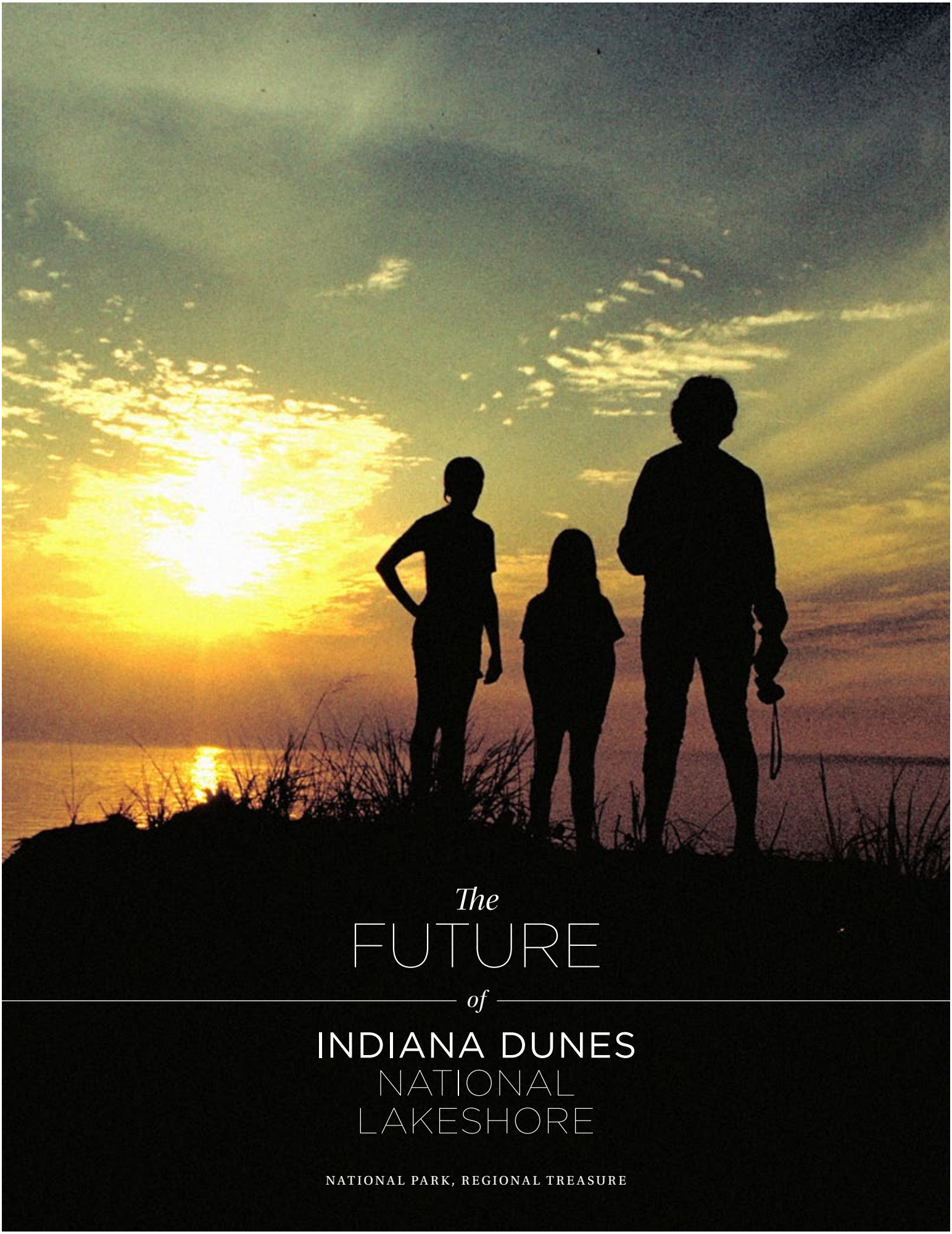

The FUTURE *of* INDIANA DUNES NATIONAL LAKESHORE

NATIONAL PARK, REGIONAL TREASURE

PROJECT PARTNERS:

NATIONAL PARKS
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THE FIELD MUSEUM OF CHICAGO

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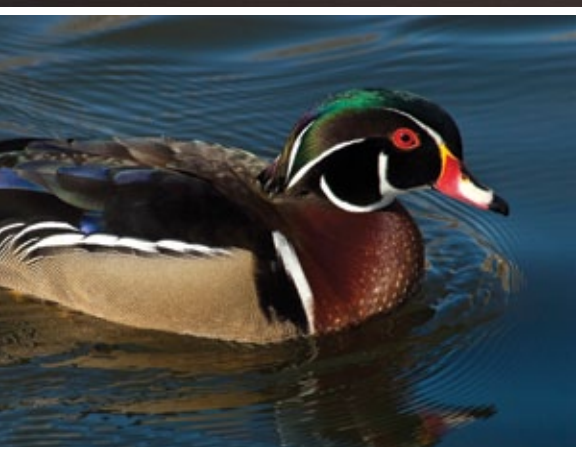
Front of a moving dune, Dune Park, Indiana.

AMERICAN ENVIRONMENTAL PHOTOGRAPHS COLLECTION,
DEPARTMENT OF SPECIAL COLLECTIONS, UNIVERSITY OF CHICAGO LIBRARY

> *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.

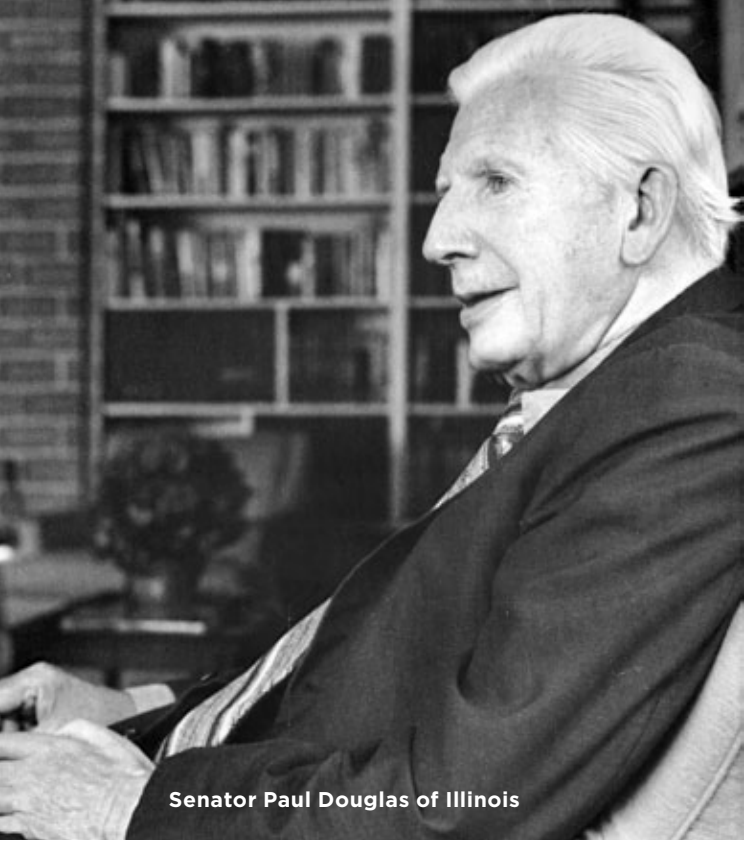
The unique landscapes, wildlife and national treasures that our national parks were created to protect were here long before we were and they will outlive us. Park visitors and staff, park partners and lawmakers will come and go, but what remains is the need to support and protect our national parks.

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**

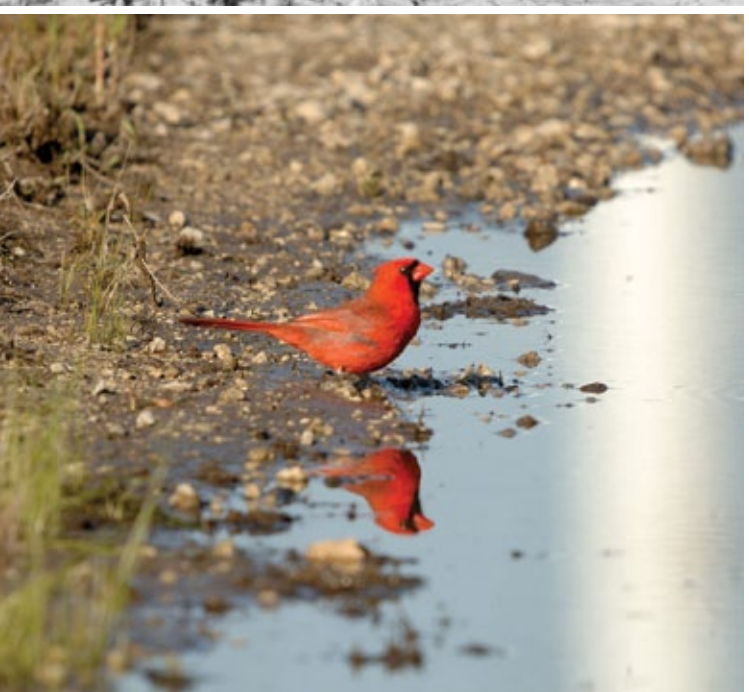
The story of Indiana Dunes National Lakeshore begins in 1899, when University of Chicago botanist Henry Chandler Cowles published the first of many works on the Dunes that have led many to consider him the "founder of plant ecology." Those articles also drew attention to the importance and fragility 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..."

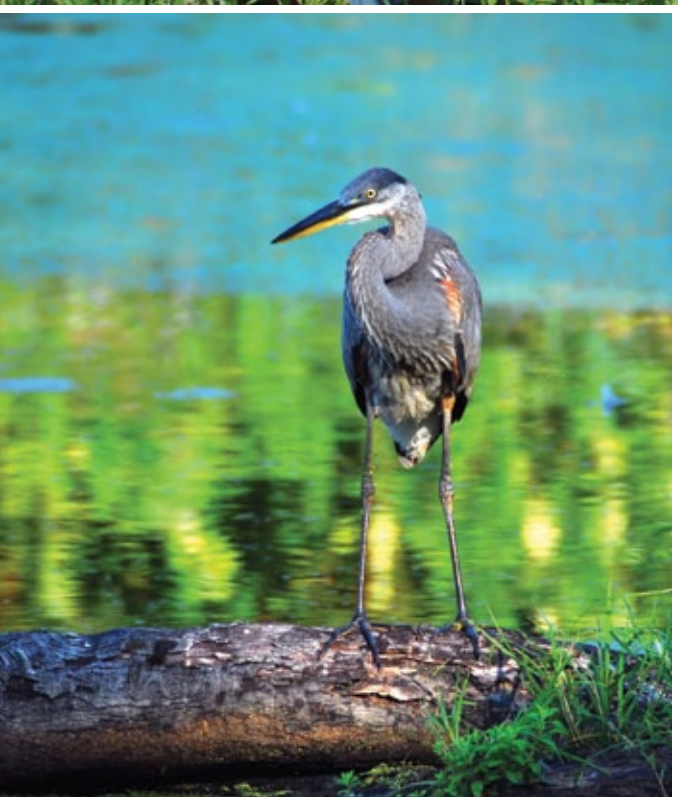
— SURVEY PARTICIPANT

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.


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.

VISITING THE PARK

WHAT VISITORS TOLD US

In preparation for this report, the National Parks Conservation Association surveyed more than 400 people who had visited the park in the previous six months.

79%
HIKED TRAILS

78%
WENT TO THE BEACH

35%
HIKED UP MT. BALDY

34%
WENT BIRD-WATCHING

31%
STOPPED AT THE VISITOR CENTER

18%
RODE BICYCLE TRAILS

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

Indiana Dunes National Lakeshore was pieced together from land left between heavy industry and residential development. Interwoven with the urban landscape, it does not present the sense of arrival that greets visitors to Yellowstone, Great Smoky Mountains or Everglades National Parks.

Highways through the park are traveled by huge trucks going to and from the steel mills. Railroad lines lance through. These major transportation corridors crossing wooded park roads often result in blind crossings that endanger visitors.

Its unusual patchwork character makes it all the more urgent to convey this lakeshore's identity as a national park clear to visitors; to help people get there; and to help them get around in the park, enjoy it, understand it and appreciate it so that it will be protected far into the future.

The national lakeshore claimed a record 2.16 million visits in 2010 — an increase of nearly 12 percent increase over 2009. About half of all visits are in the summer when the beach is open. In fact, many people are not aware there is more to the "Indiana Dunes National Lakeshore" than the lake shore itself. Far fewer visitors come to any other part of the park.

Improving the experience of visitors serves the park's mission. But it also will help turn visitors into supporters of the park, its mission and its preservation.

HERE ARE OUR IDEAS

for making it easier, safer, more informative and more interesting to visit Indiana Dunes National Lakeshore.

OPPOSITE: © RON CHAPPLE STUDIOS/DREAMSTIME.COM

Guide visitors through ample, clear and consistent signage and other aids to navigation and understanding.

Partly because of the park's wandering and fragmented boundary, visitors have told us they often have a hard time finding their way around. When we surveyed park visitors for this report, fewer than half ranked the directional and trail signs as "good."

The park needs many more signs with much clearer labeling and direction that get visitors where they need to go while reinforcing public understanding that this is a national park.

Creating clear directional signs that honor and respect the landscape will not be easy. The park should draw on the talents of Chicago-area designers, planners and landscape architects for help designing a signage system that, without intruding on the park's natural beauty, is clear, distinctive and helpful. The park could consider hosting a charrette where groups of designers work on new ideas for visitor navigation.

The park also should make the most of the emerging possibilities of digital technology, not just for navigation but for interpretation of the area's history, plants and animals, trails and facilities.

A mobile phone app, for example, might help parents guide their children on short nature walks or help visitors identify birds by song. Apps could direct visitors to nearby amenities, help them find parking and alert them to special events and ranger-led programs.

Staff at the park has already started developing a mobile app, and with the help of a partner to provide technological know-how and funding, apps could allow broad visitor interaction with the park. Although technology will never be able to replace the depth of knowledge that a park service ranger can share, it could help bridge the gap created by the reality that there are now far fewer rangers.

Resolve parking and access issues and provide transportation alternatives to and within the park.

The majority of park visitors head for the beach. Most come by car, but there is not enough parking for everyone who wants to drive; lines to enter the West Beach parking lot often back up to U.S. Highway 12. Difficult access and inadequate parking were top visitor enjoyment concerns mentioned by people surveyed for this report.

Parking on hot summer weekends is next to impossible. With official lots filled, many beachgoers park along roads where they may damage sensitive plants. Then they often have to cross busy highways and railroad tracks on foot to get to the beach.

The park should strive to provide more parking, if it can do so without paving more of the dunes it was created to protect. But it should also be easier for visitors to get to the park and the beach without driving.

A weekend shuttle service to remote parking lots has been on and off the table for years, and the time has come to do it. Getting people to take a shuttle will be difficult, since most want to park as close to their destination as possible. But the park's mission to protect dunes is more important than new parking lots.

Providing a peak-time, seasonal shuttle service could be an excellent opportunity for a local entrepreneur. A shuttle would help resolve parking issues, and it would make it easier to use a major alternative to driving: the train.

The Northern Indiana Commuter Transportation District's South Shore Line trains run the length of the park from Chicago to South Bend, Ind., with four stops in the park. The difficulty is getting around in the park from the train stops. A shuttle could run between train stations and major attractions during the summer season.

The history of the South Shore Line is interwoven with that of the park. At the turn of the 20th Century, the train provided a cheap and easy way for Chicago residents to get to the dunes. Northwest Indiana was a major destination for families seeking respite from oppressive city heat.

The South Shore Line should provide a glimpse of that history as well as visitor information about the park on the trains themselves. This information might be presented as posters or maps mounted in the trains, as audio for passengers or as a mobile app to follow while you ride. Even if riders were not headed to Indiana Dunes National Lakeshore, they could learn about this nearby national park.

Bicycles are another transportation option, if riders can get their bikes to the park without having to drive and then find parking. The National Lakeshore Connector Trail, a bicycle route that is a partnership project among nearby cities and townships and the national park, is being expanded with the goal of connecting to Chicago. But most riders will not want to pedal all the way to the park.

Given the demand from Chicago-area bike riders, the South Shore Line should allow bicycles on trains. It could follow the lead of Metra, the Chicago suburban rail service, in allowing bikes during off-peak times, including weekends. There are certainly some obstacles, such as re-engineering platforms and providing space for bikes on train cars. But groups like Active Transportation Alliance are well-placed to start the outreach so that cyclists from Chicago through South Bend can enjoy the trails in the park.

Construct new trails and improve existing ones.

The Lake Michigan Water Trail, designated in June 2011, is the first great step in a planned kayak "circle tour" of the lake, beginning in Chicago, heading south and east along the shoreline of Indiana Dunes and eventually curling around the entire lake. The many people involved in establishing the trail, led by the park service's Rivers, Trails and Conservation Assistance staff and the Northwest Indiana Paddling Association, worked tirelessly to bring this great new trail to the park.

"The South Shore Line from Chicago is a missed opportunity. A lot of people get on a train and whip on by to Michigan. There should be shuttles from the stations through the park."

— BILL HANNA, NORTHWEST INDIANA REGIONAL DEVELOPMENT AUTHORITY

More routes for water trails were identified in a 2007 report of the Northwest Indiana Regional Planning Commission and Openlands. They included the Little Calumet River and the Grand Calumet River, both of which are partially located in the park. Given the strong support behind designating the Lake Michigan Water Trail, we are confident that new water trails will come to pass.

The East-West Connector trail is the only leg that remains in completing the Chicago to Michigan bike route and is almost entirely on park land. This critical link will come at a cost of approximate $8 million and must be completed. With endorsement in the Marquette Plan and strong local support, we hope this trail can soon be completed.

To encourage outdoor activity as part of a healthy lifestyle, Indiana Dunes National Lakeshore is the first national park to launch a Park Prescription program in cooperation with Porter Health System. The program works just the way it sounds: health-care professionals write prescriptions to their patients or clients to walk or paddle trails. This innovative program to address stress

OPPOSITE, FROM LEFT: NPS; NPCA

and obesity and make a national park part of a health regimen should be adopted in more national parks.

The national lakeshore already has plans for more trails, a need identified in our public survey by the nearly 80 percent of respondents who had recently hiked there. But laying out more trails is complicated in some places by complex land ownership.

For example, there are "ghost roads" owned by the Town of Beverly Shores that make it virtually impossible for the park to extend walking trails south and east of the town's core. Since the 1920s Beverly Shores has platted roads that were never built through land the national park now owns. The park should seek to acquire all these unbuilt roads for trail extensions and visitor access.

Some of the bike trails running through the park are in dire need of repair. The Calumet Trail, a bicycle trail maintained by the Porter County Parks Department, is full of ruts where water collects when it rains. The parks department should work with the national park to identify materials for trail repair that are in keeping with the park's stewardship mission and that will keep these trails in suitable condition for cyclists.

Convey the non-industrial stretch of U.S. Highway 12 to the park to improve visitor safety and enjoyment.

U.S. Highway 12 runs right down the spine of the park. At one time, it was a scenic road taking travelers from Chicago to the dunes of Indiana and Michigan. But with the growth of industry in Northwest Indiana, U.S. Highway 12 has become a heavily traveled route for trucks carrying cargo to and from the steel mills and ports that are now in the middle of Indiana Dunes National Lakeshore.

In 1986, Congress identified U.S. 12 as a potential park road by ordering the Secretary of Interior to complete a feasibility study to establish "United States Highway 12 as the 'Indiana Dunes Parkway' under jurisdiction of the National Park Service." That study listed areas of high scenic quality and identified the roadway as connecting recreational, historic and natural areas in the park. The park's General Management Plans in 1980 and 1997 identified 11 miles of the highway from "Bethlehem Steel to the national lakeshore boundary east of Mt. Baldy" to be designated as the Dunes Highway. Other plans, including the Porter County Transportation Corridor Plan and the Marquette Plan Phase II, recommended that U.S. 12 be conveyed to the National Park Service or local entities. Even the Indiana Department of Transportation has endorsed the road transfer.

National park roads can restrict commercial or industrial traffic to improve the visitors' experience. If the park service owned U.S. 12, it would keep the road open to commuters, be empowered to reduce speed limits and work with local communities on corridor enhancement projects.

Truck traffic is problematic in a national park. As visitors try to find their way from the Chellberg Farm to the Century of Progress homes or from the interstates to the beaches, they are faced with crossing a busy highway. Although accidents are not frequent, visitors take a risk crossing U.S. 12.

The national park should take ownership of seven miles of U.S. Highway 12 from the entrance of the Arcelor Mittal steel mill in Burns Harbor to the intersection with Broadway Avenue near Beverly Shores. The remainder of the road should remain with the state of Indiana.

The park service has assumed ownership and management of other U.S. highways where they pass through national parks. Examples include U.S. Highway 209 through Delaware Water Gap National Recreation Area in Pennsylvania; U.S. Highway 34 through Rocky Mountain National Park in Colorado; and U.S. Highway 20 through Yellowstone National Park in Wyoming.

This conveyance would carry out the intention of Congress, make the park safer and improve the experience of visitors, while allowing trucks access to industrial sites.

Restore and renovate top visitor facilities.

When national park visitors are surveyed nationwide, their number one concern is that public facilities be maintained. This ranges from keeping restrooms clean and well-supplied to clearing trails, repairing roofs on historic buildings and upgrading visitor centers.

Like many national parks, Indiana Dunes National Lakeshore has a number of facilities in need of maintenance and restoration. But funding for upkeep and repair is increasingly hard to come by. America's national parks already suffer from a maintenance and construction project backlog that is almost $11 billion, and the funding that is available for these projects shrinks every year.

Restoring visitor destinations such as Goodfellow Lodge, Bailly Homestead and bathhouses will require fundraising and help from park partners.

The Century of Progress Homes, for example, would be a tremendous asset for attracting visitors if they were restored. The homes, relics of the Century of Progress International Exposition held on Chicago's lakefront in 1933-4, are an interesting connection between the city and the park and could be operated with the help of park partners as a seasonal tour destination. Groups such as the Chicago Architecture Foundation and local AIA chapters, as well as historic preservation groups, might be interested in helping this project get traction with donations, grants and volunteer support.

The Centennial Challenge was a public/private program to raise money to restore and renovate national parks in time for the National Park Service's 100th anniversary in 2016. Unveiled in 2006 under President George Bush, the program was designed to raise $200 million a year in private and federal money for park restoration projects. But Congress appropriated only a fraction of the planned funds and proposals far outstripped the funding that was made available.

This program was not continued when the Obama administration faced a budget crisis in 2008. We remain hopeful that with their centennial approaching, the national parks will again be a priority for funding in Congress and the administration.

Redesign the shared Visitor Center to set the tone for the visitor experience and be a true national park gateway.

The main park visitor center on Indiana State Road 49, shared with the Indiana Department of Natural Resources and Indiana Dunes Tourism, the marketing agency for Porter County, is a modern and functional building. However, it does not have information, exhibits, staff or a visitor-friendly design to give it the stature it deserves as the gateway to a national park.

People who enter a national park visitor center have a set of expectations: that they will learn about the park, its history and its features, and that they will see and talk to a park ranger. The Dorothy Buell Memorial Visitor Center does not meet these expectations for Indiana Dunes National Lakeshore.

The visitor center needs a makeover. Exhibits should be moved toward the front, with interactive displays including three-dimensional park maps. Rangers and park volunteers should greet and talk with visitors. The park video should be updated and shortened.

The visitor center must be more than a regional tourism information center. It must give people the sense that they are at the front door of a national park, entering into a remarkable and valuable landscape that belongs to all Americans. Both objectives can be achieved: The center can provide information about surrounding attractions as well as the park. But Indiana Dunes National Lakeshore is the centerpiece of the region and it should be the commanding presence at the visitor center.

OPPOSITE, BOTH: NPS

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 region.

On a spring day in 1896, Henry Chandler Cowles, a 27-year-old graduate student in geology at the University of Chicago, first saw the sweeping landscape of Indiana Dunes. He had come to study the area's glacial history, but his painstaking observation and careful analysis over the next two years turned him into a botanist and led to his groundbreaking 1898 doctoral thesis on plant succession in dunes communities. That and later works helped establish the science of ecological succession in the United States and helped Cowles create a legacy of knowledge and scientific discovery at Indiana Dunes National Lakeshore.

With its biodiversity, its location near major cities and research universities in the nation's core and its rich history as a place for scientific discovery, this national park should be a star nucleus for research on climate change effects and adaptation, Great Lakes ecology, plant diversity within a highly-developed urban and industrial setting, invasive species and other crucial topics. The spread of data and analysis from that research should also help make more scientists worldwide aware of the existence and importance of this unique area.

The park, with its accessible natural areas and cadre of scientists practicing their trade within reach of thousands of schools, also should take a lead role in helping children understand science and nature and feel the joy of discovery.

There are a host of ways this park could become a hub of Great Lakes research; we have identified a few strong possibilities to start.

HERE ARE OUR IDEAS **for giving Indiana Dunes National Lakeshore its proper role, both for working scientists and for scientists of the next generation.**

Make the park a discovery ground for future scientists, both in the field and in the classroom.

An understanding of science begins when children encounter nature and follow their natural curiosity. As the largest single area of preserved habitat in the southern Lake Michigan region and as a national park with a strong education mission, Indiana Dunes National Lakeshore should set out to be a learning laboratory where future scientists discover their calling and future citizens develop scientific literacy.

The park already has interpretive programs aimed at children. The Paul H. Douglas Center for Environmental Education, which anchors the park's west end in Gary, has re-opened and welcomes field trips from those schools that can afford them. But many schools, even in some nearby communities, do not have the resources, teacher training or awareness to bring classes to the park.

The majority of the park's environmental education programming is at the Dunes Learning Center. Its three-day Frog in the Bog program for 4th to 6th grade

OPPOSITE: NPS

classes, its DuneSCOPE sessions for high school students and Science Olympiad training, its teacher training and other programs reach thousands of students every year. It could reach many more if funds could be raised to subsidize fees for schools with limited resources and if it could extend its geographic reach.

The learning center might develop an exchange program with other environmental education or nature centers, schools or museums in Illinois, Indiana, Michigan and beyond, so that students could come to the park and take the scientific insights they gain in the Dunes to apply to ecosystems closer to home. An exchange program would expand knowledge of the Dunes to students and teachers from a broader area.

There is strong desire within the Department of Interior and the National Park Service to provide a national park experience for more urban children, and this is a natural goal for Indiana Dunes National Lakeshore, given its proximity to Chicago, Gary, Hammond, Michigan City, South Bend and other cities. But there is no dedicated park funding for this purpose. A number of foundations have expressed interest in funding programs that bring children into nature, and such funding might bolster the Dunes Learning Center's ability to deliver high-quality environmental education to more children.

Still, not every child will be able to visit a national park. Distance learning could be a way to bring the park to the children.

CASE STUDY:

DIVING INTO EDUCATION

At Channel Islands National Park in California, two National Park Service divers go into the ocean off Anacapa Island, where octopuses and huge, colorful fish are abundant. Divers use a camera to conduct the distance learning program for students in Ventura County Public Schools. The program, "Channel Islands Live," is co-sponsored by the Ventura County Office of Education.

The "live dive" interactive program allows children to see underwater marvels they could never otherwise experience. They can ask questions—"What's that blue fish that just swam by?"—and the park staff divers can answer.

"Channel Islands Live" also features an interactive hike that shows children the islands' remarkable human history over 10,000 years; the last light station built along the California coastline; and rare species of plants and animals that have adapted to this isolated environment.

Digital learning is increasingly a part of the experience of schoolchildren. It could be used to help children understand scientific concepts and increase their awareness of the natural wonders at the nearby national park.

Although a computer will never replace a visit, teachers facing severe budget restrictions might welcome a distance learning opportunity and view it as a first step toward field trips and the actual experience of nature.

The Second Century Commission, a group of 35 national leaders who were asked in 2010 to develop a vision for our national parks as we approach the National Park Service Centennial in 2016, realized that some visits to national parks in the future may take on a virtual dimension. With technology being integrated into classrooms across America, it seems a logical step to bring the natural world to students through the internet.

To engage older students with the national lakeshore, the park should continue to work with organizations such as the Student Conservation Association, a national group of college and high school students. This organization, dedicated to developing the next generation of conservation leaders, was born out of the efforts of the National Parks Conservation Association in the 1950s. Students who are studying the sciences come to the national park for summer internships to do research, remove invasive plants, plant native species in wetlands and work with park staff to restore former farms to prairie. The Dunes Learning Center also has student interns from all over the world.

Other programs include the Great Lakes Innovative Stewardship Through Innovation Network, which makes the park part of college courses and brings students there to help restore the Lake Michigan watershed. This program provides hands-on experience to undergraduates in the fields of science, technology, engineering and mathematics, some of whom are considering careers in research or restoration. In 2011 students came from Indiana University Northwest, Calumet College of St. Joseph, Ivy Tech Community College and Valparaiso University. This program is grant-funded in eight states and two Canadian provinces to promote stewardship of the Great Lakes and has been highly successful for its first two years. We hope it not only continues to be adequately funded but expands.

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.

The Great Lakes Inventory and Monitoring Network, one of 32 in the National Park Service, is headquartered in Ashland, Wisconsin, a good location for researchers working in the four Lake Superior national parks. But it is a challenge for the network's researchers and scientists to engage fully with the parks on

Lake Michigan, Indiana Dunes and Sleeping Bear Dunes National Lakeshores.

The network's purpose is to do long-term ecological and land-use monitoring and share the results so park staff can make informed decisions in managing their natural resources. The network is tremendously valuable to the parks in the Great Lakes and potentially to scientific discovery in the Calumet region. But its ability to engage in critical Great Lakes research is limited because its funding has not kept up with inflation.

Still, a satellite location of the network at Indiana Dunes National Lakeshore should be a priority to serve both Lake Michigan parks. It would put these Great Lakes researchers within a six-hour drive of internationally important research institutions including Indiana University; Purdue University; the University of Illinois; the University of Chicago; Northwestern University; the University of Wisconsin-Milwaukee; and many other universities, colleges and research institutions such as The Field Museum and the Chicago Botanic Garden. This proximity to other research centers would promote collaboration and leverage the work being done by all scientists in the region.

To focus on the park's unique challenges in managing natural and cultural resources, the superintendent also could cooperate with a nearby university to designate a Cooperative Ecosystem Study Unit at Indiana Dunes. With 17 sites nationwide, the Cooperative Ecosystem Study Unit Network brings together nearly 300 partners including federal agencies; academic institutions; tribal, state and local governments; and conservation groups. Their goal is to work together to support informed public land stewardship.

Although such study units usually are located at universities, nothing would preclude establishing one at a national park to take advantage of its proximity to scientific institutions and the rare and unique natural resources that a national park is established to protect.

Scientists at the monitoring network and the study unit would become part of a rich community of researchers, making it easier to exchange data; work more directly with the resource managers at the park; mentor young scientists; benefit from the expertise of conservation organizations in the region; and develop the personal relationships and conversations that so often lead to new insights and new paths of inquiry.

Connect the work of scientists, researchers and land and resource managers in the park.

One of the difficulties of research in Indiana Dunes National Lakeshore is staying informed about the many diverse studies that are done in the park. Each year, about 80 scientific studies are underway there. Over the past 40 years there have been hundreds of Calumet-area research projects and papers on topics ranging from ecological studies of Long Lake to rare and exotic plant inventories to environmental quality studies of the Calumet River. Although many of these studies are available online, they often are difficult to find and use.

In gathering information for this report, we met with more than two dozen scientists and researchers representing federal and state agencies, universities and other institutions. We brought the researchers together with Indiana Dunes natural resource managers. All felt that better coordination and dialogue were critical. We believe an integrated online library of scientific studies conducted in the park would be of tremendous value to researchers and managers.

Such an online library also would make it easier to coordinate future scientific inquiry. Ecology has long been a chief focus of research in the Dunes. As the research review completed by Indiana University for this report confirmed, there is room for an organized strategy for updated and leading-edge study of the ecological effects of erosion, climate change, sand movement, loss of habitat and other effects of human activity.

Scientists, researchers and land managers, both in the park and elsewhere in the region, also would be helped by creating both formal and informal opportunities for better connections and more conversation. While it's true that results from painstaking scientific research often do not come as fast as land managers need information, when the results do come in they need to be communicated widely and quickly. A yearly meeting would give scientists an opportunity to share the progress of their research and gain insight from the knowledge and experience of land managers.

OPPOSITE: ALEX ZAIDERMAN. THIS PAGE, FROM TOP: © TOM GILL; NPS; © TOM GILL

CONNECTING PEOPLE TO THE PARK

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

Among national parks, Indiana Dunes National Lakeshore is extraordinary in preserving so many areas of unique and irreplaceable habitat within a 90-minute drive of more than 10 million people.

Yet among those millions of people, it has remarkably little name recognition. Many people who whiz past it on highways are completely unaware there is a national park just beyond the visible corridor of business and industry. Even people who live nearby are unaware of their neighborhood national park.

When the attractions of the Chicago area are touted to tourists, the park is rarely, if ever, mentioned — though it is closer to the city than many attractions they drive hours to reach.

The early advocates of the park in the 1950s and 1960s came from both Chicago and Indiana. In 2009, 40 percent of the park's approximately 2 million visitors were from Illinois and 40 percent from Indiana. Yet there is little emotional connection between Chicago and the park and, in fact, little to let these beachgoers know they are enjoying a national park.

At the park's very edge in Northwest Indiana, it hardly has a higher profile. The park has devoted friends. But as natives of the area told us, it is perfectly possible to grow up in Northwest Indiana and never know the national park exists. To most residents of the neighborhood, "the lakeshore" simply means the beach — any beach. And thousands of children grow up nearby without ever going to the beach.

Indiana Dunes National Lakeshore cannot afford to be a hidden treasure. It must become a shining treasure, a treasure that residents and officials of the entire region brag about, a treasure that they are willing to guard and support.

HERE ARE OUR IDEAS.

Broaden the presence of the National Park Service by creating a Heritage Trail leading from Chicago to Northwest Indiana of sites that tell important stories of science, nature, labor, industry and people.

On the University of Chicago campus in Chicago's Hyde Park neighborhood is the laboratory where Henry Chandler Cowles studied the plant specimens he brought from the dunes. The neighborhood also was home to many early Dunes park supporters and to Paul Douglas, the Illinois senator who sponsored the 1966 legislation that created the park. A few miles south is the historic Pullman neighborhood, redolent of American labor's tortuous history.

A historic trail between Hyde Park and the Dunes would pass through many sites that have tales to tell in the history of science, ecology and geology, the Great Migration, railroads, industry and labor. Places

OPPOSITE: CHRIS CHAVIS

such as the site of the U.S. Steel South Works, the mighty steel mill in Chicago where 20,000 people once worked; the historic Pullman neighborhood where railroad magnate George Pullman created his model industrial town; Hegewisch Marsh, where a huge but desperately degraded wetland is undergoing a stunning restoration — all have tales to tell. The Field Museum is leading research to identify the many pieces of American history that lie in the Calumet region.

In 1996, the National Park Service conducted a resource study for a Calumet Ecological Park to determine whether more of the area's historic and natural features should be included in the National Park System. This study found that the wetlands and ecology of the Calumet region, extending from the southern tip of the City of Chicago to Michigan City, Indiana, were too fragmented, and that the national park already preserves some of the same ecosystems. The importance of the many historic sites was noted, however, and the park service suggested that the Calumet region might be a candidate for a National Heritage Area.

We agree, provided there is significant local leadership and funding to make a Heritage Trail or Heritage Area a meaningful way to draw tourism and interest to the region. The Field Museum is already taking the lead to identify and research these important sites. The Calumet Heritage Partnership should be at the core of those efforts.

Greatly expand marketing efforts, capitalizing on the National Park brand.

Much more ambitious marketing is needed to make Indiana Dunes National Lakeshore and its identity as a national park known in Chicago, Northwest Indiana, the surrounding states and the nation.

Federal agencies such as the National Park Service can spare very little funding for marketing or advertising, so it is critical that a partner step up to help. With

A TRAIL OF SITES TELL A STORY

The National Park Service tells America's history in several ways, often by grouping historic sites.

Heritage Areas are designated by Congress as places where natural, cultural, and historic resources combine to form a cohesive, nationally important lived-in landscape. One example, the Silos & Smokestacks National Heritage Area, has more than 100 sites in 37 counties in Northeast Iowa telling the story of American agriculture and its global significance. The sites are separately owned but thematically grouped and linked by signage, navigation and marketing.

The National Park Service also has partnered with several federal agencies to create a National Register of Historic Places Travel Itinerary called "We Shall Overcome" featuring sites important to the history of the civil rights movement. This itinerary includes 49 properties in 21 states, including the Ida B. Well House and the Oscar Stanton De Priest House in Chicago. As in Heritage Areas, these sites collectively receive no special federal funding, but can be marketed through their common theme.

Lowell National Historical Park tells the story of this mill town's role in the Industrial Revolution through several exhibits and buildings in downtown Lowell. It is an example of how disconnected sites can be linked through signage and interpretation.

OPPOSITE: NPS. THIS PAGE, FROM LEFT: SEAN SMITH; NPCA

that partner's aid, the park's profile must be aggressively raised, using all the tools available, beginning with marketing research to discover what the park's recognition level really is. Based on this research, a campaign should be designed and implemented to raise awareness and build appreciation for the park, and to help the park meet the needs of visitors.

In 2009, a park service survey found that visitors came from 27 states and seven countries; that the primary reason for 73 percent of non-local visitors to Northwest Indiana was to visit the park; that 35 percent lived more than 100 miles away; and that 20 percent stayed more than 24 hours. This suggests that with good marketing, the park could draw even more visitors across a wide range.

Indiana Dunes National Lakeshore is the single largest tourist destination in Northwest Indiana. Yet when the park is mentioned in regional marketing campaigns, the national park brand is all but absent. The arrowhead logo of the National Park Service has been a highly recognizable symbol of America's special places since the 1950s. But even the Porter County Convention, Recreation and Visitor Commission campaign "The Indiana Dunes, Nature's Masterpiece" does not feature the National Park arrowhead in its list of partners or anywhere on its website.

Regional marketing efforts should firmly assert Indiana Dunes National Lakeshore's status as a national park, capitalizing on the powerful brand identity of the National Park Service arrowhead to reinforce that this place is truly unique and special.

It might be easier to market this park with a change of name. It has often been suggested that "Indiana Dunes National Lakeshore" courts confusion with Indiana Dunes State Park and does not clearly indicate that this is a national park. There has been no research on the park's name recognition or on whether visitors know they are in a national park, but from anecdotal evidence it seems likely this awareness is fairly low.

A name change is worth consideration. The Second Century Commission recommended that the National Park Service simplify its list of park types, which includes 20 different designations, to make national parks better known and easier to market.

Reach out to create connections with the park throughout the region, especially in Chicago and Indianapolis.

To survive and thrive, Indiana Dunes National Lakeshore needs to be a special place to many more people in Chicago, Indianapolis and the Midwest. It should mean to Chicago what Santa Monica Mountains means to Los Angeles.

Among the park's early supporters were many Chicagoans. And today, the park is beginning to engage city-dwellers in new ways.

Many of the kayakers who came together to establish the southern portion of the Lake Michigan Water Trail are from the Chicago area. They can become ambassadors for the park as well as stewards. They can help the park seek out every chance, through websites, social media and other means, to reach out into the world of paddlers with the message that this national park is a great kayak destination. These paddlers' involvement with the park is one small link toward a stronger, more vibrant connection between the park and the city.

Milestones such as the park's upcoming 50th anniversary and the National Park Service centennial in 2016 are opportunities to showcase the park to millions of Chicago-area and Indianapolis-area residents, as well as neighbors from Northwest Indiana.

Hundreds of thousands of Chicagoans already visit and enjoy the national lakeshore and could be its core friends and supporters. But if they are to form an emotional connection with the park, someone must start the conversation. They must be asked.

In the summer of 2010 the park placed a ranger part-time at The Field Museum and the Peggy Notebaert Nature Center in Chicago. This was a valiant effort to connect with Chicago tourists, but one part-time park staff member can hardly begin to communicate the wonders of the nearby Indiana Dunes National Lakeshore to millions of museum visitors. Permanent exhibits at Chicago-area educational attractions would do a better job of building understanding and backing for the park.

The Field Museum, the Shedd Aquarium, Brookfield Zoo, the Chicago Botanic Garden, the Museum of Science and Industry and the Nature Museum all seem likely sites for permanent exhibits about the ecosystem and history of the national park. Museum exhibits are

CASE STUDY:

GOOD PARTNER, GOOD INSIGHTS

The park partner that assists with marketing at the Jefferson National Expansions Memorial, or Gateway Arch, is Metro, the St. Louis public transit system. Metro operates the tram at the Arch as well as the park's three-story parking structure.

In 2009, Metro conducted research to discover how often St. Louis-area residents visited the Arch and what their experience was once they were there and asked for ideas on how to improve their visit. The information gained in this marketing survey has helped Metro fine-tune its advertising, and it has helped the park understand how to address the challenges of handling more than 2.5 million visitors yearly in a relatively small visitor facility.

As a result, Metro has developed a marketing campaign that features an informative website that integrates information about the Arch with downtown St. Louis events; banners throughout downtown; a huge interactive information screen at the airport; and remote ticketing at other attractions. The park is currently being reworked to improve visitor access and add attractions.

expensive and would take time to establish, probably with the help of a philanthropic partner. But these connections must be made. The dialogue must begin between these venerable Chicago institutions and their neighborhood national park if we are to build a critical mass of fans to secure this park's future.

At the same time, the park should court fans in Indiana. Indianapolis also offers great opportunities to tie into museums, such as the Indiana State Museum, with permanent exhibits featuring the national parks of Indiana. Such a presence would serve not only to raise the profile of Indiana Dunes, but of the two other national parks and potentially the 30 National Natural Landmarks and 37 National Historic Landmarks in the state.

The National Parks of Minnesota teamed up in 2010 for an awareness campaign that featured a video and series of public events at museums and other tourist attractions, on the heels of the Ken Burns "America's Best Idea" TV series on national parks. Indiana could instill similar state pride in its national parks and historic sites if partners at these parks would do the same.

OPPOSITE: JERRY DOWNS/ISTOCKPHOTO. THIS PAGE, FROM TOP: DEAN PENNALA/DREAMSTIME.COM; NPS

SUSTAINING THE PARK

For the long-term health and viability of Indiana Dunes National Lakeshore, the park must have more support from key decision-makers.

Indiana Dunes National Lakeshore was founded because those who loved the landscape of the region, both from Indiana and from Illinois, joined forces to advocate for it. It was authorized and funded because members of Congress understood its importance in the inventory of this country's natural wonders. But as the drama of creating the park has faded, support on Capitol Hill has become spotty.

Within the National Park Service, the park has a long history. A "Dunes National Park" was the first proposal when Stephen T. Mather became the first director of the new agency in 1916. But the park that was finally created 50 years later was not much like the isolated wilderness parks the agency had become accustomed to operating. Though it has had valiant champions within the park service, the park suffers from identity issues within its own agency.

In Northwest Indiana, even in places where the park was first seen as a threat to industrial jobs, many businesses and officials have come to appreciate the value of the park: as a source of retreat and recreation for local residents, as the foundation of the area's environmental quality, and as a generator of revenue and jobs from tourism. But some are indifferent or unaware, and others remain to be convinced. And all need to be persuaded that supporting the park's interests is in their interest.

The park needs enthusiastic support from key decision-makers in the region in order to thrive.

HERE ARE SOME OF OUR IDEAS FOR ENLISTING IT.

Engage the Indiana and Illinois Congressional delegations with the park to provide federal funding and policy support.

In the spring of 2011 the Department of Interior officially dedicated the Lake Michigan Water Trail as a National Recreational Trail at a press conference in Chicago. Senator Richard Durbin from Illinois stood on the shore of Lake Michigan, pointing across the water to Indiana Dunes National Lakeshore, and recited the famous words of the late Illinois Senator Paul H. Douglas:

"Until I was thirty, I wanted to save the world. Between thirty and sixty I wanted to save the country. But since I was sixty I've wanted to save the Dunes."

And Douglas did help save Indiana Dunes. At the urging of the Save the Dunes Council, he took on the steel mills and the Indiana political establishment to pass the legislation that created the park.

OPPOSITE: PVSTOCK.COM/ALAMY

Indiana Congressman Peter Visclosky, whose district takes in most of the national lakeshore, has been very supportive of the park and of funding for cleaning and restoring the Great Lakes. Other members of the Indiana Congressional delegation, as well as representatives from Illinois, are highly supportive of Great Lakes funding for restoration. But widespread, consistent passion from our members of Congress is necessary to safeguard the park.

Strong support from Illinois' and Indiana's Congressional delegation can only be renewed by bringing these officials and their Washington and district staffs to the park to see, firsthand, the challenges and the importance of protecting this park for future generations. Local and regional groups should join to provide meaningful park visits and regular briefings about issues and opportunities there.

Protection of the Great Lakes has bipartisan support, so advocates for the park should take care to connect the health of Lake Michigan and the health of the park.

Congressional briefings should include community representatives, tourism agencies and conservation groups. National Park Service leadership should join in these visits and briefings where they can appropriately provide information without influencing Congressional decision-making.

These efforts to re-engage members of Congress will take time and persistence. They also will require drawing important associations between each member and the park. If a representative or senator has an interest in history or kayaking or just loves visiting our national parks, park advocates must seize on the opportunity to show that member the unique history, recreational opportunities or nationally significant resources Indiana Dunes National Lakeshore has to offer.

It is critical for advocates to remember to engage their members of Congress not just when they need something from them, but on a regular basis and in a way that speaks to the members' interests.

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.

Indiana Dunes National Lakeshore brings in about 2 million visitors each year and generates nearly $55

million in visitor spending, with $34 million of that from non-local visitors. In other words, people visiting Northwest Indiana spend $34 million because of the national park that would otherwise be spent elsewhere. That spending generates more than 540 local jobs. Those are pretty strong reasons why this national park and its surrounding communities should work together.

The park needs the consistent support of regional decision-makers to thrive. This includes state lawmakers, mayors, township supervisors, elected boards from surrounding communities, business owners, tourism officials and other influential people in the Calumet region. Many already value this park and are ready to go to the mat for it. But there also are fences that need mending between the park and local officials.

Communities adjacent to national parks are called "Gateway Communities," and there are many tools to help national parks and communities work closely together for the benefit of both. The Conservation Fund, the Sonoran Institute and the National Park Service all provide Gateway Community training and guides to help enhance the economic well-being of nearby communities while preserving the landscape surrounding a national park.

The park needs the consistent support of regional decision-makers to thrive.

At least three cities could be considered Gateway Communities for Indiana Dunes National Lakeshore: Gary, Chesterton and Michigan City. Many others are within its sphere of economic influence. These communities should join together under the banner "One national park, many gateways" and collaborate to support and protect the park, recognizing that what is good for the park is good for them all.

They also should consider how they might capitalize on the presence of park visitors.

Beyond the gateways, the importance of the City of Chicago to the park is undeniable. The city's stature is recognized by the Obama administration. Park partners and advocates must seize on this opportunity to elevate Indiana Dunes National Lakeshore in the view of Mayor Rahm Emanuel and other key decision-makers in the Chicago area.

Raise the park's profile as an important national park in the Great Lakes region within the National Park Service.

Indiana Dunes National Lakeshore rarely makes the list as an "iconic" national park. Because of that, it struggles for awareness and attention even within the National Park Service.

Among 394 national parks, it is tough to get attention. Parks such as Yellowstone, Yosemite and the Grand Canyon dominate headlines while parks such as the national lakeshore take a distant back seat. The National Park Service Midwest regional office, once centrally located in Chicago, is now in Omaha, Nebraska. Only a few lonely National Park Service employees are left in Chicago.

The National Park Service should establish a larger staff in the city. Chicago is a recognized center for Midwest and Great Lakes leadership, and having a hub of park service positions in the nation's third largest city would deepen the agency's imprint among regional leaders. A well-staffed office here also would raise the profile of Indiana Dunes National Lakeshore within the agency.

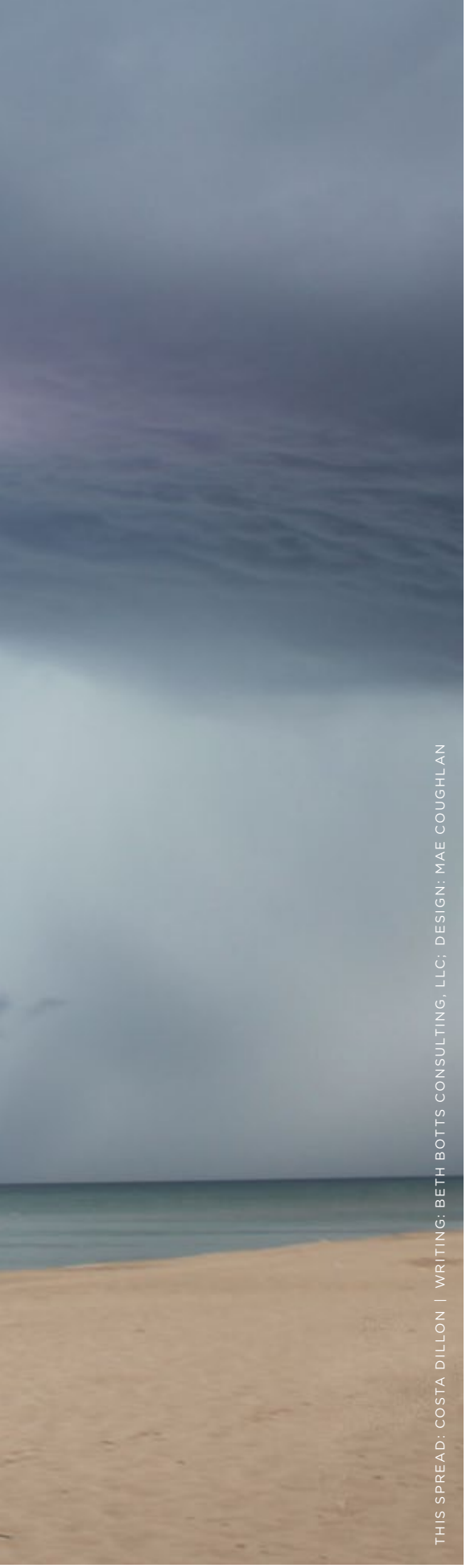
Making this park better known within the park service would help increase its funding, particularly its ability to fund special projects. It also would help the park's projects, land appraisals and purchases rise to the top among requests from the region.

But the park can hardly be seen in a positive light if the National Park Service only hears from its supporters when they sound an alarm. Park advocates should collectively work to ensure that the agency understands all the good things happening at Indiana Dunes National Lakeshore. When the time is right, they should advocate for a new General Management Plan and a boundary study. And they should visit park service leadership at least once a year to improve their understanding of the issues and opportunities that surround this national park.

OPPOSITE: ANDRE JENNY/ALAMY

THIS EXTRAORDINARY PARK

We have only been able to touch on a few **of the many ideas that have been suggested** as we collected information for this document. Our hope is that the discussion that begins here will lead to positive action that makes a great park even greater.



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