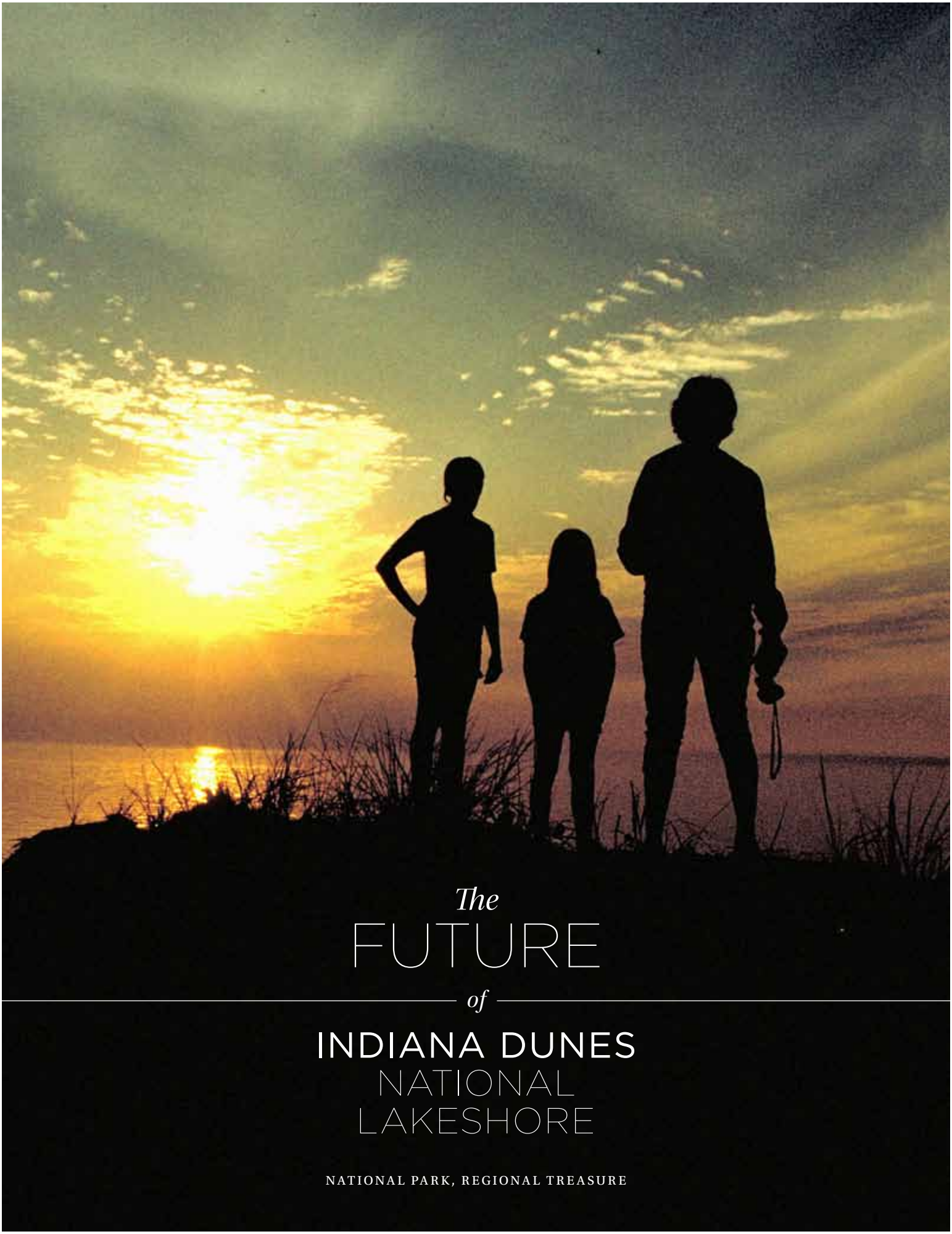

The FUTURE *of* INDIANA DUNES NATIONAL LAKESHORE

NATIONAL PARK, REGIONAL TREASURE

PROJECT PARTNERS:

NATIONAL PARKS
CONSERVATION ASSOCIATION

THE FIELD MUSEUM OF CHICAGO

INDIANA UNIVERSITY,
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CONTENTS

Front of a moving dune, Dune Park, Indiana.

AMERICAN ENVIRONMENTAL PHOTOGRAPHS COLLECTION,
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> *The Dunes are to the Midwest what the Grand Canyon is to Arizona and Yosemite is to California. They constitute a signature of time and eternity. Once lost, the loss would be irrevocable.*
>
> — CARL SANDBURG

OUR NATIONAL PARK

HOME TO:

15,177 acres of beaches, dunes, marshes, prairies, bogs and forests

15 miles of Lake Michigan shoreline just 40 miles from the nation's 3rd largest city

45 miles of hiking and biking trails

1,700 species of native birds, plants, amphibians, insects, fungi, and other organisms found in 2009 BioBlitz

30 percent of Indiana's listed rare, threatened, endangered and special-concern plant species

28 species of native orchids

OPPOSITE, CLOCKWISE FROM TOP: © PETE DOHERTY, DOHERTY IMAGES; NPCA; © MICHAEL SEABROOK; © CAROL FREEMAN

INTRODUCTION

Far into the horizon, wide blue water reflects the sky. Waves crinkle at the shore, scattering sand and tumbling pebbles that are a legacy of ancient glaciers. Graceful dunes roll back from the beach to forests, marshes and bogs that are home to an unrivaled diversity of species, including endangered butterflies, orchids and badgers. Yet look east and west to steel mills and power plants, or across the water to the sharp skyline of the nation's third largest city. **This marvel of a national park, Indiana Dunes National Lakeshore, visited by some 2 million people each year, was created and survives in one of the most heavily populated places in the United States.**

Here, Native American trails and portages that connected the Mississippi River system and the Great Lakes became a dense network of railroads, canals, roads and ports that supported muscular industrial development and the building of great cities. It took a long time for some people to realize that in the spaces between was something deep, rare and precious that deserved to be saved and protected for all Americans.

Our goal in this document is to present thoughtful, informed ideas for the future of this great national park, with a goal of sparking action and cooperation to strengthen and safeguard it.

Indiana Dunes National Lakeshore was created after decades of advocacy and argument in a series of compromises. Strung along the southern shore of Lake Michigan between Gary and Michigan City, Indiana, it is a 25-mile-long patchwork of crucial habitats and breathtaking landscapes stitched together from land between industrial and residential developments, railroad lines and interstate highways.

Today, as thousands of children romp on the beach, researchers from half a dozen major academic centers come to study species found nowhere else on earth, an easy drive on the interstate and a short hike down a shady trail from the access road to a huge industrial plant.

The challenges of this park are many. Its history has left it fragmented, with inconsistent and confusing boundaries. To many, that fragmentation helps make it all but invisible — especially in Chicago, just an hour away, home to many of the park's strongest advocates decades ago. Climate change is a growing threat. Many kinds of pollution imperil the park, in the air, in the water and in the form of noise. Development continues, putting pressure on the park and on the species whose habitats it includes. Like all national parks, Indiana Dunes National Lakeshore has faced major budget cutbacks and reduced resources, and as this report is released, the outlook for federal park funding is grim.

In 2016, we will celebrate the 50th anniversary of Indiana Dunes National Lakeshore and the centennial of the National Park Service.

Many plans have been developed for Indiana Dunes National Lakeshore, but few have led to action. The partners in this effort — the National Parks Conservation Association, The Field Museum and The Eppley Institute for Parks and Public Lands at Indiana University — hope that fresh eyes and an independent outlook can help stimulate new discussion and action.

In 2016, we will celebrate the 50th anniversary of Indiana Dunes National Lakeshore and the centennial of the National Park Service. With this document, we hope to increase awareness and understanding of the park and its place in our community, the region and the biosphere. Our goal is to help focus the energies of people, groups and interests in Chicago and the Calumet region to work together on its behalf and to articulate a sound, sustainable action plan for its future.

We aim to identify specific projects and opportunities that could better connect the park with people and communities in Indiana, Chicago and beyond; to make the park the pivot for conservation efforts all over the Calumet region; to maximize the use of its resources; and to create a stronger sense of ownership and support among the leadership of the National Park Service and local and national legislators.

Though this is not a conventional strategic plan, its research and preparation have been rigorous. We interviewed nearly 200 people. An online survey drew 417 responses. We reviewed more than 50 studies and plans as well as many articles, books and blogs. We listened to people who had helped shape the park, who worked at the park, who visited the park, who had written about the park, and who had traveled hundreds of miles to study at the park. From their knowledge and insights we developed and tested our recommendations. This report does not cover every topic, nor does it acknowledge every great project or program. But it does draw on the best efforts of many of the park's best friends.

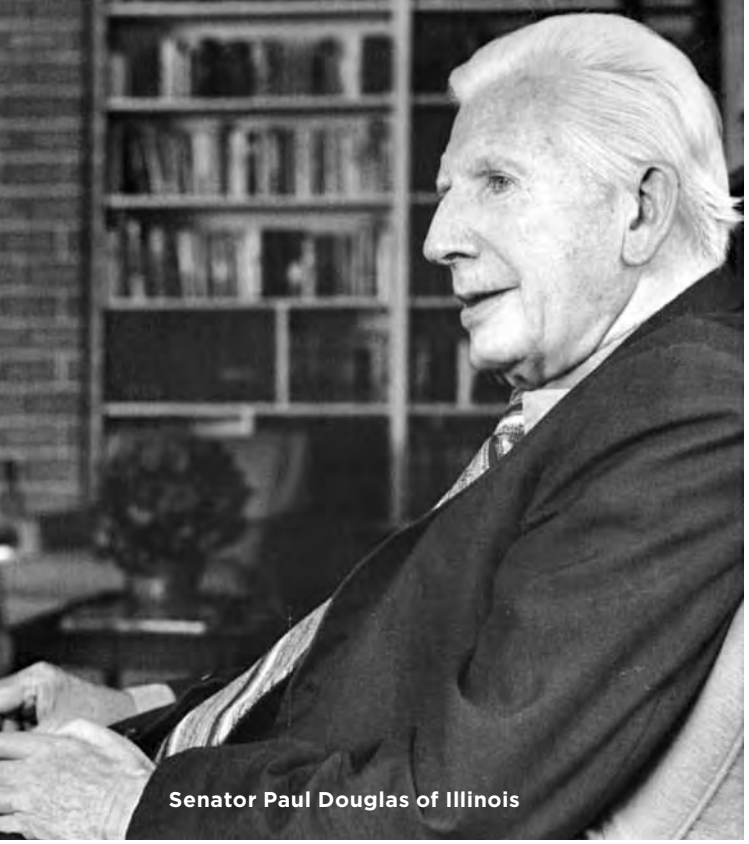
The unique landscapes, wildlife and national treasures that our national parks were created to protect were here long before we were and they will outlive us. Park visitors and staff, park partners and lawmakers will come and go, but what remains is the need to support and protect our national parks.

This marvel of a park is fragile. The natural resources and rich history that Indiana Dunes National Lakeshore was created to protect cannot be sustained without fresh, forward thinking, cooperation, a stronger base of support and coordinated, integrated efforts. Our hope is that this document helps make those things real.

HOW THE PARK **CAME TO BE**

The story of Indiana Dunes National Lakeshore begins in 1899, when University of Chicago botanist Henry Chandler Cowles published the first of many works on the Dunes that have led many to consider him the "founder of plant ecology." Those articles also drew attention to the importance and fragility of this natural area of sand deposited by thousands of years of wave action at the tip of Lake Michigan.

OPPOSITE, FROM TOP: CHICAGO TRIBUNE; AMERICAN ENVIRONMENTAL PHOTOGRAPHS COLLECTION, DEPARTMENT OF SPECIAL COLLECTIONS, UNIVERSITY OF CHICAGO LIBRARY; NPS



Senator Paul Douglas of Illinois

Henry Chandler Cowles and researchers.

Conservationists in Chicago, including pioneer landscape architect Jens Jensen recognized that the rising tide of industrial development threatened the Dunes and began advocating for their preservation. City dwellers such as poet Carl Sandburg and other artists loved the Dunes for their inspiring beauty and seclusion.

Meanwhile, hundreds of thousands of people came to work in factories along the railroads and what were once scattered villages grew. Gary, Indiana was created by leveling sand dunes and soon the shoreline between Gary and Chicago was almost entirely built up with mills and refineries.

The Prairie Club of Chicago, founded in 1908, first proposed that a portion of Indiana Dunes be protected. In 1916, Stephen Mather, a Chicago industrialist and member of the Prairie Club became the first director of the National Park Service and proposed a "Sand Dunes National Park" in the undeveloped area east of Gary. But Congress balked at spending public money to buy private land for a national park for the first time.

It wasn't until 1952 that the nonprofit Save the Dunes Council was formed to push for a national park even as development continued. Many in Northwest Indiana resisted the idea, believing that the shoreline's best use was for industry that would create more jobs.

The council's strongest ally was U.S. Senator Paul Douglas of Illinois. With his leadership, Congress authorized an 8,330-acre Indiana Dunes National Lakeshore in 1966.

By 1966, the largest contiguous stretch of natural areas had already been developed for steel mills and a huge industrial port. So the park's boundaries were drawn, after contentious negotiations, to protect as much as possible of what was left.

After the park's founding, the Save the Dunes Council continued to advocate for its expansion, working with Indiana and Illinois congressmen.

Congress has since passed four expansion bills increasing the park to more than 15,000 acres, including some imperiled habitats well inland that are disconnected from the core of the park.

OUR IDEAS
FOR THE **FUTURE** OF THE PARK

SUPPORT FOR THE PARK

For the park to thrive, it must have **strong voices of support**, dedicated to understanding how to protect and advocate for it, and a robust philanthropic partner. Our recommendations:

- Establish a strong coalition of advocacy organizations and individuals that will defend Indiana Dunes National Lakeshore and work in a coordinated way on its behalf.
- Empower a park partner to take the lead in raising money, providing educational programs and supplementing the park staff.
- Strengthen the base of dedicated, reliable volunteers to enhance park programs and projects and help offset declining staff positions.

MANAGING THE PARK

Land and water, wildlife and plant life must be managed within the context of the regional landscape, and the park's **fragile resources must be protected** from encroaching development. Our recommendations:

- Complete an official boundary study and redraw the park boundary to eliminate jagged contours and connect fragments.
- Work with partners to develop and implement a land acquisition strategy and complete land acquisition within the new park boundary.
- Manage Indiana Dunes National Lakeshore and Indiana Dunes State Park through a cooperative management agreement.
- Actively manage healthy natural communities and make ecological restoration a high priority for the more degraded areas of the park.
- Restore wetlands and reconnect watersheds to be a natural filter where water flows into Lake Michigan.
- Establish a climate change action and response plan to protect the park resources most at risk.
- Manage the Lake Michigan shoreline at the highest possible level of stewardship.

VISITING THE PARK

The park must be made **more accessible and easier to navigate** so more people can discover and experience it. Our recommendations:

- Guide visitors through ample, clear and consistent signage and other aids to navigation and understanding.
- Resolve parking and access issues and provide transportation alternatives to and within the park.
- Construct new trails and improve existing ones.
- Convey the non-industrial stretch of U.S. Highway 12 to the park to improve visitor safety and enjoyment.
- Restore and renovate top visitor facilities.
- Redesign the shared Visitor Center to set the tone for the visitor experience and be a true national park gateway.

SCIENCE IN THE PARK

As a national eco-treasure, the park needs a higher profile and more **central role in scientific discovery** and research in the Great Lakes. Our recommendations:

- Make the park a discovery ground for future scientists, both in the field and in the classroom.
- Create a center for scientific inquiry at the park by establishing a satellite of the National Park Service Great Lakes Inventory and Monitoring Network or a Cooperative Ecosystem Study Unit.
- Connect the work of scientists, researchers and land and resource managers in the park.

CONNECTING PEOPLE TO THE PARK

The park needs greater visibility, stronger identity as a national park and **deeper emotional and economic ties** within and beyond the region. Our recommendations:

- Broaden the presence of the National Park Service by creating a Heritage Trail of sites that tell important stories of science, nature, labor history, industry and people leading from Chicago to Northwest Indiana.
- Greatly expand marketing efforts, capitalizing on the National Parks brand.
- Reach out to create connection and recruit support in the region, especially in the Chicago metropolitan area.

"I remember what a wonderful and rugged place it was when I was a kid from Chicago. It seemed like another world..."

— SURVEY PARTICIPANT

SUSTAINING THE PARK

For the **long-term health and viability** of Indiana Dunes National Lakeshore, it must have more support from key decision-makers. Our recommendations:

- Engage the Indiana and Illinois Congressional delegations with the park to provide federal funding and policy support.
- Convince key state and local officials in Indiana and Illinois that the national park is a critical asset to the region's economy and well-being.
- Raise the park's profile as an important Great Lakes national park within the National Park Service.

TOP, LEFT TO RIGHT: SEAN SMITH, NPCA; JEFF GREENBERG/ALAMY; © RUDI1976/DREAMSTIME.COM. ALL OTHERS: NPS


ALIFORNIA

SUPPORT
FOR THE PARK

For the park to thrive, it must have strong voices of support, dedicated to understanding how to protect and advocate for it, and a robust philanthropic partner.

Without the strong volunteer advocacy of citizens who love the Dunes, Indiana Dunes National Lakeshore would not exist. People who wanted to protect this remarkable landscape enlisted the support of powerful legislators and worked tirelessly until the park was created and expanded. But since then, interest in conservation and land stewardship has grown and new organizations have been established to protect the natural resources of the region.

The park has had many partners over the years, helping with volunteers, education and outreach and providing a modest flow of donations. Now, to meet its many challenges, the park needs a broader base of support. We believe that all the people who love the Dunes and all the agencies and organizations that have an interest in the survival and success of the park, the health of its habitats, and the efficiency and thoughtfulness of its management can be stronger and more effective if they work together on its behalf.

HERE ARE OUR IDEAS.

Establish a strong coalition of advocacy organizations and individuals that will defend Indiana Dunes National Lakeshore and work in a coordinated way on its behalf.

Since 1952, Save the Dunes has been the park's primary advocate, but the organization's work has gone far beyond the park. It has worked to defend Northwest Indiana against air and water pollution, restored wetlands and watersheds, acquired land with valuable habitat and advocated for land acquisition in the region, and educated countless residents and volunteers on the importance of protecting Northwest Indiana's precious natural resources. But Save the Dunes is only one organization, and this park needs the consistent voices of many. The well-being of Indiana Dunes National Lakeshore should be the primary focus of a formally organized coalition. Many groups with regional conservation missions, such as Save the Dunes, Shirley Heinze Land Trust, Hoosier Environmental Council, Chicago Wilderness, Calumet Stewardship Initiative, and National Parks Conservation Association, share an overlapping interest in the park's strength and health. Regional businesses that depend on the millions of tourists who visit the national park each year also have a strong interest in acting on its behalf. Such a coalition would have a broad base of representation and be a strong voice to protect the park.

Such coalitions are effective in marshaling support and defending the land, water and wildlife of other national parks, thereby improving the health of entire regions. The health of this park and that of Northwest Indiana are interdependent; to defend the park is to

OPPOSITE, CLOCKWISE FROM TOP: NPS; EVAN E. PARKER; TIM ELLIOTT/DREAMSTIME.COM

defend the region — not only its ecosystems, but its economic prosperity, recreation and history.

Tools are available to advocate for the protection of the park that also will benefit the surrounding region. For example, the National Park Service has a management policy to protect "viewsheds" — the experience of visitors looking out from a national park. This and other existing management policies can be invoked to ensure that development around the park does not further degrade scenic views and quiet.

A coalition could start small, with representation from local, regional and national organizations that are focused on public land protection. It could grow to include businesses and groups that represent people who benefit from having a national park nearby. It would work to protect the park, to engage critical decision-makers with its future and to increase funding.

But its representatives should meet even when there is no crisis at the park, to exchange information and share visions; to set long-term goals for protecting Indiana Dunes and thereby improving the health of the region; and to maintain ties and communication. Communication should be regular and open for rapid response to any issues or opportunities that arise.

The Calumet Stewardship Initiative and Calumet Research Summits in 2006 and 2010 have brought many regional groups together in an exciting display of talent, knowledge and energy that point to great potential for coordinated effort in the region. A coalition to protect Indiana Dunes National Lakeshore will most certainly draw from that energy.

Empower a park partner to take the lead in raising money, providing educational programs and supplementing park staff.

Indiana Dunes National Lakeshore needs a strong partner to provide support by raising funds for programs and facilities that enrich visitors' experiences. At national parks, such a partner is often formally designated a "cooperating association."

Cooperating associations are nonprofit organizations that supplement the National Park Service's interpretive and educational operations. The first such associations were formed soon after the park service was established in 1916, beginning at Yosemite National Park. Cooperating associations develop and operate education centers, provide programs and events, run visitor centers and raise funds to support the parks' mission.

FUNDING FOR NATIONAL PARKS

National parks can be funded through several sources. They receive funding annually from the federal government for operations, which includes personnel, equipment, supplies and utilities. They also receive federal funding for capital improvements and maintenance, which includes building repair and construction, road repairs and other work on visitor facilities.

Many national parks collect entrance fees. For example, Yellowstone and Grand Canyon National Parks collect $25 per vehicle while Rocky Mountain and Acadia National Parks collect $20 per vehicle. Indiana Dunes National Lakeshore has a $6 per vehicle fee at West Beach and a $15 per night camping fee at Dunewood Campground, but otherwise it is a fee-free park. Parks that collect fees are able to invest a majority of that revenue back into improving services for park visitors.

Between 2003 and 2009, while the operational budget at Indiana Dunes National Lakeshore increased by only 17 percent, personnel costs increased by 23 percent, and fuel, equipment and other costs rose by 38 percent. Over that six-year period, the staff at the park decreased from 101 to 76 people, while the park continued to attract about 2 million visitors a year.

Strong cooperating associations such as the Conservancy for Cuyahoga Valley National Park in Ohio and Friends of Acadia in Maine provide upwards of $1 million annually to each park through direct donations and critical project work and, in some cases, by supporting functions the park would otherwise have to pay for.

Cooperating associations have formal partnership agreements with the national parks they support but are independent organizations with their own boards and staffs. They control their budgets and set their own policies, while working closely with the national park. In effect, they add a margin of excellence and tremendous value to what the National Park Service provides.

Such an association at Indiana Dunes National Lakeshore could be a great force for engaging visitors with the park, improving their experience, deepening their understanding and increasing the number of people who feel connected to the Dunes.

The park already has a partner that could, if its board so chooses, move toward becoming a cooperating association: the Dunes Learning Center.

Since the learning center opened in 1998 as a partnership between the national lakeshore and a new standalone nonprofit, some 50,000 people have benefitted from its educational programs. In the last school year, more than 5,000 students in 4th, 5th and 6th grades, most from Indiana schools, came for the center's three-day, two-night experience in environmental education. The program, based on the unique ecology of the dunes, meets state curriculum standards for math, science, social studies and language arts. For many of those students, it is their first experience of nature, their first night away from home, even their first hike. The learning center also has award-winning programs for high school students and for teachers.

The National Park Service owns the Dunes Learning Center's facility and has provided substantial annual operating support. That financial underwriting has dwindled in recent years because, simply put, the park can no longer afford it.

The learning center has visionary leadership, a wonderful mission and ambitious plans for growth. It needs to be strengthened with an aggressive fundraising campaign so it can renovate and expand the existing facilities; take the lead in restoring the adjacent Goodfellow Lodge, a historic building, for educational

OPPOSITE: DWIGHT NADIG, ISTOCKPHOTO. THIS PAGE: NPS

purposes; and expand its reach into Chicago and its suburbs, Indianapolis, and the rest of Indiana and southwest Michigan.

The Dunes Learning Center has the potential to use its experience with educational programming to grow into a major interpretive partner for the park, explaining its wonders and winning it friends.

The effort to increase the learning center's base of philanthropic support might be its first step toward becoming the powerful partner the park needs.

Strengthen the base of dedicated, reliable volunteers to enhance park programs and projects and help offset declining staff positions.

To succeed, any national park needs a base of well-organized, well-trained volunteers. This is especially critical in the face of flat or declining operating budgets. When reliable volunteers can competently perform tasks such as assisting in education and outreach or natural areas management, they can fill gaps created by staff reductions.

In 2010, Indiana Dunes National Lakeshore hired 20 seasonal workers to assist resource managers in restoring the Great Marsh. In 2011, funding was available for only five paid workers. Trained volunteers who are available at the right times to assist park staff are critical in keeping up the momentum of such important projects.

From fall 2009 through September 2010, nearly 1,500 volunteers worked at the National Lakeshore as campground hosts and assistants, helping interpret the history of the park. The park could use many more volunteers, provided there is adequate staff to train and deploy them effectively.

For a number of years the Friends of Indiana Dunes provided volunteer support to both the national and state parks. Recently, however, the group has shifted its volunteer work entirely to the state park. The loss of these volunteers will undoubtedly be felt in the national park. But among its many friends, we are certain that many new volunteers can be recruited and organized to support the park.

The Student Conservation Association and other groups already are at work connecting young, energetic volunteers with park projects, and the number of high school and college volunteers surely will grow.

CASE STUDY:

FRIENDS OF ACADIA

Acadia National Park embraces 45,000 acres of rocky Maine shoreline, granite peaks and wooded trails. The park attracts about 2 million visitors each year and has a strong cooperating association partner: Friends of Acadia, established in 1986. The organization is guided by a set of operating principles that include stewardship, advocacy and education, citizen engagement, collaboration and independent leadership.

Since 1986, this group has grown to more than 3,500 members, established an endowment of more than $19 million to maintain the park's carriage trails, trained a force of 3,000 volunteers, funded 144 seasonal staff positions at the park and made $15.4 million in grants to the park and to community conservation projects within the park.

OPPOSITE, FROM TOP: NPS; © ZRFPHOTO, DREAMSTIME.COM. THIS PAGE: TIM FITZHARRIS

MANAGING THE PARK

Land and water, wildlife and plant life must be managed within the context of the regional landscape, and **the park's fragile resources must be protected from encroaching development.**

Indiana Dunes National Lakeshore is part of a grand ecosystem of lakes, dunes, forests and wetlands that is constantly in motion: Lake Michigan currents sweep sand onshore to create dunes, and then storms erode them; wetlands that filter water entering from rivers rise and fall with the level of the lake; plant succession crafts dunes into forests. Each habitat within this varied ecosystem provides a home for a particular assortment of mammals, birds, fish, insects, reptiles, amphibians and plants.

This ecosystem co-exists, and in many places is interspersed, with dense development, industry and homes. The park was created in the face of considerable opposition and only after a decades-long struggle. Meanwhile, industrial and residential development continued.

This history accounts for the park's convoluted boundary and outlying fragments. A considerable portion of the land within the park has been acquired through reservations of use and occupancy, purchases that allowed the former owners to continue to occupy the land for up to 25 years. Other sites, not all connected to the main mass of the park, were added to protect precious habitat from development.

This jagged, tangled border greatly increases the difficulty of managing the park. Other national parks may be islands of wilderness. But it is not possible to manage this park's resources and tend to its health without considering all that goes on outside the park.

Climate change, invasive species on land and in water, land acquisition,, encroaching development, staffing, budget, jurisdiction, and the impact of millions of visitors are challenges that face many national parks. But because of the special character that proceeds from its history, these challenges are unusually demanding at Indiana Dunes National Lakeshore. The park's General Management Plan is 20 years old and cries out to be updated.

HERE ARE OUR IDEAS FOR MANAGING THESE RESOURCES.

Complete an official boundary study and redraw the park boundary to eliminate jagged contours and connect fragments.

The long, kinky, broken boundary creates many problems. It confuses visitors, who often are unaware that they have entered a national park, can't find their way around or encounter unexpected obstacles. The interweaving of the boundary with private and municipal property raises jurisdictional issues. It also increases the risk of insidious, often inadvertent encroachment on the park; where homes or businesses are next door, for example, it is easy to pour a driveway or build a shed on park land without realizing it. With limited staff and budget, the park finds it hard to police the boundary, especially when, in some areas, few people even know exactly where it is.

OPPOSITE: TIM FITZHARRIS

The complex boundary multiplies opportunities for invasive species to enter and proliferate, degrading the habitat for native plants and animals and destroying the very natural resources that the park was established to protect. Among those we interviewed for this report, scientists were particularly concerned about how this boundary opens the gate for the march of invasive species. To resist, the park needs a defensible border.

The park's fragmentation into 16 disconnected pieces, including the outlying Heron Rookery, Pinhook Bog and Hoosier Prairie, plays a part in most of its ecological and resource management challenges. Our scientist panel told us that many animals and plants will need to shift their habitat in order to adapt to climate change. If that habitat is in fragments without corridors for migration, they are trapped. A diminished staff will continually struggle to manage disconnected pieces that require travel time from the park's core.

A boundary study, performed by the National Park Service at the request of Congress, should identify how to fill in the gaps and notches and connect the fragments with habitat corridors to preserve native animal and plant species and provide them with space to move and multiply.

Park partners will need to advocate for the National Park Service to fund the study, and then press for Congress to approve the new, more manageable park boundary.

Work with partners to develop and implement a land acquisition strategy and complete all land acquisition within the new park boundary.

The park should work with partners to develop and implement a land acquisition plan that serves its future. These partners should include not only local land trusts, but nationally based groups such as The Trust for Public Lands, The Nature Conservancy, and The Conservation Fund, which have deep pockets and strong political connections.

Among the top priorities for acquisition should be the inholdings, or more than 100 parcels of private property that remain within the park boundary, as well as key adjacent lands and river corridors. There also are 13 homes left within the park for which the former owners have a "reservation of use and occupancy" for up to 25 years. The park should continue to acquire these lands as Congress originally intended.

Disconnected parcels are too difficult for the park to manage. When valuable habitat outside the core of the park calls out for preservation, regional conservation organizations should cooperate to find other means to save it rather than seeking to add it to the park.

The new land acquisition plan must work within the difficult financial realities of the National Park Service.

CASE STUDY:

WORKING WITHIN THE PLAN

When a plan is in place and a scenario is prepared, important land can be saved quickly. In 2007, a highly visible and highly desirable 3.5-acre shoreline property within Voyageurs National Park in northern Minnesota was offered for sale; the asking price was $385,000. This parcel was one of the top priorities in the park's land acquisition plan.

The park turned to its partner, Voyageurs National Park Association, which, with the Minnesota Parks and Trails Council, bought the land in 2008 for the asking price as a short-term measure to protect it until the National Park Service had funds to buy it. The Voyageurs National Park Association and the National Parks Conservation Association advocated in Congress for the $385,000 from the Land and Water Conservation Fund and when those funds were appropriated in 2010, the land was added to the park.

There is tremendous competition for federal funding to purchase land for national parks. For fiscal year 2012, the President's preliminary budget recommendation included only $109 million of the $651 million that had been requested for national park land acquisition — a sum that would fund just 34 of 308 requested projects. Indiana Dunes National Lakeshore's friends and partners will need to strongly advocate within the park service, Congress and the executive branch if its needs are to be among those funded.

The park service acquires land mainly with money from the federal Land and Water Conservation Fund, which receives a portion of its revenues from offshore oil and gas leases. However, only once since it was established in 1965 has the fund received the full amount that is authorized. Congress must fully fund the Land and Water Conservation Fund so national parks can purchase land as soon as it becomes available, to avoid the risk that important parcels will be sold and developed.

Efforts should also be made to increase the capacity of local and national land trusts to acquire land and care for it, while advocating for funds so the park can buy it later. To make sure everyone is prepared for land acquisition opportunities, the park's staff and partners should periodically run scenario-planning exercises to identify parcels most likely to become available.

But even if plans were in place, purchases were authorized and money were in hand, there are bureaucratic obstacles. The appraisal process is severely backlogged and often takes more than a year. Many landowners don't want to wait that long to sell. To avoid missing important chances, appraisals should be decentralized and streamlined to reduce lead time and allow for park-based decision-making.

Indiana Dunes National Lakeshore does not have the right of first refusal for land within its boundary, which means that property surrounded by the park can go on the open market without the owners first checking to see if the park is interested in buying it. Congress should amend the park's legislation to give it the right of first refusal on any land it is authorized to buy.

Where land cannot or should not be acquired, the park should work with other public and private landholders to manage the landscape cooperatively. Rail corridors and locally-owned river easements are obvious candidates for habitat connectors.

Actively manage healthy natural communities and make ecological restoration a high priority for the more degraded areas of the park.

The park needs staff and funding for fire management and invasive species control so that biodiversity is not lost in areas of ecological richness and is increased where natural communities have been damaged.

The movement of invasive species also can be addressed through cooperative landscape management. The park, working with Indiana Coastal Cooperative Weed Management Area members and other local partners, should mount an aggressive outreach program to educate private property owners about how they can manage their land to reduce the impact of invasive species on the park.

Manage Indiana Dunes National Lakeshore and Indiana Dunes State Park through a cooperative management agreement.

Visitors to Indiana Dunes National Lakeshore or to Indiana Dunes State Park often have trouble distinguishing these two adjacent destinations with such similar names. Indiana Dunes State Park is contained wholly within the National Lakeshore and Congress originally intended the state park to become part of the national park, specifying the eventual transfer in the 1966 and 1976 legislation. Opinions differ on whether this should happen. But the heart of the issue is not necessarily who owns the land, but how it is managed.

These two parks have similar resource management missions. But a chain-link fence along the boundary, preventing the free movement of animals and native plants as well as visitors, is a symbol of the agencies' inability to cooperatively manage parts of a single ecosystem. As long as the parks remain separately owned, a strong cooperative management agreement should be signed to define how land, water and wildlife will be jointly managed for preservation and visitor enjoyment.

There are many issues to resolve in negotiating a formal agreement — entry fees being one of them.

OPPOSITE: NPS

But there are examples throughout the National Park System of cooperative management that works. Redwoods National and State Parks forged an agreement that includes a revenue sharing system as well as shared management. The issues at Indiana Dunes should not be allowed to stand in the way of a sensible, comprehensive agreement.

Restore wetlands and reconnect watersheds to be a natural filter where water flows into Lake Michigan.

A huge wetland called the Great Marsh once ran behind the Dunes' ridges, pooling and filtering water on its way into Lake Michigan. But since 1800, development has brought vast changes to this undervalued "swamp land" as roads were built, drainage ditches were dug and miles of underground pipe were laid to carry water away so the former wetland could be farmed. As a result, the Great Marsh was split into three separate watersheds.

National park resource managers want to reconnect the fragments of the Great Marsh to improve water quality, restore habitat and reduce the risk of flooding. Expertise on the value of restoring the natural hydrology is available not only among the park staff but through groups such as Save the Dunes, the Shirley Heinze Land Trust, The Nature Conservancy and other partners in Chicago Wilderness, which already are working on restoration projects in the vicinity.

But long-term, consistent funding is needed to keep restoration work active and effective. The Great Lakes Restoration Initiative of the U.S. Environmental Protection Agency currently funds some Great Marsh restoration. This funding is far from stable, however; it fluctuates from year to year. The park should seek modest but assured long-term funding for Great Marsh restoration through a philanthropic partner.

There is also widespread misunderstanding about why wetlands are important, and a good education campaign is necessary to explain how it will help not only the habitat and Lake Michigan but the interests of nearby landowners by reducing flooding.

Establish a climate change action and response plan to protect the park resources most at risk.

According to reports released in 2009 and 2011 by the Rocky Mountain Climate Organization and the Natural Resources Defense Council, Indiana Dunes National Lakeshore is one of the 25 national parks most vulnerable to the impacts of climate change. These reports underscore the research-based understanding of scientists that climate change will require new approaches in managing native wildlife, dealing with loss of plant communities and the effects of increased temperatures on the park.

All natural resource managers struggle with the issues that a changing climate is beginning to raise. For example, if a species that was once native far south of the park begins showing up in Indiana Dunes National Lakeshore, is it invasive? Or has it simply expanded its native range because the climate has changed?

CASE STUDY:

COOPERATING FOR THE GOOD OF THE HABITAT

The Redwoods National and State Parks offer an excellent model for cooperative management.

Redwoods National Park was established in 1968 to save one of the last stands of old-growth redwoods in California. The California Department of Parks and Recreation already managed several other small stands of redwoods.

In 1978, Redwoods National Park was almost doubled in size.

Sixteen years later, the national and state parks entered a formal cooperative management agreement to protect the redwoods from logging and restore previously damaged or obliterated redwood forests. The agreement clearly spells out jurisdiction, law enforcement procedures, cost efficiencies, research and monitoring practices and many other aspects of joint management. The National Park Service uses the story of this important state and federal partnership in its interpretation of the park's history, and the homepage for the park is entitled "Redwoods National and State Parks."

Park staff have identified one habitat that is particularly susceptible to the effects of climate change: the sand dunes themselves. Shifts in the wind patterns over time have affected the dunes' growth and movement. Now researchers at Indiana University are looking into how warmer winters that reduce lake ice may affect the movement of sand.

Re-assessing the park boundary also is key to meeting the challenge of climate change. As part of the boundary study, the park, in cooperation with regional scientists and researchers, should assess how and where a changing climate may alter ecosystems. Where possible, the new park boundary should be set to better allow for the changes they expect and allow native plants and wildlife to adapt.

In September 2010, the National Park Service released a Climate Change Response Strategy guidebook. Although park managers cannot anticipate every consequence of climate change, area scientists who are leaders in climate change research can help translate the guidebook's strategies into useful approaches for this park. With their aid, the park staff should develop its own climate change action plan, building on regional initiatives and resources such as the Chicago Wilderness Climate Action Plan for Nature and the Climate Change Update to its Biodiversity Recovery Plan.

In 2011, Indiana Dunes National Lakeshore became a "Climate Friendly" park, committing to reduce the carbon footprint of its own operations and educate visitors to do the same. This is a great first step to taking action in the climate change arena.

Manage the Lake Michigan shoreline at the highest possible level of stewardship.

Of the more than 1,600 miles of Lake Michigan shoreline, only about 40 miles are in Indiana. More than half of that falls within Indiana Dunes National Lakeshore.

Many government and private entities have interests in the shoreline, including the National Park Service; several departments within the State of Indiana; the U.S. Army Corps of Engineers; the U.S Environmental Protection Agency; cities, towns and townships; Ports of Indiana; and local steel mills and power plants. These groups are often at odds about who has rights in the lake and along the shoreline, how erosion is managed and how traffic flows through the lake.

Because of the shipping industry and recreational boating, the shoreline bristles with breakwaters, piers and harbors. These man-made structures interrupt currents and have altered the natural east-to-west sand movement that builds the beaches and dunes the park was established to protect. The park's mission to protect the fragile shoreline ecosystem sometimes conflicts with local communities' desire for quick fixes to beach erosion.

Other national lakeshores in Michigan and Wisconsin have far fewer man-made structures along the shores within their boundaries. They also have jurisdiction one-quarter mile from the ordinary high-water mark into Lake Michigan and Lake Superior, while Indiana Dunes National Lakeshore has jurisdiction only 300 feet into the lake. When Congress amended the park's legislation in 1976 to add this 300-foot strip, it was to "provide for better management of shoreline recreation and activities on the Lake."

Indiana Dunes National Lakeshore started a Shoreline Management Plan in 2010 in an effort to determine the best practices for managing this complex stretch of shoreline. When completed, this plan will recommend the best ways to protect endangered species; to protect and restore critical habitat; to minimize the impact of human activity; and to specify what sand should be used to rebuild eroded beaches.

We urge the state of Indiana, local communities and federal agencies to work together to make this plan a true reflection of understanding, collaboration and stewardship.