to comment on your environmental impact statement for the proposed Yellowstone National Park master plan. We have no comments to make on the statement in regard to our official responsibilities at this time. In our forthcoming letter to you concerning the proposed master plan for Grand Teton National Park, in addition to our official comments, we will include a short, unofficial set of supplementary comments on both the Yellowstone and Grand Teton Park impact statements. We hope that you may find these supplementary comments useful in improving your environmental impact statement.

You may expect to receive comments concerning the master plan impact statement for Yellowstone Park from the Omaha District Office, as we have sent a copy of this letter and the environmental impact statement to them for review. This is necessitated by the fact that the boundary between the Walla Walla District and the Omaha District passes through Yellowstone Park.

If we can be of further help, please feel free to call on us.

Sincerely yours,

A handwritten signature in cursive script, reading "Carlos W. Hickman".

CARLOS W. HICKMAN
Major, CE
Acting District Engineer



DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS

BLDG. 602, CITY-COUNTY AIRPORT
WALLA WALLA, WASHINGTON 99362

NPWEN-PL

5 April 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

Your letter A98 MWR (CFS) to General Clarke dated 1 March 1972 concerning the Grand Teton Park master plan has been referred to this office for reply. Thank you for the opportunity to comment on this statement. This letter contains the official comments of the Walla Walla District on the park statement as required by the National Environmental Policy Act of 1969 and our own guidelines. In addition to our official comments, we have inclosed several comments (Inclosure 1) on items not directly related to our Congressional authorities, which we hope will be of use to you in preparation of your final statement. The supplementary comments cover the impact statements for both the Yellowstone and Grand Teton master plans.

Our official comments are as follows:

At the present time, flood problems exist along the Snake, Gros Ventre, and Buffalo Fork Rivers; all three have sections which form a part of the Grand Teton National Park boundary. In recent years this office has received numerous requests for alleviation of flood problems on private lands along these rivers, both in reaches adjacent to the park and other areas. Any work which we might propose to do in these areas, whether adjacent to the park boundaries or not, must take into account any effects our work might have on the park. For example, if we were to do some levee work on the private lands, flows might be deflected into the park unless work was done on the park side of the river to prevent it. Whether or not Park Service policy would allow a levee to be built within the park would have a direct result on any work we would propose, since we obviously do not want to simply transfer a problem from one side of the river to another. Whatever the policy of

5 April 1972

Mr. J. Leonard Volz

the Park Service toward flood control measures within park boundaries, it should be spelled out and its effects discussed in terms of both the effect on the park and the effects on neighboring private lands. If, for instance, the policy is to not allow any artificial alteration of flow patterns in the boundary rivers by structures within the park, then the effects of such a policy on lands outside the park should be discussed.

It is obvious that this issue is a difficult one, basically because of the conflict between land use policies with the park being managed to preserve and encourage natural phenomena while the private lands are managed to provide maximum economic yields and, as a result, are adversely affected by natural phenomena. This is a situation which has direct effects on both the Park Service and the Corps of Engineers and should be the subject of a definite policy to guide both our agencies' actions. We believe it is also something which should be discussed in both the park master plan and the environmental impact statement. We in this office would be glad to get together with officials of the Park Service to discuss the problems in the area and to attempt to formulate some definite policy which would help direct future action.

The fluctuation of Jackson Lake is caused largely by use of water supplies stored in the lake for irrigation use. The Bureau of Reclamation is responsible for the operation of the project, although the Walla Walla District does provide criteria for operation of the project for flood control. Fluctuation of the lake solely for flood control is usually not necessary since, as a result of irrigation use of the stored water, the lake level is already depressed. During the late fall and winter period it is possible that the lake level could be lowered for flood control storage, but in the past this usually has not been necessary. Additional information which would be of use in the master plan can be obtained from the Bureau of Reclamation. Due to the aesthetic effects of lake level fluctuation, more information concerning this matter should probably be incorporated in the environmental impact statement and the master plan.

Paragraph 3, page 9, mentions the elimination of sewage effluent discharge to the Snake River. As the paragraph now reads, there is no indication as to what will be done with the effluent. A little more discussion of this point would help clarify the matter.

If we can be of any help to you in discussing our comments contained in this letter, please feel free to call on us at any time.

Sincerely yours,



H. L. DRAKE

Acting District Engineer

1 Incl
As Stated

SUPPLEMENTARY COMMENTS ON ENVIRONMENTAL
IMPACT STATEMENTS FOR MASTER PLANS OF
YELLOWSTONE AND GRAND TETON NATIONAL PARKS

These comments are provided in addition to our official comments in the hope that they will be of some use to you in preparation of your final statements.

GRAND TETON NATIONAL PARK

a. Although it is alluded to in several places, there could perhaps be more discussion of the possible effects of concentrating development outside of the park. When one sees what has happened at West Yellowstone, where excessive border development has occurred, it becomes evident that there are problems associated with this approach. There is also an important question as to how large urban-type developments near a park entry would affect potential park visitors. What would such development do to the visitor's state of mind when he should be concentrating on the "nature" experience he will enjoy in the park? Also, would this surrounding growth have an encroaching effect on possible wild rivers of the region (e.g., Upper Snake, Gros Ventre, Henrys Fork) or the adjacent Teton wilderness area?

b. Your emphasis on reducing vehicular traffic in the park is an important goal; however, there seem to be several contradictory discussions in the statement concerning the various aspects of the proposed plan. For instance, extension of the parkway system would seem to be at odds with the stated desire to reduce automobile traffic in the park. The extension of the runway of the airport to enable it to handle jet aircraft also seems to be out of place unless it is tied directly to eliminating individual automobile traffic in the park and is considered as an integral part of a mass transit system. Given the stated goal of returning the park to a more naturalistic state, the plan to continue and even expand the use of the airport and the parkway seems to strike a discordant note and, as a result, merits further discussion in the environmental statement.

c. One related point, which concerns future transportation systems, is the likelihood that by utilizing a mass-type transit system, the actual concentration of people will increase. This concentration may be desirable for certain purposes, such as sewage treatment and solid waste disposal, but may cause adverse user reaction due to necessary regimentation that would accompany mass transit. The environmental and socio-psychological aspects of the matter of user concentration would be a topic for more discussion.

d. Paragraph 6, page 9, contains a discussion of "environmentally oriented communication" which is difficult to understand. Perhaps a little added discussion, which contrasts this new approach with present methods, would make the paragraph and its contents more meaningful.

e. Paragraph 7, page 10, contains a reference to natural fire and insect regimes which is somewhat vague. We believe that we understand what is proposed here, but the public at large will need more discussion of the effects of such a program, especially since fire and insect control have been incorporated into our life style for a long time now.

f. Another point which could be discussed in more detail is the potential for winter use of the park. As you have stated, this facet of the recreational use of the park is rapidly growing, and the master plan impact statement should include some discussion of what will be done to control and guide its growth.

g. Though somewhat afield from the alternatives normally considered to be applicable to a specific master plan, perhaps it would be worthwhile to discuss what effect increasing the number of national parks or national recreation areas would have on attendance at Grand Teton Park. Would attendance pressures decrease? Increasing the facilities and visitor use of the adjacent National Forests to help reduce overcrowding in the park could also be discussed.

h. In general, we are very favorably impressed with two of the major ideas contained in the master plan: (1) the proposal to determine what the natural carrying capacity of the park is for visitor use while preventing the loss of the resource; and (2) the proposal to reduce vehicular congestion which, at this point in time, seriously detracts from the full enjoyment of the park.

YELLOWSTONE NATIONAL PARK

It appears that you have done a very good job in setting forth the impacts of the proposed master plan and in the process have addressed several very difficult and controversial resource management questions. Our only major comment concerns the lack of a comprehensive discussion of the effects of moving most of the service and related facilities outside of the park boundary. As we stated previously in our comments on the impact statements for both the Grand Teton National Park master plan and the Yellowstone National Park wilderness proposal, there should be more discussion of the effects on the surrounding area of the policy of moving development outside the park. Although this is undoubtedly a necessary action to preserve the integrity of the park, there are also possible major adverse effects on the boundary areas. We note on page 3, paragraph 8 of the statement, that the Park Service plans to participate in planning

for the gateway communities. In our opinion, this is absolutely necessary to prevent future degradation of both the park and the surrounding areas, and this point should be more fully covered in the environmental impact statement.

The discussions of restructuring visitor use, traffic flow, and resource protection are very good.

As a result of the tremendous visitor pressure that a natural area such as Yellowstone National Park is subjected to, it becomes increasingly difficult to insure that the resource will be preserved for future generations. Only through the judicious use of management practices such as those discussed in this statement will the resource survive.



IN REPLY REFER TO.

United States Department of the Interior

BUREAU OF OUTDOOR RECREATION

MID-CONTINENT REGION
BUILDING 41, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

MAR 24 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
Department of the Interior
1709 Jackson Street
Omaha, Nebraska 68102


Dear Mr. Volz:

This is in response to your letter of March 1, 1972, requesting Bureau of Outdoor Recreation comments on the draft environmental impact statement for the proposed master plan for Yellowstone National Park, Wyoming.

We have reviewed the draft statement and find that it adequately discusses the environmental impacts of the proposed master plan. Therefore we concur with the statement as written.

Thank you for the opportunity to comment.

Sincerely yours,

 Maurice D. Arnold
Regional Director



IN REPLY REFER TO:

United States Department of the Interior

1792.2 (220)

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

APR 19 1972

Dear Mr. Volz:

This is in reply to your request of March 1, requesting review and comments on the draft environmental statements for the proposed master plan for Yellowstone and Grand Teton National Parks and the Yellowstone and Trois Tetons Wilderness Areas.

These statements vividly identify the effects of overuse of parks. Restriction of use by proposing portions of the parks be identified as wilderness or restricting the number of persons allowed in the parks can help solve the immediate problems of overuse. It may also serve to shift the impacts to adjacent lands at present ill equipped to cope with increased use. Recognition of the effect shifting use can have on adjacent lands is needed.

A coordinated effort to develop regional plans which recognize and reflect the opportunities and needs for diverse recreational experiences may help with the problems of overuse and also provide for protection of natural resources and the environment in other areas.

Sincerely yours,

Assistant Director



United States Department of the Interior

BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY 736
REFER TO:
120.1

MAY 16 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

This is in response to your March 1 letter requesting our review of draft environmental statements for the proposed master plans and wilderness proposals for Yellowstone and Grand Teton National Parks.

On pages 7 and 12 of the proposed master plan environmental statement, Grand Teton National Park, specific reference is made to the Bureau of Reclamation's withdrawn lands for Jackson Lake storage. The implication is that the Jackson Lake facilities should be reoriented to recreation purposes. In 1967, the Bureau prepared a reconnaissance report on replacement storage for Jackson Lake and selected six sites which could serve this purpose. Meetings were held with the State of Wyoming, the National Park Service, the Forest Service, and the Bureau of Sport Fisheries and Wildlife to discuss and evaluate the proposed sites. None of these agencies favored developing any of the Wyoming sites. The Idaho Water Resource Board opposed developing the Lynn Crandall site in Idaho as replacement for Jackson Lake storage. With respect to the use of Jackson Lake water for primarily recreational purposes, it appears that the alternates for providing storage for irrigation are unattractive compared to the existing operational plan.

Since the proposed master plan of the National Park Service for management of Grand Teton National Park would affect the Jackson Lake Storage Project which is now used primarily for irrigation, we should be involved in any plans which would limit or adversely affect the existing project.

We find the statement on Yellowstone National Park to be adequate and have no comment.

In the future, it would aid our review and coordination efforts if our Regional Director was included in the list of agencies receiving copies of environmental statements and related reports.

Sincerely,

A handwritten signature in black ink, appearing to read "Ellis L. Armstrong", written in a cursive style.

Ellis L. Armstrong
Commissioner

ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
SUITE 900, 1860 LINCOLN STREET
DENVER COLORADO 80203

May 11, 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

We have reviewed the draft environmental impact statement for Yellowstone National Park and wish to offer the following considerations:

1. The proposed Master Plan for Yellowstone National Park is a timely proposal for protecting the existing and future environment of this unique scenic, biotic, and geologic heritage. Though the plan calls for new management techniques that will impose certain restrictions on visitor use of the Park, it is recognized that the great number of people who visit the Park each year could destroy the very resources they seek, unless new techniques are implemented to control visitor impact. The Master Plan would go a long way toward assuring Park protection while, at the same time, providing for visitor enjoyment and activity.

2. Although we are in general agreement with most of the specific proposals dealing with current transportation problems in the Park, because of the rapid expansion in the numbers and forms of transportation vehicles, whose impacts on park trails, roads, and wildlife can be considerable, an overall policy toward such vehicles is needed. And since Yellowstone in particular, contains concentrations of wildlife in such great numbers, including some rare and endangered species, and the area serves as a prime winter feeding grounds for many such animal species, the maximum degree of protection should be afforded to the wildlife, an irreplaceable and fast dwindling resource.

As a guideline for policy considerations, we offer the suggestion that private vehicles such as automobiles, snowmobiles, trailbikes, motorboats, and aircraft, now serve primarily three basic functions in the Park: (1) they provide access to and move goods to various locations, (2) they serve as mechanisms for sightseeing, and (3) they serve as pleasurable experiences in themselves.

We would recommend that such private motorized vehicles be constrained to serve the first function, namely transportation of goods and access. To this end, corridors for automobiles (which have already been considered in the Wilderness proposal), snowmobiles, motorboats, and aircraft could be implemented as part of the Master Plan. This could involve limiting snowmobiles as access vehicles to

jumping-off places in the Park that would minimize impacts on wildlife feeding grounds if this were desirable. Perhaps motorboating corridors could also be employed, or limited strictly to essential Park Service functions.

The second function of sightseeing could be admirably filled by the mass transit proposals in the Master Plan. Constraints could also be developed to limit private vehicle use for the same function.

The final use mentioned for these vehicles has no place in the Park where such use conflicts with Park policy, and has adverse environmental impacts. There are enough areas in this country where such vehicles can be utilized, with less direct impact on the natural environment, or where such environmental considerations are deemed less important. Suggestions in the plan to encourage more natural modes of travel, such as snowshoeing, cross-country skiing or bicycling are consonant with this policy of encouraging non-mechanized modes of travel.

3. We are in support of your position regarding the need for gateway communities to adopt zoning, construction, and sanitation codes. Since the gateway communities would be used as staging areas for the transit system into the Park the distribution of use pressures within the Park would be dictated to some degree by the capacity and location of these staging areas.

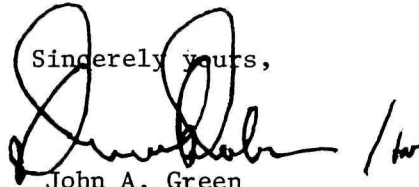
4. Discussions on water quality could be expanded to acknowledge the need for continued water quality surveillance to detect and monitor problems attributable to Park use and operations and those problems relating to use and developments outside the Park.

5. Regarding the content of the impact statement for the Master Plan, it would be important to provide information on the approximate implementation schedule for various elements of the Master Plan.

6. Due to the possible adverse impact of the proposed Master Plan on the environmental integrity of areas outside the Park, discussions relative to this subject should be expanded. We feel it appropriate that the statement provide a discussion on the desirability of adopting a regional coordinating structure to minimize the impact of the Master Plan as well as other Plans or development efforts on the environmental integrity of the Region. Discussions similar to those presented in the Master Plan would be sufficient.

We strongly recommend coordinated interagency planning between the Park Service, the Forest Service and other concerned Federal agencies, for the development of the entire region, in view of the Wilderness proposals for Trois Tetons, Yellowstone and contiguous areas, and the vast numbers of visitors this area will handle in the future.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'John A. Green', followed by a small mark that looks like a stylized 'h' or 'w'.

John A. Green
Regional Administrator



604 East 25th Street, Box 309, Cheyenne, Wyo. 82001

Telephone: Area Code 307 - 777-7695

LYLE BENTZEN
President

STANLEY K. HATHAWAY
Governor

PAUL H. WESTEDT
Director

**COMMISSION
OFFICERS**

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2221 Van Lennan Avenue
Cheyenne 82001

August 2, 1972

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Mr. J. Leonard Volz, Director
Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

This is in reply to your letter of June 23, 1972, (your file reference A 98 MWR CF) covering the Environment Statement for a proposed Yellowstone Master Plan, Yellowstone National Park, Wyoming, in which you ask for comment from the State Liaison Officer in Wyoming for the National Historic Preservation Act.

There is not a great deal of historic preservation comment for us to make regarding a master plan of this nature.

Overall, we are pleased to note the rigid classifications of national park types---natural, historic, and recreational---is no longer, at least in this proposed master plan, being so strictly applied. Of course, everyone recognizes that Yellowstone is fundamentally a natural national park. Nature plays the predominating role with her displays of scenery, geyser basins and wildlife.

Nevertheless, it is necessary to remember that Yellowstone was the first national park and, within that ideal, the pattern of all subsequent national parks regardless of geographic location either in this country or elsewhere in the world. As such, it is of great importance to the history of this country and to a world wide heritage. Also the history of exploration carried on within the park and its immediate environs was important to the final geographic rounding out of the nation. A heritage has been founded on the work of these mountainmen explorers.

Mr. J. Leonard Volz
Yellowstone Master Plan
August 2, 1972
page 2

Thus Yellowstone, a natural national park, also possesses a substantial historic and cultural legacy. We know that the N.P.S. is aware of these secondary attributes; however, it seems proper that we should here make record of those historic interests.

Sincerely,
Paul H. Westedt, Director
Wyoming State Liaison Officer

A handwritten signature in black ink that reads "Ned Frost". The signature is written in a cursive, slightly slanted style.

By: Ned Frost
Historian

NF/mr



WYOMING
EXECUTIVE DEPARTMENT
CHEYENNE

STANLEY K. HATHAWAY
GOVERNOR

February 8, 1973

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

We have reviewed the draft environmental statement for the proposed Master Plan for Yellowstone National Park and wish to comment as follows:

When the public hearings were held in March of 1972 on the proposed Master Plan, considerable testimony was presented which

- (1) endorsed the basic principle of protecting and preserving the scenic beauty and natural wonders and resources of Yellowstone Park, and
- (2) took exception to certain elements of the proposal which violate the principle that parks are for the enjoyment of the people.

The official position of the State of Wyoming was expressed by Governor Hathaway in a statement presented for him at the Jackson, Wyoming, public hearing on March 11, 1972. Governor Hathaway noted that Wyoming is concerned especially over the proposed wilderness designation, adequate highway planning, adequate park staffing, year-around park utilization and the role of the three states bordering the park in the planning and development of facilities both inside and outside the boundaries of the park. The draft environmental statement does not in all cases adequately treat these concerns, but rather appears to be an endorsement of that thrust of the Master Plan which emphasizes the "wilderness experience" for a small minority over the desire and right of all the people to see and enjoy their own park. The statement is

Mr. J. Leonard Volz
February 8, 1973
Page Two

inadequate in that it does not discuss the impacts, beneficial and otherwise, of limited expansion or improvements of roadways and facilities. It was suggested at the public hearings, for example, that major roads could be widened to at least forty-five feet to allow uninterrupted traffic in both directions with a parking lane on each side. This would permit traffic to flow evenly and at the same time provide opportunity for roadside parking which would help relieve people pressure at the more popular attractions.

The environmental statement probably should include some discussion of the implications that the proposed Rockefeller Memorial Parkway would have for Yellowstone Park.

Sincerely,

STATE CLEARINGHOUSE

A handwritten signature in black ink, appearing to read "Keith Osborn". The signature is fluid and cursive, with a large initial "K" and a long, sweeping underline.

Keith Osborn
Planning Coordinator

KO:b



United States Department of the Interior

BUREAU OF OUTDOOR RECREATION
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

D7223-Yellowstone NP (WYO)
D7223-Grand Teton NP (WYO)

MAR 15 1972

INITIAL AND DATE	
Director, MWR	
Director's Secretary	
Assoc. Dir. MWR	
Asst. Dir. - P&L	
Asst. Dir. - R	
Asst. Dir. - E	
Asst. Dir. - I	
Asst. Dir. - L	
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Asst. Dir. - Y	
Asst. Dir. - Z	

3/20

3/15/72

3/15/72

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
Department of the Interior
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

We have received your letter of March 1, 1972, requesting this Bureau's review and comments on the draft environmental statements for the proposed master plans and wilderness proposals for Yellowstone and Grand Teton National Parks.

Formal comments on these statements will be submitted to you by our Regional Director, Mid-Continent Region in Denver, Colorado.

Sincerely yours,

Robert A. Ritsch
Acting Assistant Director for
Federal Programs



STATE OF IDAHO

STATE PLANNING AND COMMUNITY AFFAIRS AGENCY
BOISE, IDAHO 83707

February 20, 1973

Mr. J. Leonard Volz
Director, Midwest Region
U. S. Department of Interior
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

The Idaho State Clearinghouse has completed its review of the Master Plan Draft Environmental Statement for Yellowstone National Park. Of major concern to Idaho is the impact that implementation of the Master Plan will have on gateway communities. Implementation of the plan further limiting overnight use of the park causing visitors to spend their nights outside the park could cause major problems for local governments to provide adequate services. Therefore, we strongly encourage the National Park Service to take into careful consideration the capabilities and desires of the surrounding counties and municipal governments to provide accommodations to park visitors. The National Park Service needs to work directly with local governments to insure that park plans are coordinated with local plans.

We are also enclosing copies of letters from the Idaho Parks and Recreation Department and the Idaho State Historical Society concerning this environmental statement. Your attention to these comments will be most appreciated.

Thank you for the opportunity to review and comment.

Sincerely,

A handwritten signature in black ink, reading "Karl Tueller".

Karl Tueller
Associate Director for
Intergovernmental Coordination

KT:mj
Enclosures

cc: Idaho Department of Parks
Idaho Historical Society



STEVEN W. BLY, Director
R. P. PETERSON, Deputy Director

Idaho State

PARKS & RECREATION DEPARTMENT

STATEHOUSE MAIL - 2263 WARM SPRINGS AVE., BOISE, IDAHO 83720
PHONE: (208) 384-2154

CECIL D. ANDRUS
Governor of Idaho
**IDAHO STATE PARKS &
RECREATION BOARD**

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RECEIVED
FEB 15 1973

STATE PLANNING AGENCY

February 14, 1973

Mr. Carl Tuller, Associate Director
Inter-Governmental Coordination
State Planning & Community Affairs Agency
Boise, Idaho 83707

RE: Environmental Impact Statement
for Yellowstone National Park
Master Plan

Dear Mr. Tuller:

We have just reviewed the draft of Environmental Impact Statement for the proposed Yellowstone National Park Master Plan.

We have only several comments to make concerning this statement. Of the alternatives considered, we feel that the alternative to "Remove all facilities in the park, restrict visitor use to scientific community and restrict activities to a point where impact is negligible" is not in the best interest of the public. The park is established to serve both the needs of the scientific community and of the public in general. The park offers a diversity of recreation opportunity in such a natural wilderness setting for all interest groups.

The second alternative which is "Allow unlimited expansion of development" is not a realistic approach to planning a park the caliber of Yellowstone. To often unlimited expansion results in the degradation of experiences to visitors coming into that facility. We do not support such an alternative. The Third alternative which is "Reduce the kind and quantities of existing facilities, services, and activities" is perhaps the best alternative to Yellowstone's problem. We feel that the park should be developed in as much a wilderness setting as possible and still offer visitors access to view all the scenic attractions available in Yellowstone. We feel that there is still untapped opportunities for visitors to use Yellowstone.

In regards to this third alternative, we do support the removal of heavy vehicular traffic in the park. However, if this is to be the policy of the National Park Service, we feel very strongly that additional facilities are going to have to be developed by the National Park Service such as quality campgrounds

Mr. Carl Tuller
Page 2
February 14, 1973

in and around the border of the park. We do not feel that the private development along the routes into the park provide the necessary experience to the visitor as Yellowstone. Their sole motive is profit and thus an experience is sacrificed in these locations.


One possible solution is to expand existing camping facilities on adjacent National Forest Land close to the major entrances to the park.

At the same time, consideration must be given to providing large parking areas for visitors, tourist, etc, to park their vehicles in order to have access to the park. Transportation within the park, in the form of shuttle service such as proposed in the statement, appears to be the only solution for preserving and enhancing experiences in Yellowstone. However, we do not support a charge for this service. Because of the inconveniences being placed on the tourist to visit their park, we feel that such a service should be free and be made available at regularly scheduled intervals at ingress points in the park. These intervals should be 15 minutes apart.

We support the major concept for the development of this park. This proposal is long time in coming and will be a positive step to help alleviate some of the problems that exist in our National Park System. This is but one example of the growing demand for quality recreation facilities throughout the country.

Sincerely,

FOR THE DIRECTOR



William G. Hagdorn, Chief
Resources and Development

WGH:sad

IDAHO STATE HISTORICAL SOCIETY

610 NORTH JULIA DAVIS DRIVE BOISE, IDAHO 83706



STATE MUSEUM

February 10, 1973

RECEIVED
FEB 12 1973

STATE PLANNING AGENCY

Mr. Karl Tueller
State Associate Director for
Intergovernmental Coordination
State Planning and Community Affairs Agency
Boise, Idaho 83707

Dear Mr. Tueller:

Thank you for sending me the Yellowstone Park environmental statement for review. None of the possibilities discussed are likely to have an adverse impact (or much of any impact) upon historical resources of the Idaho portion of the park. Management of Yellowstone will have an indirect effect upon Idaho, but not upon the historical resources of that part of the state to any great extent.

Sincerely,

A handwritten signature in cursive script, reading "Mark W. Wells".

Mark W. Wells
State Historic Preservation Officer

MWW:mjw

Mineral occurrences in the Yellowstone
area -- review of Master Plan and
Yellowstone Wilderness -- environmental
statements (U.S.G.S.)

Since this area has been a national park for a century, there has been little investigation of mineral possibilities. Most of the information noted below is based on extrapolation from adjoining areas. Information from the most recent work is not yet available, and the most thorough published work is USGS Monograph 32, 1899.

Coal. USGS Coal Investigations Map C6, 1951, shows a thin subbituminous coal field impinging into the park from the south for about a two-township area. At the northwest corner of the park, there is also some known coal and at least several townships within the park in that vicinity are considered to have possibilities.

Oil and gas. As adjacent areas on the northwest corner, south, southeast, and southwest boundaries are considered to have possibilities, even if low, it is clear that some of the park would also be so considered, possibly as much as one-third.

Phosphate. A number of townships in the northwest portion of the park are considered as having possibilities as are two areas close to the southern boundary.

Geothermal resources. As much as three-fourths of the park would be considered as of geothermal interest. This is a major theme of the park.

Bentonite. A number of small areas, totaling about half a township in area, are known close to the south-central boundary.

Other minerals. While only one metalliferous mineral occurrence, involving copper, gold, and silver, is known within the park, there are doubtless others.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

WASHINGTON, D.C. 20240

ADDRESS ONLY THE DIRECTOR,
BUREAU OF SPORT FISHERIES
AND WILDLIFE

APR 4 1972

Mr. J. Leonard Volz
Director, Midwest Region
National Park Service
1709 Jackson Street
Omaha, Nebraska 68102

Dear Mr. Volz:

On behalf of Acting Director Smith, thank you for the opportunity to comment on the draft environmental statements for Yellowstone and Grand Teton Master Plans and Wilderness Proposals.

We have no specific comments on the Yellowstone statements other than to note that in DES 72-30 the bald eagle is named as a "species considered endangered here...." Such wording could be misleading, particularly to the uninitiated reader since the northern bald eagle is not considered as endangered. Other than this point, the Yellowstone statements are well-written and comprehensive.

Our primary interest in the Grand Teton statements centers around the numerous references concerning the harvest from the south Yellowstone (Jackson Hole) elk (wapiti) herd. The Grand Teton National Park is strategically located on elk migration routes to the extent that winter management of the herd would assume monumental proportions without the harvest achieved on the Park. Winter herd numbers would increase beyond our present management capabilities. Present management is keeping the herd at desired and agreed upon numbers; actions that will upset this balance must be thoroughly considered. With the Park closed to hunting, the elk would quickly adapt to the situation with herd reduction and control becoming virtually impossible.

Statements in both releases suggest restoration of historic migration routes to eliminate the need for Park hunting. Are the locations of these routes known sufficiently and are management techniques available to alter present routes? Further, can the total effect of altering migration routes be predicted.

Your statement indicates that National Elk Refuge hunting could be expanded to lessen the need for Park hunting. Present hunting on the refuge is managed for the control of a resident herd of some 200 animals. Additional hunting to permit control of migrating herds could well prove similar to the situation so objectionable in the recent past with the North Yellowstone herd. In both documents, it is stated "...This (herd reduction outside the Park) would be possible, although potentially difficult...." We consider this an understatement and are inclined to agree with page 7, paragraph 2 of DES 72-31 "...Complete elimination of the elk reduction program (in the Park) seems unlikely;...." Use of the word "complete" connotes a reduction of hunting in the Park. It may be that increased Park hunting will be needed to control winter herd numbers. For this reason, it might be appropriate to consider an exception to National Park Service policy regarding no hunting in wilderness areas, as a part of the legislation, although presently the proposal does not include the lands most used by migrating elk.

In DES 72-31, it is stated that the elk herd would benefit by the eventual acquisition of over 150 parcels (6,566 acres) of privately owned land. We cannot agree that this acquisition would be entirely beneficial to the elk since under park policy it would lead to less control by hunting.

It is our privilege to provide these comments and hope that they will be helpful in preparation of the final statements.

Sincerely yours,


Acting Deputy Director

