National Scout Jamboree
National Park Service
Staff Handbook

"Conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

--National Park Service Mission Statement
# National Scout Jamboree
## National Park Service Staff Handbook

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Creation of the First National Parks

The idea that entities of land can be preserved by the government as a place to protect the resources within it began as early as 1832. Through artists and authors, the idea of a public park became widespread as the people began to see and appreciate unspoiled nature and spectacular natural areas.

The concept of large-scale natural preservation — the "national park idea" — has been credited to the artist George Catlin. In 1832 he worried about the effects of America's westward expansion on American Indian civilization, wildlife, and wilderness. He suggested preserving them, "by some great protecting policy of government...in a magnificent park.... A nation's park, containing man and beast, in all the wild[ness] and freshness of their nature's beauty!"

Naturalist John Muir continued the expression of these ideas through his books. He promoted and made real the idea that wilderness does not just have economic values, but also spiritual.

Did You Know?
Starting in 1910 with "The Immortal Alamo", film makers have been coming to national parks year after year to capture scenery for their productions.
The expression of these ideas and thoughts came to fruition with the creation of the earliest national parks. There is debate about when the first national park was actually created. Was it in 1872 with Yellowstone National Park, was it 1864 with the protection of the Yosemite Valley or was it 1832 with the creation of Hot Springs Reservation? There is merit to each answer, but each unit contributed to the growing idea that land could be protected in perpetuity while being enjoyed at the same time.

Hot Springs Reservation (1832)

“Taking the Cure” at mineral springs resorts became highly fashionable in Europe during the 18th and 19th Century. As mineral springs were found in the United States, they too attracted attention. Many of these springs became private enterprises, but in 1832, Congress reserved four sections of land containing Hot Springs “for the future disposal of the United States.”

After the Civil War, the Interior Department permitted private entrepreneurs to build and operate bathhouses to which spring water were piped, and Hot Spring Reservation became a popular resort. Congress re-designated it a national park in 1921, but the idea of future use and preservation was already evident in 1832.

Yosemite Valley (1864)

In response to the desires of various men of California, legislation was sponsored to transfer the federally owned valley and nearby Mariposa Big Tree Grove to the state so they might “be used and preserved for the benefit of mankind.” The act of Congress, signed by President Abraham Lincoln granted California the lands on condition that they would be “held for public use, resort, and recreation...inalienable for all time.”

Did You Know?

African American students built the brick buildings of the Tuskegee Institute themselves. Booker T. Washington founded the institute in 1881 as a school for African Americans. Tuskegee Institute National Historic Site (AL) protects this still active learning institution.
Yellowstone National Park (1872)

The geological wonders of Yellowstone region were little known until the 1869-1871 when successive expeditions by David E. Folsom, Henry D. Washburn, and Ferdinand V. Hayden traversed the area and publicized their remarkable findings.

Several members of these parties suggested reserving Yellowstone for public use rather than allowing it to fall under private control. The park idea received influential support from agents of the Northern Pacific Railroad Company, whose projected main line through Montana stood to benefit from a major tourist destination in the area.

Because most of Yellowstone lay in Wyoming and neither Montana or Wyoming were yet states, the legislation was written to leave Yellowstone in federal custody differing from the state custody of Yosemite Valley. The Yellowstone Act was signed on March 1, 1872 by President Ullyses S. Grant into law.

The Yellowstone Act withdrew more than two million acres of the public domain from settlement, occupancy, or sale to be “dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people.” It placed the park “under the exclusive control of the Secretary of the Interior” and charged him to “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.” He was also to prevent the “wanton destruction” and commercial taking of fish and game.

“Dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people”

Did You Know?
47 thermal springs with year-round temperature of 143 degrees are found in Hot Springs National Park (AR).
Creation of National Monuments

While the early national parks were being established, a separate movement arose to protect the prehistoric cliff dwellings, pueblo ruins, and early missions found by cowboys, army officers, ethnologists, and other explorers on the vast public lands of the Southwest.

Antiquities Act of 1906

Congress took a first step in this direction in 1889 by authorizing the president to reserve from settlement or sale the land in Arizona containing the massive Casa Grande ruin. President Benjamin Harrison ordered the Casa Grande Ruin Reservation three years later. In 1904, at the request of the Interior Department's General Land Office, archeologist Edgar Lee Hewett reviewed prehistoric features on federal lands in Arizona, New Mexico, Colorado, and Utah and recommended specific sites for protection. The following year he drafted general legislation for the purpose. The legislation received President Theodore Roosevelt's signature on June 8, 1906.

The Antiquities Act was a blanket authority for presidents to proclaim and reserve "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest" on lands owned or controlled by the United States as "national monuments." It also prohibited the excavation or appropriation of antiquities on federal lands without permission from the department having jurisdiction.

Separate legislation to protect the spectacular cliff dwellings of southwestern Colorado moved through Congress simultaneously, resulting in the creation of Mesa Verde National Park three weeks later. Thereafter the Antiquities Act was widely used to reserve such cultural features—and natural features as well.

Transfer of National Monuments to NPS

By the end of the century, presidents had proclaimed more than 100 national monuments. Although many were later incorporated in national parks or otherwise redesignated, and several were abolished, it may be said that nearly a quarter of the units of today's National Park System sprang in whole or part from the Antiquities Act.

Did you Know?

Kenai Fjords National Park (AK) has the 300-square-mile Harding Icefield – the largest contained within the boundaries of the US.
By August 1916 the Department of the Interior oversaw 14 national parks, 21 national monuments, and the Hot Springs and Casa Grande Ruin reservations. This collection of areas was not a true park system, however, for it lacked systematic management. Without an organization equipped for the purpose, Interior secretaries had been forced to call on the Army to develop and police Yellowstone and the California parks. The troops protected these areas and served their visitors well for the most part, but their primary mission lay elsewhere, and their continued presence could not be counted on. Civilian appointees of varying capabilities managed the other national parks, while most of the national monuments received minimal attention from part-time custodians. In the absence of an effective central administration, those in charge operated with little coordinated supervision or policy guidance.

Rape of Hetch Hetchy

When the city of San Francisco sought permission to dam Hetch Hetchy Valley in Yosemite National Park for its water supply in the first decade of the 20th century, the utilitarian and preservationist wings of the conservation movement came to blows. Lacking unified leadership, the parks were also vulnerable to competing interests. Conservationists of the utilitarian school, who advocated the regulated use of natural resources to achieve "the greatest good for the greatest number," championed the construction of dams by public authorities for water supply, electric power, and irrigation purposes.

"The rape of Hetch Hetchy," as the preservationists termed it, highlighted the institutional weakness of the park movement. While utilitarian conservation had become well represented in government by the U.S. Geological Survey, the Forest Service, and the Reclamation Service, no comparable bureau spoke for park preservation in Washington. The need for an organization to operate the parks and advocate their interests was clearer than ever.

Did you know?

Sitka National Historic Park (AK) protects the oldest intact piece of Russian American architecture—Russian Bishops House built in 1842.
"We want our national parks developed.

We want roads and trails like Switzerland's.

We want hotels of all prices from lowest to highest.

We want comfortable public camps in sufficient abundance to meet all demands.

We want lodges and chalets at convenient intervals commanding the scenic possibilities of all our parks.

We want the best and cheapest accommodations for pedestrians and motorists.

We want sufficient and convenient transportation at reasonable rates.

We want adequate facilities and supplies for camping out at lowest prices.

We want good fishing.

We want our wild animals life conserved and developed.

We want special facilities for nature study."

- Robert Sterling Yard, NPS Publicist

Stephen T. Mather and Horace M. Albright

Among those recognizing this need was Stephen T. Mather, a wealthy Chicago businessman, vigorous outdoorsman, and a born promoter. In 1914 Mather complained to Secretary of the Interior Franklin K. Lane about the mismanagement of the parks. Lane invited Mather to come to Washington and do something about it. Mather accepted the challenge, arriving early in 1915 to become assistant to the secretary for park matters. Twenty-five-year-old Horace M. Albright became Mather’s top aide.

Previous efforts to establish a national parks bureau in Interior had been resisted by the Agriculture Department’s Forest Service, which rightly foresaw the creation and removal of more parks from its national forests. Lobbying skillfully to overcome such opposition, Mather and Albright blurred the distinction between utilitarian conservation and preservation by emphasizing the economic potential of parks as tourist meccas.

The Campaign for a National Park Service

Mather and Albright took up the crusade for a national parks bureau. That summer they conducted a leading congressman, the editor of the National Geographic Magazine, the president of the American Museum of Natural History, the vice president of the Southern Pacific Railroad, and other prominent writers, editors, and opinion makers on an elaborate pack trip through Sequoia and Yosemite. Gilbert Grosvenor of the National Geographic Society devoted the April 1916 issue to the parks, and favorable articles appeared in The Saturday Evening Post and other popular magazines. Mather hired publicist Robert Sterling Yard and obtained funds from 17 western railroads to produce The National Parks Portfolio, a lavishly illustrated publication sent to congressmen and other influential citizens.

"We Want..."
Congress responded to the publicity campaign, and on August 25, 1916, President Woodrow Wilson affixed his signature to the bill creating the National Park Service.

The National Park Service Act made the new bureau responsible for the 35 national parks and monuments then under Interior, Hot Springs Reservation, and "such other national parks and reservations of like character as may be hereafter created by Congress." In managing these areas the NPS was directed:

"To conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Secretary Lane appointed Mather the NPS's first director. Albright served as assistant director until 1919, then as superintendent of Yellowstone and field assistant director before succeeding Mather in 1929. Mather was initially incapacitated by illness, leaving Albright to organize the bureau in 1917, obtain its first appropriations from Congress, and prepare its first park policies.

Did you know?
National park units are home to two federal prison: Alcatraz (Golden Gate National Recreation Area), and a leper colony, Molokai Island Hansen’s Disease Settlement (Kalaupapa National Historical Park).
Dual Mission: Preservation and Enjoyment

The policies, issued in a May 13, 1918, letter from Lane to Mather, elaborated on the Service's dual mission of conserving park resources and providing for their enjoyment by the public. "Every activity of the Service is subordinate to the duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state," the letter stated. At the same time, it reflected Mather's and Albright's conviction that more visitors must be attracted and accommodated if the parks and the NPS were to prosper.

Automobiles, not permitted in Yellowstone until 1915, were to be allowed in all parks. "Low-priced camps...as well as comfortable and even luxurious hotels" would be provided by concessioners. Mountain climbing, horseback riding, swimming, boating, fishing, and winter sports would be encouraged, as would natural history museums, exhibits, and other activities furthering the educational value of the parks.

Expansion of the National Park System

The same policy letter from Lane also sought to guide further expansion of the park system: "In studying new park projects, you should seek to find scenery of supreme and distinctive quality or some natural feature so extraordinary or unique as to be of national interest and importance....The national park system as now constituted should not be lowered in standard, dignity, and prestige by the inclusion of areas which express in less than the highest terms the particular class or kind of exhibit which they represent."

Immediately following World War I, there was a great spurt of travel in the US partly due to the "See America First" campaign. Camping by thousands of outdoor enthusiasts was a new phenomenon. Magazines and newspapers jumped on the bandwagon with pictures and articles to entice readers to the parks. These visitors forever changed some wilderness areas into popular playgrounds.

Did you know?
Montezuma Castle National Monument (AZ) preserves the best preserved cliff dwellings in the United States: five-stories and 20 rooms.
Through the 1920s the National Park System was really a western park system. Of the Service’s holding, only Lafayette (Acadia) National Park in Maine lay east of the Mississippi. This geographic bias was hardly surprising as the West was the setting of America’s most spectacular natural scenery, and most of the lands were federally owned—subject to park or monument reservation without purchase. If the system were to benefit more people and maximize its support in Congress, it would have to expand eastward. This was a foremost objective of NPS leadership, particularly for Horace Albright.

Reorganization of 1933

The reorganization of August 10, 1933 was arguably the most significant event in the evolution of the National Park System. There was now a single system of federal parklands, truly national in scope, embracing historic as well as natural places. The Service’s major involvement with historic sites held limitless potential for the System’s further growth.

The Service’s greatest opportunity in the East was history and historic sites. Congress had directed the War Department to preserve a number of historic battlefields, forts, and memorials there as national military parks and monuments. Albright, who had a personal interest in history, sought the transfer of these areas to the National Park Service soon after the bureau was created.

As a first step, he got Congress to establish three new historical parks in the East under National Park Service administration. Parts of two of these, Yorktown Battlefield at Colonial National Monument, Virginia, and the Revolutionary War encampments at Morristown National Historical Park, New Jersey, edged the Park Service into military history, advancing its case for the War

Did you know?
Thaddeus Kosciuszko National Memorial (PA) is the smallest national park at 0.02 acres.
Department’s areas. The Service hired its first park historians at Colonial in 1931.

Albright’s big moment came soon after President Franklin D. Roosevelt took office in 1933. When Roosevelt went to inspect ex-President Herbert Hoover’s fishing retreat at Shenandoah National Park for his possible use, Albright was invited to accompany him. On the return drive to Washington through Civil War country, Albright turned the conversation to history and mentioned his plan to acquire the War Department’s areas. Roosevelt readily agreed and directed Albright to initiate an executive order to bring about the transfer.

Roosevelt’s order, effective August 10, 1933, gave the NPS the War Department’s parks and monuments, but it also gave the NPS the 15 national monuments then held by the Forest Service. It also assumed responsibility for the national capital parks, then managed by a separate office in Washington. They included the Washington Monument, the Lincoln Memorial, the White House, and Rock Creek Park, a unique urban natural area established simultaneously with Sequoia and Yosemite national parks in 1890.

This merger of all the national military parks, national monuments, and national capital parks in a single national park system had major implications for the National Park Service. With the addition of nearly 50 historical areas in the East, the system and Service were now truly national. Henceforth, the Service would be the leading federal agency in historic as well as natural preservation, acquiring many more historic sites and assuming important historic preservation responsibilities beyond the parks. The national capital parks would give it high visibility in Washington with members of Congress and visitors from around the nation. Of necessity, the Service would become a much larger and more diverse organization.

Did you know?
Washington Monument is the world’s tallest stone structure and is the world’s tallest obelisk standing at 555 feet and 6-1/8 inches. Upon completion, it became the world’s tallest structure, until 1889, when the Eiffel Tower was finished in Paris.

Addition of National Memorials

The management of the parks in the nation's capital would give the NPS high visibility with members of Congress and visitors from around the nation and invite the expansion of the System into the urban regions. The parks of the nation's capital are the oldest elements of today's national park system, dating from the creation of DC in 1790-91.

National memorials inside and outside of Washington formed the most distinctly different class of areas in the reorganization. Among them are the Washington Monument and the Statue of Liberty.

The first federal action toward a national memorial now in the System came in 1783 when the Continental Congress resolved "that an equestrian statue of General Washington be erected where the residence of Congress shall be established." This became the Washington Monument, finally completed and dedicated in 1885.

During the centennial of the US, France offered the Statue of Liberty as a gift to the US. Congress authorized acceptance of the statue, provision of a suitable site in New York Harbor, and preservation of a structure "as a monument of art and the continued good will of the great nation which aided us in our struggle for freedom." Statue was dedicated in 1886.

Other memorials designated included:
Cabrillo National Monument in 1913 in honor of Portuguese Explorer Juan Rodriguez Cabrillo in San Diego, CA. (transferred to NPS in 1933 from War Department); Perry's Victory Memorial in 1919 in Ohio. (Congress authorized Perry's Victory and International Peace Memorial in 1936; Mount Rushmore National Memorial, SD in 1925 (NPS gained control of MORU in 1939); Kill Devil Hill Monument (later Wright Brothers National Memorial), NC in 1927.

Did you know?
Grand Teton National Park (WY) contains the Teton Mountain Range which is among the youngest mountain ranges in the US and contains some of the oldest rocks on Earth.
National Battlefields and Cemeteries

The first official step to commemorate an American battle where it occurred was taken in 1781. Inspired by the Franco-American victory over the British at Yorktown that October, the Continental Congress authorized "to be erected at York, Virginia, a marble column adorned with emblems of the alliance between the United States and His Most Christian Majesty; and inscribed with a succinct narrative of the surrender." Funds were unavailable and was not followed through until 1881. The Yorktown Column is now a prominent feature of Colonial National Historical Park. Other battlefield and cemeteries designated early on include: August 19 1890: Chickamauga and Chattanooga National Military Park; February 11 1895: Gettysburg National Military Park; March 2 1917: Guilford Courthouse National Military Park; February 14 1927: Fredericksburg & Spotsylvania County Battlefields Memorial NMP; March 4, 1931: Kings Mountain National Military Park.

"We Can Take It" CCC Slogan

Civilian Conservation Corps

Along with the great influx of parks from the reorganization, the National Park Service received another mission in 1933 as President Franklin D. Roosevelt launched his New Deal: helping to relieve the great economic depression then gripping the nation. Under NPS supervision, the new Civilian Conservation Corps would employ thousands of jobless young men in a wide range of conservation, rehabilitation, and construction projects in both the national and state parks. At the program’s peak in 1935 the NPS oversaw 600 CCC camps, 118 of them in national parklands and 482 in state parks, staffed by some 120,000 enrollees and 6,000 professional supervisors.

Besides its many park improvements, the CCC had lasting effects on NPS organization and personnel. Regional offices established to coordinate the CCC in the state parks evolved in 1937 into a permanent regional structure for management of the National Park System. Many of the landscape architects, engineers, foresters, biologists, historians, archeologists, and architects hired under the program’s auspices remained on the rolls as career NPS employees.

Did you know?

Haleakala National Park (HI) has more endangered species than any other park in the NPS.
Mission 66

When Conrad L. Wirth took over as National Park Service director in December 1951, he inherited a National Park System besieged by its admiring public. Increasing personal incomes, leisure time, and automobile ownership fueled a postwar travel boom for families young and old, and the national parks, it seemed, bore the brunt of it. Visits to the parks mounted from the six million of 1942 to 33 million in 1950 en route to 72 million in 1960. With few improvements since the CCC era and park appropriations again cut during the Korean War, obsolete and deteriorating park roads, campgrounds, employee housing, sanitary systems, and other facilities were overwhelmed.

Wirth’s response was Mission 66, a 10-year program to upgrade facilities, staffing, and resource management throughout the system by the 50th anniversary of the NPS in 1966. Dozens of park visitor centers, hundreds of employee residences, and the Mather and Albright employee training centers at Harpers Ferry and the Grand Canyon are among the program’s enduring legacies.

Mission 66 covered an array of other activities that the NPS had foregone during its lean years, including resumption of the National Survey of Historic Sites and Buildings to aid in planning for the system’s orderly expansion. Beginning in 1960, most historic properties surveyed and found nationally significant were designated national historic landmarks by secretaries of the interior. In 1962 the NPS launched a similar program for natural lands, resulting in the designation of national natural landmarks. Although these programs continued to help identify areas meriting inclusion in the system, their larger function was to officially recognize outstanding places not proposed as parks and encourage their preservation by others. By 1999 some 2,300 historic properties and nearly 600 natural areas had received landmark designation.

Did you know?
Minidoka Internment National Monument (ID) constituted the 7th largest city in Idaho when it was operational between 1942 and 1945, with a peak population of 7,500.
"As a primary goal, we would recommend that the biotic associations within each park be maintained, or where necessary recreated, as nearly as possible in the condition that prevailed when the area was first visited by the white man."

--Leopold Report

Increase in Environmental Awareness and Historic Preservation

Ecology received more emphasis in natural resource management following a 1963 report by a committee of distinguished scientists chaired by A. Starker Leopold. "As a primary goal, we would recommend that the biotic associations within each park be maintained, or where necessary recreated, as nearly as possible in the condition that prevailed when the area was first visited by the white man," the Leopold Report declared. "A national park should represent a vignette of primitive America." The natural roles of predators, once routinely killed, and wildfire, customarily suppressed, received special attention.

In the field of interpretation, "living history" programs ranging from military demonstrations to farming became popular attractions at many areas. Environmental interpretation, emphasizing ecological relationships, and special environmental education programs for school classes reflected and promoted the nation's growing environmental awareness.

The Service's historic preservation activities expanded further beyond the parks. Responding to the destructive effects of urban renewal, highway construction, and other federal projects during the postwar era, the National Historic Preservation Act of 1966 authorized the NPS to maintain a comprehensive National Register of Historic Places. National Register properties—locally significant places as well as national historic landmarks in both public and private ownership—would receive special consideration in federal project planning and various forms of preservation assistance.

Did you know?

Little Rock Central High School National Historic Site (AR) has the only functioning high school located within the boundary of a national historic site.
The National Park Service
Today
National Park
These are generally large natural places having a wide variety of attributes, at times including significant historic assets. Hunting, mining and consumptive activities are not authorized. *Acadia National Park*

National Monument
The Antiquities Act of 1906 authorized the President to declare by public proclamation landmarks, structures, and other objects of historic or scientific interest situated on lands owned or controlled by the government to be national monuments. *Statue of Liberty National Monument*

National Preserve
National preserves are areas having characteristics associated with national parks, but in which Congress has permitted continued public hunting, trapping, oil/gas exploration and extraction. Many existing national preserves, without sport hunting, would qualify for national park designation. *Mojave National Preserve*

National Historic Site
Usually, a national historic site contains a single historical feature that was directly associated with its subject. Derived from the Historic Sites Act of 1935, a number of historic sites were established by secretaries of the Interior, but most have been authorized by acts of Congress. *Thomas Edison National Historic Site*

National Historical Park
This designation generally applies to historic parks that extend beyond single properties or buildings. *Independence National Historical Park*

National Memorial
A national memorial is commemorative of a historic person or episode; it need not occupy a site historically connected with its subject. *Mount Rushmore National Memorial*

National Recreation Area
Twelve NRAs in the system are centered on large reservoirs and emphasize water-based recreation. Five other NRAs are located near major population centers. Such urban parks combine scarce open spaces with the preservation of significant historic resources and important natural areas in location that can provide outdoor recreation for large numbers of people. *Lake Mead National Recreation Area*

Did you know?
Big Cypress National Preserve (FL) is home to one of the rarest and most endangered mammals in the world: the Florida Panther.
National Seashore
Ten national seashores have been established on the Atlantic, Gulf and Pacific coasts; some are developed and some relatively primitive. Hunting is allowed at many of these sites. Assateague Island National Seashore

National Lakeshore
National lakeshores, all on the Great Lakes, closely parallel the seashores in character and use. Indiana Dunes National Lakeshore

National River
There are several variations to this category: national river and recreation area, national scenic river, wild river, etc. The first was authorized in 1964 and others were established following passage of the Wild and Scenic Rivers Act of 1968. New River Gorge National River

National Parkway
The title parkway refers to a roadway and the parkland paralleling the roadway. All were intended for scenic motoring along a protected corridor and often connect cultural sites. John D. Rockefeller Jr. Memorial Parkway

National Trail
National scenic trails and national historic trails are the titles given to these linear parklands (over 3,600 miles) authorized under the National Trails System Act of 1968. Natchez Trace National Scenic Trail

Did you know?
Antietam National Battlefield (MD) preserves the site of the largest single day loss of life in American history, with 23,000 casualties.
Balancing Preservation and Enjoyment

Even before Yellowstone National Park was established in 1872, people have been enjoying the national parks. Use of it has progressed from subtle exploitation of the land, to conscious sustainable use in order to protect the natural, cultural, and historical resources while allowing enjoyment at the same time. Throughout the evolution of the National Park Service we have figured how to create a careful balance between these two contradictory ideas.

To first attract visitors to the national parks, Stephen Mather and Horace Albright believed that visitors must be attracted and accommodated if the parks and the NPS were to prosper. Automobiles were allowed in all national parks. Low priced camps as well as comfortable and even luxurious hotels were provided by concessioners. Mountain Climbing, horseback riding, swimming, boating, fishing, and winter sports were encouraged, as well as natural history museums, exhibits, and other activities furthering the educational value of the parks.

Conservation and Preservation

“As a primary goal, we would recommend that the biotic associations within each park be maintained, or where necessary recreated, as nearly as possible in the condition that prevailed when the area was first visited by the white man,” the Leopold Report declared.

“A national park should represent a vignette of primitive America.” The natural roles of predators, once routinely killed, and wildfire, customarily suppressed, received special emphasis.

“The realization is coming that perhaps our greatest national heritage is nature itself, with all its complexity and its abundance of life, which, when combined with great scenic beauty as it is in the national parks, becomes of unlimited value.”

--George Melendez Wright

Did you know?
San Juan National Historic Site (PR) comprises the oldest European constructions in the NPS.
Climate Change

Glaciers and snow packs are melting, stream temperatures are going up, coastal erosion is increasing, and changes in weather patterns are leading to drought and heat waves both locally and regionally. Many of them have consequences that will affect the resources and influence the experiences for which the national parks were established. Many climate change consequences make it difficult for park managers to preserve the resources unimpaired.

Examples of Climate Change's impact on the parks

Increase Frequency of Wildland Fires
Higher temperatures in spring and summer and earlier melting of the snow pack in recent years have contributed to an increase in the frequency and duration of wildland fires. Recent studies have concluded that a changing climate, not previous fire suppression policies or land-use changes, is the major cause. Particularly at risk are plant and animal species that are more restricted in their needs for habitat, have limited ability to relocate, or have surrounding development that leaves them few options.

Animal Extinction
In Yosemite, the pika population is in danger of extinction as warming temperatures occur higher and higher on the mountainsides. With each season, the cool habitat for pikas shifts further upslope. Eventually, if this continues, pikas may have nowhere higher to go.

Food Source Depletion
Nutrient-rich whitebark pine seeds are a critical food source for the grizzly bears of Yellowstone. Warmer winters have enabled bark beetles to significantly increase mortality of whitebark pines over their entire American range with little sign of relief. Not only does this lower the grizzlies' survival rates, they are now more likely to experience human conflicts in their search for alternate foods.

Loss of Inhabitable Habitat
Another dilemma for managers is occurring at Joshua Tree National Park. Joshua trees require cool winters and freezing temperatures in order to flower and set their seeds. Researchers have documented substantial mortality of Joshua trees and predict that because of climate warming, the trees will be unable to persist much longer within the park. Soon, Joshua trees may no longer be found in the park bearing their name.
The National Park Service response to climate change begins by examining policy, planning and decision-making. The effects of climate change will impact the ability of the NPS to meet its mission and comply with legal mandates. Most resource protection laws that the NPS must comply with were not written considering a changing climate. For decades we have been striving for "natural" or "historical" conditions in the national parks, but such conditions may be more difficult or impossible to maintain under climate change. Even the concept of naturalness becomes convoluted in an era where human activities play a role in shaping global climate.

To allow parks to better cope with uncertainty in future climate conditions, scenario planning offers an additional approach.

When future conditions are uncertain, formulating multiple scenarios and then finding the beneficial actions common to each of the potential futures becomes an efficient approach and will be utilized for park planning. This approach can best be summed up as being prepared—for worst-case scenarios, best-case scenarios, and a range of future alternatives in between.

Although there will always be a need to learn more, we now have sufficient knowledge about climate change to take important steps. Park managers need to determine the extent to which they can and should act to protect the parks' current resources while allowing the parks' ecosystems to adapt to new conditions.

Climate Change Response

Efforts of the Climate Change Response Program are coordinated around four areas of emphasis:

**Using science to help us manage**
The National Park Service will uncover and apply the best available climate science. By collaborating with scientific agencies and institutions, we can address the specific needs of park managers and park partners as they confront the challenges of climate change.

**Adapting to an uncertain future**
Climate change will alter park ecosystems in fundamental ways. The NPS must remain flexible amidst a changing landscape and uncertain future, and swiftly address both natural and human systems when necessary. Scenario planning will be a key tool for adaptation.

**Reducing our carbon footprint**
The most effective way to lessen the long-term effects of climate change is to reduce greenhouse gas emissions. The National Park Service should be a leader in reducing its carbon footprint through energy efficient practices and integrating climate-friendly practices into administration, planning, and workforce culture.

**Educating about climate change**
National parks are visible examples of how climate change can affect natural and cultural resources. Through clear communication, we will prepare park staff and connect visitors with information concerning the impacts to parks and steps the agency is taking to preserve our heritage.

Did you know?
Appalachian National Scenic Trail is 2,167 miles long and extends across the mountain crests and valleys of the Appalachian Mountains through 14 states from Maine to Georgia.
Wildlife is managed in concert with the other natural resources of a park in order to maintain all the components and processes of naturally evolving ecosystems, including the natural abundance, diversity, and genetic and ecological integrity of the plant and animal species native to those ecosystems.

Whenever possible, natural processes are relied upon to maintain native plant and animal species and influence natural fluctuations in populations of these species. However, active management may become necessary:

- To protect rare, threatened, or endangered species.
- To protect human health and maintain human safety.
- When an exotic species (a non-native species introduced due to human actions) threatens to displace native species or disrupt natural processes.
- To protect specific cultural resources of the park.
- When a population of animals occurs in an unnaturally high or low concentration as a result of human influences (such as extirpation of predators or loss of habitat).

Some NPS units have problems with wildlife that have become food-conditioned. Animals from ground squirrels to bears can become a threat to human safety if they begin approaching humans for food in an aggressive manner.

Never feeding wildlife, careful food storage, and proper disposal of trash are key to preventing food-conditioned wildlife. If prevention fails, more aggressive management actions may be required to protect human safety and return the “wild” to wildlife.

Did you know?
Touro Synagogue National Historic Site (RI) is the oldest synagogue in the US and the last surviving one from the colonial era.
**Endangered Species**

The Endangered Species Program works to sustain and recover over a thousand populations of federally listed threatened and endangered species in 204 of the 392 NPS units. The program's mission is to reduce the risk of extinction of plants and animals in the parks, and to restore species that have occurred in parks historically but have been lost due to human activities. The NPS seeks to be proactive in determining the status of rare species and cooperating with other agencies to conserve declining species to avoid listing under the Endangered Species Act. Every park provides yearly information on the status of their current T&E species, the trend of the population, and the money spent on recovery and monitoring.

**Invasive Species**

The spread of invasive species is recognized as one of the major factors threatening ecosystem throughout the world. "Invasive species" means an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

These species have the ability to displace or eradicate native species, alter fire regimes, damage infrastructure, damage ecological services such as water and air filtration, which people and wildlife depend upon, and threaten human livelihoods. Invasive species are changing the ecology and iconic landscapes of national parks. Over 6,500 non-native invasive species have been documented on park lands.

The NPS is working to manage invasive species on park lands based upon the following strategies: protection of native species and ecosystem processes, science-based decision-making, cooperation and collaboration, inventory and monitoring, prevention, early detection and rapid response, suitable treatment and control, and restoration.

**Endangered and Threatened Species in National Park Units**

*Based on 2008 numbers*

<table>
<thead>
<tr>
<th>ESA Category</th>
<th>Species</th>
<th>Park Populations</th>
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</thead>
<tbody>
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<tr>
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<td>355</td>
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<td>Experimental</td>
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<td>14</td>
</tr>
<tr>
<td>Threatened by Similarity of Appearance</td>
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<tr>
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<table>
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<th>Species</th>
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<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>389</strong></td>
<td><strong>1,052</strong></td>
</tr>
</tbody>
</table>

1 Some populations are listed as endangered while others as threatened. In order to not double count them, they are listed as endangered.
2 23 species present in parks units have experimental status in addition to endangered to threatened status. They are counted in the E and T categories.

**Did you know?**

Isle Royale National Park (MI) has no roads and is accessible only by boat or floatplane.
Air Quality

The NPS works to preserve, protect, enhance, and understand air quality and resources sensitive to air quality in the National Park System. This is crucial to parks because air pollution affects ecological health, scenic views, human health, and visitor enjoyment even at relatively low levels.

The NPS measures progress toward improving park air quality by examining trends for key air quality indicators, including:

- **Visibility**: affects how well and how far visitors can see
- **Atmospheric deposition**: affects ecological health through acidification and fertilization of soil and surface waters
- **Ambient Ozone**: affects human health and native vegetation

Ecological Restoration

Logging, grazing, mining, and other human activities have left a legacy of non-native vegetation, eroded soils, and altered fire patterns in our national parks. Some former park management techniques, such as fire suppression and elimination of predators, have led to declines in the integrity of the original ecosystems. In addition, invasive species, pollution, and climate change continuously threaten these systems.

Ecosystems are collections of plants, animals, and micro-organisms interacting among themselves and with their habitat. While most ecosystems are hard to define and draw rigid boundaries around, scientists characterize them by their rock and soil types, by water features such as streams and ponds, and by the common plant and animal species which make their homes within these areas.

Ecosystem management brings an integrated perspective to natural resource management. It takes a “big-picture” approach, replacing short term, single species management with multi-species, long-term and large-scale approaches. For example, instead of managing for deer and elk to maximize viewing opportunities, the NPS manages for the entire ecosystem, considering not only deer, elk and other herbivore populations, but also vegetation, water flow, and predators and rare species. Ecosystem management also recognizes the influence of natural disturbances such as fire and windstorms, accepting that natural ecosystems are dynamic and change over time.

The goal of ecosystem restoration is not to replace a static picture of the past. Instead, the NPS works to remove the barriers to ecosystem recovery. These barriers include biological or chemical contaminants, drained wetlands, channelized rivers, alteration of fire patterns, or lack of species to re-populate areas of parks. Whole-ecosystem approaches to management ensure not only the survival of species and scenic vistas, but also allows these systems to continuously evolve and change.

Did you know?

Apostle Islands National Lakeshore (WI) cares for the largest collection of lighthouses anywhere in the NPS.
Minerals Management

A variety of rights to explore and extract minerals exist in and near national park units. Management of mineral development to prevent or mitigate adverse effects on park resources and values presents complex challenges to NPS. Oil and gas development occurs in 13 units with active and potential coal and hardrock mining, coalbed methane, and oil and gas development adjacent to 53 units. Further, at least 22 NPS units contain significant geothermal resources. The NPS strives to work with adjacent land managers and other permitting entities to help ensure that NPS resources and values are not adversely impacted by external mineral exploration and development.

Management of Caves and Karst Systems

Caves and karst features occur in 120 parks in all regions of the National Park System (81 contain caves and an additional 39 contain karst). Over 3,900 caves are currently known throughout the system. Karst is a region of irregular topography with sinks, underground streams, and caves that were formed by dissolution of soluble rock.

The number of caves ranges from as few as 10 to 15 caves per unit—as in the Chesapeake & Ohio Canal National Historic Park—to more than 450 caves per unit—as in Lava Beds NM.

Cave and karst areas: hold about 25% of the nation’s groundwater; include valuable data relevant to global climate change, waste disposal, groundwater supply and contamination, petroleum recovery, and biomedical investigations; contain data that are pertinent to anthropologic, archaeologic, geologic, paleontologic, and mineralogic discoveries and resources; are natural laboratories; and act as natural traps for flora and fauna, and new species of extinct animals have been discovered from paleontological excavations in caves.

The Cave and Karst Program provides:

- Protection for natural processes in cave ecosystems and karst landscapes;
- Scientific studies and research in or about cave and karst resources and systems;
- Cartographic surveys and inventories of cave systems;
- Educational and recreational opportunities;
- Development of guidelines to maximize cave protection and management;
- Monitoring of natural environmental conditions and visitor use impact; and
- Methods for sustainable use of cave resources.

Did you know?

War in the Pacific National Historical Park and American Memorial Park are in the national parks farthest to the east, 15 hours ahead of Washington, D.C.
Protection of Natural Sound

Natural soundscapes are vital to the natural functioning of park ecosystems. Visitors also appreciate natural sounds. Many natural sounds such as gurgling streams, bird songs, or the rustling of leaves on a fall day can have a calming and relaxing effect.

Studies suggest that the acoustical environment is important in a number of ways including:

- Intra-species communication
- Territory establishment, finding desirable habitat
- Courtship and mating
- Nurturing and protecting young
- Predation and predator avoidance
- Effective use of habitat

The National Park Service works to protect and enhance park resources and visitor experiences, and as a result, the Natural Sounds Program differentiates between the physical sound sources and human perceptions of those sounds. The combination of physical sound resources, or acoustic resources, at a particular location comprise what is known as the acoustical environment. Acoustic resources include both natural sounds (wind, water, wildlife, vegetation) and cultural and historic sounds (battle reenactments, tribal ceremonies, quiet reverence). The human perception of the acoustical environment is referred to as the soundscape. Making this distinction between these terms will allow managers to create objectives for safeguarding both the acoustical environment and the visitor experience.

Fire Management

Wildland fire has great potential to change park landscapes more often than volcanoes, earthquakes or even floods. Such forces of change are completely natural. Many plants and animals cannot survive without the cycles of fire or flooding to which they are adapted. If all fire is suppressed, fuel builds up and makes bigger fires inevitable. Under certain conditions, large, hot fires can threaten public safety, devastate property, damage natural and cultural resources, and be expensive and dangerous to fight.

National Park Service policy stresses managing fire, not simply suppressing it. This means planning for the inevitable and promoting the use of fire as a land management tool. The goal is to restore fire's role as a dynamic and necessary natural process.

Did you know?
National Park of American Samoa is the only U.S. national park in the Southern Hemisphere.
Cultural Resource Preservation

Preservation is about deciding what's important, figuring out how to protect it, and passing along an appreciation for what was saved to the next generation.

Prehistoric and historic objects and places help us understand the world and our place in it. They connect us to the past, but they can also connect us to the present and each other. The NPS cares for some of the largest and most diverse natural and cultural history collections in the world.

Archeology

Archeologists are anthropologists, meaning they study people, but they are not geologists (who study rocks and minerals) or paleontologists (who study very ancient reptiles). Archeologists look at old things and sites to investigate how people lived in the past.

Archeologists are a hardy bunch. They dig everywhere, including in old garbage piles and toilets. They seem to know something about everything people in the past did: how they made tools, why they moved around, and what kinds of foods they ate.

Excavators + an excavation = A field crew
A field crew is the team of people who excavate sites. Many archeologists on field crews have lots of experience and excavate as their job. They might have a graduate or doctoral degree in archeology. Many archeology projects have field crews who are new to archeology, like students and volunteers, who want field experience.

Artifacts + analysis = Collections specialist
Also called curators and archeological technicians, collections specialists take care of excavation records and artifacts. Collections specialists work everywhere archeological collections go, including museums, historical societies, colleges and universities, and parks. They help to preserve archeological materials and work with researchers and the public.

Animals + archeology = Zooarcheologist
Zooarcheologists study animal remains, or fauna, from archeological sites. Their work shows what people ate, the animals they hunted and raised, and about their health.

History + archeology = Historical archeologist
Historical archeologists compare documentary sources with what they find at sites. Sometimes they find the actual events or artifacts described in the texts hidden in the ground.

Geology + archeology = Geoarcheologist
Geoarcheologists look at the changing relationships between people and rocky places over thousands of years. Geoarcheologists tell us about what earlier landforms were like and how people may have used them.

Did you know?
There are over 2,000 cataloged arches in Arches National Park (UT). In order to be considered an arch, an opening must measure at least three feet.
Historic landscapes can range from 1,000s of acres of rural tracts to a small homestead with a front yard of less than one acre. Like historic buildings and structures, these special places reveal aspects of our country’s origins and development through their form and features and the way they were used. In fact, almost every historic property has a landscape component. Imagine a residential district without sidewalks, lawns, and trees or an agricultural complex with buildings, but no fields, garden plots, or hedge rows! Like other historic properties, historic landscapes are subject to loss and change through inappropriate uses, insensitive development, vandalism, and natural forces such as flooding.

The NPS promotes responsible preservation practices that protect our nation’s irreplaceable legacy of cultural landscapes.

Historic American Buildings Survey

The Historic American Buildings Survey (HABS) is the nation’s first federal preservation program, begun in 1933 to document America’s architectural heritage. Creation of the program was motivated primarily by the perceived need to mitigate the negative effects upon our history and culture of rapidly vanishing architectural resources. A source was needed to assist with the documentation of our architectural heritage, as well as with design and interpretation of historic resources, that was national in scope.

Careful planning prior to undertaking work can help prevent irrevocable damage to a cultural landscape. Professional techniques for identifying, documenting, evaluating and preserving cultural landscapes have advanced during the past 25 years and are continually being refined. Preservation planning generally involves the following steps: historical research; inventory and documentation of existing conditions; site analysis and evaluation of integrity and significance; development of a cultural landscape preservation approach and treatment plan; development of a cultural landscape management plan and management philosophy; the development of a strategy for ongoing maintenance; and preparation of a record of treatment and future research recommendations.

As a national survey, the HABS collection is intended to represent “a complete resume of the builder’s art.” Thus, the building selection ranges in type and style from the monumental and architect-designed to the utilitarian and vernacular, including a sampling of our nation’s vast array of regionally and ethnically derived building traditions.

Did you know?
Russell Cave National Monument (AL) has an almost continuous record of human habitation going back to 7000 BC.
Ethno ra
hy
Descendants of plantation owners, sharecroppers, and slaves at Louisiana's Cane River Creole National Historical Park... anglers casting into the surf at Cape Cod National Seashore... neighborhood gardeners plying the soil at Washington DC's Fort Dupont Park. NPS ethnographers—under federal and NPS legal and policy mandates—focus on these and other groups linked to the parks by religion, legend, deep historical attachment, subsistence use, or other aspects of their culture.

A park can be integral to the identity of a people, whose relationship to the land may be centuries old. Yet, in some cases, the park's reason for being may diverge from a culture's way of life. Naturalist John Muir, one of the founders of Glacier Bay National Park, saw the place as untrammeled wilderness; to the native Tlingit or Haida, however, the bay is home, a source of food and security, where their people began. Using research approaches and other methods, ethnographers identify these constituents, giving them a voice in how parks are planned and run.

Ethnographers also assist parks in developing brochures, exhibits, and the like to tell the stakeholders' stories to the visiting public. By shining local spotlights, NPS ethnographers enrich our diverse heritage as a nation.

Museum Curation
Curators inventory, register, and catalog museum collections. They also study and document the items in their care and provide appropriate conservation treatment when necessary. Much of their work centers on maintaining a stable and protected storage environment for the objects so that these items can survive the centuries and be available for both study and enjoyment by future generations.

Ethnography
Descendants of plantation owners, sharecroppers, and slaves at Louisiana's Cane River Creole National Historical Park... anglers casting into the surf at Cape Cod National Seashore... neighborhood gardeners plying the soil at Washington DC's Fort Dupont Park. NPS ethnographers—under federal and NPS legal and policy mandates—focus on these and other groups linked to the parks by religion, legend, deep historical attachment, subsistence use, or other aspects of their culture.

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Did you know?
Mt. McKinley, part of Denali National Park and Preserve (AK) is the highest point in North America at 20,320 feet.
Historic Structures

The Park Historic Structures Program is responsible for all service-wide activities related to the protection and preservation of historic structures in the National Park System. Stewardship of historic structures provides the richness and complexity of the human story of our nation and includes the living traditions of Native Americans and peoples whose roots lie in Africa, Oceania, Europe, and Asia.

Historic structures include buildings and monuments, dams, millraces, and canals, nautical vessels, bridges, tunnels and roads, railroad locomotives, rolling stock and track, stockades and fences, defensive works, temple mounds and kivas, ruins of all structural types, and outdoor sculpture. Historic structures are usually immovable, although some have been relocated and others are movable by design. The Park Historic Structures Program focuses on structures listed in or eligible for the National Register of Historic Places.

The preservation of historic structures involves two basic concerns: slowing the rate at which historic material is lost, and maintaining historic character. The program offers strategic planning for strengthening and expanding programs; coordinates inventory and research efforts; provides technical information; and organizes and participates in training opportunities.

Cultural Landscape

During the past 20 years cultural landscapes have become an integral component in historic preservation both in the United States and abroad. In the NPS, this field has grown rapidly since the establishment of policy in 1988 that formally identified cultural landscapes as a type of cultural resource in the system. These policies recognize the importance of considering both built and natural features and the dynamics inherent in natural processes and continued use.

Cultural landscapes are complex resources that range from large rural tracts covering several acres to formal gardens of less than an acre. The character of a cultural landscapes is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

The Park Cultural Landscapes Program provides direction and demonstrates high quality preservation practice regarding cultural landscapes in the National Park System. The variety of cultural landscapes in the system range from carriage roads to battlefields, designed gardens to vernacular homesteads, industrial complexes to summer estates. The program is a Servicewide effort of people in parks, support offices, centers, and partnerships dedicated to a mission of protection and preservation of cultural landscapes in the national park system for the enjoyment of present and future generations.

Did you know?
Death Valley National Park (CA) has the lowest point in the Western Hemisphere at 282 feet below sea level.
Career, Volunteer, and Education Opportunities
Volunteers-In-Parks work side-by-side with National Park Service employees and partners in parks from Maine to Hawaii, from Alaska to Florida, in big cities and small towns, even in remote wilderness areas.

VIPs play an increasing role in national parks doing a variety of jobs such as:
Working at an information desk answering visitor questions; presenting living history demonstrations in period costume; building fences, painting buildings, and making cabinets; giving guided nature walks and evening campfire programs; assisting with preservation of museum artifacts; maintaining trails and building boardwalks; designing computer programs or park websites; serving on a bike, horseback, or beach patrol.

**Scout Ranger**

By being a Scout Ranger you will be able to:
- learn about the mission of the NPS, help protect the nation's natural, cultural, and historic resources, and explore your national park.

Scouts can earn a certificate or patch for participating in a volunteer service project or educational program(s) at national park sites. To earn a certificate, a scout must participate for 5 hours in either an educational program or volunteer service project. The certificate is downloadable online. To earn a patch, a scout must participate for 10 hours in either program. Scouts can obtain the patch at park visitor centers after verbally reporting their completion of 10 hours.

Acceptable forms of education programs include: Junior Ranger program, environmental education programs, ranger-led programs, and any other official NPS education program. All volunteer service projects must be approved by the scout troop and the NPS to be considered for the Scout Ranger program.

**Did you know?**
The National Park Service budget for FY 2010 is $3.16 billion.
Youth Conservation Corps

The Youth Conservation Corps employees youth ages 15-18 in conservation work at national parks. Participants gain both work experience and knowledge of the park, environmental issues, and conservation efforts.

Typical programs run for 8-10 weeks during the summer. Most programs are non-residential, but Yellowstone National Park and Yosemite National Park host residential programs. Participants are paid the established federal minimum wage, unless they are working in a state with a higher state minimum wage. The YCC website at www.nps.gov/gettinginvolved/youthprograms/ycc.htm has information about how to apply. Most parks require the applications to be sent in by April 15th, but interested individuals should check with the parks they are interested in working at.

Enrollees are selected without regard to civil service or classification laws, rules or regulation. The selection process is conducted in a public forum by the random method.

There are many conservation projects that participants could work on. Here are a few examples:

- Construction, repair, or restoration of trails, campsites, fences, corrals, bridges
- Preservation of historic buildings
- Removal of invasive plant
- Reclamation of hazardous or abandoned building materials
- Preservation of habitats
- Lead environmental education programs.

Did you know?
Mammoth Cave National Park (KY) hosts the longest cave system in the world with 345 miles mapped.
Public Land Corps

Public Land Corps employs youth ages 16-25 in conservation projects through non-profit organizations such as the California Conservation Corps or Coconino Rural Environment Corps. Participants apply and are selected by the non-profit organization.

Participants will receive a living allowance and may be able to be hired non-competitively after completing 960 hours of service, 120 hours of which must come from Public Land Corps projects.

Programs can run for the entire summer or for short terms such as one or two weeks.

Participants are typically recruited and selected through one NPS's non-profit partners. Those that are interested should check out the website: www.nps.gov/gettinginvolved/youthprograms/plc.htm for a list of non-profit organizations that participate in the Public Land Corps. Applicants apply through the organization to participate in the Public Land Corps.

Participants must be between 16 and 25 years of age and must be either a U.S. citizen or a legal resident.

There are many conservation projects that participants could work on. Here are a few examples:

- Construction, repair, or restoration of trails, campsites, fences, corrals, bridges
- Preservation of historic buildings
- Removal of invasive plant
- Reclamation of hazardous or abandoned building materials
- Preservation of habitats
- Lead environmental education programs.

Did you know?
The world's largest gypsum dune field is at White Sands National Monument (NM) rising 60 feet high and covering 275 square miles.
Invites youth (especially 5-17) to explore the national parks on their own with the aid of an interactive activity book. The activities teach youth about various topics of the national parks to inspire them to learn something new, to have an adventure and to have fun!

Participants complete a series of activities during their park visit, share their answers with a park ranger, and receive an official Junior Ranger badge or patch and Junior Ranger certificate.

This is the National Park Service’s on-line Junior Ranger program for kids of all ages. Participants can play more than 50 interactive games and learn about the National Parks. This is also a place to share park stories and pictures with other WebRangers around the world in My Community.

The WebRanger website is: http://www.nps.gov/webrangers/.

Did you know?
The National Park Service requested budget for FY 2011 is $3.14.
4 Exhibit Image
Background Information
**Information Tent**

**Tuskegee Airmen**
**Lieutenant Colonel Benjamin O. Davis**
*Tuskegee Airmen National Historic Site*  
*Alabama*

Before 1940, African Americans were barred from flying for the U.S. military. Civil rights organizations and the black press exerted pressure that resulted in the formation of an all African-American pursuit squadron based in Tuskegee, Alabama, in 1941. They became known as the Tuskegee Airmen.

In the 1940s Tuskegee became home to a “military experiment” to train America’s first African-American military pilots.

The Tuskegee Airmen overcame segregation and prejudice to become one of the most highly respected fighter groups of World War II. They proved conclusively that African Americans could fly and maintain sophisticated combat aircraft. The Tuskegee Airmen’s achievements, together with the men and women who supported them, paved the way for full integration of the U.S. military.

Benjamin O. Davis Jr., a pioneering military officer who was the leader of the fabled Tuskegee Airmen during World War II and the first African American to become a General in the Air Force. His combat record and that of the unit he led have been credited with playing a major role in prompting the integration of the armed services after World War II.

At the time he left the Air Force as a Lieutenant General, wearing three stars, he was the senior black officer in the armed forces. In 1998, President Bill Clinton awarded Davis his fourth star, advancing him to full general.

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**Delicate Arch**
*Arches National Park, Utah*

Arches National Park preserves over 2,000 natural sandstone arches, like the world-famous Delicate Arch, as well as many other unusual rock formations. In some areas, the forces of nature have exposed millions of years of geologic history.

Arches National Park lies atop an underground salt bed called the “Paradox Formation” which is responsible for the arches, spires, balanced rocks, fins and eroded monoliths common throughout the park. Thousands of feet thick in places, the Paradox Formation was deposited over 300 million years ago when seas flowed into the region and eventually evaporated. Over millions of years, the salt bed was covered with the residue of floods and winds as the oceans returned and evaporated again and again. Much of this debris was cemented into rock. Salt under pressure is unstable, and the salt bed below Arches began to flow under the weight of the overlying sandstones. This movement caused the surface rock to buckle and shift, thrusting some sections upward into domes, dropping others into surrounding cavities, and causing vertical cracks which would later contribute to the development of arches.

As the subsurface movement of salt shaped the surface, erosion stripped away the younger rock layers. Water seeped into cracks and joints, washing away loose debris and eroding the “cement” that held the sandstone together, leaving a series of free-standing fins. During colder periods, ice formed, its expansion putting pressure on the rock, breaking off bits and pieces, and sometimes creating openings. Many damaged fins collapsed. Others, with the right degree of hardness and balance, have survived as the world famous formations of Arches National Park.

More information:
- [www.nps.gov/tuai](http://www.nps.gov/tuai)
- [www.nps.gov/arch/naturescience/geologic-formations.htm](http://www.nps.gov/arch/naturescience/geologic-formations.htm)
- [www.nps.gov/arch](http://www.nps.gov/arch)

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**Did you know?**
The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The Sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.
Statue of Liberty

Statue of Liberty National Monument, NY

The Statue of Liberty Enlightening the World was a gift of friendship from the people of France to the people of the United States and is a universal symbol of freedom and democracy. The Statue of Liberty was dedicated on October 28, 1886, designated as a National Monument in 1924 and restored for her centennial on July 4, 1986. The statue is 305 feet and 1 inch tall.

Symbolism of the Statue of Liberty:
• The Statue of Liberty faces Southeast in perfect symmetry with the placement of Fort Wood and how people would see the Statue while entering the harbor.
• The torch is a symbol of enlightenment. The current torch is a 1986 replacement of the original, now in the lobby. The new torch is copper, covered in 24k. gold leaf.
• There are 25 windows in the crown which symbolize gemstones and the heaven's rays shining over the world.
• The seven rays of the crown represent the seven seas and continents of the world.
• The chains and a broken shackle are at the Statue's feet and cannot be seen from below. This symbolizes the Statue as a goddess free from oppression and servitude.
• The tablet represents a book of law and reads in Roman numerals: "July 4, 1776, the date of American Independence." JULY IV MDCCLXXVI.

Descending a Knife-Edge to Golden Eagle's Nest, 1930s.
Mesa Verde National Park, CO

About 1,400 years ago, long before Europeans explored North America, a group of people living in the Four Corners region chose Mesa Verde for their home. For more than 700 years they and their descendants lived and flourished here, eventually building elaborate stone communities in the sheltered alcoves of the canyon walls. Then, in the late 1200s, in the span of a generation or two, they left their homes and moved away. Mesa Verde National Park preserves a spectacular reminder of this ancient culture. The park contains over 4,000 known archeological sites including cliff dwellings and the mesa top sites of pithouses, pueblos, masonry towers, and farming structures.

Golden Eagles are among the 100+ bird species in the park, along with shrews, bats, mice, rats, bears, raccoons, porcupines, deer, lizards, snakes, salamanders, toads, and frogs among many others.

Did you know?
Two national parks are located north of the Artic Circle: Gates of the Arctic National Park and Preserve and the Kobuk Valley National Park.
Saguaro Cactus
Saguaro National Park, AZ

Enormous cacti, silhouetted by the setting sun, for most of us the Giant Saguaro is the universal symbol of the American West. And yet, these majestic plants are only found in a small portion of the United States. Saguaro National Park protects some of the most impressive forests of these sub-tropical giants, on the edge of the modern City of Tucson.

Saguaro cacti are host to a great variety of animals. The gilded flicker and Gila woodpecker excavate nest cavities inside the saguaro's pulpy flesh. When a woodpecker abandons a cavity, elf owls, screech owls, purple martins, finches and sparrows may move in.

Archeological evidence indicates that the Hohokam people of the Tucson area used the saguaro in their daily lives. The strong, woody ribs were gathered to construct the framework for the walls of their homes.

Additionally, saguaro ribs were used to collect saguaro fruits, which grow high up on the plant. Several ribs were tied together with a cross piece at the end. These long poles were used to knock ripe fruit down from the top of the plants. The present day Tohono O'odham continue to gather saguaro fruit just as their ancestors did. They use the sweet fruits to make the ceremonial wine as well as jelly and candies. They also use the high protein saguaro seeds as chicken feed.

The saguaro is a long-lived cactus, most affected by long-term climate cycles of frost and drought. Reports of a saguaro “disease” popularized almost fifty years ago, but saguaros are not subject to blights. The saguaro is a common plant in the Sonoran Desert and is not an endangered species.

Campfire at Fletcher Meadow, 1936
Yosemite National Park, CA

For tens of thousands of years, humans have changed, and have been changed by, this place we now call Yosemite. The Ahwahneechee lived here for generations, followed by the arrival of Europeans in the mid-1800s. The rugged terrain challenged many early travelers, with just a few—only 650 from the mid-1850s to mid-1860s—making the journey to Yosemite Valley by horseback or stagecoach. By 1907, construction of the Yosemite Valley Railroad from Merced to El Portal eased the journey, increasing visitation.

Within Yosemite’s history, various cultures abounded that left a mark. Historic mining sites remain from miners who came to the Sierra to seek their fortune in gold.

History books detail the Mariposa Battalion entering Yosemite Valley in 1851 to remove the Ahwahneechee. As Euro-American settlement occurred, people arrived on foot, on horseback and by rail to rustic hotels. Parts of the landscape were exploited, spurring conservationists to appeal for protections. President Abraham Lincoln signed an 1864 bill granting Yosemite Valley and the Mariposa Grove to the State of California. John Muir helped spark the creation of Yosemite National Park in 1890.

Did you know?

African Burial Ground National Monument (NY) is the final resting place of approximately 15,000 free and enslaved Africans.
Youth Conservation Corps
Boston National Historic Site, MA

Branching Out Program sponsored by the Olmsted Center for Landscape Preservation. Participants learn about landscapes maintenance practices through educational workshops and hands-on field experience.

Wildlife Biology
Park unknown

Law Enforcement
Santa Monica Mountains National Recreational Area, CA

Maintenance
Rocky Mountain National Park, CO

Maintenance staff work to fit signs at Holzwarth Ranch during deferred maintenance of park signs.

Cultural Resources
Grand Canyon National Park, AZ

Volunteers-In-Parks
Acadia National Park

Interpretation
Yellowstone National Park, WY, ID, MT

Mount Rushmore National Monument
Duane Bubac (L) and Blaine Kortemeyer (R) are silhouetted by the rising sun beneath the giant nose of President Abraham Lincoln during Search and Rescue Rope Access Training.

Did you know?
There are more than 630 NPS concessionaires (in 128 different park units) which vary in size from small, family-owned businesses to national/international corporations. Concessionaires provide park visitors with lodging, transportation, food services, shops, and other services.
Conservation Trail

Casa Rinconada
Chaco Culture National Historical Park, NM

From 850 to 1250, Chaco was a hub of ceremony, trade, and administration for the prehistoric Four Corners area—unlike anything before or since. Chaco is remarkable for its multi-storied public buildings, ceremonial buildings, and distinctive architecture. These structures required considerable planning, designing, organizing of labor, and engineering to construct. The Chacoan people combined many elements: pre-planned architectural designs, astronomical alignments, geometry, landscaping, and engineering to create an ancient urban center of spectacular public architecture—one that still awes and inspires us a thousand years later.

During the middle and late 800s, the great houses of Pueblo Bonito, Una Vida, and Peñasco Blanco were constructed, followed by Hungo Pavi, Chetro Ketl, Pueblo Alto, and others. These structures were often oriented to solar, lunar, and cardinal directions. Lines of sight between the great houses allowed communication. Sophisticated astronomical markers, communication features, water control devices, and formal earthen mounds surrounded them. The buildings were placed within a landscape surrounded by sacred mountains, mesas, and shrines that still have deep spiritual meaning for their descendants.

By 1050, Chaco had become the ceremonial, administrative, and economic center of the San Juan Basin. Its sphere of influence was extensive. Dozens of great houses in Chaco Canyon were connected by roads to more than 150 great houses throughout the region. It is thought that the great houses were not traditional farming villages occupied by large populations. They may instead have been impressive examples of “public architecture” that were used periodically during times of ceremony, commerce, and trading when temporary populations came to the canyon for these events.

What was at the heart of this great social experiment? Pueblo descendants say that Chaco was a special gathering place where many peoples and clans converged to share their ceremonies, traditions, and knowledge. Chaco is central to the origins of several Navajo clans and ceremonies.

In the 1100s and 1200s, change came to Chaco as new construction slowed and Chaco’s role as a regional center shifted. Chaco’s influence continued at Aztec, Mesa Verde, the Chuska Mountains, and other centers to the north, south, and west. In time, the people shifted away from Chacoan ways, migrated to new areas, reorganized their world, and eventually interacted with foreign cultures. Their descendants are the modern Southwest Indians. Many Southwest Indian people look upon Chaco as an important stop along their clans’ sacred migration paths—a spiritual place to be honored and respected.

Did you know?
Nevada is the most mountainous state in the country, with over 300 individual mountain ranges and 42 named summits over 11,000 feet.
Church Facade of Mission San Jose  
*San Antonio Missions Nat'l Historical Park, TX*

Over 400 years ago Spanish expeditions began to explore land that is now the American Southwest. Beginning in the 16th century, missionaries, accompanied by a few soldiers, moved north out of the Valley of Mexico, founding missions and presidios. By 1718 this activity extended to the San Antonio River, helping form the nucleus of the future city of San Antonio itself.

In 1718 Franciscans and Spanish representatives established the first mission. Within 13 years, five were located along the San Antonio River. The missions' purpose? To acculturate and Christianize the native population and make them Spanish citizens.

Threatened by French encroachments from Louisiana, Spain stepped up its colonization and, beginning in 1690, six missions were established in what is now East Texas. The lush area had long attracted native hunters and gatherers and, in time, Spanish explorers. The missions established along the San Antonio River in the 1700s are reminders of the extent of Spain’s dominion north from Mexico.

Noting the substantial population of native people nearby, Fray Antonio Margil de Jesús established a mission, San José, south along the river in 1720. By 1731, as a result of changing political policies, drought, and disease, the missions in eastern Texas once again began to falter.

Known as the “Queen of the Missions”, Mission San Jose is the largest of the missions and was almost fully restored to its original design in the 1930s by the WPA (Works Projects Administration). Spanish missions were not churches, but communities, with the church the focus. Mission San José shows the visitor how all the missions might have looked over 250 years ago.

The missions flourished between 1745 and the 1780s. Increasing hostility from the mission Indians’ traditional enemy, the Apache, and later the Comanche, coupled with inadequate military support, caused the communities to retreat behind walls. Disease reduced the native population, accelerating the missions’ decline.

Grizzly Bear fishing Sockeye Salmon  
*Katmai National Park and Preserve, AK*

Katmai National Monument was created in 1918 to preserve the famed Valley of Ten Thousand Smokes, a spectacular forty square mile, 100 to 700 foot deep ash flow deposited by Novarupta Volcano. A National Park & Preserve since 1980, today Katmai is still famous for volcanoes, but also for brown bears, pristine waterways with abundant fish, remote wilderness, and a rugged coastline.

A predictable eruption occurs at Katmai National Park and Preserve annually as salmon burst from the northern Pacific Ocean and into park waters. Sockeye (also known as red) salmon return from the ocean, where they have spent two or three years. Navigating first across the open ocean, and then up rivers, lakes, and streams, they return to the headwater gravel beds of their birth to deposit their own young before dying. Their size, averaging 5 to 7 pounds, varies proportionally to how long they spend feeding at sea.

Brooks Camp is the most visited area of the park where brown bear congregate to feed on sockeye salmon at the Brooks Falls or the Brooks River.

Did you know?  
Crater Lake at Crater Lake National Park (OR) is the deepest lake in the US at 1,932 feet.
Frederick Douglass
Frederick Douglass National Historic Site

The Frederick Douglass National Historic Site preserves the home and legacy of Frederick Douglass, a runaway slave, abolitionist, civil rights advocate, author and statesman.

Frederick Douglass was born into slavery on the Eastern Shore of Maryland in 1818. During the course of his remarkable life he escaped from slavery, became internationally renowned for his eloquence in the cause of liberty, and went on to serve the national government in several official capacities.

Through his work he came into contact with many of the leaders of his times. His early work in the cause of freedom brought him into contact with a wide array of abolitionists and social reformers, including William Lloyd Garrison, Elizabeth Cady Stanton, John Brown, Gerrit Smith and many others.

As a major Stationmaster on the Underground Railroad he directly helped hundreds on their way to freedom through his adopted home city of Rochester, NY.

Renowned for his eloquence, he lectured throughout the US and England on the brutality and immorality of slavery. As a publisher his North Star and Frederick Douglass' Paper brought news of the anti-slavery movement to thousands.

Forced to leave the country to avoid arrest after John Brown's raid on Harpers Ferry, he returned to become a staunch advocate of the Union cause. He helped recruit African American troops for the Union Army, and his personal relationship with Lincoln helped persuade the President to make emancipation a cause of the Civil War.

In 1872, Douglass moved to Washington, DC where he initially served as publisher of the New National Era, which was intended to carry forward the work of elevating the position of African Americans in the post-Emancipation period. In this period Douglass also served briefly as President of the Freedmen's National Bank, and subsequently in various national service positions, including US Marshal for the District of Columbia, and diplomatic positions in Haiti and the Dominican Republic.

War of 1812 Renactors
Fort McHenry National Monument and Historic Shrine, MD

On June 18, 1812, the United States declared war on England, in part to "preserve Free Trade & Sailor's Rights." In August 1814, British forces marched on Washington, defeated U.S. forces, and burned the Capitol. Then, on September 13-14, the British attacked Fort McHenry. The failure of the bombardment and sight of the American flag inspired Francis Scott Key to compose "The Star-Spangled Banner."

O say can you see, by the dawns early light, a large red, white and blue banner? Whose broad stripes and bright stars... were so gallantly streaming! over the star-shaped Fort McHenry during the Battle of Baltimore, September 13-14, 1814. The valiant defense of the fort inspired Francis Scott Key to write The Star-Spangled Banner.

Fort McHenry was constructed between 1799 and 1802. It was in the shape of a five-pointed star, which was a popular design during the period. Each point of the star was visible from the point on either side and every area of land surrounding the fort could be covered with as few as five men.

More information:
• www.nps.gov/frdo
• www.pbs.org/wgbh/aia/part4/4p1539.html

Did you know?
The world's most massive Doric Column is at Perry's Victory and International Peace Memorial (OH).
Snorklers on Elkhorn Coral Reef  
*Biscayne National Park, FL*

Biscayne protects a rare combination of aquamarine waters, emerald islands, and fish-bejeweled coral reefs. Here too is evidence of 10,000 years of human history, from pirates and shipwrecks to pineapple farmers.

Tiny coral animals, called polyps, obtain calcium from seawater and use it to manufacture cup-like limestone skeletons around themselves. When colonies of various species occur in close proximity, they create the living fortresses we call reefs.

Coral reefs are among the most biologically diverse ecosystems on earth. Every crack and crevice seems to be occupied by something. As a result, human knowledge of the reef is constantly growing—a fact that should prove valuable as coral reefs around the world experience problems from pollution, overfishing, boat groundings, and disease. Florida’s reefs are the world’s most accessible, just a few miles by automobile from millions of residents and tourists. For this reason, they are also among the world’s most vulnerable reefs.

Kemps Ridley Sea Turtle  
*Padre Island National Seashore, TX*

Padre Island National Seashore is the longest stretch of undeveloped barrier island in the world. In addition to its 70 miles of protected coastline, other important ecosystems abound, including rare coastal prairie, a complex and dynamic dune system, wind tidal flats teeming with life, and the Laguna Madre, one of the few hypersaline lagoon environments left in the world. The National Seashore and surrounding waters provide important habitat for marine and terrestrial plants and animals, including a number of rare, threatened, and endangered species.

Also of significant concern at Padre Island is the Kemp’s ridley sea turtle, the most endangered sea turtle species in the world, which nests on the beach from late April through mid-July. The National Seashore is also one of the few places people can see newly hatched Kemp’s ridleys released into the wild.

Of the five sea turtle species that roam the Gulf of Mexico, the Kemp’s ridley is the smallest with an average length of 23 to 27.5 inches and average weight of 100 pounds. The Kemp’s ridley is the only sea turtle with an almost circular upper shell.

Ruth Gorge  
*Denali National Park and Preserve, AK*

One of the most spectacular features in the park, next to Mount McKinley, is the dramatic “Great Gorge” of the Ruth Glacier. The snow and ice that accumulate in this area are squeezed through the one-mile-wide bottleneck of the Great Gorge. Through this gorge, the glacier drops nearly 2,000 feet over ten miles and is raked with crevasses. Buttressed on either side by solid granite cliffs that tower 5,000 feet above the glacier’s surface, this gorge is not only a spectacular sight, but offers world-class challenges for mountaineers. The depth of the ice within the gorge to be more than 3,800 feet. Combined, the depth of the glacier and the height of the towering cliffs create an abyss that is deeper than the Grand Canyon.

World class mountaineering opportunities abound in Denali National Park and Preserve. Climbers from all over the globe come to test their mountaineering and wilderness survival skills, from the high altitude challenges of Mt. McKinley, the continent’s highest peak, to the vertical rock and ice walls that line the Ruth Gorge.

**Did you know?**

Wrangell-St. Elias National Park and Preserve (AK) is the largest national park with more than 8.3 million acres.
Clara Barton
Clara Barton National Historic Site, MD

Clarissa Harlowe Barton -- Clara, as she wished to be called -- is one of the most honored women in American history for being a true pioneer as well as an outstanding humanitarian. As pioneer, she began teaching school at a time when most teachers were men. She was among the first women to gain employment in the federal government. As a pioneer and humanitarian, she risked her life when she was nearly 40 years old to bring supplies and support to soldiers in the field during the Civil War. Then, at age 60, she founded the American Red Cross in 1881 and led it for the next 23 years. Her understanding of the needs of people in distress and the ways in which she could provide help to them guided her throughout her life. By the force of her personal example, she opened paths to the new field of volunteer service. Her intense devotion to the aim of serving others resulted in enough achievements to fill several ordinary lifetimes.

Golden Gate Bridge
Golden Gate National Recreation Area, CA

One of the world’s largest urban national parks, Golden Gate National Recreation Area hugs the California coastline for nearly 60 miles in and around San Francisco.

For those who live and work in the Bay Area, we are their “backyard” national park. It’s a place to windsurf, walk the dog, go for a run, or bring their kids to explore nature and get a taste of history.

Schooner “Ernestina”
New Bedford Whaling NHP, MA

New Bedford was the mid 19th century’s preeminent whaling port and for a time “the richest city in the world.” Visitors can stroll down cobblestone streets, visit the world’s largest whaling museum, tour a whaling merchant’s home and whaleman’s chapel, walk a 19th century schooner’s decks, walk in the footsteps of Herman Melville and Frederick Douglass and learn about a remarkable era.

In pursuit of whales, New Bedford’s fleet traveled the world’s oceans and brought large numbers of Americans into contact with other cultures; in the process, the whaling fleet introduced materials, technology, plants, animals, and diseases, which led to profound changes in the cultures and their environments.

Golden Gate National Recreation Area chronicles two hundred years of history, from the Native American culture, the Spanish Empire frontier and the Mexican Republic, to maritime history, the California Gold Rush, the evolution of American coastal fortifications, and the growth of urban San Francisco.

Golden Gate is home to Alcatraz, the Cliff House and Sutro Baths, Fort Baker, Fort Point, the Presidio of San Francisco.

Schooner Ernestina is a National Historic Landmark and official vessel of Massachusetts. She fished the Grand Banks, explored the Arctic, and carried passengers and cargo between the Cape Verde islands and southeastern New England. Her history is a remarkable legacy that spans continents, ethnic groups, and generations.

More information:
• www.nps.gov/clba
• www.nps.gov/goga
• www.nps.gov/nebe
• www.ernestina.org

Did you know?
Manzanar National Historic Site (CA) commemorates the WWII internment of Japanese Americans at Manzanar War Relocation Center in the Owens Valley.
John Muir
1902

John Muir (1838-1914) was America's most famous and influential naturalist and conservationist. He is one of California's most important historical personalities. He has been called "The Father of our National Parks," "Wilderness Prophet," and "Citizen of the Universe." He once described himself more humorously, and perhaps most accurately, as, a "poetico-trampo-geologist-botanist and ornithologist-naturalist etc. etc. !!!!"

As a wilderness explorer, he is renowned for his exciting adventures in Sierra Nevada, among Alaska's glaciers, and world wide travels in search of nature's beauty. As a writer, he taught the people of his time and ours the importance of experiencing and protecting our natural heritage. His writings contributed greatly to the creation of Yosemite, Sequoia, Mount Rainier, Petrified Forest, and Grand Canyon National Parks.

His words and deeds helped inspire Theodore Roosevelt's innovative conservation programs, including establishing the first National Monuments by Presidential Proclamation, and Yosemite by congressional action.

In 1892, John Muir and other supporters formed the Sierra Club "to make the mountains glad." John Muir was the Club's first president, an office he held until his death in 1914. Muir's Sierra Club has gone on to help establish a series of new National Parks and a National Wilderness Preservation System.

Muir's last battle to save the second Yosemite, Hetch Hetchy Valley, failed. But that lost battle ultimately resulted in a widespread conviction that our national parks should be held inviolate. Many proposals to dam our national parks since that time have been stopped because of the efforts of citizens inspired by John Muir, and today there are legitimate proposals to restore Hetch Hetchy. John Muir remains today an inspiration for environmental activists everywhere.

John Muir is as relevant today as he was over 100 years ago when he met with President Theodore Roosevelt in Yosemite. Many of today's headlines have Muir to thank for their inspiration.

Captain (later Colonel) Charles Young

Charles Young was born March 12, 1864, in Mayslick, Kentucky, the son of former slaves. Young graduated with his commission from the military academy, the third black man to do so at that time. His subsequent service of 28 years was with black troops — the Twenty-fifth U.S. Infantry and the Ninth U.S. Cavalry.

In 1903 Young served as captain of a black company at the Presidio, San Francisco. He was appointed acting superintendent of Sequoia and General Grant (Kings Canyon) National Parks, thus becoming the first black superintendent of a national park. He was responsible for the supervision of payroll accounts and directed the activities of rangers. Young's greatest impact on the park was road construction that helped to improve the underdeveloped park. Due to his work ethic and perseverance, Young and his troops accomplished more that summer than the three military officers who had been assigned the previous three years. Captain Young and his troops completed a wagon road to the Giant Forest.

In both military and civilian activities, Young demonstrated qualities of character during a time when prejudice was a way of life.

Did you know?
The statue of Abraham Lincoln in the Lincoln Memorial in Washington D.C. is 19 feet tall.
According to Freeman Tilden, the father of interpretation, interpretation means: "an educational activity which aims to reveal meaning and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information."

The word interpretation means many things. It can mean the translation of languages, perceptions about poems or novels, how a person feels about a historic building, or thinks about a scientific theory.

In the National Park Service, other agencies and many zoos and aquaria around the world, interpretation is the process of providing each visitor an opportunity to personally connect with a place. Each individual may connect to the place in a different way...some may not connect immediately, but everyone should have an opportunity to explore how that special place is meaningful to them.

It might be that a ranger 's discussion of a scenic vista inspires an emotional connection for some. In the mind of another, an interpretive sign describing the geologic history of the same landscape might provoke a more intellectual connection.

The goal of all interpretive services is to increase each visitor’s enjoyment and understanding of the parks, and to allow visitors to care about the parks on their own terms.

Interpretation in the National Park Service has evolved over time. The history of interpretation is intimately connected to the history and development of the national parks.

It was as early as 1871 that unofficial interpretation started in the national parks. John Muir while living and working in Yosemite said he interpreted the rocks, learned the language of floods, storms, and avalanche. Muir’s use of the word “Interpretation” is cited as the first precedent for its later adaptation by the NPS.

U.S. Army while protecting Yellowstone also performed interpretive “cone talks” about the thermal features and stagecoach drivers “guided” visitors in the park, although neither of these reflected scientific knowledge instead relying about invention of information.

In 1917 the NPS disseminated 128,000 park circulars, 83,000 automobile guide maps, and 117,000 pamphlets titled “glimpses of our national parks” that year and circulated 348,000 feet of motion picture film to schools, churches, and other organization.

Enos Mills, Father of Rocky Mountain NP, introduced the idea of guide testing and licensing.

Ranger programs in the national parks started in 1920 as a result of Stephen Mather visiting Fallen Leaf Lodge at Lake Tahoe. Dr. CM Goethe had prior traveled to Switzerland where he observed nature study and he transferred the idea to the lodge. Here Stephen mather saw two University of California professors conducting nature tours and hired them to provide nature tours in Yosemite as part of the “Free Yosemite Nature Guide Service”. They gave day walks and nighttime lectures for the tourists. From this point onward, interpretation became institutionalized.

Rangers had to compete with general entertainment programs in the parks such as Jazz music and comedy skits.

Interpretation was becoming more sophisticated, especially with the technological advances. Slides, motion pictures, and sound recordings became increasingly popular.

Did you know?
Brown v Board of Education National Historic Site (KS) commemorates the 1954 landmark supreme court case to end racial segregation in public schools. Linda Brown from Monroe School was represented by Thurgood Marshall before the Supreme Court. Marshall later became the first African American to sit on the Supreme Court.
Stephen T. Mather
1867-1930

Stephen Tyng Mather led a full active life of 63 years, from 1867 to 1930. The years spanning the turn of the century saw vast changes in the country’s demographics, as well as the development of modern forms of transportation and communication, and increased leisure time. Mather was able to capitalize on these trends in his marketing efforts at the Thorkildsen-Mather Borax Company, which made him a millionaire, and in his public life as the first director of the NPS.

Mather recognized magnificent scenery as the primary criterion for establishment of national parks. He was very careful to evaluate choices for parks, wishing the parks to stand as a collection of unique monuments. He felt those areas which were duplicates might best be managed by others. Within the framework of “scenery,” his preservation ethic covered such issues as the locations of park developments, provision of vistas along

Early Transportation in the National Parks
Mount Rainier National Park, WA (1900s)

Early transportation to national parks was long and laborious. Until 1874 all visitors to Yellowstone rode horseback and all supplies were packed in. Later park visitors, however, traveled by stagecoach along simple dirt roads constructed by private toll companies or the U.S. Army Corps of Engineers.

Stagecoach excursions through the early national parks were long and dusty outings - seeing the sights of Yellowstone could easily take a week or more - relieved by stays in grand hotels or primly maintained tent cabins. Touring the national parks in this manner was a privilege restricted to those who could afford the time and expense of lengthy vacations and costly accommodations.

The arrival of the automobile at the turn of the century presented park managers with new challenges and opportunities. A few pioneering motorists made their way into roadways, and the perpetuation of the natural scene. Mather always wished to have the parks supported by avid users, who would then communicate their support to their elected representatives. His grasp of a grassroots support system encouraged the rise of “nature study” and modern interpretation, as well as other park services, and was followed by increases in NPS appropriations. Mather was the first park professional to clearly articulate the policy which allowed the establishment of park concessioners to provide basic visitor comforts and services in the then undeveloped parks. His provision of creature comforts connected with park developments encouraged a curious and supportive public to visit the national parks.

His life is well summarized — on a series of bronze markers which were posthumously cast in his honor and distributed through many parks.

Yosemite National Park as early as 1900, but automobiles were soon banned as threats to the peace and safety of visitors traveling by stagecoach. Aggressive lobbying by automobile interests, combined with the general desire to make parks more accessible to middle-class Americans, led all national parks to open their gates to car traffic by 1915.

Stagecoach companies rapidly switched from horse-drawn vehicles to colored touring cars.

In the 1920s, motor touring and car camping blossomed into nationwide fads, actively encouraged by the NPS in order to build a broader constituency of park supporters. Parks overflowed with motorists who regaled each other with tales of their automotive adventures traveling the rough and rugged park roads.

Did you know?
40 million years of the history of mammals is preserved in fossils at the John Day Fossil Beds National Monument (OR).
Impact of Cavalry in the National Parks
Troop F, 6th Cavalry, USA, Yosemite National Park, 1899

The period of military administration of the national parks is unique in American history. Before 1894, in Yellowstone, and throughout its administrative career in the California Parks, the cavalry operated without a legal framework or means of law enforcement. Yet during the 32 years of military guardianship a national park policy was evolved and administrative procedures were formulated. Moreover, when the National Park Service began operating in 1918, it took over from the military a previously trained cadre of men. Even more important, the NPS, when organized, had something to administer: Yellowstone, Yosemite, Sequoia and General Grant, National Parks. In a very real sense, the cavalry saved these parks, and in so doing, saved the national park idea.

Early national parks did not have much protection in the ways of protecting the resources. Visitors could walk as they pleased and many would kill animals, vandalize precious resources for souvenirs to take home and in the process were destroying the resources set aside for them to enjoy. This is particularly true for Yellowstone National Park.

It was suggested "The cure for . . . unlawful practices and undoubted evils can only be found in a thorough mounted police of the park. In the absence of any legislative provision for this, recourse can most readily be had to the already-existing facilities afforded by the presence of troops in the vicinity and by the transfer of the park to the control of the War Department."

Presence of troops helped to improve facilities, built roads and trails, reduce vandalism, through exploration of unvisited areas increased knowledge of the park, reduce hunting and poaching of animals, established and enforced rules in the parks, punished violators of rules, reduced logging, prevented grazing, reduced trespassers, prevented general destruction or harm to resources, restricted campfires, provided guidelines on use of roads, prevented sale of alcoholic beverages to prevent public drunkenness,

Changing conditions in and around the parks terminated some of the older problems and gave rise to new ones. Game animals, once so ruthlessly hunted by poachers, were so well protected that new policies had to be developed to handle adequately the resulting surplus. A program to interpret park wonders to the public was originally suggested by the military commanders and scientific data were collected by them. Cooperation of individuals who lived near the parks was achieved by the impartial and effective policing of the公园 areas, and many earlier administrative problems were thus negated. The road and trail systems used by modern tourists were planned and constructed by Army engineers using Army labor. Fort Yellowstone, built of quarried stone, stands today as the central unit of the national park headquarters in Yellowstone. In the California Parks, seedling sequoias planted by Army personnel remain as testimony to the labor and foresight of the earlier military guardianship.

Many of the military personnel who had served in the parks accepted discharges from the Army and formed a cadre which was constructed the first civilian ranger service.

One of the larger legacies resulting from the military administration is the fact that the national parks are game refuges. In the Yellowstone, the administrators could have easily and naturally provided protection for the thermal features only; in the California Parks, the major administrative problems would have been eliminated had protection been confined only to the big trees and Yosemite Valley. Fortunately, the early policy makers looked beyond the obvious and extended protection to include most life within the parks. One beneficent result of this policy was the preservation and restoration of the American bison an animal that was rapidly nearing extinction in the 1890's.

Did you know?
The completion of the first transcontinental railroad is celebrated at the Golden Spike National Historic Site (UT) where the Central Pacific and the Union Pacific Railroads met.
Early Promotional Techniques

In order to attract early visitors to the national parks, concession companies and the national parks created unique shows that helped increase visitation.

Once technique was the Yosemite Firefall where embers of a fire were pushed off the edge of Glacier Point in Yosemite and fell 1,000 feet to the valley floor. Dating back to 1870s, the practice finally ended in 1968 as the NPS realized that firefall attracted too many people, brought too many cars who left behind too much litter, automobile exhaust, and trampled vegetation.

For a number of years, and up to the time of World War II, "bear shows" were staged daily in some of the western National Parks, and thousands of visitors enjoyed them thoroughly. Food, usually garbage from park restaurants and hotels, was hauled to a designated area at a certain time of day. Bears were on hand in varying numbers, and a ranger or naturalist was present to tell the people about the interesting animals. Such a program, however, was more in keeping with manmade parks and zoos than National Parks, where it has long been an accepted policy that every species shall be left to carry on its struggle for existence unaided, as being to its greatest ultimate good, unless there is real cause to believe that it will perish if unassisted. The presentation of the animal life of the parks to the public shall be a wholly natural one and no animal shall be encouraged to become dependent upon man for its support. In keeping with that policy, the bear shows in all National Park Service areas were discontinued.

Other techniques included elaborate and expensive hotels such as the Old Faithful Inn and the Ahwanhee, dance halls and festivities at concession operated campgrounds.

Drive-thru Wawona Tree
Yosemite National Park, 1929

“Where’s the tree I can drive through?”
The tunnel through Yosemite’s famous Wawona Tree was cut in 1881 as a tourist attraction. It was the second standing sequoia to be tunneled (the first, a dead tree, still stands in the Tuolumne Grove in Yosemite). It stood for 88 summers before it fell during the severe winter of 1968-69.

Factors leading to its failure include heavy snow, wet soil, and, of course, the presence of the tunnel. When it fell, the Wawona Tree was approximately 2100 years old, 234 feet high (71.9 meters), and 26 feet in diameter at the base (7.9 meters). The famous tunnel was 7 feet wide, 9 feet high and 26 feet long at the base (21 meters by 2.7 meters by 7.9 meters).

“Why not cut a new tunnel tree?” many visitors suggest, when they discover that the Wawona Tree can no longer be driven through.

Times change, however, and actions proper for one generation may not fit the needs and goals of a succeeding generation. Our expectations of national parks have changed immensely during the past half century. When our national parks were young, cutting tunnels through sequoia trees was a way to popularize the parks and gain support for their protection. In those early days, national parks usually were managed to protect individual features rather than to protect the integrity of the complete environment. Today, we realize that our national parks represent some of the last primeval landscapes in America, and our goal in the parks is to allow nature to run its course with as little interference from man as possible.

Tunnel trees had their time and place in the early history of our national parks. But today sequoias which are standing healthy and whole are worth far more.
Civilian Conservation Corps

During the Great Depression of the 1930s, many people in the United States were in desperate need of employment so that they could feed their families. President Franklin D. Roosevelt's dream was to conserve the natural resources of the United States while rescuing the largely unemployed population of 17-25 year old young men. Faced with national unemployment of more than 25% when he took office in March of 1933, the President created an organization that could target both goals. In April 1933, the first recruit was signed to the Civilian Conservation Corps.

CCC workers did environmental work and were paid well for it, but were required to send home 25% of the $30 they made each month. FDR said, "In creating this Civilian Conservation Corps we are killing two birds with one stone. We are clearly enhancing the value of our natural resources and second, we are relieving an appreciable amount of actual distress."

A generation of unemployed young men entered the Civilian Conservation Corps (CCC) with a dream of adventure, few skills, little education, and a desire to work and provide for their families. Two million men worked as CCC recruits in more than 1,200 camps across the country between 1933 and 1942.

Nationwide, the CCC accomplished wonders: enrollees built 63,256 buildings, 3,116 lookout towers and 28,087 miles of trails; erected 405,037 signs, markers, and monuments; planted 45 million trees; and fought countless fires. They developed more than 800 state parks. Thousands learned trades that lasted a lifetime. In addition, the CCC provided long-lasting friendships and a sense of loyalty and pride.

The United States entry into World War II foreshadowed the end of the Civilian Conservation Corps. Congress terminated the program on July 2, 1942. The CCC legacy, however, lives on in the nation's landscape and in the hearts of its members and their descendants. There are CCC alumni chapters throughout the country, and efforts continue to preserve the physical evidence of the program.

Dr. Martin Luther King Jr's "I have a Dream" Speech

Lincoln Memorial, August 28, 1963

King's speech was the grand finale of the August 28, 1963, "March on Washington for Jobs and Freedom." The march, led by union leader A. Philip Randolph and organizer Bayard Rustin, drew 200,000 supporters, 50,000 of them white. They included clergy of every faith, students, blue-collar and white-collar workers, and celebrities. Among their demands was the passage of the Civil Rights Bill; desegregation of schools and housing; elimination of racial discrimination in hiring; job training; an increase in minimum wage; and enforcement of the 14th Amendment.

King delivered his stirring "I have a dream" speech asking that the same rights be afforded to ALL Americans citizens—the rights of life, liberty and the pursuit of happiness. The institutional climax of King's civil rights work came with the passage of the 1964 Civil Rights Act and the 1965 Voting Rights Act.

The Lincoln Memorial was built to honor the nation's 16th President. "In this temple, as in the hearts of the people for whom he saved the Union, the memory of Abraham Lincoln is enshrined forever." Beneath these words, the 16th President of the United States—the Great Emancipator and preserver of the nation during the Civil War—sits immortalized in marble. The materials used in this memorial demonstrate a concerted effort to assemble stones from several regions of the United States into a great, classical tribute to Lincoln.

Did you know?

National park areas preserve scientific developments such as Marconi's Wireless Station Site (Cape Cod National Seashore, MA); Thomas Edison's "Invention Factory" and laboratory (Edison National Historic Site, NJ); Wilbur and Orville Wright's December 17, 1903, flight in a heavier-than-air machine at Kitty Hawk (Wright Brothers National Memorial, NC).
Concession Operators in Parks

Visitors wait to board a concession operated cruise liner to Liberty Island, 1961, Statue of Liberty National Monument, NY

Private companies have promoted the parks and served visitors since Yellowstone National Park was designated in 1872. The present-day Commercial Services Program is mindful of this legacy, ensuring that visitors have access to high-quality visitor services in order to fully appreciate our natural and cultural treasures.

Concessioners fill a vital role in helping the NPS carry out its mission. Private companies are drawn to working with NPS in order to offer services to park visitors, which are not provided directly by the government. Concessioners specialize in these operations and are thus able to provide quality services at reasonable prices. By welcoming the private sector as a partner in park operations, the National Park Service broadens the economic base of the region and communities surrounding the parks.

In concert with other NPS divisions, the Commercial Services Program administers nearly 600 concession contracts that, in total, gross over $1 billion annually. NPS concessioners employ more than 25,000 people in a variety of fields during peak seasons, providing services ranging from food service and lodging, to whitewater rafting adventures and motor coach tours. As stated in the Concessions Management Improvement Act of 1998, concession operations “are consistent to the highest practicable degree with the preservation and conservation of resources and values of the park unit.”

Food Conditioned/Habituated Bears

Bear Hold-up at Yellowstone NP (1958)

Black bears forage on a wide variety of natural foods, including grasses, insects, berries, and acorns. The bears, however, are intelligent and adaptable, and will readily accept human foods when they are available. Bears that are exposed to human food often change their behavior and begin seeking it in campgrounds, parking lots, and from backpackers. This results in property damage and dangerous confrontations between humans and bears. The ecological role of such bears is also changed - their use of natural foods diminishes, they become more nocturnal, and the elevation range of habitat use changes. When a bear’s search for human food makes them aggressive toward humans, it poses an unacceptably high threat and must be killed. As a result, black bears have been the subject of intense management.

The history of interactions between humans and black bears in national parks is a long one, marked by some periods that we now look upon as shameful. Early in the park’s history, little was done to keep bears from becoming conditioned to human food. Garbage was readily available in developed areas, and little was done to discourage visitors from feeding bears. Indeed, the National Park Service maintained several “bear pits” in the parks where bears were fed garbage in an attempt to keep them out of park campgrounds and lodging areas, and to provide visitor entertainment. Human injuries were common, and many bears were killed in the name of public safety.

Thankfully, times have changed, and the emphasis is now on managing the behavior of humans rather than the behavior of bears. In recent years, increased staffing has allowed more patrols to detect and correct food storage problems and to provide visitor education.

Did you know?

Avid bikers or hikers can travel the entire 184 mile long canal from Washington, D.C. to Cumberland, Maryland part of the Chesapeake and Ohio Canal National Historical Park.
1872 Hayden Survey Party
Grand Teton National Park, WY

Beginning in 1867, Dr. Ferdinand V. Hayden began a series of exploratory ventures into relatively unknown areas of the American West for the purpose of surveying their natural resources. His parties were comprised of a number of naturalists, scientists and their assistants.

The 1872 survey employed the largest field crew yet; 61 men were divided into two divisions. Hayden led one group into Yellowstone, while James Stevenson led the other party into the Snake River country. Snake River

The Hayden Surveys provided experience and exposure for men who would distinguish themselves in their fields. The 1872 survey was notable also for the number of political appointees included in the expedition; the packers and guides referred to them as “pilgrims.”

Hayden’s article in Scribner’s Monthly (written to accompany Thomas Moran’s sketches) about Yellowstone reached a large and influential body of readers, to whom he brought this message: “Why will not Congress at once pass a law setting it [the Yellowstone region] apart as a great public park for all time to come, as has been done with that far inferior wonder, the Yosemite Valley?” His scientific article, though written prior to the passage of the Yellowstone legislation, did not appear until later; thus, the closing statement, another powerful call for reservation of the Yellowstone region as a national park, could have influenced only those who had seen Hayden’s draft.

Beaded Elk Skin Dress Worn By Good Road, Wife of Red Cloud, Ogala (Sioux) Tribe
Agate Fossil Beds National Monument, NE

This dress is part of the Cook Collection at Agate Fossil Beds National Monument.

When James Cook first arrived in this area, he had the chance to meet Red Cloud of the Oglala Lakota Sioux. They were able to communicate with sign language and over the years James learned some of the spoken language as well. The chance encounter led to a lifelong friendship which resulted in visits to Cook’s ranch by Red Cloud and his people.

The Sioux traveled 150 miles by horse and wagon from the Pine Ridge Reservation in South Dakota for these visits to Cook’s Agate Springs Ranch on the Niobrara River ranch in Nebraska. They needed a pass to leave the reservation and needed the pass to return to it. Once they had settled into their camp they worked for James Cook, hunted, and danced under the trees near the ranch house. This was more than a “visit”, they seemed to melt back to a time when their lives were spent hunting, following game, harvesting native plants, and trading with other people.

During these visits, the Lakota and Northern Cheyenne gave gifts to James Cook and his family and received beef and hides in return. Some of the gifts were made especially for the Cooks including buckskin suits and gloves. Other items were very special, such as a shirt which had belonged to Red Cloud, three generations of pipebags (one belonging to Red Cloud, his father and his son), and one of Crazy Horse’s whetstones.

James Cook and his descendents concluded that these gifts should remain in the immediate area of the ranch.

More information:
• www.nps.gov/history/history/online_books/grte2/hrsl6.htm
• www.nps.gov/history/history/online_books/haines1/iae3c.htm
• www.nps.gov/history/history/online_books/grte2/hrsl4a.htm
• www.nps.gov/archive/jeff/LewisClark2/Circ1804/WestwardExpansion/EarlyExplorers/OtherExplorers.htm

Did you know?
The Vietnam Veterans Memorial (DC) memorializes the 58,000 were killed or missing from the Vietnam War.
Underwater archeologist document the shipwrecked America
Isle Royale National Park, MI

Some of the most interesting archeological resources in Isle Royale are hidden by the frigid waters of Lake Superior. Isle Royale's harbors were potential refuge during storms, but primitive navigation technology also made them treacherous. At least 10 wrecks of large ships, dating from 1870s to the 1950s, lie within the boundaries of the park. These sites comprise one of the most intact collections of shipwrecks in the National Park System. Preserved by the cold, fresh waters of Lake Superior, shipwrecks and submerged terrestrial sites offer amazing insights into Great Lakes shipping, commercial fishing, and the early settlement of Isle Royale.

Investigations of shipwrecks at Isle Royale have provided a more complete picture of the connections between lake and daily life on Lake Superior during the late 19th and early 20th century. Documentation and preservation of the boats help to better understand the technological and economic influences on shipping in the Upper Great Lakes.

Underwater archeologists conduct the same types of research on archeological sites as their counterparts on dry land, albeit under more challenging circumstances. Visibility may be limited, water currents may move objects as they are discovered, and the archeologist has to track his or her depth and time underwater, monitor air consumption and a host of other chores that ensure safety in addition to making valid scientific observations.

Furthermore, many of the tools that are used to record data on dry land are not available to underwater archeologists. Photographs and careful drawings and measurements become very important to the recordation of three dimensional shipwrecks. When excavation is necessary, silt and sediments are removed from an archeological site using a water dredge or airlift.

Paleontologists jacket a newly discovered Ancient Hornless Rhinoceros fossil
Wind Cave National Park, SD

In July 2003, paleontologists were on a routine investigation of fossil sites in Wind Cave National Park when something caught their attention. It was a very large set of fossil teeth. Careful study revealed that these were the teeth of an ancient hornless rhinoceros.

The formation in which these fossils lie is the White River Group. These claystones have been affected by the changing climates since the time they were uncovered by the erosional effects of wind and rain and of freezing and thawing.

As the fossils were being uncovered, the site was mapped so the exact location of the fossils and their orientation would be known for later study. To date a small deer-like mammal fossil, a turtle fossil, a horse fossil, and the rhinoceros fossil have been identified.

The process of becoming wet and dry and of freezing and thawing has caused the fossils to become extremely fractured and fragile. The scientists examining the area have to jacket the fossils they find so they won't fall apart upon inspection. To jacket something means that a plaster cast is created to surround the item, then when the fossil is taken to the lab for studying, the cast can be removed.

Without the jacket, the fossil will break into many pieces and putting them back together again would be like putting together the world's most difficult jigsaw puzzle.

These Wind Cave fossils reveal to us a past environment of the park. By protecting these fragile remnants, we can learn about a world that now only exists in fragments of fossils lying exposed on a South Dakota prairie.
Conservators rehabilitate the historic Gettysburg Cyclorama
Gettysburg National Military Park, PA

The “Cyclorama” was a very popular form of entertainment in the late 1800’s, both in America and Europe.

These massive oil-on-canvas paintings were displayed in special auditoriums and enhanced with landscaped foregrounds sometimes featuring trees, grasses, fences and even life-sized figures. The result was a three-dimensional effect that surrounded the viewers who stood on a central platform, literally placing them in the center of the great historic scene. Most cycloramas depicted dramatic events such as great battles, religious epics, or scenes from great works of literature. Hundreds were painted and exhibited in Europe and America during the 1800’s, yet most were lost or destroyed as their popularity died out with the introduction of a more entertaining art form, motion pictures.

The “Battle of Gettysburg” Cyclorama at Gettysburg is one that has survived. This fantastic painting brings the fury of the final Confederate assault on July 3, 1863 to life, providing the viewer with a sense of what occurred at the battle long touted as the turning point of the Civil War.

Initiated in 2003, the Gettysburg Cyclorama underwent a thirteen million dollar rehabilitation project. Conservation specialists repaired unstable sections of the canvas and restored original details lost during the numerous repair and preservation attempts on the painting. The cyclorama was moved to the new Gettysburg National Military Park Museum and Visitor Center and placed in its own unique viewing auditorium with a restored skyline and foreground. The conserved painting and restored foreground was unveiled to visitors on September 26, 2008 during the grand opening of the visitor center.

Wildlife Biologist working on bear
Denali National Park and Preserve, AK

Wildlife biologist conduct important tests on bears to monitor their health, track their movements and to determine size bear population. Wildlife biologists trap the bears and immobilize bears by an injection that allows them to work safely on the bear.

An immobilized bear cannot blink, wildlife biologist protect its eyes with a cloth covering and provide artificial lubrication with a special eye moisturizer. While one person is performing this task, the other is recording the bear’s respiration rate and heart rate.

Each vital sign is recorded on a data sheet and compared to what is known for a typical immobilized bears.

Information gathered from work-up include gender, weight, total body length, head length and width, height at shoulders, head, chest and neck circumference, rear pad length and width, front pad length and width, tooth condition, markings such as ear collars or tattoos, and natural markings such as chest blaze or scars.

More information:
• www.nps.gov/gett/historyculture/gettysburg-cyclorama.htm
• www.nps.gov/gett/parknews/cyclorama-issues-addressed.htm

Did you know?
Minute Man National Historical Park (MA) is where fighting erupted on April 19, 1775 to start the American Revolution.
Park Ranger shares the history of the Ancestral Puebloan people
Mesa Verde National Park, CO

About 1,400 years ago, long before Europeans explored North America, a group of people living in the Four Corners region chose Mesa Verde for their home. For more than 700 years they and their descendants lived and flourished here, eventually building elaborate stone communities in the sheltered alcoves of the canyon walls. Then, in the late A.D. 1200s, in the span of a generation or two, they left their homes and moved away. Archeologists have called these people Anasazi, from a Navajo word sometimes translated as “the ancient ones” or “ancient enemies.” We now call them Ancestral Puebloans, reflecting their modern descendants.

Mesa Verde National Park preserves a spectacular reminder of this ancient culture. The park protects over 4,000 known archeological sites, including 600 cliff dwellings. These sites are some of the most notable and best preserved in the United States.

Using nature to advantage, Ancestral Puebloans built their dwellings beneath the overhanging cliffs. Their basic construction material was sandstone that they shaped into rectangular blocks about the size of a loaf of bread. The mortar between the blocks was a mix of mud and water. Rooms averaged about six feet by eight feet, space enough for two or three persons. Isolated rooms in the rear and on the upper levels were generally used for storing crops. Underground kivas, ceremonial chambers, were built in front of the rooms. The kiva roofs created open courtyards where many daily routines took place.

Ancestral Puebloans lived in the cliff dwellings for less than 100 years. By about A.D. 1300, Mesa Verde was deserted. Several theories offer reasons for their migration. We know that the last quarter of the A.D. 1200s saw drought and crop failures—but these people had survived earlier droughts. Maybe after hundreds of years of intensive use the land and its resources—soils, forests, and animals—were depleted. Perhaps there were social and political problems, and the people simply looked for new opportunities elsewhere.

When the cliff dwellers of Mesa Verde left, they traveled south into New Mexico and Arizona, settling among their kin who were already there. Whatever may have happened, some of today’s Pueblo people, and maybe other tribes, are descendants of the Ancestral Puebloans of Mesa Verde.

Chris Sharma rock climbing
New River Gorge National Recreation Area, WV

Within the 63,000 acres of New River Gorge National River are over 1,400 established rock climbs. “The New” has become one of the most popular climbing areas in the country. The cliffs at New River Gorge are made up of a very hard sandstone, and range from 30 to 120 feet in height.

World renowned rock climber, Chris Sharma is shown climbing in this picture. Chris Sharma’s meteoric climbing career started when he won the Bouldering Nationals at age 14 and opened the hardest climb in America (at the time, 5.14c) a year later. In the decade that followed, Chris has continued to take climbing to a new level. Not only has he consistently shattered previous conceptions of difficulty, he was recently voted Sa Climber of the Decade. He has sent multiple 5.15 routes, bouldered V15, onsighted 5.14b, and established deep water solo routes at the highest grades. Chris holds claim to the current hardest route in America, and perhaps the world, with his ascent of Jumbo Love at Clark Mountain in California.

Did you know?
Kenai Fjords National Park (AK) has the 300-square-mile Harding Icefield – the largest contained within the boundaries of the United States.
Water Quality Monitoring
Big Cypress National Park, FL

The National Park Service is entrusted with managing 74 ocean and Great Lakes parks across 26 states. Established for their beauty and national significance, these parks conserve over 6,800 miles of coast and 3.1 million acres of ocean and Great Lakes waters, including coral reefs, kelp forests, glaciers, estuaries, beaches, wetlands, historic forts, and shipwrecks.

The Vital Signs water quality monitoring program, supported by the Natural Resources Challenge, is designed to track and support the attainment of the NPS and Department of the Interior strategic goals to protect pristine water quality and improve impaired water quality by supporting the Clean Water Act protections and provisions for designated unimpaired and impaired waters. NPS offices are integrating the water quality monitoring component of the program with the monitoring of other vital signs in parks. Therefore, water quality monitoring may emphasize the support of protected uses through water quality standards as developed by the states, or emphasize the characterization and determination of trends in water quality conditions due to influences like climate change and urbanization.

Grinnell Glacier Overlook Comparison
1920 and 2008 Glacier National Park, MT

Glacier National Park is not named so much for its small glaciers, but for the colossal work of colossal glaciers in the past. Ten thousand years ago, the topography of Glacier looked much the same as it does today. Before that, enough ice covered the Northern Hemisphere to lower sea levels 300 feet. In places near the park, ice was a mile deep.

In 1850, the area known as Glacier National Park had 150 glaciers. Today there are 25. Since the ice ages stopped 10,000 years ago, there have been many slight climate shifts causing periods of glacier growth or melt-back. The latest warm period, peaking in worldwide temperature as you read this, could be cause for worry. World-wide, glaciers are a fairly good indicator of worldwide temperature fluctuations. Glaciers are being studied in the park to correlate them to the latest global warming trends. What roles do human activities play in the current trend? Could we cope with severe regional climate shifts and rising sea levels? Glaciers in the park may be able to tell us whether we have to answer those questions. If the current warming trend continues in Glacier National Park, there will be no glaciers left here in the year 2020.

Glaciers, by their dynamic nature, respond to climate variation and reveal the big picture of climate change. Unable to adapt, like living creatures, Glacier’s relatively small alpine glaciers are good indicators of climate, the long-term average of daily weather conditions. While occasional big winters or frigid weeks may occur, the glaciers of Glacier National Park, like most worldwide, are melting as long term mean temperatures increase. Glaciers are like a visual checking account of the status of the cold part of the ecosystem. Analysis of weather data from western Montana shows an increase in summer temperatures and a reduction in the winter snowpack that forms and maintains the glaciers. Since 1900 the mean annual temperature for Glacier National Park and the surrounding region has increased 1.33°C, which is 1.8 times the global mean increase. Spring and summer minimum temperatures have also increased, possibly influencing earlier melt during summer.

Additionally, rain, rather than snow, has been the dominant form of increased annual precipitation in the past century. Despite variations in annual snowpack, glaciers have continued to shrink, indicating that the snowpack is not adequate to counteract the temperature changes. (more on following page)

Did you know?
Coral Reefs are found at Biscayne National Park (FL) and Buck Island Reef National Monument (VI).
In conjunction with the past century's long-term temperature increase, ocean-driven climate trends (Pacific Decadal Oscillation) influence Glacier National Park's regional climate. Tree-ring based climate records reveal PDO effects that have resulted in 20-30 year periods of hot, dry summers coupled with decreased winter snowpack. These periods have induced rapid recession, as high as 100 m/yr between 1917-1941, and influence the current rate of recession. Even during cooler phases of the PDO cycle, glaciers have continued to shrink, albeit at a slower rate.

The loss of glaciers in Glacier National Park will have significant consequences for park ecosystems as well as impacting landscape aesthetics valued by park visitors. While winter will still deposit snow in the mountains, this seasonal snow will not function the same as glacial ice since it melts early in the summer season. Glaciers act as a “bank” of water (stored as ice) whose continual melt helps regulate stream temperatures and maintains streamflow during late summer and drought periods when other sources are depleted. Without glacial melt water, summer water temperatures will increase and may cause the local extinction of temperature sensitive aquatic species, disrupting the basis of the aquatic food chain. Such changes in stream habitat may also have adverse effects for the threatened native bull trout and other keystone Salmonid species.

More information:
- [www.nrmsc.usgs.gov/research/glacier_model.htm](http://www.nrmsc.usgs.gov/research/glacier_model.htm)
- [www.nrmsc.usgs.gov/research/glacier_retreat.htm](http://www.nrmsc.usgs.gov/research/glacier_retreat.htm)
- [www.nrmsc.usgs.gov/repeatphoto/overview.htm](http://www.nrmsc.usgs.gov/repeatphoto/overview.htm)
- [www.nps.gov/glac/naturescience/glaciers.htm](http://www.nps.gov/glac/naturescience/glaciers.htm)

Horseback Riding
*Buffalo National River, AR*

River Rafting
*New River Gorge National Recreation Area, WV*

Mountaineering
*Denali National Park and Preserve, AK*

World class mountaineering opportunities abound in Denali. Climbers from all over the globe come to test their mountaineering and wilderness survival skills, from the high altitude challenges of Mt. McKinley (20,320 feet), the continent’s highest peak, to the vertical rock and ice walls that line the Ruth Gorge.

Denali (The High One) is the Native American word for Mount McKinley in the Alaska Range. Denali was renamed Mount McKinley for William McKinley, a nominee for president. Since the turn of the 19th century, the official name of this great mountain has not rested in peace. In 1980, the name Mount McKinley National Park was officially changed to Denali National Park and Preserve. The State of Alaska Board of Geographic Names has also officially changed the mountain’s name back to Denali.

Did you know?
National Park of American Samoa is home to two tropical rainforests.
Curatorial Work
Chaco Culture National Historical Park, NM

Museums have played vital roles in interpreting park resources and themes to the public. Like museums elsewhere, park museums are defined largely by the work of curators. Curators gather and care for collections of objects, record and study them, and use them in exhibits and other interpretive media. In the national parks work of this kind went on for years before any staff member received the title of curator, and many people with other titles—superintendents, rangers, naturalists, historians, archeologists, and clerical and custodial workers—still do such work. Conservators, museum registrars, exhibit designers, preparators, and technicians regularly collaborate with curators as different sorts of museum specialists. They are all part of curatorship to the extent that they help acquire, take care of, or use museum specimens.

Among the cultural resources that historical parks are charged to preserve are collections of material culture in the broadest sense: archeological remains, fine and decorative arts, architectural fragments, relics, curiosities, natural history specimens, and their attendant documentation. The very rationale for such holdings requires a curator to exercise the skills of a social historian in order to understand and optimally manage his charges. A curator must have an intimate knowledge of the context in which the collections were produced, used, and assembled in order to perform her job.

Search and Rescue
Yosemite National Park, CA

On average, 11 search and rescue (SAR) efforts are conducted in NPS units every day, and young male hikers, age 20-29 years, are most likely to require those SAR efforts. Errors in judgment, fatigue and physical conditions, and insufficient equipment, clothing, and experience are the most common contributing factors.

From 1992 to 2007 there were 78,488 individuals involved in 65,439 SAR incidents. These incidents ended with 2,659 fatalities, 24,288 ill or injured individuals, and 13,212 saves. On average there were 11.2 SAR incidents each day at an average cost of $895 per operation. Total SAR costs from 1992 to 2007 were $58,572,164.

In 2005, 50 percent of the 2,430 SAR operations occurred in just five NPS units. Grand Canyon (307) and Gateway National Recreation Area (293) reported the most SAR operations, followed by Yosemite, Rocky Mountain, and Lake Mead.

Yosemite National Park accounted for 25 percent of the total NPS SAR costs ($18,345) had the highest average SAR costs. Hiking (48%) and boating (21%) were the most common activities requiring SAR assistance. Hiking (22.8%), suicides (12.1%), swimming (10.1%), and boating (10.1%) activities were the most common activities resulting in fatalities.

Without the presence of NPS personnel responding to SAR incidents, 1 in 5 (20%) of those requesting SAR assistance would be a fatality.

Almost half (40%) of the operations occurred on Saturday and Sunday, and visitors aged 20 to 29 years were involved in 23 percent of the incidents. Males accounted for 66.3 percent of the visitors requiring SAR assistance.

Day hiking, motorized boating, swimming, overnight hiking, and non-motorized boating were the participant activities resulting in the most SAR operations. The vast majority of visitors requiring SAR assistance were located within a 24-hour period, and the most common rescue environments were mountain areas between 1,524 and 4,572 m, lakes, rivers, oceans, and coastal areas. Conditions, and insufficient equipment, clothing, and experience were the most common contributing factors.

Did you know?
Natural Bridges National Monument (UT) protects the second and third largest natural bridges in the world.
Mountain Lion Research
Santa Monica Mountains NRA, CA

Since 2002 the National Park Service, with the support of the California State Parks and Santa Monica Mountains Conservancy, has been conducting a scientific project to learn more about the habits of mountain lions in SAMO. Scientists also want to know how human development and urbanization is impacting the large cats.

So far, NPS biologists at SAMO have monitored eight mountain lions with radio-collars and GPS tracking devices, enabling them to learn a lot about the animals' ecology and behavior. Identified threats to the lions include habitat loss or fragmentation by roads and urban development. Another threat is secondary poisoning from feeding on animals like coyotes that have consumed poisoned rodents. The monitored lions are elusive, staying away from people and behaving "naturally" despite all the urban development that surrounds them.

Biologists have also been monitoring the movements of mountain lions to identify wildlife corridors, open spaces that link the Santa Monica Mountains to other large natural areas and allow the lions to move between them. Genetically, lions in the Santa Monicas are at the southern end of a larger population that extends northward to Big Sur. The long-term survival of mountain lion populations here depends on their ability to move between regions to maintain genetic diversity.

Tragedy struck in November 2007 when a Grand Canyon wildlife biologist Eric York died from the plague as a result of touching a mountain lion. Eric York's work has contributed greatly to the understanding of these cats at Grand Canyon National Park and initiated the requirement that everyone wear gloves when touching animals.

In 2003, National Park Service biologists at Grand Canyon National Park initiated a radio telemetry study of mountain lions in and around Grand Canyon. Methods included using both very high frequency radio signals and global positioning satellite technology to acquire accurate location information from collared mountain lions. Investigation of GPS locations allows biologists to gather information about lion behavior, including predation habits, reproductive activity, habitat selection, intraspecific interactions and interactions with other carnivores.

Objectives of the study included:

1. Determining behavior patterns of mountain lions that utilize human-populated areas.
2. Documenting mountain lion prey composition and predation rates.
3. Determining impacts of features such as highways, human developments and artificial water sources on mountain lion behavior.
4. Analyzing effects of human activities on the mountain lion population.

Mountain lions were captured with Aldrich-type foot snares using standard methods and equipment for trapping lions. A total of 127 traps were set along game trails, ridge lines, canyon walls and other common lion travel routes. At any one time, up to 25 traps were set from 1- to 50-day periods, year-round, depending on personnel availability and weather conditions. Traps were checked twice daily — visually in the morning near sunrise, and again in the afternoon either visually or by capture activated transmitter on the trap. Traps were closed during periods of extreme weather.

The National Park Service and its partners use such information to develop management plans that protect landscapes critical to wildlife. This promotes the long-term health of our native animal populations, including mountain lions, the ecosystem's top carnivore.

Did you know?
The arch at Jefferson National Expansion Memorial (MO) is a 630-foot high stainless steel arch.
Trail Work
Grand Canyon National Park, AZ
Trail work is an integral part of maintaining a safe and enjoyable atmosphere for visitors as well as ensure the protection of the natural environment. Trail crews are responsible for many tasks including mowing; clearing downed trees, large branches or hazardous trees; repainting/replacing tree blazes that are faded or missing, creating and clearing culverts of all debris so that proper water flow is restored; creating water bars; removing debris from old dump sites along the trail or picking up current trash found along the trail.

Public Land Corps
Kings Canyon National Park, CA
Devils Tower National Monument, WY
Public Land Corps employs youth ages 16-25 in conservation projects through non-profit organizations such as the California Conservation Corps or Coconino Rural Environment Corps. Participants apply and are selected by the non-profit organization. Projects are essentially the same as Youth Conservation Corps conservation projects.

Participants will receive a living allowance and may be able to be hired non-competitively after completing 960 hours of service, 120 hours of which must come from Public Land Corps projects.

Programs can run for the entire summer or for short terms such as one or two weeks.

Participants are typically recruited and selected through one NPS's non-profit partners. Those that are interested should check out the website to the left for a list of non-profit organizations that participate in the Public Land Corps. Applicants apply through the organization to participate in the Public Land Corps.

Participants must be between 16 and 25 years of age and must be either a U.S. citizen or a legal resident.

Participants will learn work skills by working on conservation projects such as:
• Constructing trails, campsites, fences, corrals and bridges
• Repairing/restoring trails, campsites, fences, corrals, board walks and bridges
• Preservation and restoration of historic buildings
• Exotic plant removal
• Reclamation of hazardous abandoned building materials
• Habitat preservation via stream restoration/trail demolition
• Assisting with wildlife research projects
• Teaching environmental education.

More information:
• www.nps.gov/getting-involved/youthprograms/plc.htm

Did you know?
The NPS protects 84,000,000 acres, 4,502,644 of which is oceans, lakes or reservoirs (FY 2008 data).
**Resource Stewardship Scout Ranger**
*Andersonville National Historic Site, GA*

Being a Scout Ranger allows Scouts to discover national parks. Scouts will:
- Learn about the mission
- Help protect the nation's natural, cultural, and historic resources
- Explore your national park
- Earn a certificate or patch by participating in either an educational or volunteer service project.

**How Scouts earn a certificate**
- Participate for five hours in either an educational program or volunteer service project.
- Download the certificate from the scout ranger website (see left panel).

**How Scouts earn a patch**
- Participate for ten hours in either an educational program or volunteer service project.
- Scouts will be awarded a patch upon verbally reporting their completion of the program requirements to an NPS employee or volunteer at a visitor center or information center.

**Activity Sheet**
Scouts interested in keeping a log of their hours may use the Activity Sheet. This is not a requirement, but keeping track may assist in determining how many hours have been completed.

**Share Experience**
The NPS Youth Programs Division wants to hear about Scout's experiences! Send an email to the National Park Service at npsyouthprograms@nps.gov. Scouts should include their name, age, and troop. Scouts can also submit a short description of your experience to the BSA Good Turn for America website.

**Educational Programs**
National park sites offer many educational or interpretive programs that scouts can join, including:
- Ranger-guided interpretive tours
- Junior Ranger programs
- Environmental education programs
- Any other official NPS education program

**Volunteer Service Project**
Many national park sites have volunteer programs that can offer Scouts an opportunity to assist in a variety of long-term or short-term projects to improve and ensure protection of park resources and facilities. Scouts are encouraged to take part in any sustainable organized project, agreed upon by the NPS, as an appropriate service opportunity that protects and preserves park resources.

**How to Get Started**
- Visit the www.nps.gov to find a park in your state or any park of interest.
- Visit and explore the parks website to learn a little about its history; the natural, cultural or historical resources it protects; and the activities the park offers such as hiking, biking, wildlife watching, canoeing, or snowshoeing.
- Once you have learned a little bit about the park, think about activities that interest you. Many of the parks describe the interpretive and educational programs they offer to the public and various volunteer opportunities on their website. Record a list of ideas for possible activities.
- Contact the park to discuss the possible activities. Once on the park’s website, click on the Contact Us link in the left corner and call the park information number. Identify that you are interested in participating in the Resource Stewardship Scout Ranger program and would like to speak to the person who handles the program for the park.

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**Did you know?**
11,700,000,000 people visited national parks in 2008, NPS employees 28,000 people, and is assisted by 2,482,104 volunteers (FY 2008 data).
Firefighting
Glencanyon National Recreation Area, AZ

Fire is the combination of heat, oxygen, fuel, and an ignition source. Fuels include grasses, needles, leaves, brush, and trees. Natural ignition sources include lightning and lava. Fire management staff sometimes starts fires to improve habitat or restore systems. However, sometimes people also start unwanted wildland fires through carelessness or arson.

Wildland fire has great potential to change park landscapes more often than volcanoes, earthquakes, or even floods. Such forces of change are completely natural. Many plants and animals cannot survive without the cycles of fire or flooding to which they are adapted. If all fire is suppressed, fuel builds up and makes bigger fires inevitable. Under certain conditions, large, hot fires can threaten public safety, devastate property, damage natural and cultural resources, and be expensive and dangerous to fight.

National Park Service policy stresses managing fire, not simply suppressing it. This means planning for the inevitable and promoting the use of fire as a land management tool. The goal is to restore fire’s role as a dynamic and necessary natural process.

A structural fire is a fire originating in and burning any part or all of any building, shelter, automobile, aircraft, vessel or other structure. For the purposes of this program, any fire that is not classified as a wildland fire is a structural fire.

Youth Conservation Corps
Yellowstone National Park, ID/WY/MT

The Youth Conservation Corps enables young adults 15-18 years old to learn more about conservation, gain work skills, and explore public lands. The Youth Conservation Corps is available from many agencies including FWS and USFS. Programs are conducted for 8-10 weeks during the summer. Most programs are non-residential, but Yellowstone and Yosemite offer residential programs.

There are two main components to YCC: conservation work projects and environmental education. Participants work on similar projects as the PLC (see information on PLC). With environmental education the goal is for every participant to understand how their projects benefit the park or the environment overall, the positive and/or negative impacts of the project and information about the park they are helping out. YCC staff will educate participants about common conservation and environmental topics.

Participants are paid the established federal minimum wage. However, in states with a minimum wage higher than the federal will be paid at the higher rate. Interested individuals need to apply through the individual parks. Most applications are due by April 15th, but many parks have different deadlines.

Enrollees are selected without regard to civil service or classification laws, rules or regulations. The selection process is conducted in a public forum by the random method.

Living History
Castillo de San Marcos National Monument, FL

Living history began in earnest in the national parks in the 1960s in order to better interpret the reality of historical sites. Living History comes in many forms such as mule-drawn barge trips, demonstrations of mill work and mountain crafts, colonial glass making, historic firearm demonstrations, rangers dressed in period clothing, native americans producing handicraft, dance performances, operating historic farms with period crops and livestock, cooking and baking demonstrations, first person portrayals.

Did you know?
The NPS protects 582 national natural landmarks, 2,461 national historic landmarks, 68,561 archeological sites, 400 endangered species, 27,000 historic structures. (FY 2008 data).