The State of America's National Parks

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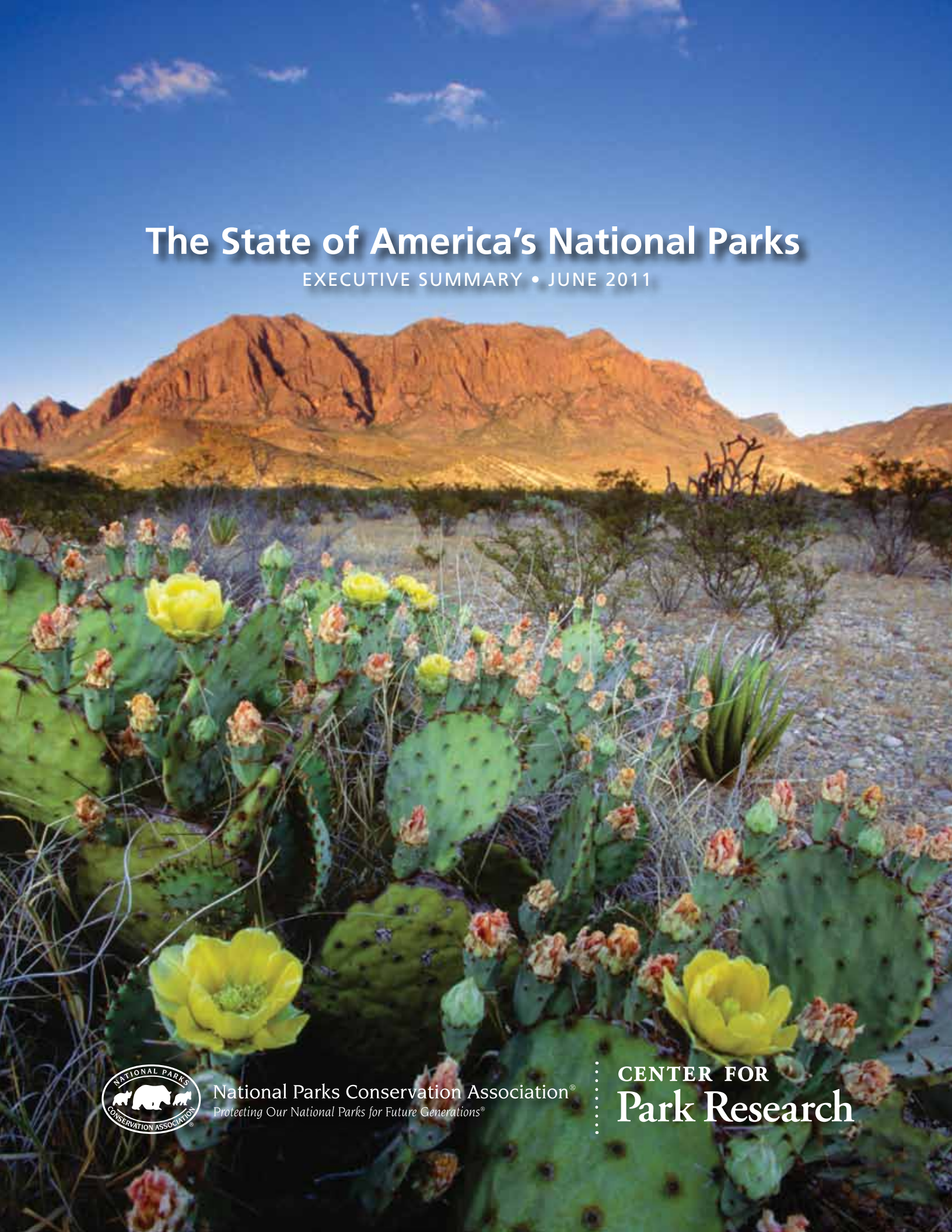

National Parks Conservation Association®
Protecting Our National Parks for Future Generations®

CENTER FOR
Park Research

National Parks Conservation Association®
Protecting Our National Parks for Future Generations®

SINCE 1919, NPCA has been the leading voice of the American people in protecting and enhancing our National Park System. NPCA, its members, and partners work together to protect the park system and preserve our nation's natural, historical, and cultural heritage for generations to come.

- More than 600,000 members and supporters
- Twenty-three regional and field offices

CENTER FOR Park Research

More than a century ago, Congress established Yellowstone as the world's first national park. That single act was the beginning of a remarkable and ongoing effort to protect this nation's natural, historical, and cultural heritage.

Today, Americans are learning that national park designation alone cannot provide full resource protection. Many parks are compromised by development of adjacent lands, air and water pollution, invasive plants and animals, and increases in motorized recreation. Park officials often lack adequate information on the condition of critical resources within their parks, and knowledge about system-wide issues is also incomplete.

The National Parks Conservation Association initiated the State of the Parks program in 2000 to assess the condition of natural and cultural resources in individual national parks. To date, 80 parks have been studied. Recently, the Center for State of the Parks (CSOTP) turned its attention to issues affecting the National Park System as a whole. Because of this change in focus, CSOTP changed its name to the Center for Park Research (CPR). The Center for Park Research delivers scientific information on systemic issues affecting national parks and their solutions. The goal of the new center remains the same: Provide information that will help policymakers, the public, and the National Park Service improve conditions in national parks, celebrate successes, and ensure a lasting legacy for future generations.

To learn more about the Center for Park Research, visit **www.npca.org/cpr** or contact:

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Cover: Blooming prickly pear cactus in Big Bend National Park in Texas. ©Art Wolfe
Left: Baker Creek in Great Basin National Park in Nevada. ©Scott Jones

The State of America's National Parks

Introduction

America's national parks are a profoundly empowering idea: landscapes of awe-inspiring beauty, humble structures where American democracy was born, cathedral forests nourishing seeds for the intricate web of life. Our national parks give us the chance to appreciate the living creatures we share the earth with and relearn the history that makes us who we are. Our parks are battlefields in the struggle for human freedom, witnesses to powerful geological forces, settings for cryptic biological processes, and classrooms for new generations of Americans. Collectively known as "America's best idea," our national parks are the places we go for reflection, inspiration, and connection to the natural, historic, and cultural world.

Our national parks also hand us a lesson in humility and responsibility. They belong to all Americans, but they depend on us for survival. We are responsible for their health and for their future.

Our nearly 400 national parks draw waves of visitors—and rightly so. But we have sometimes focused more attention on serving these visitors than on protecting the parks' resources. Visitors' immediate and pressing demands too often eclipse the conservation of the natural and cultural resources the parks were established to protect.

To draw attention to this situation, in 2000 the National Parks Conservation Association (NPCA) developed the Center for Park Research (formerly the Center for State of the Parks) to analyze national park resources and their conservation challenges—at individual parks and across the park system as a whole.

Left: In 2010, nearly 560,000 people visited Mesa Verde National Park in Colorado. Protecting the resources that visitors go to parks to experience should be paramount throughout the National Park System. ©Dallas Clemmons

NPCA launched a series of State of the Parks resource assessments aimed at producing the first comprehensive survey of natural and cultural resource conditions in America's national parks.

Below: Despite the historic importance of the resources in parks such as Gettysburg National Military Park in Pennsylvania, the Center's assessments indicate that cultural resources are consistently underfunded throughout the park system. ©Dwight Nadig/istockphoto

The Center for Park Research: Measuring Park Resource Conditions

Over the past century, the Wilderness Act, the National Historic Preservation Act, and the Redwood National Park Expansion Act of 1978 have bolstered conservation efforts in America's national parks. As well, a full complement of environmental laws—from the Clean Air Act and Clean Water Act to the National Environmental Policy Act—have promoted the ecological health of the parks. The National Park Service report, *State of the Parks–1980: A Report to Congress*, along with other efforts like *The Vail Agenda* of 1991 and the *National Parks Second Century Commission Report* of 2009, highlighted the challenges and opportunities facing our national parks.

Despite these efforts, the on-the-ground condition of national park resources has continued to be inadequately understood. In response, NPCA launched a series of State of the Parks resource assessments aimed at producing the first comprehensive survey of natural and cultural resource conditions in America's national parks. NPCA knew that gathering systematic information on park resources would strengthen the organization's education and advocacy efforts on behalf of individual national parks, but equally important was the potential for offering a view of resource conditions in the National Park System for Congress, the administration, and the American public.

Between 2001 and 2010, Center for Park Research staff gathered information on 80 parks, a 20 percent sample of the 394 parks in the National Park System. The assessments identified issues that challenge both the immediate and long-term integrity of natural and cultural resources. Their distribution has helped broaden awareness of the condition of park resources among policymakers, stakeholders, the public, and the National Park Service itself.

As the 2016 centennial of the Park Service approaches, the Center's assessments represent the most comprehensive overview yet performed on resource conditions in America's national parks. The findings are sobering: National park cultural resources are often ignored and consistently underfunded, many natural resources are being degraded, and throughout the National Park System, conservation efforts are failing to keep pace with the forces that threaten resources.

The goal of the Center for Park Research's decade-long effort has been to understand the condition of natural and cultural resources in our national parks and—based on the threats and successes identified—recommend strategies to expand National Park Service successes and improve park health. This publication, and the longer report it is drawn from, presents the results of these efforts.

Left: Rocky Mountain National Park in Colorado provides countless opportunities for visitors to enjoy time with friends and family. ©Dana Romanoff Photography, LLC
Top: Expansive views at parks such as Sleeping Bear Dunes National Lakeshore in Michigan allow visitors to reconnect with nature. ©Michael Westhoff/istockphoto
Above: At San Antonio Missions National Historical Park in Texas, visitors can learn about 18th-century Spanish missions. ©Stefan Witas/istockphoto

Threats Unveiled: Park Resources in Decline

The Center's research findings are distressing to anyone who cares about America's national parks. Natural resource ratings ranged from "excellent" to "critical," but most parks—66 percent of those we examined for natural resource conditions—earned an unimpressive "fair," indicating signs of degradation and vulnerability to continued degradation. Cultural resources fared even worse: In 91 percent of the parks surveyed, cultural resources were in "fair" or "poor" condition. None merited an "excellent" rating.

We found in many cases that development on lands adjacent to national parks is negatively impacting resources inside park boundaries. In parks as different as Grand Canyon in Arizona, Big Thicket in Texas, and Harpers Ferry in West Virginia and Maryland, mining, energy production, roads, and housing projects on adjacent lands can fragment wildlife habitat, diminish air quality, disrupt cultural landscapes, and contaminate water resources.

Our assessments revealed that native plants and animals are being eliminated from park landscapes: Ninety-five percent of the parks assessed reported missing animal or plant species. In places such as Hawai'i Volcanoes National Park, invasive plants and animals are crowding out native species and creating one of the park's most serious resource threats.

Climate change is another pressing concern, a systemic threat to the iconic flora and fauna of many national parks—the Joshua trees of Joshua Tree National Park and the redwoods of Muir Woods National Monument and Redwood National and State Parks among them. Rising sea levels wrought by climate disruption threaten to inundate coastal archaeological sites in Katmai National Park and Preserve in Alaska. But climate change is more complicated than losses of individual species or negative impacts from sea level rise. Although the National Park Service has initiated investigations on the effects of climate change in several national parks, much remains unknown. Indications are that climate change is producing alarming effects throughout the entire park system.

Above: Climate change threatens Redwood National and State Parks' towering icons. ©Images&Stories/Alamy

Cultural resources are also suffering. Two-thirds of the 394 units in the National Park System were designated to protect important historic or cultural sites, but their resources remain in peril, partly because cultural resources receive far less attention—and funding—than natural resources. A persistent assumption exists among the public, Congress, and even some National Park Service staff that the agency's primary mission is to protect scenic wonders and wildlife, while preserving historic places, structures, and artifacts is of secondary importance—or worse, a regrettable diversion of time and funding.

Consequently, many parks do not have enough trained professionals to oversee their cultural resources. With too few staff to watch over them, prehistoric sites and battlefields continue to be looted and destroyed, historic buildings are vandalized, and museum collections are left unorganized. Key cultural resource surveys have yet to be performed in many parks: In 2000, the National Park Service estimated that 43 million of its 80 million museum artifacts were uncataloged, and 28 million objects were at risk of decay or loss. Many parks lack adequate documentation and research on their cultural resources, and their artifacts are being inadequately monitored—meaning that theft and deterioration may go unnoticed.

National park cultural resources also suffer from lack of maintenance. Historic structures are in need of care and repair, but the work often gets deferred: Of the parks the Center assessed for cultural resources, almost 30 percent reported deferred maintenance costs in excess of $1 million. Harpers Ferry National Historical Park alone has an estimated $59 million in deferred maintenance and rehabilitation costs.

This is alarming because cultural resources are vital to helping visitors understand the significance of the people, places, and events associated with our national parks. Yet cultural resources—particularly archaeological resources—are not being adequately integrated into the parks' interpretive programming: Nearly 93 percent of the parks the Center examined had deficiencies in cultural resources interpretation. Without the research and maintenance these resources require—and the professional staff to care for them and voice their stories—this part of America's history will be lost.

In many cases, development on lands adjacent to national parks is negatively impacting resources inside park boundaries.

Below: Funding to maintain historic structures has failed to keep pace with needs at parks such as Harpers Ferry National Historical Park, where some structures date to the Civil War era. The park has an estimated $59 million in deferred maintenance and rehabilitation. ©Eric Foltz/istockphoto

Reasons for Hope: National Park Service's and Partners' Actions for Success

Even in the face of significant challenges, dedicated National Park staff are demonstrating a knack for holding the line against the erosion of natural and cultural resources. Many of the parks the Center assessed have developed management approaches to address challenges to their particular park—efforts that have been initiated by enterprising staff. Staff are enhancing resource conservation efforts by leveraging existing Park Service programs, creating allies and partnerships, and injecting fresh energy into traditional protection activities.

Innovation and commitment are abundant throughout the National Park Service. Employees are solving resource problems at park, regional, and system-wide levels. Where leadership, communication, and commitment intersect, the results in resource protection are an inspiration that should prompt the administration, Congress, and the American public to redouble their support for our national parks and the people who protect them.

A few examples:

Channel Islands National Park, 26 miles off the coast of California near Santa Barbara, is a place with unique flora and fauna due to its relative isolation from the mainland. These special resources began to suffer dramatically in the mid-19th century, when Anglo-Americans, Europeans, and other immigrants brought livestock to the islands, introduced rabbits for food, and began hunting and fishing. Grazing by livestock and rabbits destroyed native plant communities, accelerated soil erosion, and fragmented wildlife habitat. Hunting decreased the native sea otter population, and the loss of the sea otters allowed sea urchin populations to overgraze the giant kelp beds that fish rely on.

Working with key partners, the National Park Service implemented a large-scale project to restore the degraded ecosystems of Channel Islands National Park. Teams eradicated non-native horses, rats, pigs, sheep, cows, cats, donkeys, European honeybees, and rabbits from the islands and reintroduced bald eagles. Their efforts have produced important restoration milestones: Native grasses have taken hold in formerly degraded habitats, and the native island fox population (which once numbered just 70 individuals) has grown to more than 1,000. The lesson offered by Channel Islands and several other parks around the country is that restoration efforts, even in highly disturbed landscapes, can benefit native ecosystems, protect park resources, and improve the visitor experience.

Glacier Bay National Park and Preserve in Alaska needed to address the pressures on marine habitats from the burgeoning number of park visitors arriving by boat. In 2003, the Park Service responded with a vessel management plan that limited the number of boats allowed in park waters. Based on scientific research and monitoring studies, the plan set speed limits to prevent ship collisions with marine mammals, including the northern humpback whale. And the park's efforts are working, protecting marine mammals that delight visitors from all over the world.

In northwest Arkansas, **Pea Ridge National Military Park** protects a landscape that was used for agriculture during the Civil War. Wooded pastures and croplands were separated by miles of split-rail fencing that kept cattle out of the corn and hay. This fencing, and the sightlines and cover provided by vegetation, was critical to the movement of troops and progress of the battle. But by the time Pea Ridge became a park in the mid-20th century, the fencing was long gone, and changes in vegetation obfuscated the views the soldiers saw, making it difficult for visitors to imagine the 1862 drama.

The park had good documentation of the placement of the fences and the vegetation cover, but always lacked the staff to undertake the necessary restoration work. So when a local corporation joined a national volunteer program for the parks, the staff of Pea Ridge took advantage of the large labor force to rebuild 14 miles of split-rail fencing and restore five miles of historic road traces. The efforts dramatically improved visitors' experience by helping them envision the landscape that influenced the Pea Ridge conflict. The project also improved community relations between the park and local residents, because local volunteers returned to the park to show off "their" fences to family and friends. Pea Ridge's example highlights the creative ways park staff harness manpower when little exists at the employee level.

All of these success stories highlight the importance of having trained park staff who are committed to resource preservation and restoration. Even in small numbers, these professionals are having a big impact on the resources they protect for visitors.

Sufficient funding is critical to getting and keeping knowledgeable park staff and empowering them to efficiently manage resources. NPCA's research throughout the park system shows that when National Park Service staff have sufficient financial support, up-to-date scientific information, and adequate training, positive stories of resource protection abound.

Top Left: Removal of non-native species and a captive breeding program have helped restore Channel Islands' native island fox population. ©Ian Shive/Tandem
Top Right: A vessel management plan at Glacier Bay National Park and Preserve helps protect marine mammals from being struck by ships. Photo courtesy of the National Park Service.

The Way Forward: Recommendations

The natural and cultural resource assessments carried out by NPCA's Center for Park Research identify the many serious resource challenges facing America's national parks.

The following are NPCA's recommendations for addressing these challenges. As the National Park System approaches its second century, it is vital that the administration, Congress, and National Park Service leadership act on these opportunities in defense of the natural and cultural resources our national parks were established to protect.

Top: Collecting water quality and flow data is important for ensuring the health of park waters. ©James P. Blair/National Geographic Stock
Above: National parks should be home to healthy populations of native wildlife. ©Eric Vondy

■ Reintroduce native wildlife

Following the successful reintroduction of wolves in Yellowstone National Park and elk in Great Smoky Mountains National Park, the National Park Service should reintroduce key species of native wildlife into additional park ecosystems to reestablish their essential role in natural processes.

■ Control non-native invasive species

The administration should use its existing authority to control the entry of non-native plants, animals, and diseases into the United States and provide the Park Service with the resources needed to eliminate or limit the impact of existing non-native invasive species on the national parks.

■ Enforce air quality laws

State regulators, the U.S. Environmental Protection Agency, and the National Park Service should work together to ensure that all national parks meet the standards mandated by the Clean Air Act, the National Park Service Organic Act, and Park Service management policies.

■ Collect critical water data in national parks

The National Park Service should collect comprehensive baseline data on national park water quality, water flows, and aquatic communities to monitor and defend against the impacts of development and extraction activities taking place on adjacent lands.

■ Monitor and respond to the impacts of climate change

The National Park Service should increase data collection and analysis on the impacts of climate change, use the parks as observatories to advance understanding of the consequences of climate change for natural and cultural resources, and take action to mitigate the damages that climate change can produce.

■ Improve the condition of cultural resources

The National Park Service should develop a multiyear strategic initiative to improve the condition of cultural resources throughout the park system. This initiative should include strategies for addressing the currently inadequate level of protection for historic buildings and historic artifacts.

■ Reduce threats from adjacent lands

The administration should enforce existing laws to reduce threats from adjacent lands, including resource extraction, air and water pollution, and development that impair ecological functions, fragment wildlife habitat, and degrade natural or cultural landscapes.

■ Manage adjoining lands cooperatively

The president should issue an executive order requiring federal agencies to manage their lands and waters cooperatively with surrounding landscapes to conserve and restore natural ecosystems and watershed health. The order should direct federal agencies to partner with state, local, and tribal governments, private landholders, nonprofit organizations, and each other to conserve and restore large landscapes identified as ecologically significant by the National Park Service.

■ Expand the National Park System

By 2012, the National Park Service should prepare a new park system plan that identifies key park wildlife habitat, lands required to implement climate change adaptation and mitigation, and under-represented themes of American history and cultural diversity. The president and Congress should establish new parks and expand existing parks to make the National Park System truly representative of the nation's remarkable natural and cultural heritage.

■ Provide sufficient funding and staffing

Congress and the administration should provide sufficient funding and staffing for National Park Service operations, maintenance, construction, and land acquisition necessary to achieve the high level of natural and cultural resource protection mandated by the 1916 National Park Service Organic Act.

It is vital that the administration, Congress, and National Park Service leadership act to defend the resources our national parks were established to protect.

Below: Some of the nation's first African-American Regular Army regiments served at Fort Davis National Historic Site in Texas from the mid-1860s through the mid-1880s. ©James D. Nations/NPCA

Conclusion

The threats facing America's national parks are serious and sobering. Our parks are becoming biological lifeboats in a changing and challenging landscape. Our historical record, the story of America, too often lies uncatalogued and untold. Yet in the successes we uncovered in our research, we find room for hope.

The State of America's National Parks is our wakeup call: We must protect the biological foundation our society is built upon, and we must preserve the historical record of how we became a nation. To lose our biological underpinning is a threat to our survival; to lose our history is to lose our nation's soul.

Congress created the National Park System in 1916 with a promise—that the most cherished elements of America's national heritage would be preserved unimpaired for future generations. Unless we implement the strategic recommendations of this report, this is a promise we cannot keep.

For a detailed report on the research findings of NPCA's Center for Park Research, visit www.npca.org/cpr.

Above: The dark night skies of many national parks, such as Arches in Utah, allow visitors to connect with the universe beyond planet Earth. This opportunity—a new experience for many city-dwellers—is threatened by development that spills light pollution into the skies and by air pollution that creates haze that obscures the stars. Photo courtesy of the National Park Service.

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