

# Indiana Dunes State Park Interpretive Master Plan 2008



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# Introduction

In response to a need to stay current with interpretive and visitor trends and to maximize limited staff and financial resources, the Indiana Department of Natural Resources, Division of State Parks and Reservoirs has developed this Interpretive Master Plan for Indiana Dunes State Park. The plan accomplishes this task by:

- a. focusing interpretive efforts on a site-specific theme
- b. identifying needs for guided and self-guided interpretation, and
- c. recommending actions to fill those needs.

The process of developing interpretive recommendations considers three components:

- a. Resource. What are the natural and cultural resources of the site.?
- b. Visitor. Who are the current users? What are the untapped audiences?
- c. Agency. What is the mission of the agency? What are the management goals within the agency?

Other regional interpretive experiences and partnerships are incorporated to stretch staff and finances, foster cooperation and prevent competition.

Several factors make the plan important for Indiana Dunes State Park:

- In 2016, Indiana State Parks will be celebrating its 100th birthday.
- The Indiana Dunes Nature Center opened in 1990. Most of the exhibits have been unchanged and are showing their age.
- Indiana Dunes is unique from other parks. Recommendations need to reflect:
  1. Most of the park's visitors are day use only.
  2. Indiana Dunes is an urban park.
  3. The park contains some exceedingly rare and fragile natural features
  4. Indiana Dunes is in close proximity to the Indiana Dunes National Lakeshore. This offers opportunities and constraints.

The intent of the plan is to serve as a long-term guide for interpretation at Indiana Dunes State Park. The phased and prioritized recommendations are designed to further Indiana Dunes in the near future and into the Division's next 100 years.

# Resource Overview

The following resource overview is general and related to the interpretive themes. For a more detailed resource overview, see the Indiana Dunes Natural Resources Management Plan. It is located at the Nature Center.

## I. Natural History

### A. Dunes

#### 1. Formation

The dunes found on the southern shore of Lake Michigan are a part of the most recent beach, known as the Toleston Beach. The dunes are still forming and changing.

The level of Lake Michigan rose and fell several times following the retreat of the glaciers. About 6500 years ago, a pause in the changing lake level permitted the development of a barrier beach farther out in the lake from the beach's current position. Storm waves gradually moved the barrier beach toward land, forming a lagoon of trapped lake water and sediments. This lagoon is now the Great Marsh. Later, sand exposed by a lowered lake level was blown inland, forming the dunes.



*Indiana Dunes*

Terms:

Foredunes are the first dunes, closest to the water and running parallel to the beach.

Blowouts occur where the vegetative cover is absent. Strong winds blow through the gap in cover, moving sand into the area. Blowouts grow and move inland as prevailing winds continue to introduce new sand.

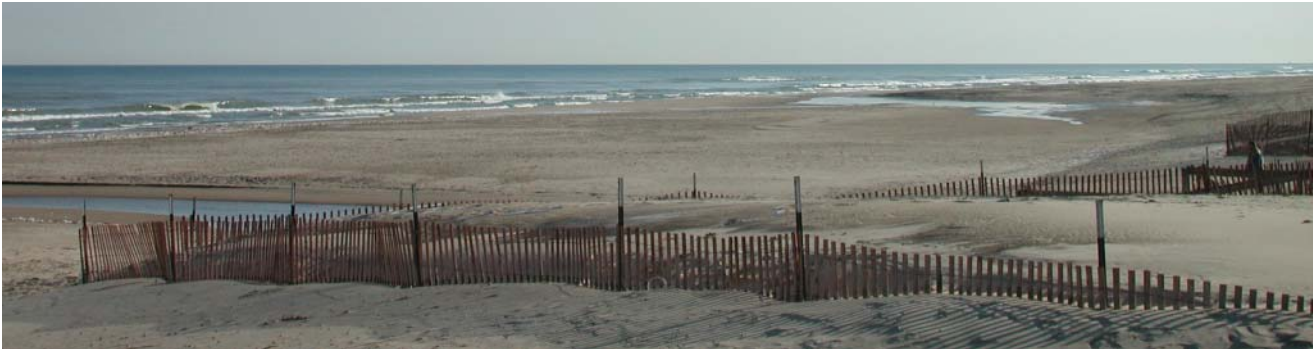
#### 2. Succession

The study of the dunes by Henry Cowles led to the concept of succession and ecology. Taking a walk from the beach inland is comparable to taking a walk from the earliest to more recent time. The sandy beach is devoid of vegetation and constantly moving, the earliest stage. Walking inland, the sand is stabilized, nutrients are available and pioneer vegetation such as maram grass can take hold. Roots and dead organic material begin to form soil. Further back from the beach, cottonwood, black oak and pines grow on the shallow soil. These are followed next by white oaks, sassafras and other trees and ground vegetation. The culminating system is a dense beech/maple forest which can grow only in deep rich soil.

Each stage of plant succession is accompanied by animals adapted to those particular conditions. Insects, birds, herptiles and mammals have specific food and shelter requirements provided in the different stages.

### B. Biodiversity

Indiana Dunes is located at the edge of several ecosystems. Prairies to the west, deciduous forest to the east, northern forest and wetlands are all represented at Indiana Dunes. As the result, species diversity is extremely high. Additionally, being at the edge of range for these ecosystems, Indiana Dunes has the highest number of listed species of any Indiana State Park. Seventy species of plants and animals are federally or state endangered. These include the federally endangered Karner blue butterfly and the federally threatened dune thistle and well as state listed species. For a complete listing, consult the Indiana Dunes Natural Resources Management Plan.



*Lake Michigan*

### **C. Lake Michigan**

Lake Michigan is the second largest Great Lake and the only Great Lake entirely within the United States. Its drainage basin includes portions of Illinois, Indiana, Michigan and Wisconsin. Lake Michigan drains into Lake Huron at the Straits of Mackinac. Metropolitan Milwaukee and Chicago are located on the Lake Michigan shore. Many towns along Lake Michigan originated with the French fur trade. The lake still plays a significant role in trade and commerce.

Lake Michigan influences air temperature, precipitation and storms for some twenty miles inland from the shore. Summer heat stored in the water keeps temperatures moderate in the autumn. Cold winter water temperatures delay spring. Lake-effect precipitation and cloudiness result from differing air and water temperatures.

The long north-south orientation of Lake Michigan allows wind from the north to sweep its entire length. With fewer safe harbors and a large amount of commerce compared with the other Great Lakes, Lake Michigan has the highest number of storm-related shipwrecks.

### **D. Management of Resources**

Indiana Dunes has a long history of biological research, protection and preservation. Two-thirds of the property is designated as Nature Preserve. The large population base surrounding the park provides a core of volunteers and organizations dedicated to proper resource management.

The large population also creates heavy use in specific areas of the park. With very fragile ecosystems, such as the dunes, careful planning and implementation is important. Other management issues such as invasive species, compromised hydrology and surrounding development pressures require vigilance and partnerships.

## **II. Cultural History**

### **A. Fort Le Petit**

A historical marker notes Fort Le Petit. The marker is near the Pavilion where Dunes Creek goes under the park road. Little is known about Fort Le Petit. There is debate as to whether this was a fort or merely a trading post. Its exact location is unknown. The marker makes mention of the fort and a 1780 battle near the site.

From *The Original People of Northwest Indiana* by Christopher Light:

“The frontier wars of 1774 and American Revolution (1776-1783) saw little activity in Northern Indiana. It was not until December 5, 1780 that the war reached northern Indiana. An American raid was planned against the St. Joseph Post and the Potawatomi village there. The troops had come from Cahokia (Illinois) on the Mississippi. Arriving in the village while the warriors were on a winter hunt, the Americans burned everything. Their return route took them along the lakeshore. Meanwhile, the British Lieutenant assigned to the post discovered the disaster and quickly organized a Potawatomi raiding party. Following the American raiders, they over took

them near Fort Creek the abandoned site of the Old French Petit Fort (1750-79). Here in Indiana Dunes State Park, they killed three of the sixteen soldiers and captured the rest.”

## B. Maritime History

1. *Commerce.* Lake Michigan is rich in history beginning with early Native American trade routes, the French fur trade up through the present. A Native American camp was located near Mt. Tom at the campgrounds.



*Propeller from the J.D. Marshall*

2. *Shipwrecks.* Several shipwrecks are documented in Lake Michigan. The wreck of the J.D. Marshall occurred June 11, 1911 just offshore from the Pavilion. The ship’s propeller and several other artifacts reside at the park. Artifacts include a pulley, wrench, beams and a length of chain.

## C. Civil War

During the Civil War, watch towers were situated at the top of the Mt. Tom. The apparent threat was a Canadian pro-slavery group.

## D. Henry Cowles: Birthplace of Ecology

In the late 1800s, Henry Chandler Cowles of Chicago University conducted his research on plants using Indiana Dunes as his laboratory. His findings illustrated that as one moves inland from Lake Michigan, plants change from earliest pioneer species clinging to the sand, to upland forests. The pioneer plants themselves alter the dune environment, allowing the next generation of plants to take over. His findings developed into the understanding of plant succession and later ecology.



## E. Prairie Club and Preservation

The Prairie Club of Chicago originated as a conservation and hiking club in the early 1900s. Their hikes in the Dunes became so popular that a special train was designated to transport members to the Dunes. A club house was located at the dunes and specific dunes were named for club presidents. Their love of the Dunes led the Prairie Club to take a leading role in the making Indiana Dunes a state park.

## F. Civilian Conservation Corps (CCC)

A CCC camp was located at the site of Dunes Creek upstream from the Pavilion. The Company 556 was at Dunes for a short while before being moved to Pokagon State Park as [Company 1563](#). Wilson Shelter is one of their projects. Other projects of theirs, such as the Group Camps, have been removed. A flag pole near the Nature Center is from the CCC.



*Wilson Shelter*

The construction of the camp involved creating an underground path for Dunes Creek via a culvert. Following the departure of the CCC, the camp was dismantled and served as a parking lot. It is only recently that the creek was restored to its original state.

# Existing Conditions

## I. Audiences

Audiences include those using the interpretive service as well as those using the park only.

### A. Local/Day Users

Indiana Dunes State Park is located in a densely populated area. As a result, the park is the local city park for many. Early morning will find a lot of people jogging, cycling and walking before work. “Lake lookers” come to enjoy their lunch or the sunset at the pavilion parking lot.

### B. Schools

Several area agencies offer school programs for the region. The adjacent Dunes National Lakeshore offers a staff that conducts school programs at the Lakeshore as well as outreach programs in the school.

Indiana Dunes is the only public agency in the region that charges a fee for school programs. Additionally, staff is limited, making school visits logistically difficult. In spite of this, Indiana Dunes booked school programs during the reserved times. Schools represented 4% of the programs offered and 11% of the program attendance in 2007.

### C. Birders

Individuals, local birding organizations and ecotourism groups use the park. Indiana Dunes has a reputation as a birding “hot spot” due to its lake location. Migrating hawks ride the thermal updrafts produced by the dunes. Warblers rest in the surrounding trees after crossing the water. Waterfowl are visible from observation areas along the dunes.

Interpretative programming and facilities have catered to this expanding group.

### D. Hispanic Social Gatherings

Family gatherings numbering up to 200 people come to the park for a day of picnicking and relaxing at the beach. These day users are not using interpretive services and are from the local region.

### E. Scouts

Scouts are using the park for programs as well as for specific badge requirements. Eagle scout candidates have set up projects with the park to improve trails.

### F. Campgrounds

Campground users visit the Nature Center and participate in public programs.

### G. Beach Users

Beach users overlap with some of the earlier mentioned audiences (day users, campgrounds and Hispanic social gatherings). They are worth mentioning however, because on summer afternoons, almost all of the park visitors are at the beach. The park’s beach location is their reason for being there.

### H. International Visitors

The park’s strategic location with easy access by a large population makes Indiana Dunes a popular stop for visitors from around the world. Citizens from 28 different countries signed in at the Nature Center. No doubt many more countries were represented in the broader park visitation.

## II. Facilities for Interpretation

### A. Nature Center

The Nature Center is located near the Campgrounds and the edge of the Nature Preserve. The Nature Center includes a display area, program room, bird watching room, library, storage and offices. Plans are in progress to build an outdoor program area next to the building. The Nature Center was built in 1990 for this purpose.

Nature Center attendance in 2007 was 58,543 representing 3% of the overall park attendance. Its distance from the beach may prevent a higher visitation.

### B. Campground Shelter

A small roofed shelter, located in the campgrounds is available for interpretive programs and as a meeting place for hikes. The shelter is not available for reservations, so can be used exclusively by the interpretive service.

### C. Trails

The Nature Center is located near several loop trails, making it a good point of origin for hikes. Many trails go back into the nature preserve that makes up 2/3 of the park. Others head to the beach.

The park follows the coast and accessing the eastern boundary can become a two-hour hike. The eastern boundary, however, borders the National Lakeshore. The interpreter carpools hikers to the eastern end, parks at the National Lakeshore and hikes into the state park.

### D. Observation Tower

A new tower overlooking the lake, pavilion and beach is to replace a pre-existing structure. This location has been a popular meeting place and destination for bird programs, hawk watches and bird walks.

### E. Pavilion (future)

The Pavilion was built in 1930 and may soon be nominated for the historic registry. Windows facing the lake offer an outstanding view of Lake Michigan and the Chicago skyline. Plans are underway to convert the second floor of the pavilion into a restaurant. The restaurant would be managed by the park and the Division's Inns and Concessions.

### F. Joint Visitor Center (potential)

The Porter County Tourism Bureau and the National Park Service (NPS) have opened a Visitor Center at a highway junction (Highways 20 and 49) just outside of the state park. The NPS will be installing new exhibits in a large display room. The IDNR will have a staff presence at the information desk.



*Nature Center*



*Campground Shelter*



*View from Observation Tower Location*



*Pavilion*



### III. Staff

#### A. Interpretive Staff

At present, Indiana Dunes has the following staff at the Nature Center:

1. One full-time interpreter
2. One 180-day interpreter
3. One 90-day interpreter

#### B. Volunteers

The Nature Center enjoys a group of dedicated volunteers. Some put in as many as 300-400 hours per year and a few come in weekly. Volunteers staff the front desk, or assist and lead programs. Some may begin doing roving interpretation.

#### C. Natural Resource Attendant

A natural resource attendant will be working two days at the Park Office and three days at the new joint visitor center. While this individual will not be at the Nature Center, they will be representing the park and providing information to visitors.

#### D. Resource Management Team

The interpreter is responsible for the supervision of the Resource Management Team. The team consists of two 180-day CRR positions. Their tasks include removing invasives, installing fencing, and tracking and mapping exotic species.

#### E. Staff Evaluation

Seasonal staff receive program evaluations and performance reviews during the mid summer using standard DN forms. These are discussed, signed and kept on file.

Full-time staff programs are not directly observed and evaluated. The full-time staff is evaluated in relationship to performance objectives agreed upon between the property manager and the full-time staff.

#### F. Staff Training

*1. Seasonal Naturalist Training Session.* The annual 4-day interpretive staff training is conducted for new and returning seasonal interpretive staff. It includes foundation classes on interpretation as well as practical ideas for planning and conducting interpretive programs. This training is held in May prior to the start of the summer season. It is organized by the Chief of Interpretation and conducted by full-time interpretive staff.

*2. In-service Topical Training.* DNR sponsored sessions on specific topics related to resource management (chain saw safety, wildfires, invasives), and administration (new DNR software).

*3. Non-IDNR Sponsored Training:* The full-time interpreter attended workshops hosted by professional associations National Association for Interpretation and the National Recreation and Parks Assn. Save the Dunes Council also hosts workshops related to environmental issues.

### IV. Interpretive Programs

#### A. Public Programs

A schedule of short hikes and talks is offered to day users and those staying in the campgrounds. In 2007, public programs made up 90% of the programs offered and 80% of the program attendance.

#### B. Special Events

Special events are a sub-category of public programs, but are offered over the course of a day or weekend with a specific theme. Astronomy, Halloween and Birding special events are examples of such programs. The Halloween program was offered in the Campgrounds with many people reserving campsites specifically because of the program. Other special events draw in local residents.

### **C. Roving Interpretation**

During summer afternoons, most of the park visitors are at the beach. Roving interpretation at the beach has been successful by taking interpretation to the people. Roving interpretation dealing with the emerald ash borer has been conducted in the campgrounds.

### **D. Workshops**

Workshops generally charge a fee and frequently involve learning a skill or making an item. The Friends Group funds and conducts workshops. Examples of workshops have included spirit stick carving and wire jewelry making.

### **E. Geocaching**

The Nature Center has begun a GPS rental program. Park geocaches, trails and points of interest are available on the units.

### **F. Schools**

School programs made up about 5% of the programs offered. Limited staff and a large number of free opportunities for schools in the region has limited the amount of time allocated for school groups.

### **F. Evaluation**

#### *Program Topic Evaluation*

In response to a questions about areas that are “underinterpreted”, the park interpreter felt that the following areas could use more emphasis:

- a. Dunes. Their formation, fragility and protection.
- b. Emerald Ash Borer

#### Comments

Both of these are directly related to resource management. The dunes topic can be developed into programs or other media. The interpreter notes that the Nature Center used to house an exhibit about dune formation, leaving a gap in this story. The emerald ash borer infestation is an issue that is constantly updated. For this reason an exhibit or sign would not be appropriate as they would be obsolete too soon. Programs and fliers would be better approaches.

It is important to note that a particular topic need not be a separate program, but can be tied into existing programs. For example, mention of the ash borer can be tied into many talks and hikes dealing with the park. This applies to other media as well.

#### *Program Success Evaluation*

While programs are not always evaluated using the program form, changes and improvements are discussed and incorporated. Comment cards are available at the Nature Center reception area. Comments rarely include programs, but more frequently cover aspects of the building. The interpreter has found few of the comments to be “usable”.



*Nature Center*

## VI. Interpretive Media

### A. Nature Center Exhibits

The exhibits are, for the most part, the original exhibits from the 1990 opening of the building. The entryway includes many bird mounts suspended from the vaulted ceiling, an interactive bird wingspan comparison graphic and information about the Prairie Club. A large divider in the exhibit room has back-lit photos of the park on one side and panels covering historical figures from the region on the other side. Many of the back-lit photos are splitting. Movable exhibits on casters cover the topics of biodiversity and Lake Michigan species, rocks and litter. Wall panels cover Lake Michigan, the original design drawing for the Prairie Club Fountain and Frank Dudley artwork. Wood sculptures of the adult and larval stages of ant lions are featured. A wall of live animal tanks features local fauna. The children's corner features a tree to climb through, games and activities. A bird watching room is separate from the main display area and offers windows on three sides looking out on a feeding station.



*Wayside Exhibit*

Roughly 58,000 visitors came through the Nature Center during 2007.

### B. Wayside Exhibits

A series of signs has been placed at features and destination points in the park. Topics include: the J.D. Marshall shipwreck, the Prairie Club fountain, the view from Mt. Tom, dune erosion and the Great Marsh. Save the Dunes also sponsored signs about the daylighting project, rain gardens and the Dunes watershed. Additionally, smaller signs mark the boundary of the Nature Preserve.

### C. Brochures

Two Dunes-specific brochures are available at the Nature Center. They are: Dunes Wildflowers and the J.D. Marshall. The J.D. Marshall brochure is a reprint of an article covering the shipwreck.

### D. Bulletin Boards

Bulletin boards throughout the park are largely informational, but also contain some interpretive information.

### E. Videos and DVDs

The Nature Center offers videos and DVDs upon request for watching at the building. A new 13-minute DVD about the park was produced and is available for viewing and for purchase. These are popular especially on rainy days.

# Partnerships

Indiana Dunes has a long history of support and advocacy from several groups. These relationships have kept the park a regional treasure and a tourist destination.

## **A. Indiana Dunes National Lakeshore (National Park Service)**

The National Lakeshore Purchase Area extends from Michigan City to Gary. National Lakeshore property borders the state park to the west, east and south. The Lakeshore includes natural and historical sites. The National Park Service (NPS) staff conducts interpretive programs including historical programs at the Chellberg Farm and Bailly Homestead. School programs conducted at the Lakeshore and in schools are offered by a large education staff. A residential center and day care reside on the property.

At present, Dunes State Park and the National Lakeshore partner at the new joint visitor center. Park programs conducted on the eastern edge of the State Park park at a Lakeshore parking area.

## **B. Friends Group**

The Friends of Indiana Dunes numbers more than 600. Their mission includes both the State Park and the National Lakeshore. The group raises money and conducts programs and workshops. The park may request money for specific items such as equipment and supplies. The group conducts plant sales and workshops to raise money.

## **C. Save the Dunes and Conservation Fund**

The Save the Dunes and Conservation Fund formed in 1952 to “preserve, protect and restore Indiana’s famous dunelands”. Their efforts led to the 1966 creation of the National Lakeshore. The Council works primarily in the political arena advocating and supporting laws and regulations related to the dunes and the Lake Michigan watershed. Watershed plans are also facilitated by the council.

## **D. Shirley Heinze**

“The Shirley Heinze Land Trust, a non-profit organization, was endowed in 1981 as a charitable trust to preserve and protect the unique ecosystems of the Indiana Dunes region.” The land trust partners with the park by providing tools, expertise and manpower for burns and resource management projects.

## **E. Lake Michigan Coastal Program**

“The purpose of the Indiana Lake Michigan Coastal Program (LMCP) is to enhance the State's role in planning for and managing natural and cultural resources in the coastal region and to support partnerships between federal, state and local agencies and organizations.” The Coastal Program is under the auspices of the Indiana Division of Nature Preserves. Federal grant money administered by the National Oceanic and Atmospheric Administration (NOAA) is available through the LMCP. Grants funded include acquisition, restoration, education and planning projects.

## **F. Indiana Division of Nature Preserves**

Staff from the IDNR Division of Nature Preserves conducts botanical monitoring at Indiana Dunes State Park.

## **G. U.S. Geological Survey**

The USGS has conducted water studies and fish counts for the park.

## **H. Porter County Parks**

The Porter County Parks Department has collaborated with the state park on programs. Hay wagons and other equipment has been shared between the two agencies.

### **I. Porter County Convention, Recreation and Visitor Commission**

The Commission has been very active in providing publicity for the state park.

### **J. Chesterton Feed and Garden**

The local business has been helpful in assisting with special events by providing prizes, donations and setting up displays.

### **K. Northwest Indiana Migratory Bird Association**

This organization has provided funding for bird related programs and items.

### **L. Antique Tractor Association**

The Antique Tractor Association brings their tractors to events and offers rides at special events.

### **M. Porter County Solid Waste District**

The Solid Waste District and the state park have conducted joint programs to maximize staff.

### **N. Prairie Club**

The Prairie Club, responsible for the establishment of the state park in the 1920s is still in existence. They are a potential partner and maintain an archive of historical information.

### **Comments**

Dunes has several long-lasting successful partnerships. The interpreter credits these successes with maintaining a two-way exchange of help, services and resources. Additionally, recognition is paramount in maintaining and motivating successful partners.

# Regional Offerings

Indiana Dunes is situated in an area with numerous opportunities for recreation and interpretation. A trip to the joint county/NPS visitor center presents a daunting brochure rack of things to do in the area. Almost any weekend offers concerts, festivals and art shows. The following features those most related to interpretation.

## **A. Indiana Dunes National Lakeshore**

The National Lakeshore offers interpretation, a similar ecosystem and close proximity to the park. The Lakeshore borders the park on three sides. It includes the coastal dunes, portions of the Great Marsh and other similar ecosystems. A large interpretive staff offers cultural and natural history programs for the public and school groups.

Combining the acreage of the Lakeshore and the state park creates a larger protected area for the dunes ecosystem. The opportunities of shared staff, facilities and equipment exists. Program collaboration continues to be an option. The contiguous property created by the park and Lakeshore offers the opportunity for longer trail experiences.

In addition to trails and programs about the dunes, marshes and other ecosystems, the Lakeshore has a program focus on historical sites within their property. The Chellberg Farm maintains live animals and interprets a working farm. The Bailly Homestead represents the evolution of an area from early trading post to established 1917 residence.

It is important that the park and the Lakeshore find their own niches for interpretation and continue to collaborate rather than compete.

## **B. Chesterton, Indiana**

### *1. Westchester Township History Museum*

The museum is located in the 1885 Brown Mansion and includes period furnishings as well as exhibits on local history. The agency also provides an archive and research service on area history.

### *2. Historic Chesterton Tour, Historic Landmarks Foundation of Indiana, Calumet Office*

A brochure accompanies a walking tour of the commercial and residential historic districts.

### *3. Coffee Creek Watershed Conservancy*

The Coffee Creek Watershed Preserve is a 167-acre preserve just north of I-80/90 along State Road 49. The preserve has 5 miles of trails, an amphitheater and pavilion.

## **C. Commercial Venues**

The area offers the Anderson Vineyard and Winery, Outdoor World (Bass Pro Shops), and Taltree Arboretum and Gardens. Additionally, there are unlimited hotels, restaurants and shopping opportunities in the region.

## **D. Evaluation**

The urban area surrounding Indiana Dunes perhaps offers unlimited things to do. Many of these, however, are not interpretive and others emphasize cultural over natural history.

The Indiana Dunes National Lakeshore is the operation that is in closest proximity and shares the most common goals with the state park. They are adjacent and contain the same ecosystems. A good shared relationship exists between the two agencies.

The National Lakeshore has a large staff and budget which allows them to offer free programs and outreach programs. To prevent a competitive relationship, Indiana Dunes needs to continue focusing on the large audiences that are already using the park. These include beach users, day users and local birders and hikers.

# Interpretive Theme

Lake Michigan and its dunes have influenced the surrounding ecosystems and the people who visited, studied and protected them.

## Subthemes

*1. The dunes formed and continue to change as the result of water, wind and human impact.*

Objectives:

- A. Visitors will understand how the rising and falling of post-glacial Lake Michigan created the dunes.
- B. Visitors will understand how wind continues to change the dunes.
- C. Visitors will understand how their behavior can alter the fragile dunes.

*2. Dunes succession tells the story of nature claiming new land.*

Objectives:

- A. Visitors will be able to explain the process of dunes succession from pioneer species to mature forest.
- B. Visitors will appreciate the scientific research and discovery that occurred at Indiana Dunes.

*3. The array of edge of range conditions and ecosystems created by the dunes allows a vast variety of species to live at Indiana Dunes.*

Objectives:

- A. Visitors will understand how the western prairie, eastern deciduous forest and northern wetlands all meet at the dunes.
- B. Visitors will appreciate how each stage of dunes succession includes its associated flora and fauna.
- C. Surrounded by intense urban pressures, visitors will understand that Indiana Dunes is an island containing species that are rare in Indiana.

*4. Lake Michigan influences the weather, climate, dunes development and regional history.*

- A. Visitors will understand how the lake's large volume of water effects the local weather.
- B. Visitors can appreciate the intense storms that have led to shipwrecks on Lake Michigan.
- C. Visitors will appreciate Indiana Dunes's strategic location for trade and commerce.

*5. The fragile resources at Indiana Dunes require constant protection, research and management.*

- A. Visitors will empathize with the Prairie Club and their desire to protect the dunes.
- B. Visitors will appreciate the ecosystem management and invasives control required to maintain the dunes.

# Recommendations

## I. Interpretive Center

### A. General Comments

Indiana Dunes is fortunate to have a building designed as an interpretative center with staff and facility needs in mind. Storage and office space are good relative to other facilities. The program room and display areas are large, but still manageable.

The current exhibits have been relatively the same since the opening of the building in 1990. Some have held together well. In others the cases are in good condition, but the interpretive portions need to be upgraded or replaced. Still others need to be completely replaced.

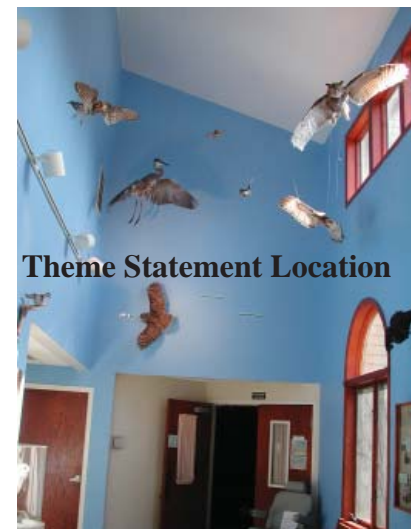
It is important to create an exhibit flow that explains the main theme at the start, supported by the sub-themes. The sub-themes take the form of individual exhibits.

### B. Entryway/Lobby

The interpretive theme for Indiana Dunes is: Lake Michigan and its dunes have influenced the surrounding ecosystems and the people who visited, studied and protected them.

This theme statement could be stated on the large wall over the auditorium entryway. Associated with this large lettered theme statement would be icons representing the sub-themes: Lake Michigan, ice age, dunes, Henry Cowles, dune succession, species diversity, rare species, trade and commerce, shipwrecks, Prairie Club and resource management. Each icon would be represented in its corresponding exhibit/exhibit area in the display room.

The ample wall space (mostly above head level) could be filled with large images and enlarged photographs representing different themes. Examples could be hikers with the Prairie Club, a rare species, a ship on Lake Michigan, the dunes, etc. An alternative would be a large mural that would wrap around the wall over the auditorium to the wall over the reception window. The mural would be used as a visual aid by interpreters or self-guided, to provide a park overview.



### C. Exhibit Room

Visitors will enter the exhibit area and travel in a counterclockwise path through the room (see floor plan).

#### 1. Lake Michigan/Dunes Formation

This exhibit conveys the changing Lake Michigan shoreline and the lake's influence on the dunes. The visual covers a several thousand year span showing the creation and movement of the Tolleston Beach. The final text label conveys the fact that the dunes are constantly changing, fragile and need special protection.

The physical appearance of this exhibit could be:

- 3-panel kiosk with each panel graphic representing a period in the formation ("6000 years ago", for example)
- an interactive exhibit where the image changes through a lenticular/holograph image, or other interactive means.

As one enters the exhibit hall, a carpet or floor tiling can indicate the ancient shorelines of Lake Michigan. These shorelines would be identified on the wall to the right upon entering.



## *2. Dunes Succession*

Central to the exhibit hall is a large diorama featuring dunes succession on one side and the Prairie Club on the back side.

The diorama would portray the stages of dunes succession beginning at the lake and ending with climax forest. Representative plants and animals would be featured on the background wall as graphics, as 3-D replicas, or using the many taxidermy mounts that the park has.

Lift doors in the base of the diorama shows smaller dioramas of roots and/or underground fauna (burrowing animals, insects).

## *3. Henry Cowles*

On the farther end of the succession exhibit is information on Henry Cowles. A large photo will include brief text labels describing his research and its importance to the dunes.

## *4. Ant Lions*

The existing ant lion sculptures are moved to the area leading to biodiversity. Additional information is needed to draw attention to the life stages of the ant lion represented in the two pieces. A video against the wall will have footage of ant lion ambush tactics and two life stages.

## *5. Edge of Range/Biodiversity*

A wall divider is a map showing the northern, eastern and western ecosystems whose edges overlap at the dunes. Photos of representative species from each ecosystem surround the map.

The map could become interactive with the use of LEDs. Visitors would push buttons to light up each ecosystem on the map.

## *6. Bird Room Partition Wall*

The wall partition at the bird room would explain why Indiana Dunes is such a strategic location for migratory birds. The flat panel would map various migration routes for hawks, waterfowl and passerines. Thermals created by the dunes, water and resting areas during migration are featured on the panel.

## *7. Cultural Strategic Location*

Moving from the biological strategic location, visitors move to the cultural strategic location. The stairway wall will cover the Indian Camp near Mt. Tom, fur trade, Fort Le Petit, the 1780 battle and the Civil War observation towers once located at the dunes. Furs (beaver, muskrat, etc.) can be securely displayed for people to touch.

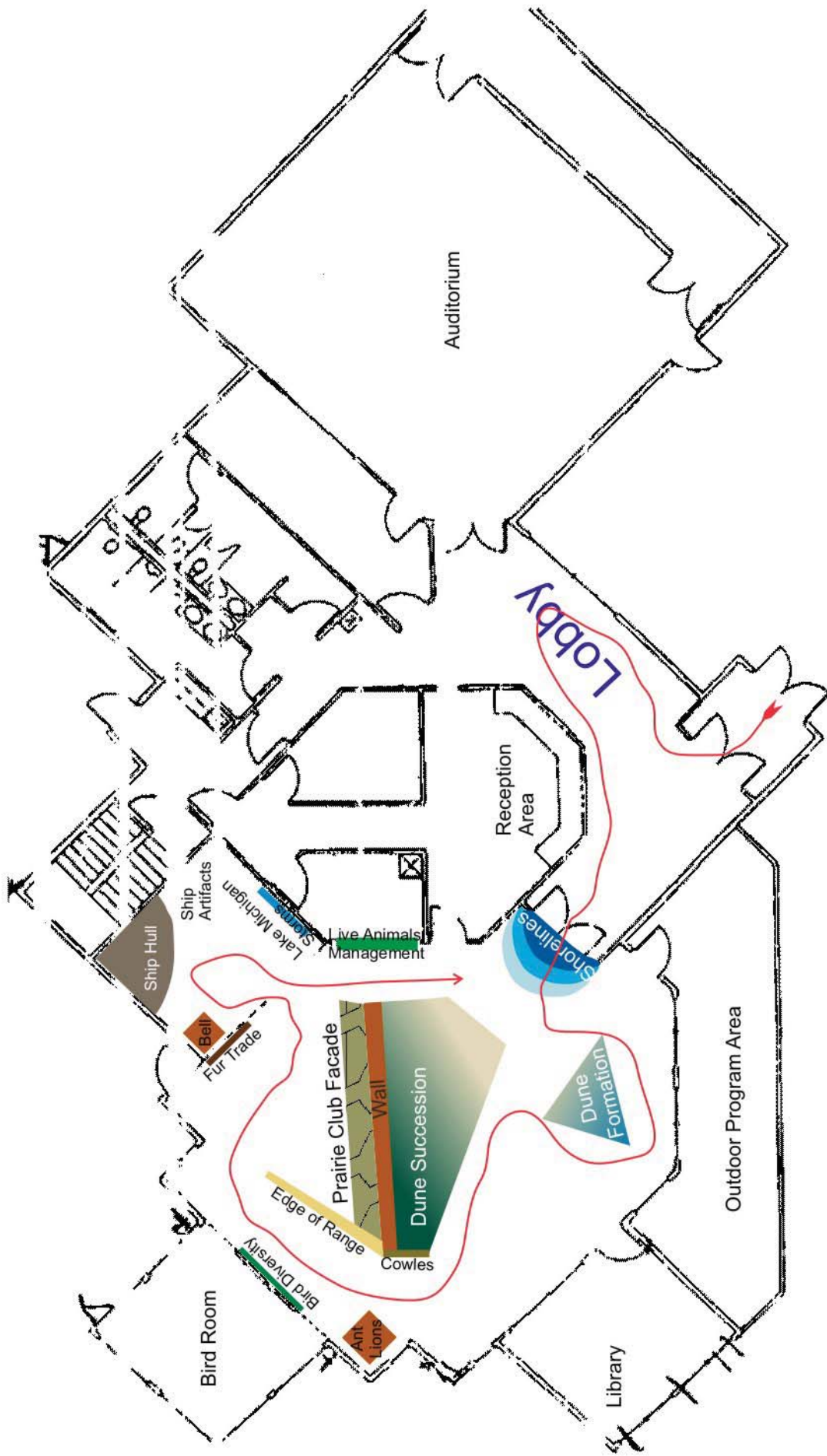
## *8. Prairie Club/Preservation*

On the back of the dune succession exhibit is a replica facade of the Prairie Club's clubhouse that once resided at the dunes (photo). Looking through windows, visitors can see photos, posters, documents and articles related to the Club and their efforts to save the dunes. A mannequin or flat image in period dress could be visible through one window.

## *9. J.D. Marshall and Maritime History*

This exhibit area is located in the current kids area. The "tree" will become a ship's hull with portholes. Artifacts from the ship will be displayed. Some items will need protective cases. The brass Memorial Bell is displayed in a way that protects the bell, but allows it to be rung. The bell can be removed for use in programs. A Lake Michigan weather station will provide either a real-time audio or a computer link giving current lake conditions. Interpretive labels will cover the wreck of the J.D. Marshall, Lake Michigan's influence on weather,

# Conceptual Exhibit Floor Plan



riptides and storms on the lake. A segue to the next exhibit covers how prevailing wind from the lake creates blow-outs that were started by humans.

### 10. Resource Management/Live Animals

The current live animal exhibit wall needs to be upgraded. At present, the openings are not standard aquarium sizes, making it difficult to replace tanks. Label holders do not work well and labels slide out of place.

In re-working this wall, the animals selected would tie into specific habitats and the management done to maintain and restore specific habitats. For example, an animal found in the Great Marsh would be accompanied by text and photos of invasive plant removal taking place in the marsh.

## D. Outdoor Program Area

The Nature Center once had a deck that provided program space. This deck had to be removed several years ago. A new area is planned and will soon be constructed. This will be a wonderful, nearby facility for the interpreter.

### Sand Table Exhibit

A closeable sand table can be used for outdoor programs at the Nature Center. (Photo) This can be used to illustrate (with a fan) how blow-outs develop, how the dunes formed and how plants can stabilize the dunes. With young children, programs can cater to making dunes. Tables can be constructed or purchased. <http://daycaremallcatalog.com/classroom-sand-water-table-with-shelf-p-308.html>



*Sand Table*



*Fountain Drawing*

## E. Other

### 1. Jens Jensen fountain drawing

The original Jens Jensen design for the Prairie Club Fountain is hanging in the Nature Center. This is a valuable document, but does not get much interest at the center. Bright lighting is causing it to fade. It is recommended that this find a new home where it can be of more use, and be better protected. The local historical society, the Prairie Club or a professional landscape architect association would perhaps have a greater audience for Jensen's work.

### 2. Vertical Space in the Exhibit Room

The exhibit room includes high vaulted ceilings. The sculpture of the adult ant lion is suspended in one area. Some of the many bird mounts currently displayed in the foyer could be moved into the exhibit room especially near the bird room area.

### 3. Lighting

Lighting was installed in the uppermost areas of the ceiling. Changing bulbs is impossible, so the lighting is not used. In light of new exhibits being installed, it would be advantageous to consult with an electrical and lighting company to discuss alternatives.

## II. Pavilion

Plans are in progress to convert the second floor of the Pavilion into a restaurant with dining room. The view of Lake Michigan is outstanding. Working with Inns and Concessions, the Lake Michigan theme can be incorporated into the restaurant.

## A. Menus

Include brief information about Lake Michigan and the dunes in the menu. Where appropriate, food item names can fit with the park theme. Kids menus can include activities (coloring sheets, word searches, etc.) that interpret the park.

## B. Interpreting the View

Tables near windows will have a beautiful vista of Lake Michigan. Interpretation should orient visitors to this view, including direction and mileage to various points. For example, direction and miles to: Chicago, Milwaukee, Straits of Mackinaw would provide a sense of the lake's size. This information could be presented via permanent signs at the windows, or printed on tablecloths. Paper placemats that visitors could take with them is another possibility. The placemat would in effect become a flyer containing interpretive and park information.



*View from Pavilion Window*

## C. Restaurant Interior

There is a wealth of historic photos of the pavilion, park and dunes region. Large wall photos as well as related artifacts with brief labels would establish the theme and significance of Indiana Dunes.

## D. Exhibits

The Nature Center has several exhibits on casters. These will be replaced and the existing exhibits can be moved to the Pavilion and used in the waiting area for the restaurant. The structures themselves are in good shape, but the information would need to be cleaned up and/or changed.

# III. Self-Guided Media

## A. Interpretive Signs

### 1. Fort Le Petit

The bigger idea of strategic location for the fur trade and during times of war is the focus of this sign. Ideally more research would provide more information on the fort itself. What is known fits into the sub-theme 4.C.: Visitors will appreciate Indiana Dunes's strategic location for trade and commerce.

### 2. Observation Tower

Plans are in progress to build an observation tower overlooking the beach, pavilion and lake. This replaces a structure used for this purpose. It has been a popular location and destination for birders.

Rail mounted signs can interpret birds and why the lake provides such an excellent location. Signs can be attached below the railing (see figure) to permit an unobstructed railing for birders to lean against while using binoculars. Sign topics can include: a) hawks: silhouettes, thermals and dunes, migration along the lake; b) waterfowl: shapes, migration; c) passerines: migration across water, importance of resting areas.



### 3. Civilian Conservation Corps Camp

A panel located either at Wilson Shelter or near the site of the camp would explain the history and the projects of the company assigned to Indiana Dunes.

## B. Dunes Succession Trail

At present there are no self-guided trails at the park. An ideal trail for such an experience would guide visitors

through the various stages of dune succession. This trail could originate from the Nature Center (where trail brochures would be provided) and guide people toward the beach, through the various stages of succession. An emphasis would be on the fragility of the dunes and precautions against getting off the trail. Existing trails could be used with low ground markers corresponding with the information in the trail brochure. Due to the subject, this would be a linear trail rather than a loop trail.

#### Alternatives:

Ideally, the trail would start at the beach and head inland. This would allow the information to be revealed chronologically through the stages of succession. Two options for this would be:

- Creating a loop trail from the Nature Center, the first half heading toward the beach and interpreting other dune features, information, etc. The return half of the trail (from the beach to the Nature Center) would focus on dune succession.
- Creating a linear trail originating from the Beach and ending at the Nature Center. Brochures would be available at the Pavilion and could include an invitation to return them at the Nature Center.
- Using signs to mark stops rather than a brochure has a greater initial cost, but a lower maintenance cost. No brochure reprints and maintaining brochure supplies is required. Using signs allows all hikers to learn, instead of only those who picked up a brochure.

## IV. Programs

### A. Self-serve programs

The interpretive staff have made changes that reflect the audience, available staff and other regional opportunities. More “self-serve” opportunities exist. These allow the visitor to partake of a program when convenient rather than having to conform to a schedule. Such programs are popular on rainy days. Videos are an example of this type of programming. It is recommended to continue this trend as long as participation numbers justify it.

### B. Catered Programs

The opening of the Pavilion Restaurant offers some opportunities to offer meal and program packages to special groups. For example, steel company executives hosting a conference could be treated to an evening overlooking the lake followed by an indoor or outdoor program at the beach.

Taking this one step further, events similar to The Nature Conservancy’s Big Donor Days could be held for organizations and individuals who have made donations to the Friends Group. These events would include food, hikes and talks to these individuals.

### C. South Shore Line/Calumet Trail

There is the possibility of drawing a large audience from the Chicago area via the South Shore Line. The South Shore Line has a station just outside the park and along the Calumet Trail. Currently the railroad is not set up to accommodate cyclists. It is recommended to pursue opportunities to partner with the South Shore Line, Calumet Trail and local cycling and



*South Shore Line at Dunes Station*

hiking groups to offer package day trips. Trips could include the Indiana Dunes, cycling along the trail and lunch at the Pavilion.

## V. Staff

The interpretive staff is comparable to other properties in the system. What Indiana Dunes excels at is the number of volunteers who staff the building. This allows longer open hours and greater flexibility for staff to do roving interpretation and programs away from the building.

During the summer months, almost all park visitors are at the beach during the hours of 11 a.m. until 3 p.m. With the exception of roving interpretation at the beach, programs during these hours can not be justified in attendance.

This also creates some staffing issues as the most popular program hours are morning and evening. Not as many staff are needed during the middle of the day, but it would be difficult to have staff leave at noon and return for an evening program. IDNR policy and employee needs have to be considered. It is recommended to experiment with scheduling possibilities to work around the mid-day lull and maximize staff hours.

### Evaluation

#### Full-time

It would be beneficial if a standard evaluation form were available to all property managers for the purpose of evaluating full-time interpreters. This would guide them as to what to look for when observing a program. The form should be developed by the Chief of Interpretation with input from the full-time interpreters.

#### Seasonal

In addition to continued evaluation by the full-time interpreter, it would be beneficial for seasonal staff to observe and evaluate a program at the National Lakeshore. This would provide a comparison of a different agency at a similar site. Much can be gained from seeing interpretive techniques and presentation styles at another agency.

*“We have observed that there is a certain rate of decay in accuracy that starts shortly after training is completed and accelerates in the absence of feedback.” (Covel, 1990)*

In addition to evaluating program presentation, knowledge of the topic must be checked. A test, specific to Dunes topics should be given to staff and volunteers during the course of the season. This could be a take-home test, allowing participants to look up answers and improve their knowledge.

## VI. Other Locations for Interpretation

### A. NPS Visitor Center

The new Visitor Center is operated jointly by the county visitor’s bureau and the National Park Service. The Indiana DNR will have a staff presence there on a part-time basis as well as having literature available for distribution.

At present, the NPS is responsible for exhibits at the facility. Due to the unavailability of funding, exhibits have been limited. An alternative to moving the castor exhibits to the Pavilion (mentioned earlier in the Recommendations) would be to upgrade and move



*NPS Visitor Center Exhibits*

these to this center. This would require working closely with the NPS.

Doing this would offer the IDNR a greater presence at a center outside the park.

## **B. Railroad Station**

The South Shore Line maintains a station a short distance from the park and the Calumet Trail. The entire route runs from South Bend to downtown Chicago and serves as transportation for commuters as well as for tourists to Chicago. For years the route served the Prairie Club coming from Chicago to visit the dunes on their outings.

Currently the modern station has a large floor-to-ceiling display case containing a diorama of the dunes and dunes succession. There is no text interpreting the display. It is believed that the display was created by the National Park Service.

The strategic location of the station, creates an opportunity for promoting and interpreting the park. It is recommended that the park investigate options for sharing the display space and using it to encourage visitors to make this a destination.



*South Shore Station Exhibit*

## **VIII. Training and Professional Development**

The full-time interpreter should continue to participate in training related to their diverse training. This includes training related to interpretation as well as to resource management and volunteer coordination.

Indiana Dunes is fortunate to have a large, dedicated volunteer staff, many who have contributed years to the park. Since these volunteers have a lot of visitor contact, it is recommended to pursue training opportunities for interested volunteers. This could take the form of attending workshops or becoming certified through the National Association for Interpretation.

## Summary of Recommendations

| Locations                  | Phase I                                                                         | Phase II                                      |
|----------------------------|---------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Interp. Center</b>      | Develop new exhibits for Interpretive Center                                    |                                               |
|                            | Remove Jensen drawing                                                           |                                               |
|                            | Install new lighting                                                            |                                               |
|                            |                                                                                 | Sand table for IC outdoor area                |
| <b>Pavilion Restaurant</b> | Maintain interpretive theme in interior design and with menus, placements, etc. |                                               |
|                            | Move old castor exhibits from IC to lobby                                       |                                               |
|                            |                                                                                 | Pavilion Restaurant package programs          |
|                            |                                                                                 | Develop orientation signage for window tables |
| <b>Ft. Le Petit</b>        | Interpretive sign to replace existing marker                                    |                                               |
| <b>Obs. Tower</b>          | Interpretive signs on birds                                                     |                                               |
| <b>CCC Camp</b>            |                                                                                 | Interpretive sign                             |
| <b>Trails</b>              |                                                                                 | Self-guided Succession Trail                  |
| <b>South Shore Station</b> |                                                                                 | South Shore Line package events               |
|                            |                                                                                 | Investigate shared interpretive exhibit       |
| <b>Staff</b>               | Evaluate scheduling around heavy beach times                                    |                                               |
|                            | Attend and evaluate NPS programs (and reciprocate)                              |                                               |



Phase I in order of priority with time estimate

| Years to complete                               | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------------------|---|---|---|---|---|
| <b>Project</b>                                  |   |   |   |   |   |
| 1. Design and install IC exhibits               |   |   |   |   |   |
| 2. Install new IC lighting                      |   |   |   |   |   |
| 3. Remove Jensen drawing                        |   |   |   |   |   |
| 4. Evaluate staff scheduling                    |   |   |   |   |   |
| 5. Develop themed items for Pavilion restaurant |   |   |   |   |   |
| 6. Move IC caster exhibits to Pavilion          |   |   |   |   |   |
| 7. Observation tower signs                      |   |   |   |   |   |

Phase II in order of priority with time estimate

| Years to complete                         | 1 | 2 | 3 | 4 |
|-------------------------------------------|---|---|---|---|
| <b>Project</b>                            |   |   |   |   |
| 1. Self-guided Succession Trail           |   |   |   |   |
| 2. Sand table for IC outdoor area         |   |   |   |   |
| 3. Orientation signs for Pavilion windows |   |   |   |   |
| 4. Pavilion restaurant package programs   |   |   |   |   |
| 5. CCC camp sign                          |   |   |   |   |
| 6. South Shore exhibit                    |   |   |   |   |
| 7. South Shore package events             |   |   |   |   |