master plan

YELLOWSTONE

NATIONAL PARK / WYOMING-MONTANA-IDAHO
YELLOWSTONE
NATIONAL PARK
As a monument to man's earliest realization that the natural wonders of the planet are perishable, Yellowstone, the first national park, is a spiritual as well as natural landmark in the relationship between Americans and the land in which they live.

With each passing year, Yellowstone becomes more and more valuable as an island of wilderness serenity in the midst of a world suffering from the pollution of air, water, and land; from the destruction of animal and plant life; and from overpopulation. And as urbanization and mechanization spread, this island will become more and more precious—providing a memorable glimpse of the deer and elk, the bison and antelope, the bear and beaver, the trumpeter swan, and the lovely valleys, lakes, rushing streams, and dense forests that once covered so much of this land. In this sense, even those wondrous natural phenomena, the great geysers and thermal pools, for which Yellowstone is world-famous will take on a new and deeper meaning.

But, if Yellowstone is to survive the next 100 years, a new equilibrium must be achieved—the irreplaceable park resources must be weighed against the human impact upon them and a new balance struck.

To this end the master plan speaks.
introduction

PURPOSE

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 spoliation, of all timber, mineral deposits, natural curiosities, or wonders . . . and their retention in their natural condition.”

Thus it was stated in 1872, at a point in this Nation’s history when only a handful were convinced that America’s natural resources were limited and that the public could not have its cake and eat it too. Today, with the Nation and the park facing an environmental crisis, it should be apparent that to have both is to have neither. In light of this, 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 inspirational, educational, cultural, and scientific values for this and future generations.

MANAGEMENT CATEGORY

Yellowstone National Park by provision of its establishment act is a natural area and will be planned and managed in accordance with approved policies for said category and pertinent legislation.

LEGISLATIVE BACKGROUND

Mounting concern by a few for the conservation of the Nation’s resources and preservation of its scenic beauty had by 1864, through the Yosemite Valley Act, established the precedent for perpetual public ownership of significant portions of the public domain for other than material gain or resource exploitation.

The act of March 1, 1872, which established Yellowstone National Park, reaffirmed this principle and laid down criteria for selection of such lands to be set aside, thus establishing the basic framework for the unique land-use policy embodied within the present National Park System.

Subsequent legislation related directly to such diverse park problems as concessions, water rights, school facilities, park protection, lease of lands, and wildlife management, the most pertinent of which are summarized as follows:
The Act of May 7, 1894, provided for the protection of birds and animals within Yellowstone, prohibited hunting, and regulated fishing.

The Act of August 3, 1894, restricted the granting of leases for hotels and outbuildings against inclusion of lands lying within 1/8 mile of any geyser, Yellowstone Falls, the Grand Canyon, Mammoth Hot Springs, or any object of curiosity.

The Act of June 4, 1906, extended the Secretary’s authority to enter into leases for the transaction of “business in the Yellowstone National Park . . . as the comfort and convenience of visitors may require, for the construction and maintenance of substantial hotel buildings and buildings for the protection of the stage, stock, and equipment.”

The Act of April 9, 1924, authorized the Secretary “to construct, reconstruct, and improve roads and trails, inclusive of necessary bridges, in the National Parks and Monuments under the jurisdiction of the Department of Interior.”

The Act of March 1, 1929 (45 Stat. 1435), changed the east boundary to conform more closely to natural topographic features, and included lands known as the Gallatin Addition at the northwest corner of the park, which contained the petrified tree deposits and the winter elk range.

Public Law 592, 71st Congress (January 31, 1931), authorized the construction of the Beartooth Highway entirely outside the park as an approach road to serve the park. Land jurisdiction remained vested in the States of Wyoming and Montana.

A Presidential Proclamation of October 20, 1932, as authorized by the congressional act of May 26, 1926 (44 Stat. 656), added land on the north known as the Gardiner Addition, to include additional winter wildlife range.

The preliminary draft of the master plan was completed and made available for public inspection in February 1972. This plan was presented in conjunction with the Yellowstone wilderness proposal at public hearings that were held in each of the adjoining states in March 1972.

There were 91 letters received, and 35 organizations or individuals presented statements at the hearings. This sampling of public opinion indicated a need for changes and clarification of some aspects of the plan.

The intense interest of many surrounding communities in the operation of the park and in furnishing supplies and services to park visitors prompted an expanded system of accommodation/information centers, and emphasized the need for encouragement of the private sector in adjacent communities to provide these needed services.
The interpretive transit system was probably the subject of more comment and controversy than any other single facet of the plan. Because it was very obvious that the bulk of these comments stemmed from a misunderstanding of the proposal rather than actual opposition to the concept, this section has been rewritten for clarification.

The restoration of Fort Yellowstone was also clarified, because many people obviously thought this restoration would terminate present administrative use of the buildings and would require construction of facilities elsewhere.

A fire-management plan calling for allowable natural fires in certain sections of the park has recently been implemented, and this change in management procedures called for rewriting the portions dealing with fire management in the chapters “Research Needs” and “Restoring the Natural Regime.”

Public opinion was divided as to use and accommodations provided by the park and the preservation of wilderness, depending on the individual preference of the user.

Environmental protection of resources was stressed by all. Needless to say, conservation groups wanted more wilderness and no expansion of visitor facilities.

REGIONAL CONSIDERATIONS

Together, Yellowstone National Park and Grand Teton National Park immediately to the south comprise the strategic core of a vast upland wilderness that is held almost exclusively within Federal ownership. Five national forests and parts of three others define its parameters. Centered primarily within northwestern Wyoming astride the Continental Divide, it extends into Montana on the north and Idaho on the west. This 27,000-square-mile region is slightly larger than the combined acreage of Vermont, New Hampshire, Massachusetts, and Rhode Island — in other words, the New England area excluding Maine.

By any standard the region is imposing. Only Alaska can match its wilderness quality and its variety and number of large mammals. The land, the result of volcanism, glaciation, and ongoing hydrothermal activity, is a massive geologic laboratory. Backyard for the legendary mountain men who first described its geologic wonders, its history is as impressive as its scenic wonders, reflecting the spectrum of the Nation’s westward expansion — Indian wars, mining, railroads, logging, ranching, and homesteading.

To prevent overexploitation of a critical watershed, this vast area was carved out of the public domain between 1872 and 1907, and subsequently served to stabilize an emerging agriculturally based economy. Government sponsorship under the Reclamation Act of 1902 led to the construction of
reservoirs and diversion canals on peripheral lands to store and distribute the melt from the mountain uplands, all of which further entrenched and expanded the agricultural base of the surrounding basin lands. The Nation’s unprecedented mobility, affluence, and urban shift following World War II, however, shattered what remained of this stability; and recreation, which had been slowly emerging since the turn of the century, assumed greater importance.

The upland forests, the abundant wildlife, a moderately wet climate, and streams and lakes provided ideal conditions for a wide variety of both summer and winter recreational activity. And nestled within the region’s core were Yellowstone and Grand Teton National Parks, each renowned for its distinctive scenic attractions.

Today, recreation surpasses the agricultural and livestock industries as the economic base of the region. Visitors to Yellowstone National Park contributed an estimated $57.7 million in gross expenditures to the surrounding economy in 1968. In Teton County, Wyoming, tourist expenditures rose from $6 million to $13 million between 1958 and 1964. Although summer recreation has been the traditional pattern, the increasing popularity of winter sports is leading to a stable year-round tourist economy.

Realistically, however, if recreation is to evolve into a permanent economic asset without damaging the environment, regional and local planning and subsequent zoning must be established and vigorously enforced.

Furthermore, limited developable land, critical wildlife ranges, and the region’s historic watershed responsibilities suggest that guidelines and zoning be established for the residual grazing and the lumbering and mining operations.

There is also a need for the region to evolve an integrated solid waste disposal plan, as well as an overall plan for preserving its prime scenic attributes. Likewise, guidelines for the management of rare and endangered species must be established and enforced. Finally, a comprehensive transportation plan must be developed. Critical in this respect is the necessity to develop all-weather road circulation within the region.

Proposals addressed to this fundamental need have evolved. Although many may be controversial and the feasibility of some is questionable, the concept is valid, since the purpose of the core parks’ already overloaded road system is not for intra-regional travel. Properly planned, a road system that skirts the core parks would not only stimulate dispersal of the region’s recreation enclaves, but would also facilitate the development of quantitative and qualitative controls within the core parks.

Since the ultimate disposition of all these issues will have an important bearing on the long-range plans of all entities involved, means must be found to implement their resolution. It is imperative that there be an expanded effort to upgrade coordinated planning for land and water resources. Only within such a framework can the region’s unique qualities be sustained.
NATURAL ENVIRONMENT AND BIOTA

The commanding features that initially attracted interest and led to the reservation of Yellowstone as a national park were geological: the geothermal phenomena, the colorful Grand Canyon of the Yellowstone River, and the size and elevation of Yellowstone Lake.

The park’s geological history includes formations from the most ancient to the more recent. Precambrian granite, schist, and gneiss, having an age of 2 to 3 billion years, are exposed in the northern section of the park. The long Paleozoic era is represented by several formations exposed in the Gallatin Range, while records of the Mesozoic are found on Yellowstone’s Mt. Everts. Volcanism during the early Tertiary, 50 million years ago, produced the Absaroka Range on the park’s eastern boundary. Also, during this time, periodic ash flows buried at least 27 successive forests that originally flourished on Specimen Ridge. Here, standing fossil trees testify to this ancient chain of events. Volcanic activity during the past 2 million years emplaced the rhyolites and basalts that form the park plateaus, and the more recent flows, interleaved with glacial deposits of Pleistocene age, may be used to date some of the glacial advances and retreats. Evidence exists indicating that glaciers covered the region three or four times in the last 300 thousand years. The end of the last glaciation, less than 11 thousand years ago, is a significant time-marker for life in the park — plants and animals reinvaded the territory. Thus, the vegetation in the park today began its development in the not-too-distant past.

A cold-climate coniferous forest composed of species that reseeded from adjacent regions became established, which accounts for the park’s limited number of tree species. One of these, the lodgepole pine, is abundant, comprising about 80 percent of the forest; however, at higher elevations, in stream valleys and in glacial kettles on the plateaus, Engelmann spruce and subalpine fir are present. The white bark pine, often growing near the spruce and fir, also reproduces in many places under the lodgepole pine. 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 5 thousand years ago.

Climate has been dramatically important in another way. Lightning and dry conditions exposed the vegetation of the park to natural fire, subjecting much of the high forested plateaus to burning every 100 years or so. Regular firing on this cycle in the postglacial period may explain the sustained presence of lodgepole pine and the limited distribution of
other, less fire-resistant species, which dominate when fire is lacking. More frequent wildfires in the grasslands at lower elevations undoubtedly have contributed to maintaining the open character of the northern part of the park.

The vegetation, having adapted itself to the particular geological conditions, supplied the base upon which a spectacular assemblage of animal species became established. This fauna, interacting with and integral to the surrounding biotic communities, completed the complex web of life that exemplifies the high Rockies.

Obtaining their food from the producing level of the food chain are land rodents such as mice, pocket gophers, marmots, squirrels, and porcupines. The muskrat and beaver are rodents that occupy the aquatic environment and feed upon the aquatic plants to some extent; however, the beaver's primary use of its water environment is for a home, while it obtains much of its food from dry land.

Larger plant-eaters include such ungulates as the bison, moose, elk, mule deer, pronghorn antelope, and 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 1000 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.

Dividing his time between the role of predator and vegetarian, the renowned Yellowstone black bear has long supplemented his natural summer diet of fruit and rodents with roadside handouts. In recent years, vigorous efforts to convert the feeding habits of roadside black bears back to their native plant and animal foods have been noticeably successful. The grizzly bear, now numbering about 250, ranges throughout the park, with greater concentrations in the Gallatin Range and throughout the Central and Mirror Plateaus. This animal is of sufficient size and power to kill any other animal in the park. However, its omnivorous habits and limited numbers minimize its role in effectively regulating animal populations. Indeed, man's activities have so altered the inherent feeding habits of both grizzly and black bears that their balancing effect as meat-eaters is less than would normally be expected. In the past, open garbage dumps attracted bears from miles away, changing their normal ranging patterns as well as their food habits. From the dumps, it was only a short step to garbage cans and campsites; however, this trend has been reversed dramatically by management action in recent years.
Preying on land-based animals is an assembly of predators ranging from the insect-eating bats to the large carnivores. Some of the most effective predators, such as the mountain lion and grey wolf, have been seriously depleted in number through man's early efforts to protect the ungulate populations. Others, such as the coyote, red fox, marten, and weasel, while exercising control on the rodent populations, can do little to fill the gap left by the elimination of these larger carnivores. They add, however, to the exciting diversity of the park's fauna, as do the winged predators such as the golden eagle and various species of hawks and owls.

An important element in the Yellowstone wildlife scene are the mammals and birds dependent upon the aquatic environment for their prey. The river otter, extirpated over much of its range, is still found in most of the major rivers and lakes in the park. An important avian predator is the white pelican, whose critical nesting grounds are located on the Molly Islands in Yellowstone Lake. During the summer, this huge fish-eater can be seen fishing the lakes, sloughs, and quiet backwaters throughout the upper Yellowstone Valley. Another equally important fish-eating bird, now on the endangered list, is the osprey. Cormorants, sandhill cranes, great blue herons, and kingfishers also depend upon fish for a major portion of their diet.

Other important and conspicuous bird species include several ducks, the Canada goose, and the trumpeter swan. Once threatened with extinction, the trumpeter swan has been able to strengthen its numbers in Yellowstone. Although present in the park, the bald eagle is apparently severely affected by the accumulation of pesticides in the natural environment, and as elsewhere its population has diminished. The eagle and other scavengers such as the raven, magpie, and gull occupy the last niche in the food chain before decay completes the recycling process.

Amphibians and reptiles have a limited representation. The sagebrush lizard can be found in remnant populations near thermal areas—a refugee from the times of warmer climate about 5 thousand years ago. The prairie rattlesnake, three nonpoisonous snakes, and one salamander are now restricted to the relatively warm, low elevations near Yellowstone's northern boundary. The one toad present is nonvocal, but two species of frogs make strong contributions to the way in which the park is heard.

An array of other less visible animal life is present, including protozoans, parasitic worms, and a host of insects. It is probably true here—as elsewhere in the world—that the number of insect species alone is equal to all the species of plants and animals put together. Their impact is most evident in defoliation of forest trees. In the past, epidemic outbreaks of forest defoliating insects such as western budworm or mountain pine beetle would have been countered with pesticide control attempts, but today their role is recognized as natural and even beneficial to the park ecosystem.
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 wild fish in a wilderness environment. Of greater importance, the fish are an essential part of the diet for several species of birds and mammals.

Today the tradition of catching and killing fish is being questioned in light of the importance of sustaining the integrity of the natural ecosystem. Carefully regulated fishing is permitted, but the fishery management objective here is vastly different from that in areas outside the national park. The principal objective is the preservation of native fish populations and associated aquatic life in a natural environment. This includes the regulation of man’s fishing so as not to reduce the essential food for dependent wildlife, disrupt bird nesting areas, or disturb other plant and animal life in areas that can be seen by a large number of park visitors.

A secondary objective is the maintenance of quality angling for wild fish by restricting man’s consumptive exploitation, thereby maintaining fish populations that will be readily replenished by natural reproduction.

While the faunal ecosystem within the park is still relatively intact, man’s sometimes well-intentioned efforts caused serious alterations. Larger predators have been depleted in number, migration patterns have been disrupted, and the distribution of some large ungulates has been changed. Feeding habits have been seriously altered by the presence of unnatural food sources, and one community, the aquatic, has been completely changed by the introduction of exotic fish that now completely dominate many portions of the park’s 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.

Although Yellowstone National Park has been designated a natural area rather than a recreational or historical one, this does not imply that the two latter associations are not present. Recreation for its own sake has been traditional. Hiking, horseback riding, cross-country skiing, and fishing are practiced. Powerboating has become established on Yellowstone and Lewis Lakes. A regulation favoring only hand-propelled craft has, however, been established for all other lakes. To protect natural conditions, no boats are allowed on the rivers of Yellowstone National Park.

The human history of the park is fascinating and diverse. It begins with prehistoric use of the high plateaus by various Indian groups, and continues with the areas’ rediscovery by trappers and adventurers. Reports of the geologic wonders and concentrations of wildlife acted as a magnet for exploration parties, whose excitement over and recognition of the uniqueness of Yellowstone’s natural phenomena led to its establishment as the world’s first national park. The development and administration of Yellowstone served as a model for other nations, and the park philosophy that evolved here has become increasingly significant in the history of our society.
"If we are to keep our appointed rendezvous with the land, we must do so with our own plan of conservation, and not the plan of our fathers."

--George B. Hartzog, Jr.

the plan

COORDINATE PLANNING

In the charge conferred by Congress in 1916, the National Park Service has a dual purpose with respect to national parks to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."

The 1916 act supplements the act of 1872, creating Yellowstone National Park, wherein lands of the United States are "dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people" and "provide for the preservation, from injury or spoliation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition."

The perpetuation of nature and the provision for public use and enjoyment are legislatively mandated National Park Service objectives. The two are compatible in many ways. They conflict seriously in others.

Over the years, the interests which would intensify and further commercialize public use of America’s great national parks have relied heavily on the generalization that "parks are for people." The fact, however, is that such a philosophy oversimplifies that complex problems encountered by park administrators who must seek ways of accommodating increasing public visitation, while perpetuating the natural values upon which that visitation is based.
A growing population, more leisure time, and widening individual mobility seriously threaten the basis on which the National Park System is founded. Yellowstone National Park is a prime example in that all the threats to the National Park System concept are present.

To this end, and recognizing that we may have already come too far, a moratorium on stopgap expansion has been declared. The master plan calls for holding the line on accommodations and support services in the park and thoroughly considering the alternatives. On an interim basis, such a moratorium will grant management time to monitor use and alleviate these pressures, so far as is feasible within existing realities. But on a long-range basis, this is not enough.

In brief, very fragile elements comprise the ecological framework of a national park. Destroy or damage these delicate and interdependent facets and the opportunity for continuing public appreciation and enjoyment diminishes. Therefore, 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. Inherent in this concept is the basic need for regional planning; it is evident that national parks no longer exist as isolated entities. 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.

A regional approach unquestionably challenges the traditional mandates of an area jurisdictionally divided along many county, State, and Federal levels. Cooperation and compromise, essential to such a confederation, will not come easily. Nevertheless, a new land-use ethic is imperative, and the common need to resolve today's complex problems must be recognized and accommodated if the park's finite natural environment is to be perpetuated.

It is encouraging that steps have already been taken toward the resolution of mutual resource-management problems, and the park is most fortunate in that an informal framework known as the “Joint National Park Service and Forest Service Coordination Committee” already exists. The membership includes representatives of five adjacent forests and Grand Teton and Yellowstone National Parks. However, a broader system of cooperative planning should be developed to coordinate regional problems. Ultimately, if Yellowstone National Park is to provide for the enjoyment of this and future generations—with acceptable resource perpetuation—cooperative planning that incorporates the national parks, national forests, other public lands, and gateway communities is essential. 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 core parks.
Restructure Visitor Use

Built upon Yellowstone's original accommodations structure and elaborated on since World War II by a development program that chose modernization and expansion as solutions to its problems, the physical plant that exists today is a grossly inefficient operation, inharmonious with today's visitor needs, and wasteful of the park's finite resources. With locations originally dictated by requirements of the horse-and-wagon era, it is not surprising to find Yellowstone's cumbersome facilities incongruent with today's economic realities and life-styles; therefore, the validity of the park's visitor accommodation base must be questioned.

In its search for alternatives, the Service is presented with a unique opportunity to pioneer in the evolution of a new kind of program-oriented wilderness threshold community, particularly at Lake and Grant. Such a need is based on the supposition that if we truly want to get the visitor off the road and into the park we must create people-oriented or social spaces to accommodate him.

Each area might assume a different configuration. Such qualifying criteria as pedestrian orientation and minimal encroachment on park resources per maximum density suggest a tightly knit development creatively interspersed with plazas or green spaces. Furthermore, since such units would be essentially program-oriented, visitor capacities should be developed as functions of the interpretive and/or recreation programs offered, rather than on a visitor demand basis. In its search for such a design idiom, the Service should consider a nationwide competition open to all design professions.

Finally, the Service must come to terms with the legitimacy of the recreation vehicle as the basis for the traditional camping experience. This is not only critical to the composition of the proposed developments, but essential to their effective design. If the recreation vehicle is not part of the camping experience, then it should be incorporated within the park's existing development enclaves or on peripheral lands. On the other hand, if it is, in fact, the focus of the modern camping experience, then an appropriate design framework to more efficiently accommodate these mobile apartments must be evolved. Our outlying campgrounds can then be restored for the resource-oriented pioneer experience traditionally encouraged by the Service.

In the final analysis, however, 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.

Existing developments with amenities that go beyond basic food service and lodging have a multiple effect that extends beyond the mere consumption of space and scenery. Sewage requires costly and
space-consuming treatment facilities and poses the threat of pollution; garbage and waste require acreage for dumps; water must be impounded or pumped and distributed, which requires clearings that scar the landscape; electricity requires obtrusive poles and wires or disruptive trenches. The character of such developments is not compatible with the tenor of this great wilderness park, and ultimately should be minimized.

Fulfillment of Yellowstone National Park as a unique natural environment is directly related to the proper development of its peripheral gateway towns as primary visitor hubs, and to the management of the surrounding national forests as multi-use forests. The National Park Service, therefore, must assist the surrounding State, county, and municipal governments in petitioning for technical and financial aid to upgrade the appearance and service capability of park entrance communities. There is a need for planning in these communities and for their acceptance of zoning, construction, and sanitation codes to carry out the public health, safety, and esthetic measures needed for the mass accommodation of visitors.

With the establishment of ceilings for overnight accommodations within the park, the private sector is already being encouraged to provide for the projected increases in travel to the Yellowstone region. Planning assistance would enable the gateway communities to develop their long-range potential as integrated overnight centers for the park and the surrounding forests. The economic base of these communities will be enhanced — both from the standpoint of providing for an increasing share of visitor needs during the traditional summer season and that of extending the visitor season into winter, spring, and fall, contemplated by accelerated interest in the region.

Ultimately freed from having to provide the mass terminal creature-comfort facilities and services within its prime resource zone, Yellowstone National Park can begin to expand its interpretive, educational, and environmental functions.

Recognizing, however, that certain improvements and adjustments are basic to any concept, the following restructuring within the park is proposed.

**West Thumb**
Present planning proposes the removal of all accommodations and services because of their encroachment on natural features, and this is now being implemented. 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 that includes trails and exhibits.

**Fishing Bridge**
Current planning proposes to ultimately relieve congestion and eliminate accommodations and services from this existing developed area in order to
facilitate restoration of critical wildlife habitats at Yellowstone Lake’s outlet. The existing campground, trailer village, store, and service station will, however, be retained for an interim period.

Canyon Village
A conflict between campers and bears has existed here for years. Unstable soils as well as peripheral regional developments will ultimately decide the fate and character of this developed area. Until then, existing capacities should be adhered to.

Roosevelt Lodge
Although the present flavor and character of this development is appropriate, the individual structures have outlived their usefulness and should be replaced. A “western cap” 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 on site. Special stock required for extended packtrips will be trucked in as needed.

Old Faithful
Environmental restoration of this area containing the park’s most famous attraction has already been accomplished by road obliteration and rerouting of vehicular traffic around the fragile thermal zone, coupled with the removal of the campground and some concessioner accommodations. High priority should be given to gradually converting the Old Faithful development into a scenic day-use area, an objective that necessarily will take many years to achieve.

Mammoth
Ongoing planning proposes the 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, an important facet of the park’s interpretive program, should be accelerated. This restoration should be responsive to the complex’s secondary mission, which is to house the park administrative and support facilities.

ACCESS AND CIRCULATION

Modification and improvements initiated since the turn of the century have transformed into a primary through-system what was conceived of as, and remains — in standard and design — a secondary road circulation 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, for which it was never designed. Complicating the problem and frustrating its 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.

In searching for a solution to this dilemma, the Service must reject the bigger-and-better-road syndrome. In the first place, facilitating regional or interstate through-traffic is not a legitimate use of park roads. Furthermore, any major expansion and/or relocation of the existing road system will be at the expense of the park resources. While appearing to offer some attractive short-range solutions, dualizing of the roads into independent directional roadways would open up some undeveloped terrain, would be costly in both time and money, and would impose an intolerable impact upon the park’s resources. And like many freeways, they might possibly be overloaded at completion.

Another suggestion, that of converting the Grand Loop to one-way traffic, would create logistical problems for both visitor and management, and be unworkable because of the distances involved.

With the completion of the impact-area bypasses, the existing road system will be adequate to serve current visitor travel to the park. But if future demands to visit Yellowstone are to be met, an alternative to the private automobile must be provided.

A transit system incorporating supplemental interpretive “vehicles” that would use the existing road network is proposed. This system would be optional for all visitors, but would be tailored especially for the first-time visitor who typically wants to view the principal features of the park but has budgeted only a day or two to do so. The transit system ultimately would tie into the accommodation centers on the periphery of the park, and would offer the attractive alternative of providing all family members a scenic interpretive overview of Yellowstone without the driver’s concern for route-finding and negotiating traffic. The end result would be to reduce road congestion, thus improving the quality of a park experience—both for those using the system and those preferring to travel by private auto.

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 and should be inexpensive or free. The vehicle must be quiet, attractive, and suitable for scenic viewing. Loading and unloading should be simple and rapid, with seating designed to keep family groups intact.

Finally, since an important objective is to lure the “scenic drivers” from their automobiles, this service should be advertised adequately and made as attractive and convenient as possible.
Although it is assumed that special terminal facilities will ultimately be required for a totally interrelated and expanded interpretive system, they should not be necessary to accommodate an initial “pioneer” increment. On an interim basis, the units could operate from locations within the park’s principal developed areas where some parking already exists. When fully implemented, terminals would be located outside the park in the gateway communities, and their construction might provide the catalyst necessary to stimulate redevelopment in these important centers of visitor accommodations. 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, and, together with the anticipated construction of the bypass at Mammoth, will facilitate the proposed supplemental tour service and will encourage use of minisystems within prime visitor zones.

Such programs reinforced by appropriate regulatory measures, such as restricted trailer use of the roads during specific hours for access and egress only, offer real hope in partially accommodating ever-increasing demands for visitation, and they therefore should be implemented as soon as possible.

EXPAND INTERPRETATION

Traditional interest in Yellowstone has focused upon its individual natural features—the geysers and other thermal phenomena, the canyons, the waterfalls, the lake, the bison, elk, and bears—and of course the park today remains one of the world’s greatest collections of natural wonders. But in a world of shrinking natural environments, Yellowstone is becoming equally important to America and to park visitors as one of the outstanding examples of a natural ecosystem, complete with the interacting species of plants and animals that existed in prehistoric times. The major objective of the park’s interpretive program, then, is to communicate an understanding of the individual features and resources; how they fit into the park’s total ecosystem; and how this system relates to the larger ecosystem of the world and to the personal experience of the park visitor.

The challenge is one of communicating the value of 3400 square miles of wild land to the predominantly urban visitor, who in recent years has become increasingly insulated within his automobile while touring the park, and especially to the first-time visitor who typically has allotted a minimum amount of time for his visit. The crux of the problem is to kindle a new sense of environmental awareness within the visitor. It is hoped that through this interpretation he will want to leave his auto and explore the many beauties of the park on his own.
Existing interpretive devices such as limited-range radios that transmit messages to car radios throughout the park can 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 to help him use his limited time effectively.

This master plan proposes that the Service complement ongoing interpretive programs with a comprehensive system of supplemental interpretive vehicles. Not only does such a system offer new potential for communication, but it also permits us to communicate with the visitor as often as he wishes throughout his visit.

In addition, because such a system provides continuity between local interpretive sites and thematic interpretive centers, it can provide the basic introductory mass orientation that has been wanting. The automobile would continue to be used by those wanting a more selective visit or whose transportation needs are not met by the public system. Certainly, such an interpretive progression would encourage the kind of visitor growth that would ultimately lead him to the park trail system and, eventually, to the trailless wilderness, which provides the ultimate experience available within the park.

As envisioned, the vehicles would be comprised of modular units in which families could, insofar as practical, remain grouped together as they are when traveling by individual car. Continuous interpretive messages, broadcast either live or on tape, would be available at the option of the visitor in each travel module. Stops would be made at principal attractions such as trailheads, scenic viewpoints, and important natural or historic features. Here, audio stations, exhibits, and/or live interpretation of specific themes, features, and activities would be offered. Visitors would be encouraged to spend some time walking and leisurely enjoying each major site, continuing their park tour aboard a later bus.

If this transportation system is to serve the projected increases in visitation, 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 furthering their knowledge of a particular subject. Within this category, programs would periodically be oriented toward specific themes such as photography, wildlife-viewing, geology, wildflower displays, Army life, and early explorers.

The anticipated shift of terminal overnight accommodations to the surrounding gateway towns might ultimately dictate a similar shift in the location of evening interpretive programs. Amphitheater and campfire programs now held within the interior of Yellowstone might gradually give way to similar ranger-conducted presentations at public outdoor amphitheaters located in gateway towns on the periphery of the park. Face-to-face personal services would continue to serve as the backbone of Yellowstone’s interpretive program.
The proposed exterior restoration at Mammoth will offer the opportunity to feature Fort Yellowstone as an in-place exhibit designed to tell the story of the evolution of administration and management of the world’s first national park. Also, the newly restored soldiers’ station at Norris adds another dimension to this story.

With the conversion of Old Faithful to day use, the opportunity will exist for restoring Old Faithful Inn to its historic and architectural integrity. Stripped of its more recent wings and refurnished in its original turn-of-the-century decor, the inn can be utilized as a unique visitor facility, providing food services for those who would care to see or experience how the visitor fared in the park’s early years. To lose so unique a perspective, especially during this period of transition as the Nation gropes for a life-style more in harmony with the environment, would be tragic. This transition will be long-range.

EXPAND INFORMATION

If the recreation potential inherent in the proposed interrelationship of gateway towns, forests, and parks is to be realized, information and orientation within the region must be improved and expanded. A regional information system is suggested, entailing a network of highway hospitality centers, area broadcasts, gateway visitor centers, and varied media within the park.

Ideally, introductory hospitality centers should be available on the periphery of the region, preferably where intra-regional road corridors intersect the principal interstate routes. Such facilities would be operated by the appropriate States and would provide information on a statewide basis. The National Park Service would provide park information through the media of exhibits, films, and brochures. The chambers of commerce from the various gateway communities and the Forest Service should participate. The collective information would enable the visitor to select a base facility that would suit his needs and allow him to become familiar with the types of recreation and special events available within the region.

Coincident with these key centers, a uniform radio and television information service that supplies regional recreational news should be instituted. Regular spot announcements on major area broadcasting stations could then alert travelers to the status of campground space, alternate open areas along their route, and other pertinent information.

As suggested in the visitor-use plan, the visitor’s initial contact with park personnel or facilities would ultimately be available at the reception areas located within the transportation terminals in the various gateway communities. Here he would obtain specific information about park regulations and the various activities, facilities, and points of interest available to him within the park. The proposed supplemental interpretive system would be designed to provide an introductory park tour, as well as special tours oriented toward such themes as photography,
SCHEMATIC PLAN FOR A GATEWAY TOWN INFORMATION CENTER AND BUS STAGING FACILITY
wildlife-viewing, or geology. Once on his way, audio devices within the system, as well as the more traditional kiosks, visitor centers, and signs would facilitate his needs.

Having separated the visitor from his car, we will have literally cast him adrift in an uncharted and, to many, unknown and even hostile environment. For his own sake and ultimately ours, we must be available to fill that void. Although computer systems can assist the visitor in selecting options within his time limitation and interest, electronic gadgetry should not be considered a substitute for the courtesy, warmth, and concern provided by personal contact.

If we are to meet this challenge, additional manpower will be required on the trails, within campgrounds, and at key features, as well as in the various units of the interpretive system, to help, advise, and inform. If an essentially wilderness park is to serve an ever-increasing urban society, organized recreation/education programs must be considered.

RESTORE THE NATURAL REGIME

In preserving the natural resources of the park, past efforts were primarily directed toward protecting the forest from fire and insect losses, and toward manipulating fish and wildlife populations for favored species. With increased knowledge of ecological processes gleaned from relatively recent problem-oriented research, it has become apparent that this “first aid” approach to resource management is not the long-term solution. As a natural area, Yellowstone should be a place where all the resources in a wild land environment are subject to minimal management. Normally, natural changes in individual plant and animal populations should not be interfered with. Indeed, change must be accepted as inevitable; it is an important aspect of a natural regime.

Evidence to date suggests that the vegetation of the park was repeatedly burned at intervals of 30 to 100 years. Fires spaced so far apart tend to burn in the forest crown over territory measured in the hundreds and thousands of acres. Since repeated firing on this cycle in the postglacial period determined the present species distribution and successional levels within the park, fire must ultimately be reintroduced into the environment. The park already has a fire-management plan that permits natural wildfires to burn unsuppressed in specific zones carefully selected where there is no chance of a conflagration that would threaten developed areas or personal life, or spread outside the park.

Insects, like fire, 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.
Yellowstone’s wildlife occurred in dynamic balance with the food sources and the environment over the eons before western man arrived on the scene. Ongoing and future wildlife management actions will be directed toward reducing 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. Also, the removal of all artificial food sources that directly or indirectly cause the grizzly and black bears to intrude into developed areas should be continued.

The different races of native cutthroat trout and the rare grayling found within Yellowstone require special protection. Here too, management efforts have recently leaned toward regulating man’s influence rather than manipulating the resource to suit his purposes. Bait restrictions, creel limits, size limits, and catch-and-release fishing have been implemented.

Certainly, such encompassing programs can do much toward restoring and perpetuating the natural regime within the park. Nevertheless, because the park is but a segment of a vast upland wilderness, such broad issues cannot be fully resolved by any single agency program. Having come to the realization that we inhabit a finite and fragile planet with limited resources, we certainly must accept the inevitable—that resource perpetuation must be everyone’s concern. The Nation’s conservation agencies can no longer afford the luxury of emphasizing their traditional differences while ignoring all they have in common. To this end, the Service must expand its efforts toward evolving a truly joint resource-management program with the surrounding land-managing agencies.

Only through cooperative efforts can flexible management programs be developed to protect the endangered wildlife, to transfer excess or problem bears to remote areas, or to better control ungulate populations. Finally, only a coordinated approach can guarantee the total watershed protection necessary to ensure water quality, as well as the perpetuation of the park’s unique native fish habitats.

**VISITOR PROTECTION – INTERIM AND FUTURE**

Challenge in some degree is a fundamental ingredient of a wilderness experience. The Service therefore must come to see its role in visitor protection as one that features varied levels of risk and hardship, rather than one that promotes ease and comfort. The visitor must be made to see that if Yellowstone’s unique wilderness essence is to survive, he must be willing to accept nature on her own terms, rather than his own, contrived within the framework of contemporary ethics.
Before such a concept can be implemented, however, better integration of the design and management professions with the natural and behavioral sciences is essential. For the present, however, the best hope is to separate the visitor from exposure to real hazards, especially those he is unaccustomed to experiencing at home.

With respect to the park’s traditional bear problems such an approach has been highly successful to date. For years the Service has tried with little success to impress upon a generation of visitors, desensitized by cartoon wildlife, that roadside bears are wild, dangerous, and therefore should be enjoyed from the safety of their cars. Faced with the dilemma of increased maulings and traffic fatalities from such encounters, and unable to convince enough visitors of the seriousness—and often tragic results to both bear and human—of their misguided philanthropy, park managers found that separating the offended bears from the temptations was the only alternative. Hopefully, the supplemental interpretive system will provide the means whereby the visitor might be reached so that this unique species can be restored to its native habits.

Grizzly marauding within visitor corridors likewise has been minimized by eliminating all artificial food sources that directly or indirectly caused the animals to intrude into developed areas. Research suggests that such a program, coupled with strict enforcement of food-storage procedures within existing campgrounds, can be effective in providing for visitor safety in the presence of truly “wild” grizzly bears.

In relating such a concept to the park’s extensive backcountry, 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 and enclaves. Categorized as natural environmental zones, they will provide a vital introduction to wilderness. Here, the visitor can test not only his desire but also his muscles.

Rounding out this hierarchy of backcountry use will be an effective network of scenic trails in portions of the backcountry that are not prime grizzly habitat. 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 could be considered complete if it did not address itself to the rapidly emerging phenomenon of winter use. To this end, present and proposed programs suggest the hierarchy of challenges possible within the park proper. A fleet of 12-passenger snow buses 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.
Although the benefits inherent in such a comprehensive management approach should be obvious, they are dependent on more realistic levels of manpower, information, and research. To this end, all levels must be increased if these objectives are to be realized.

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 new course. One need only remember what existed at Old Faithful and West Thumb but a short time ago to sense that the traditional resort-community concept may no longer be valid within Yellowstone; yet how, where, and to what level these functions are legitimate and are to be developed — in Grant Village for example — is not as obvious. Likewise, the accommodation of ever-increasing day use must be evaluated, and eventually some form of mass transportation must be introduced. It is, however, another thing to predict the type of system most appropriate. Cost, public acceptance, and the availability of equipment are all yet-undetermined factors.

The thrust of the Yellowstone research program should be “mission oriented,” that is, directed toward anticipating and solving problems that must be faced by management. One paramount need is the determination of backcountry and developed area carrying capacities.

At present, standards have been established to ensure the protection of the public’s health with regard to the design of waste disposal and water treatment systems. But knowledge is lacking on the long-term effect of such systems on stream ecosystems and wildlife. Current studies of the park’s water resources and how they are affected by existing developments and use should result in the establishment of formal water-quality standards for Yellowstone.

Present research indicates that wildfire played an important role in shaping the environment of Yellowstone National Park and therefore should be restored. Results from the park’s new fire-management plan, which permits some unsuppressed natural wildfires, should be carefully monitored to determine if the plan can be expanded.

As a conceptual document, the master plan only provides a comprehensive philosophical thrust developed as a series of interrelating and hopefully logical hypotheses subject to testing. Reference knowledge, therefore, not only involving the natural sciences but also the behavioral sciences, landscape design, sanitation, history, and education, must be developed if the thrust is to materialize.

To this end, cooperation, coordination, and communication, not only between the various regional entities, but with the academic community, must be expanded.
MANAGEMENT OBJECTIVES

The following statement by the superintendent of Yellowstone National Park reflects park management’s needs and goals relative to this master plan.

General Management

Yellowstone will be managed on a year-round use basis. There are two defined periods of heavy use, and the management and operation must be geared to such for maximum enjoyment of the resources by the visitor – May 1 through October 31 and December 1 through March 15.

Management of the park will continue to be centralized at the headquarters at Mammoth. The headquarters complex will support the district units, which are comprised of the North, South, and West operating levels. District units will have adequate plant and personnel for routine and recurring operations.

Improved employee housing is a very real necessity in the district units for both permanent and seasonal personnel.

Alternatives must be explored for substitute methods of disposing of refuse other than the existing open dump operations and present incinerator methods. New approaches must make certain that air and water pollution is eliminated.

With increasing emphasis on environmental awareness and the need to coordinate matters between States, community leaders, and the park, a vigorous and expanding public relations program in the tri-State region is vital to the Service.

Overnight accommodations will not exceed an aggregate total of 8300 pillow count.

Every encouragement and assistance should be given to the development of visitor overnight accommodations outside and within an hour’s driving distance of the park. Means should be explored whereby the portal cities might receive planning and development assistance.

Resource Management

Every effort will be made to eliminate artificial relationships between bears and man, especially situations that potentially lead to food-habit dependence.

The fishery resource shall be managed toward the goal of preserving native fish populations and high-quality angling for wild trout in a natural environment.
Development shall be excluded from thermal areas; however, walking-path access and small self-guiding interpretive devices may be permitted. As new thermal features appear, they shall be allowed to develop without interference from man, unless they concern the safety of the public.

**Visitor Use**

Park roads (Grand Loop) will be open to visitor travel between May 1 and October 31 of each year. Special emphasis should be given to this matter in planning facilities, equipment, and manpower resources to be located in the district to meet this need.

To maintain the quality of a “winter wilderness,” park roads will not be snow-plowed in winter except for the Gardiner Northeast Entrance Road. Oversnow vehicles will be restricted to unplowed roadways. Limited eating facilities and overnight shelter will be provided in the interior of the park as winter use may demand.

The present road system will continue to be studied toward relieving congestion around major developed areas. Consideration should also be given to the limitation of trailer and oversize vehicle use on park roads during peak daytime travel periods.

Studies will be initiated to determine the carrying capacities for individual backcountry use areas and to define the possible impact on units. These backcountry units should be defined as to capacity per site and each provided with hitching rack and sanitary facilities. Chalet-type facilities should be included in the studies. No wheeled or air access is to be allowed.

All aerial-based utilities including power and telephone transmission lines shall be replaced with substitute facilities that will not infringe upon the natural scene, such as microwave stations, et cetera.

The Fort Yellowstone historic structures, as identified in the historic structures inventory, will be restored exteriorly, but will continue to serve administrative functions interiorly. The Chittenden Building (current Mammoth Ranger Office) will be studied for possible interior refurnishing or exhibit display use. A Fort Yellowstone Historic District prospectus needs to be prepared. Consideration should be given to relocating the Mammoth Campground. The employee trailer area should be relocated and the area restored to its natural condition. Storage adjacent to the Trailer Village should be replaced with a modern plant and the existing facilities obliterated.

Except for the campground, Norris Basin shall continue to operate as a day-use area.
Old Faithful should be restored to a day-use area, with the obliteration of all non-historic facilities. In the meantime, no new overnight accommodations will be constructed. Consideration should be given to the development of a system of walking-path or mini-bus accesses to features within the geyser basins, following the obliteration of the existing road through the thermal area.

Grant Village will become a major development, containing several classes of accommodations. Also, the location of a wilderness loop interpretive trail should be studied at Grant. West Thumb will become a day-use area for visitor observation of the lakeside thermal features. The gas station and other service facilities should be phased out.

With the completion of the marina at Grant Village, facilities there and at Bridge Bay will not be expanded, nor will any additional marinas be provided in the park. Facilities for the disposal of sanitary wastes from boats should be provided at both existing marinas.

Because of proximity to choice grizzly bear habitats in the Pelican Valley and in the lake outlet area, as well as the outstanding environmental education opportunities, overnight facilities should be phased out of the Fishing Bridge area. The area from the mouth of the Yellowstone River at Lake to one mile downstream is superb ecological environment and should be restored to natural conditions. Consideration should be given to the development of an interpretation and information facility for visitor enjoyment of the stream wildlife. A system of walking paths and overlooks would be developed in conjunction with the proposed visitor wildlife information center on the north shore of the lake. Lake would continue to serve as a concessioner-operated overnight facility, and Bridge Bay, an overnight accommodation center, would be the site of the major campground in this area. All utilities, including sewage treatment facilities, should be integrated for the three developed subareas.

Existing vehicular traffic should be removed from the north rim of the canyon and studies initiated to determine methods of moving people to canyon viewing points. Consideration should be given to a shuttle system that would connect path access to viewpoints. Additional overnight visitor facilities are not foreseen in the canyon area.

Roosevelt will become the focal point for all horse-concession base station operations. Expansion of this activity, to consist of backcountry packtrips of varying duration, will be encouraged. Unloading ramps and holding corrals at major trailheads, with additional horse trails to accommodate this use, should be studied and developed at an early date.
The outstanding open wildlife range at Lamar should eventually revert to a natural scene with the ultimate removal of all artificial structures, such as elk traps, and the obliteration of visual remains, such as irrigation ditches from early ranching operations.

The administration and jurisdiction of the Beartooth Highway should be studied and clarified.

Construction by the State of Wyoming of the road from Cody to Cooke City will cause a shift in visitor-use patterns. As this occurs, studies should be initiated to determine levels of visitor facilities, both for winter and summer operation in the northeast section of the park.

Interpretation
The interpretive program will focus upon three primary themes: (1) Yellowstone's natural ecosystem, wherein plant and animal communities exist as they did in primitive America, free from modern man's disruptive influence; (2) geology, especially the unique thermal features; and (3) the human history of the Yellowstone country.
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Publication services were provided by the graphics and editorial staffs of the Denver Service Center, 1973.

United States Department of the Interior / National Park Service