



The Earth may be warming but... The Lake is Still Cold!

SOMETHING’S HAPPENING HERE. THE WINTER OF 2011-2012 never really showed up. Only five percent of the Great Lakes were covered with ice this year, the lowest amount recorded since satellite photos became available in 1973. Researchers at the National Oceanic and Atmospheric Administration say that Lake Superior ice cover has decreased 79% in the past 40 years. Studies at the University of Minnesota-Duluth indicate that since 1980, the summer water temperatures in Lake Superior have increased 2.5°F per decade. The water is so warm that 44% of summer visitors responding to a 2004 survey said that swimming in the lake was one of the activities they participated in during their park visit.

So, the lake is getting warmer. That doesn’t mean that the water is warm. In fact, the lake is still cold. Any water below 70° Fahrenheit is cold water. At those temperatures, the human body cannot generate enough heat to keep warm. Even at its warmest period in August, the average surface temperature of Lake Superior is about 61° F. Here are the average lake surface temperatures by month (as measured 1992-2011):

May	June	July	August	Sept.	Oct.
39°F	41°F	52°F	61°F	57°F	48°F

Prolonged exposure to these temperatures leads to hypothermia, a condition in which core body temperature drops below the required temperature for normal metabolism and body functions. Hypothermia causes shivering, lethargy, confusion, apathy, delirium, and death. In September 2010, and June 2011, two kayakers died of hypothermia while paddling in the Apostle Islands (see sidebar article). It is important to realize that exposure to cold water will quickly begin to impact the human body.

The 1-10-1 Principle

Upon sudden immersion in cold water, a person has about. . .

- One (1) minute to gain control of their breathing. The shock of immersion in cold water causes gasping for air and hyperventilation.
- Ten (10) minutes of meaningful movement to attempt self-rescue. The rapid loss of control over your hands, arms, and legs leads to swimming failure.
- One (1) hour before becoming hypothermic and losing consciousness.

This means that without a life jacket (personal flotation device or PFD), a person can only survive for about 10 minutes in cold water before being unable to save themselves. With a PFD, you might survive for an hour before hypothermia sets in.



Top: Reflective material on PFDs improves their visibility, especially at night.
Middle: Paddlers have about 10 minutes to attempt self-rescue before losing control of arms and legs and not being able to swim.
Bottom: Even in the middle of summer, Lake Superior surface water rarely gets above 60 degrees F. In these temperatures the human body cannot generate enough heat to keep warm.

So, the changing climate does seem to be having an impact on one of the world’s largest lakes. Lake Superior’s surface temperatures are rising. By all means, enjoy the relatively warm water near beaches in shallow bays where you can quickly go to shore if you start to get chilled. But be aware that even during the dog days of summer, Lake Superior water is still cold and unforgiving if you are immersed too long and can’t get out.

Kayakers Die From Hypothermia

There have been two fatal kayaking accidents in the Apostle Islands in the past two years. On Friday September 10, 2010 two kayakers departed from Little Sand Bay to paddle to a campsite three miles away on Sand Island. Increasing wind and wave conditions on Lake Superior caused the paddlers to become separated about 4 pm. One of the paddlers reached Sand Island and reported that his companion was overdue after 6 pm. An extensive multi-agency search continued unsuccessfully through the evening until deteriorating weather conditions forced its suspension near midnight. The body of the missing paddler was found floating near Sand Island the following morning. The victim was wearing a life jacket over a full wet suit. The cause of death was determined to be hypothermia.

Against recommendations from park staff, a group of four college students launched kayaks from Little Sand Bay on the afternoon of June 7, 2011. Two of the four kayaks capsized during the crossing to Sand Island sending the paddlers into 49° water. Three of the paddlers eventually made it to shore and used a cell phone to report they had lost sight of the fourth man. The Coast Guard found the missing man unresponsive in Little Sand Bay at about 8 pm, with a blue life jacket and the bottom half of a wet suit on. His friends reported that, when last seen, he was wearing the life jacket, swim trunks and a t-shirt. The paddler died from hypothermia.

These tragedies might have been avoided if the paddlers took the following precautions:

- Use the proper equipment in the proper fashion. Several of the kayaks in these incidents were too small and not properly outfitted for a trip on Lake Superior.
- Use the buddy system. Stay together with your group.
- Check the latest weather forecast and pay attention to existing lake conditions. In both incidents, paddlers ignored warnings to delay their trip.
- Wear a wet suit or a dry suit and a brightly colored PFD with reflective material.
- Be capable of re-entering your kayak from the water.
- Do not overestimate your skill level.

3 Summer Info



5 Safety



7 Lighthouses



7 Bear Update





National Park Service
U.S. Department of the Interior



Apostle Islands National Lakeshore

Wisconsin’s northernmost landscape juts into Lake Superior as the scenic archipelago of 22 Apostle Islands. The area’s scenic, historical, biological, and recreational values were recognized in 1970 when Congress named 20 of the islands and 2,500 acres of the peninsula as a national lakeshore. In 1986, Long Island was also included. The Gaylord Nelson Wilderness, including 33,500 acres of the lakeshore, was established in 2004.

This fascinating unit of the National Park System features a combination of spectacular natural beauty and rich cultural history. The wooded islands are trimmed with sea caves, sandstone cliffs, and miles of pristine sand beaches. Native Americans, voyageurs, loggers, stone cutters, farmers, and commercial fishermen all left their marks on the islands. Six light stations were built in the Apostles to aid Great Lakes navigation.

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Apostle Islands National Lakeshore has a Fan Page on Facebook. Here, you will be able to share your experiences at the national lakeshore. Occasionally, we’ll ask a thought provoking question, tell you “what is happening now,” engage in conversations, and bring clarity to any rumors floating around out there.

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

Parks Contribute to the Economy

By Bob Krumenaker
Park Superintendent

National park managers love statistics. When we get together, we enjoy talking about how our national park is the largest in acreage, has the most coastline, has the most of this or the highest density of that. As cool as each national park is, we love to quantify how special it is. After all, Apostle Islands isn’t as well known as Yellowstone, the Grand Canyon, or even Voyageurs or Big Bend National Parks. A good case could be made that this misses the most important aspect of what a national park means -- that being the connection people make with their heritage, natural and cultural, in places that the American people have chosen to protect in perpetuity.

Wallace Stegner, the great American author, said it best:

“National parks are the best idea we ever had. Absolutely American, absolutely democratic, they reflect us at our best rather than our worst.”

Without parks, Stegner continued,

“millions of American lives ... would have been poorer. The world would have been poorer.”

Stegner probably wasn’t thinking economics when he used the word “poorer” but there’s literal truth to his statement. In these challenging economic times, the role national parks play in the local, regional, and national economy is worth noting. National parks create and maintain jobs, and there is abundant evidence that most gateway communities near parks and other protected landscapes are healthier than otherwise comparable communities far from similar amenities.

In 2010, 281 million visitors to national park units around the United States spent over \$12 billion in the parks and their nearby communities. Local residents accounted for about 10% of this total, which does not include the travel costs for the other 90% to get to the park area. These numbers come from a peer-reviewed visitor spending analysis conducted by Dr. Daniel Stynes of Michigan State University published annually by the NPS. You can find a link to the latest report on the park’s web site, on our news release page (<http://www.nps.gov/apis/parknews/newsreleases.htm>) from February 28, 2012.

The “Economic Benefits to Local Communities” report does include some additional statistics that I simply can’t resist. I’ll mention a few more national stats but the really interesting data is the local impact.

The \$12 billion of direct spending by NPS visitors, like all spending, cascades through the national economy. Stynes estimates that the contribution of national park spending to the national economy is 258,000 jobs, \$9.8 billion in labor income, and \$16.6 billion in value added, most of which accrues to the local regions around national parks.

National parks also affect the economy through the spending the NPS itself does, through payroll, purchases of supplies and equipment, capital investment,



Visitors line up to enter Grand Canyon National Park. In 2010, 281 million visitors to national park units around the country spent over \$12 billion in the parks and their nearby communities.



A variety of companies lead commercial trips in the Apostle Islands. A 2004 visitor survey found that the average Apostle Islands visitor invests more in the local economy than do visitors to most national parks.

and contracts with the private sector to accomplish portions of our mission.

In 2010, the NPS employed approximately 26,000 people, with a total payroll of \$1.7 billion in wages and benefits. Stynes’ data show that, nationally, one local private sector job is created for every four NPS jobs, and three jobs are created for every 5 on the NPS payroll.

**Apostle Islands
National Lakeshore’s
156,000 visitors in
2010 spent over \$17
million in nearby
communities.**

These are averages, and where there have been park-specific surveys, the numbers for each park may be higher or lower, but they’ll be more accurate. One of those more-detailed surveys was done here in 2004 and, not surprisingly, found that the average Apostle Islands visitor invests more in the local economy than does the visitor to most other parks. Bayfield’s B&B and summer restaurant scene is a draw, and the cost of visiting the islands themselves is not insignificant.

So let’s bring the mind-boggling data home, where it becomes “real.” 2010 was a “down” year for the Apostle Islands in that our visitation dipped a bit below our long-term average. Visitation bounced back in 2011, but since I have 2010 data, that’s what I’ll share.

The 156,000 visitors to the Apostle Islands National Lakeshore spent over \$17 million in communities near the park. The spending

by non-locals supported 287 local jobs, which produced a payroll of approximately \$6.3 million and a value added of over \$10 million. In addition, the NPS directly employed 36 people (full-time equivalents) at the Apostle Islands and another 16 at the nearby NPS Great Lakes Inventory and Monitoring Network office, with the impact of our payroll resulting in a total of 68 jobs (NPS and private sector). The combined labor income in this area was over \$4.5 million, with a value added of \$5.0 million.

These are substantial contributions to the local economy. According to the state of Wisconsin, in 2010, the Apostle Islands National Lakeshore was the 9th largest employer in Bayfield County, the 6th largest if school districts are excluded (http://dwd.wisconsin.gov/oea/largest_employers). Yet with budget cuts affecting the park since 2011, we’re unable to fill key positions. We don’t know any more than anyone else what Congress and the President will agree to for a 2013 budget, but it seems probable that there will be continuing reductions, perhaps major ones.

Visitors, of course, come to the park independent of the NPS staffing. Fewer rangers, however, means shorter hours at visitor centers, fewer interpretive programs, and more critically, a possible reduction in response time in emergencies. Fewer facilities maintenance staff mean less frequent cleaning of the toilets and a longer cycle between roof replacement on the park’s structures. But fewer NPS staff overall also mean fewer dollars into the local and national economy, which has ripple effects well beyond the Apostle Islands.

Please enjoy the park, and please do so safely. And do enjoy the amenities of our gateway communities. We’ll do our best for you whatever our staffing.

Planning a Visit

Information/Orientation



Headquarters Visitor Center

Open Mon-Fri 8 am to 4:30 pm, May 1-May 25
Open Daily 8 am to 4:30 pm, May 26-June 15
Open Daily 8 am to 5 pm, June 16-Sept 1
Open Daily 8 am to 4:30 pm, Sept 2-Oct 7
Open M-F 8 am to 4:30 pm, Oct 9-May, 2013

Little Sand Bay Visitor Center

Open 9 am to 5 pm May 26-28
Open Daily 9 am to 5 pm, June 16-Sep. 3

Camping



Camping is available on 19 of the lakeshore's 21 islands and at one campsite on the mainland. Permits are required for all camping in the national lakeshore and can be obtained in person or by calling 715-779-3397. Individual campsites (for one to seven campers) can be reserved beginning one month before the start of a trip. Group campsites (for eight to 21 campers) can be reserved beginning the second week in January. Camping zones have also been established on 15 islands in the national lakeshore for visitors seeking a remote backcountry experience. A nightly fee is charged for camping (see chart on this page). Pictures and descriptions of Apostle Islands campsites are available on-line at www.nps.gov/apis/planyourvisit/camping.htm

Sailing and Boating



The Apostle Islands offer outstanding boating opportunities. Public docks are found on 13 of the islands in the national lakeshore. Space is reserved at some docks for National Park Service (NPS) vessels and excursion boats. The remaining space is available to the public on a first come, first served basis. A fee is charged for docking any time from 6 pm to 6 am. The fee is \$10 for vessels up to 40 feet long or \$20 for vessels over 40 feet long. Public boat launches (non-NPS) are located in Ashland, Bayfield, Cornucopia, Little Sand Bay, Red Cliff, and Washburn. The cost is \$5/launch in Bayfield, \$6/launch at Little Sand Bay. All watercraft must be decontaminated before launching in the lake. Marinas are in Ashland, Bayfield, Cornucopia, LaPointe, Pike's Bay, Port Superior, Red Cliff, Roys Point, Schooner Bay, and Washburn.

Personal Watercraft (Jet skis)

The use of personal watercraft is not allowed within the national lakeshore's boundaries.

Paddling



Sea kayaks are very popular for travel among the Apostle Islands. To prevent the spread of the deadly VHS virus, all watercraft must be decontaminated before launching in the lake. Two kayak launch points are located within the national lakeshore's mainland unit. Meyers Beach is a popular spot to begin a tour to the mainland sea caves. There is a day use parking fee at Meyers Beach. A kayak launch is located west of the NPS dock at Little Sand Bay. Temporary parking for loading/unloading equipment is located to the west of the NPS visitor center. For more information go to www.nps.gov/apis/planyourvisit/kayaking.htm

Fishing and Hunting

A Wisconsin fishing license with a Great Lakes trout and salmon stamp is required for fishermen 16 or older. Sport fishermen are drawn to the Apostle Islands region by the opportunities to catch lake trout, rainbow trout, brown trout, and coho salmon. Emergency restrictions were implemented in 2008 to prevent the spread of the deadly VHS virus. More information is available on our website at www.nps.gov/apis/planyourvisit/fishing.htm

Hunting activity may occur in the national lakeshore from September (after Labor Day) through May 15. Archery hunts for island deer run from mid-September to the end of September and from the beginning of November through December. For detailed information go to <http://www.nps.gov/apis/planyourvisit/hunting.htm>. All hunting is in compliance with federal and state law. CHANGE FOR 2012: The park's October 2012 muzzle loader deer hunt has been suspended by the State of Wisconsin, but the possibility for a 2013 muzzle loader hunt is being reviewed.

Firearms

As of February 22, 2010, a federal law allows people who can legally possess firearms under federal, Wisconsin, and local laws to possess firearms in Apostle Islands National Lakeshore. It is the visitor's responsibility to understand and comply with all applicable state, local, and federal firearms laws. Federal law prohibits firearms in certain facilities in this park; those places are posted with signs at public entrances.

Accessibility

- The Headquarters visitor center in Bayfield offers accessible parking, a ramped entry on the west side of the building, power operated door openers, accessible restrooms, an auditorium with a hearing assistance system, and an accessible exhibit area.
- The Little Sand Bay visitor center has accessible parking, a ramped entry to the visitor center, an accessible exhibit area and accessible restrooms.
- Campsite #1 at Sockton Island's Presque Isle campground features a ramped boardwalk from the dock to the campsite and an accessible route to the vault toilets. Campers with mobility impairments should specifically request this site when obtaining a permit.
- Apostle Islands Cruises can accommodate visitors with mobility impairments. Deckhands will assist visitors onto the main deck of the boat. The "Island Princess" includes an accessible toilet room and accessible seating spaces.

Apostle Islands Cruises Tour Summary - 2012		
Cruise Name	Description	Dates/Times
Grand Tour \$39.95/adult, \$23.95/child	3.25 hour nonstop cruise around Devils Island	10 am daily May 19-Oct. 14
Stockton Shuttle Dayhiker:\$41.95/ adult, \$24.95/child Camper: \$54.95/ adult, \$32.95/child	4.5 hour shuttle to Stockton Island (day hike/camp)	8:30 am, Tue-Fri-Sat-Sun June 29-Sept. 2
Raspberry Island Lighthouse Shuttle \$41.95/adult, \$24.95/child	4 hour shuttle to Raspberry Island (additional fee for lighthouse tour)	1:30 pm, Tue-Fri-Sat-Sun June 29-Sept. 2
Glass Bottom Boat Tour \$34.95/ adult, \$17.95/child	2.5 hour nonstop cruise past several shipwrecks	2 pm daily, June 22 - Sept.16 2 pm Sat-Sun, Sept. 22-Oct. 14
Evening Grand Tour-\$39.95/adult, \$23.95/child	3.25 hour nonstop cruise around Devils Island	5:00 pm (4:30 after Aug. 19), Mon-Sat June 29 - Sept. 1
Call 800-323-7619 for Reservations		

Island Tours/Shuttles



Apostle Islands Cruises (an authorized National Park Service concessioner) offers a variety of nonstop sight seeing excursions and island shuttles featuring stops at several islands (see schedule). Their office is located in the Bayfield Pavilion near the city dock at the bottom of Rittenhouse Avenue in Bayfield, WI. All cruises depart from Bayfield. Reservations are recommended. For more information call 800-323-7619 or visit on-line at www.apostleisland.com

Park Fees

<u>Camping (per site per night)</u>	
Individual site or camping zone:	\$10
Group site:	\$20
<u>Docking (between 6 pm and 6 am)</u>	
Boats less than 40 feet:	\$10
Six-night docking ticket book:	\$50
Boats 40 feet or more:	\$20
Six-night docking ticket book:	\$100
<u>Parking</u>	
Meyers Beach day use, vehicle less than 20' (including trailer):	\$3
Meyers Beach day use, vehicle 20' or more:	\$5
Meyers Beach annual parking pass (cost based on vehicle length):	\$15-25
Bayfield Headquarters overnight (cost based on vehicle length):	\$5-8
<u>Guided tours/interpretive programs</u>	
Per person:	\$3
Per immediate family:	\$8

All of the fee revenue collected at Apostle Islands National Lakeshore stays in the park and is used for critical and highly visible projects to benefit the public.

The Golden Age Passport or Interagency Senior Pass (for U.S. citizens 62 or older) and Golden Access Passport or Interagency Access Pass (for permanently disabled U.S. citizens) provide a

50% discount on camping, docking, parking and guided tours at Apostle Islands National Lakeshore.

Guided Activities

Park staff offer a variety of guided activities from June to September. Check at park visitor centers or bulletin boards for specific times, topics, and locations.



Guided Lighthouse Tours
Guided tours of the restored Raspberry Island lighthouse will be offered daily between 9 am and 4:30 pm from June 16 through mid-September. Tours include access to the lighthouse tower and the refurbished head lighthouse keeper's quarters. Guided tours at Raspberry Island cost \$3/person or \$8/ immediate family.

Park staff may be available to conduct free guided tours of the lighthouses at Devils and Sand islands from late June to September. Tours will generally be available daily on request from about 9 am to 4:30 pm. Guided tours will NOT be available before 9 am or after 4:30 pm without prior arrangements.

Campfire Programs
Join park staff at the Presque Isle campfire circle on Stockton Island nightly from late June through Labor Day. The free talks last about 45 minutes and cover such topics as bears, wilderness, bears, shipwrecks, and (did we mention) ...bears. Programs start at twilight.

Self-Guided Tours and Walks
Brochures for self-guided tours and walks are available from brochure boxes at Little Sand Bay's Hokenson Brothers Fishery, the Manitou Island Fish Camp, and the Julian Bay Trail on Stockton Island. The brochures can be purchased, or used for free and returned.

Long Island...Unlike All the Others

In many ways, Long Island is different from the other islands in Apostle Islands National Lakeshore. It was the last island added to the national lakeshore. Most of the park was established in 1970, but a 1986 act of Congress authorized the inclusion of “approximately 200 acres of land at the mouth of Chequamegon Bay known as Long Island” into the park. The island is composed almost entirely of sand and has no obvious bedrock pedestal beneath it. Perhaps most importantly, Long Island (at least for now) is not an island at all!

In his 1930 book “The Lake Superior Country in History and Story”, author Guy Burnham wrote, “Long Island, the remarkable island four miles in length which forms a part of the natural breakwater at the entrance to Chequamegon Bay, is an island no longer, but simply a very long and narrow peninsula, extending out from the mainland. No one can guarantee its present status very long, for within the memory of the present generation at least, Long Island has been quite fickle.” Long Island has changed from an island to a continuous part of a peninsula many times, usually persisting in one form or the other for a few decades. It is presently part of a peninsula, and has been since the mid 1970s.

Piping Plovers

Long Island is also unique in the Apostles, and perhaps in the state of Wisconsin, for providing nesting habitat for the endangered piping plover. Piping plovers are sand-colored shorebirds that arrive on Long Island in late April to early May. They lay four eggs in nests that are shallow scrapes in the sand lined with pebbles and driftwood. The eggs hatch after about 28 days, and the downy young soon follow their parents and pluck insects and spiders from the sand. Last year only 54 breeding pairs of piping plover were found in the



An aerial view of Long Island shows that it is not an island, but a peninsula. (photo by William Cronon)

Great Lakes. Nesting primarily in areas of pristine sand dunes and barrier beaches, the Great Lakes piping plover is representative of the imperiled Great Lakes shoreline ecosystem and the many important plant and animal species that occur there. Last season approximately 10 percent of the production of the entire Great Lakes population of piping plovers came from Long Island. The island has been designated as critical habitat for the piping plover.

Several factors threaten Long Island’s plovers:

- Human disturbance (e.g., beach-walking, fireworks, ORV use, etc.) may cause the parents to desert the nest, exposing eggs or chicks to the summer sun and predators.
- Pets, especially dogs, may harass or kill the birds.
- Predators such as coyotes, gulls, and crows eat plover eggs and young.

Unleashed dogs pose a great threat to piping plovers. Dogs are required to be on a leash six feet or shorter at all times.

Areas on Long Island may be closed to protect piping plovers. Fencing is used to protect piping plover nests from predators and human activity. Closed areas include a metal fence enclosure (approximately 12 feet across) surrounded by signs and a twine fence (approximately 50 feet across). Piping plover monitors are stationed on Long Island during the nesting period to educate visitors about the importance of protecting plovers.

Like the other islands...

Long Island is part of Apostle Islands National Lakeshore. Island visitors are subject to the same National Park Service (NPS) rules and regulations that apply in the rest of the national lakeshore. Dogs are required to be on a leash six feet or shorter at all times. Unleashed dogs pose a great threat to piping plover nesting success and chick survival. Last year, NPS law enforcement rangers made a concerted effort to educate visitors and decrease offenses, especially the number of dogs off leash. Numerous warnings were issued to visitors. Citations will be used more frequently this year. Enjoy your visit to Long Island, but help us protect the spectacular wildlife that only nests on this narrow strip of sand.



Long Island is the only place in the state where endangered piping plovers nest.



Unleashed dogs threaten plovers and other wildlife. Dogs must be kept on a leash that is no longer than six feet.

Destructive Species Invading Beaches and Dunes



Winged pigweed, a type of tumbleweed, was found growing on Long Island beaches in 2011.

Park staff discovered some strange new species within the boundaries of Apostle Islands National Lakeshore last year. Winged Pigweed, a tumbleweed species normally found west of the Mississippi River, was found on Long Island and Pale Juniper Webworm, a European transport, was found on Michigan Island.

Winged pigweed is easily recognizable because, after it matures, the plant breaks free and rolls in the wind like a tumbleweed. Unfortunately, the pigweed can drop up to 27,000 seeds as it travels, and it is dropping those seeds on the same Long Island beaches used for nesting by endangered piping plovers (see above article).

Pale juniper webworms are easily recognizable because of the damage they cause. Webworms feed on the needles of juniper shrubs, leaving them brown and dying. The central branches of the shrub acquire a skeletal look as the leaves die and fall off. Webworm larvae



The center of this juniper shrub has been decimated by pale juniper webworms.

wrap the branch tips in cobwebs of silk, to protect the immature webworms during their winter hibernation. Seventy percent of the junipers on the Michigan Island sandscape show signs of dying as a result of the pale juniper webworm. Death of the juniper shrubs will increase soil erosion and degradation in this fragile landscape.

Two other exotic species have also recently been identified in the national lakeshore. Bell’s honeysuckle and the Siberian elm, like many exotics, displace native plants and decrease the biodiversity of the area. Loss of biodiversity limits an area’s food and cover value for wildlife which, in turn, reduces wildlife numbers.

Invasive species can destroy wildlife habitat, reduce property values, and are expensive and difficult to remove from a landscape. Visitors can help limit the spread of these species by cleaning your boots and equipment before and after visiting the park.

Help limit the spread of these species by cleaning your boots and equipment before and after visiting the park.

Have Fun...Be Safe...

Tips to help preserve the park, respect other visitors, and protect yourself.

...On the Water



To avoid dangerous mishaps, paddlers should monitor weather forecasts and conditions, stay close together with their group, and know their limits.

Paddling

Canoes should not be used for travel between the islands. Calm days may make canoe use possible along the mainland or island shorelines, but weather conditions can change rapidly. Sea kayaks have become very popular for travel among the islands, but may be difficult for other boaters to see. Brightly colored kayaks clustered in a group offer greater visibility. Allow plenty of time to accomplish your intended route. Beginners should not try to cover more than ten miles in a day. Inform a friend or relative of your travel plans. Kayakers should wear a PFD and use wet suits or dry suits when paddling in the Apostles. Paddlers should also pack such items as: a marine radio or cell phone, a first aid kit, extra paddle, sunscreen, insect repellent, compass, nautical charts, 50 feet of line, waterproof matches, a headlamp, dry storage containers, and provisions for at least one extra day.



Severe weather can occur with little or no warning. NPS and Coast Guard vessels provide towing only in emergency situations.

Boating

The following precautions and regulations will help make a safe trip:

- Do not overload your boat.
- Use personal flotation devices (PFDs). A U.S. Coast Guard approved, wearable PFD must be provided for each person aboard any boat. They should be brightly colored with reflective patches.
- All children under age 13 must wear PFDs while aboard recreational vessels underway except when in an enclosed cabin or below deck.
- Boat sober.
- Exhibit anchor lights from sunset to sunrise.
- Stay at least 100 feet from commercial fishing nets.
- Be wary of shoal areas and when beaching a boat. NPS and U.S. Coast Guard vessels provide towing only in emergency situations.
- Make sure your boat is equipped with: PFDs, paddles or oars, fire extinguisher, spare propeller and shear pin, compass and nautical charts, running lights, flashlight, whistle or horn, first-aid kit, radio, and an anchor with sufficient line.

Swimming

The average annual water temperature of Lake Superior is about 40 degrees Fahrenheit, but on calm sunny summer days, surface water temperatures in the Apostle Islands’ protected shallow bays can climb into the 70s. There are no lifeguards in the national lakeshore. Swimming is done at your own risk. Swimming is not allowed within 100 feet of all harbors, public docks, and vessels secured to docks. Diving or jumping into the lake from the cliffs at Devils Island, Sand Island, or the mainland sea caves is not permitted.

Drinking Water

Well water is only available at Little Sand Bay, on Sand Island, and at Presque Isle on Stockton Island. Water from the lake should be boiled for two minutes or filtered through an adequate filter (0.4 microns pore size) before use. This precaution eliminates many organisms including Giardia, a microorganism which causes an intestinal disorder.

...On the Land

Black Bears

Stockton, Oak, and Sand islands host resident bears, but bears can swim to any of the Apostle Islands. Never approach a bear, even to take pictures. Keep at least 50 yards away. Never feed a bear. There are several ways to avoid a close encounter with a bear where you camp or picnic. Reduce food odors by washing dishes and cleaning the kitchen site after cooking. Use minimal amounts of water to clean dishes and broadcast that wastewater on the ground at least 50 yards from camp. All food, beverage containers, garbage, cooking materials, condiments, utensils, and toiletries (such as toothpaste or soap) must be secured from wildlife contact. Bear-proof lockers are provided at all designated campsites in the park. Where food lockers or closed vessels are not available, hang all food and related items in a tree away from the tent and at least 12 feet from the ground and five feet from the trunk. Do not bury, scatter or try to burn food scraps. Bag garbage and pack it out. If you encounter a bear near a dock, campsite, or picnic area, use tone of voice and body posture to show you are in charge, yell and make noise until the bear leaves the area, then report the encounter to park staff.



All food, beverage containers, cooking materials, garbage, etc. must be locked up INSIDE bear-proof food lockers except during meals. Violations are subject to fines.

Fires

Campfires must be built within fire receptacles where provided or on the sand beach near the water’s edge, below the vegetation line. Fires are not allowed on beaches at Raspberry Island, at Julian Bay and Presque Isle Bay on Stockton Island, on beaches within 150 feet of campsites where fire receptacles are provided, or in Outer Island camping zone #3 (NW quarter of the island). Beach and camp fires may not be larger than 3 feet in height or diameter. Dead wood on the ground in forested areas or unvegetated beach areas may be collected for firewood. Firewood cannot be carried into, or between islands in, the national lakeshore. Chain saws cannot be operated in the national lakeshore. Before leaving a campfire, the fire must be extinguished and free of litter with no evidence of food remains that could attract wildlife. Fires are not permitted in portable grills or stoves on docks or topside areas of boats tied to public docks. Open fires will be prohibited when fire danger is high.

Pets

Pets must be kept on a leash that is six feet or shorter, and never left unattended. Pet excrement must be immediately collected and disposed of in the nearest trash receptacle or buried in a forested area using a small hole dug in soil at least six inches deep at least 200 feet from any trail, campsite, beach, dock or water source. Pets are not allowed in public buildings or on scheduled Apostle Islands Cruises trips (except assistance dogs accompanying visually or hearing impaired people.)

Insects and Ticks

Biting insects can be prevalent on the islands from June to September. Wearing long pants and long sleeved shirts will provide some protection from mosquitoes, biting flies, and ticks. Insect repellents are helpful. The ticks that transmit Lyme Disease and Ehrlichiosis are found in the park. If you notice a rash, flu-like symptoms, or pain in the joints following a tick bite, call your physician.

Hazard Trees

High winds can cause even healthy trees to fall down. Beware of trees with recognizable flaws (leaning or partly uprooted, dead areas, hanging branches) near campsites, docks, outhouses, and picnic areas. Do not linger in areas adjacent to hazard trees, especially during high winds. Report any such trees near visitor use areas to park staff as soon as possible.

Emergency Contacts

Call 715-779-3397 (day, NPS),
or 219-395-1008 (NPS 24-hour dispatch),
or 715-373-6120 (night, Bayfield County Sheriff),
or 911 and specify your location (Bayfield County),
or marine channel 16.

Climate & Weather

Typical summer conditions feature winds of 5 to 20 knots and waves of 1 to 4 feet. Winds of 30 to 40 knots with 6 to 12 foot seas are possible. Severe weather (high winds, rough seas, fog) can set in with little or no warning. Pay close attention to the weather and monitor weather forecasts. In fall, warm lake waters intensify storms and strengthen winds, making small craft advisories (22-33 knots) and gale warnings (34-47 knots) more frequent. Many of the islands are more than five miles from shore, so boaters should check both the nearshore (within five miles of shore) marine forecast and the open waters forecast. Marine weather forecasts are broadcast on marine band radio on the following channels:

- Ashland, WI - marine channel 8 - 162.525 MHz
- Park Falls, WI - marine channel 7 - 162.500 MHz
- Duluth, MN - marine channel 9 - 162.550 MHz

Weather information is available at ranger stations and visitor centers. NOAA’s National Weather Service forecast office in Duluth (<http://www.crh.noaa.gov/dlh/marine.php>) has both nearshore and open waters forecasts for Lake Superior as well as weather readings from the lighthouse at Devils Island.



What’s the Weather?		
	Avg. High/Low	Avg. Precip. “
January	21/3	1.64
February	27/6	1.14
March	35/16	2.05
April	48/28	2.40
May	61/38	3.29
June	71/47	4.16
July	77/55	3.98
August	75/54	3.98
September	68/46	3.58
October	55/36	2.74
November	38/25	2.66
December	26/12	1.56
Yearly Avg.	50/31	33.18
Average temperature (degrees F) and precipitation measured on Madeline Island		

Park News



The “Boar’s Nest” at the Hansen Farm on Sand Island will be moved back from the edge of the lake this summer.

High Angle Rescue at Sand Island’s Hansen Farm

Some mountain parks have skilled ranger teams who conduct high-angle rescues of injured visitors. But not too many parks are faced with conducting a high-angle rescue on a historic building. That’s exactly the problem facing Apostle Islands staff at Sand Island where two commercial fishing buildings at the historic Hansen Farm are being gradually undercut by Lake Superior waves. Decades of erosion have left one building hanging approximately ten feet over the bank, and threatening to fall into the lake. Undercutting is just beginning at the second building. Prompt action is needed to save the structures. In 2012, with the assistance of coastal restoration funds from the Great Lakes Restoration Initiative, both buildings will be moved back from the lake where they can be safely preserved. This spring, an Ashland construction company will begin carefully shoring and bracing the buildings, and then rolling them back along rails to their new resting place. Preservation work on these and other farm structures will take several more years before the site can be safely opened to the public. The re-located structures will be used to help tell the story of commercial fishing and island life at the Hansen Farm.



Real-time wave data and water tmperatures are transmitted using wireless cellular technology to a host computer at UW-Madison.

Real-Time Wave Observation System

The Real-time Wave Observation System (RTWOS) at the Mainland Sea Caves will continue to provide wave heights and wave pictures this season via the internet at: <http://wavesatseacaves.cee.wisc.edu/index.htm>. Please check this site for the latest conditions at the Mainland sea caves. Rangers stationed at Meyers Beach this summer will have access to weather and wave condition information. The National Park Service and its partners are exploring ways to provide a digital display at Meyers Beach so visitors will be able to check conditions before they paddle to the caves.



Edibles like these cranberries may be collected in limited quantities.

Collecting Edible Plants

New guidelines have been established governing the collection of edible plants in Apostle Islands National Lakeshore. Native fruits (except apples), nuts, and berries not from plants listed as threatened or endangered species may be collected in quantities up to one gallon per person per week. Up to five gallons of apples per person per week may be harvested in the park. All edible mushrooms not listed as threatened or endangered species may be collected in quantities up to one gallon per person per week. The gathering of fruits, nuts, berries, apples and mushrooms by hand in the quantities identified will not have an adverse affect on the various plant species. Wildflowers may NOT be collected in the park.



Two raccoons and a coyote were photographed by a wildlife camera on Sand Island in January.

Raccoons on Sand Island

Esiban is the Ojibwe word for raccoon. One story tells how Raccoon was caught stealing from his grandfathers and playing tricks on them. Nanaboujou (a spirit or trickster in Ojibwe legends) catches Raccoon and draws rings around his eyes and tail. Then Nanaboujou tells him from then on, he must search for food at night when it is harder to see and he must wash his food in the water. Lake Superior provides ample water, but also serves as a barrier for raccoons attempting to reach the Apostle Islands. Last spring, however, wildlife cameras captured proof of two raccoons on Sand Island. This is the first known evidence of raccoons on any of the islands in the park (they are found on Madeline Island). Raccoons are good swimmers and can stay in the water for several hours. They are also smart and can open challenging locks in a matter of minutes. Considering these characteristics, campers should always store food and toiletries in the bear lockers and maintain a clean campsite. Please do not feed raccoons, as this may make them even more like Esiban in the Ojibwe story.



The rebuilt dock at Basswood Island is one of two new docks reopening this summer.

New Docks Ready for 2012

Public docks at Basswood and South Twin islands are now new and improved. The

new docks are similar in size to the old models, but have a bin wall (adjoining closed-faced bins composed of corrugated steel members) style cribbing that is anchored to the bedrock replacing the old wooden cribs. The new docks incorporate a flow through design that includes a 40 foot walkway from the shore to the dock. This allows coastal sediment (sand , dirt, gravel) to flow along the shore instead of building up along the dock. The bin wall cribs are filled and have a concrete cap for a deck. The new docks will last longer than the old design. Since waves will not roll through the bins as they did with the old cribs, the new dock will provide more protection for boats tied alongside.



Sand Island group site B is now located in a former cabin site south of the dock at East Bay.

Campsite Update

Group site B on Sand Island has been relocated from near the East Bay dock to a clearing south of group site A. This area is about 300 yards south of the dock. It was the site of the Palm family cabin that was removed several years ago. It’s a great site with a wonderful view. The former group site near the dock has been converted to an individual campsite (site #4).

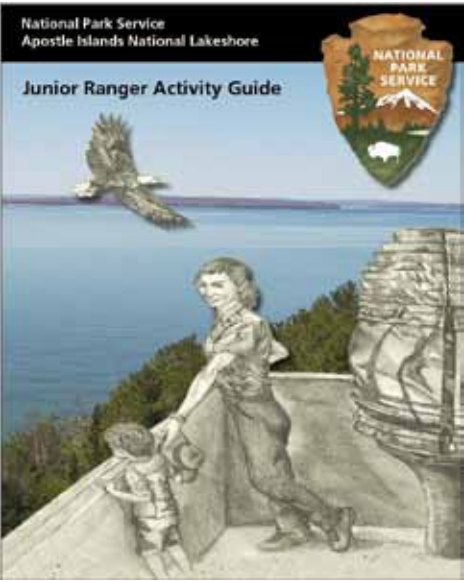
A designated campsite will be established this year on Long Island, approximately ½ mile southeast of the light station. The site will feature a picnic table, bearproof food locker, fire ring, a tent area, and a privy. Once established, this will be the only place camping will be allowed on Long Island.

The campsite on Ironwood Island has become severely eroded. The Ironwood Island sandspit has important cultural resources and fragile vegetation. The campsite will be relocated from the west side of the sandspit to a more stable location on the east side of the sandspit. Vegetation restoration will be done to help stabilize bare ground. A privy will be added near the campsite. A floating boardwalk will direct access to the campsite and the privy. Tent pads and a separate eating area will be established. The tent pads are especially important at this location because of the site’s cultural resources. All tents must be pitched within a tent pad.



Wilderness Privies

This year we’ll be adding some privies to Wilderness campsites. These are basic accessible stump privies with no outhouse surrounding them. They will be screened by vegetation to provide some privacy. The design is familiar to anyone who has been to the Boundary Waters Canoe Area Wilder-ness. We hope to add these to all single sites in Wilderness that currently don’t have a privy or outhouse. We plan to install them on Long and Ironwood islands this summer.



Become a Junior Ranger

The Apostle Islands have stories to tell. Young visitors can begin to read these stories and write their own tales of Apostle Islands adventure by using the park’s new Junior Ranger Activity Guide. The booklet is full of fun activities designed to help kids of all ages connect with what makes the Apostle Islands special. Ask for the free booklet at any park visitor center or ranger station. The National Park Service also has an online Junior Ranger program at www.nps.gov/webrangers.



Dangerous Cliffs Ahead!

A new wayside exhibit now warns hikers on the Lakeshore Trail that the cliff edges above the mainland sea caves are unfenced and unstable. Visitors should stay back from the edge. Funds from the Friends of Apostle Islands National Lakeshore paid for the fabrication and installation of the exhibit. An emergency life ring mounted on the exhibit frame is available to be thrown to anyone who might fall into the lake.



A new wayside exhibit on Sand Island tells the story of two vehicles that were used by island residents.

Your Fee Dollars at Work

You might be wondering what the park is doing with the money it has collected from camping, docking, guided tours, and parking. In 2012 those funds will be used to complete the rehabilitation of the historic fish tug “Twilite” at Little Sand Bay’s Hokenson Fishery. Fee money will also help pay the salary for park staff providing guided tours of the Raspberry Island Lighthouse and working at the information desk at park headquarters in Bayfield. 2012 fee dollars will also be used to plan and design a series of wayside exhibits to help interpret the stories of Sand Island, and to fund trail repairs on Michigan, Outer, Raspberry, Rocky, and South Twin islands.

Lighthouse Preservation Work Begins!



Work at the Michigan Island Light Station will include four buildings and clearing four acres at the site to restore the cultural landscape.

After a busy winter of construction design, the Apostle Islands’ lighthouse preservation project is almost ready to hit the field! Beginning in spring 2012, the multi-million dollar preservation project goes out for bid, and a general contractor will be selected to start work this summer. The project will provide for urgently needed repairs at five of the park’s light stations, requiring the efforts of many trades and specialists including architects, masons, painters, carpenters, roofers, structural engineers, electricians, and lighthouse preservation specialists.

While details are still being worked out, let’s roll out the blueprints and see what we hope to accomplish in 2012-2014:

Michigan Island

- Clear four acres around the light station to partially restore the original grounds and views.
- Reroof the Old Lighthouse, Keeper’s Quarters, Power House, and Assistant Keeper’s quarters.
- Rehabilitate the interior of the Old Lighthouse including floors, doors, trim, and plaster.

- Install new exhibits in the Old Lighthouse.
- Repaint the Old Lighthouse tower and lantern.
- Repair windows, plaster, and iron columns in “New” Light Tower base;
- Repair brick and porches, and refinish the upstairs interior floors in the Keeper’s Quarters.
- Repair windows and repaint exterior of the Assistant Keeper’s quarters.
- Improve ventilation in all structures.

Outer Island

- Re-point and repaint masonry light tower.
- Repaint the lantern exterior.
- Repair windows and repaint exterior trim.
- Improve ventilation.

Devils Island

- Repair concrete footings of the light



The floors, doors, trim and plaster inside the Old Michigan Island Lighthouse will be rehabilitated and new interpretive exhibits are being planned for rooms on the first floor.

- tower.
- Repair windows, porches, and re-point brick on the Keeper’s and Assistant Keeper’s Quarters.
- Improve ventilation in those buildings.
- Repair the exterior and foundation of the Fog Signal building.

Long Island

- Reroof; repair foundation and drainage; and improve ventilation in the Keeper’s Quarters.
- Repair concrete footings of the La Pointe Light Tower.

Sand Island

- Reroof; repair and refinish floors; repair plaster and repaint interior; and improve ventilation in the lighthouse.
- Clear one acre of the site to partially restore the original grounds.

While the park will work to minimize visitor inconvenience during the construction

work, there will be some necessary closures for public safety and to allow workmen access to the light stations. Some buildings will have to be closed to visitation while work is in process, as will adjacent areas of the grounds. Volunteer lighthouse “keepers” may not be in residence at some lights during construction. In some cases lighthouse dock closures may also be required for visitor safety and to guarantee dock space for the work crews and materials. Michigan Island light is likely to be the most impacted by closures as dock space is limited, and work on the station and grounds will be very extensive. Since weather might delay some of our work, it is possible that some work will continue into the 2014 season. We apologize in advance for any inconveniences, and we recommend that if you plan on visiting any of the light stations (other than Raspberry) in 2012-2014 that you check in advance with the park on any closures which might be in place. Check the park’s website or call 715-779-3397 for information. We don’t want you to be disappointed by a “closed for construction” sign.

Boom and Bust...Black Bears on the Apostle Islands

Black bears are found on the Apostle Islands. Some bears are talented swimmers and the expanse of water surrounding the islands does not deter them from island hopping. Some islands are too small to support a bear for very long. Many larger islands have year-round populations.

Island populations can grow rapidly from a single pair of individuals to very high densities, only to eventually crash. The Stockton Island population has been studied on and off for decades, and may be going through this boom to bust cycle. Thought to have included only a single pair of bears in the 1970s, this population grew to a peak of 31 bears in 1994. The population appeared to be stable between the mid-1990s and 2002 with approximately 26 bears, but a recent study revealed the population has decreased by 50%, and all of the sows (female bears) may be gone. Why are female bears disappearing on Stockton Island? We’re not sure, but do know that male bears are known to make much longer water crossings than females. Stockton Island’s distance from the mainland may be preventing all but the most adventurous of females from making the big swim to the island.

In contrast to Stockton Island, the bear population on Sand nearly doubled between 2002 and 2010 (from 6 to 10 bears) and the population of 18 bears on Oak Island is exceptionally high. For many years Stockton was thought to have the highest population



Black bear inspecting one of the bear-hair-snares set on the islands in 2010.

density in Wisconsin and among the highest in North America. That title has been passed to Oak Island, with Sand Island a close second. All may not be rosy on Oak Island, however, as the majority of its bears are related. Of 18 bears on Oak in 2010, one male sired ten offspring with three females! This could lead to problems associated with inbreeding. But no need to despair, on occasion a female with wanderlust appears to diversify the population. The 2010 study tracked one such female that had Sand Island ancestry, was captured on Basswood Island, bred with a male from Oak Island and gave birth on Hermit Island. How in the world do we know this? The knowledge was obtained through the wonders of DNA analysis.

In 2002 and again in 2010, Dr. Jerry Belant, of Mississippi State University, worked with the park to gather bear hair samples for DNA analysis. Barbed wire snares were established on several islands at stations baited with fish oil-soaked logs to attract bears. When they investigated the wonderful aromas, bears left a sample of hair snared on the barbed wire. By checking the snares on a regular basis and collecting all of the hair samples, it is possible to estimate the population through a technique known as “mark-recapture”. The samples were analyzed by Wildlife Genetics in British Columbia, Canada, where they were able to identify unique individuals. The genetic

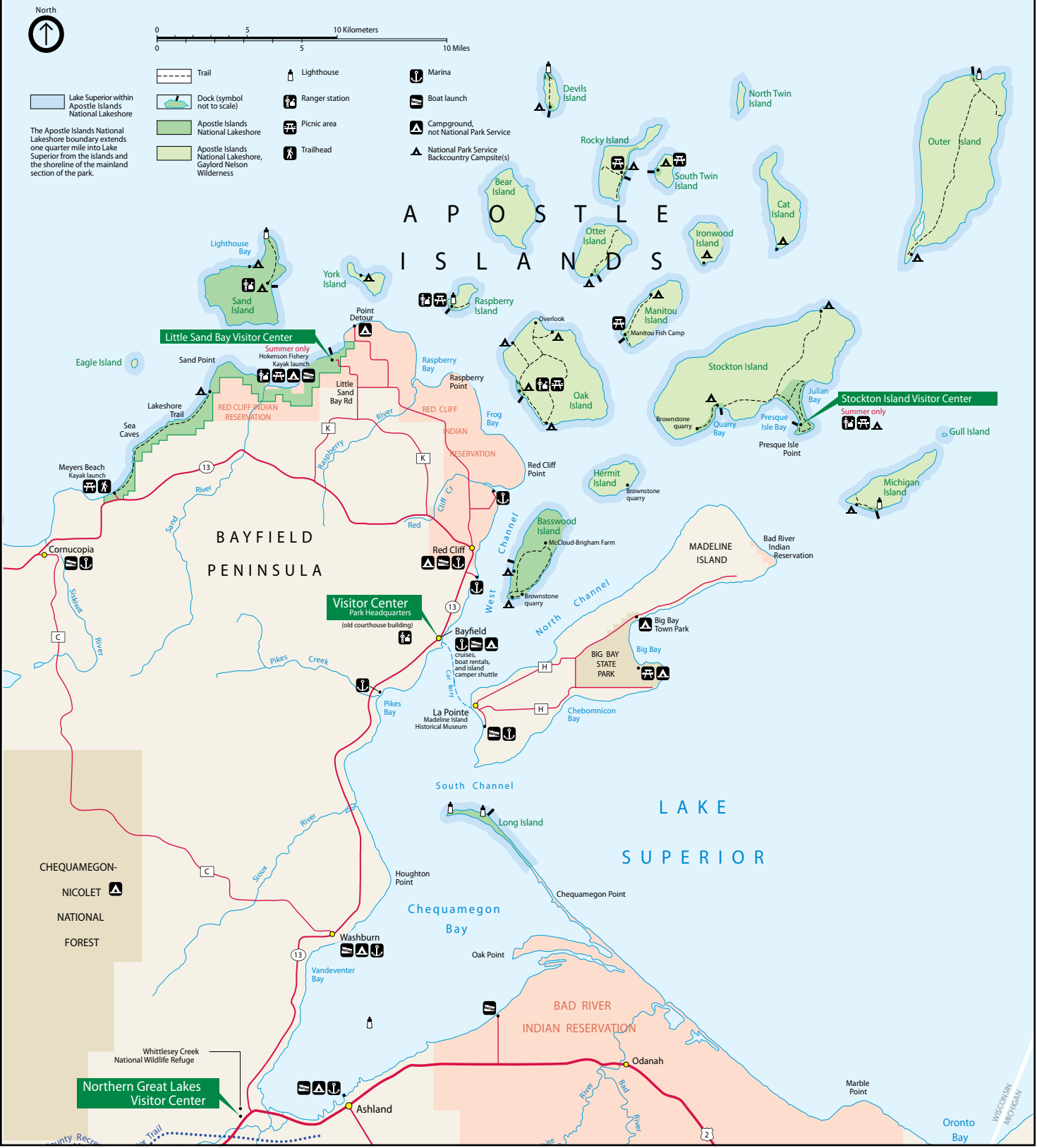
analysis also indicated that bears on Stockton Island were genetically distinct from those on Oak Island, while Sand Island and mainland bears were closely related. The on-going saga continues as bear populations ebb and flow throughout the Apostle Islands. Stay tuned for the next “hair-raising” installment.



If you encounter a bear in a visitor use area (campsite, dock, picnic area)...

- **Make yourself look big and dominant. Show that you are in charge by using voice tone and body posture.**
- **Bang pots, yell, make noise until the bear leaves the area.**
- **Throwing small rocks in the direction of the bear should be done with caution. Do not try to hit the bear.**
- **Report the encounter to park staff as soon as possible.**

Apostle Islands National Lakeshore



Hiking Trails...



The Julian Bay Trail on Stockton Island.



The Loop Trail to the Basswood Island Quarry.



The Tombolo Trail on Stockton Island.



Hiking the Lakeshore Trail on the mainland.

“Friends” Look to the Heavens to Help Support Park Projects



“At night the stars they put on a show for free,” according to songwriter Carole King. She must have been thinking of Apostle Islands National Lakeshore. Nowhere in the Midwest do the stars shine so brightly as in the dark skies above Lake Superior. The national lakeshore is spectacular for stargazing with its lack of man made light pollution.

In 2009, those pristine nocturnal skies caught the attention of Mark Weller and John Rummel, noted astro-photographers from Madison, Wisconsin. They were on a quest to capture a dramatic photograph of the rising summer Milky Way lazily draped around the historic lighthouse on Outer Island. This quest resulted from a longtime friendship with famed conservationist Martin Hanson. Hanson’s connection to Apostle Islands National Lakeshore is well known, as he was one of a handful of insiders that worked closely with Senator Gaylord Nelson to pass legislation leading to the establishment of the lakeshore in 1970. If that wasn’t enough, Hanson founded The Friends of The Apostle Islands



This image of the Milky Way over Raspberry Island is one of the “Lights of the Apostle Islands” images helping to raise money for park projects.

National Lakeshore, which raises money to support educational, recreational and resource protection efforts of the National Park Service.

Many were deeply saddened when Hanson passed away in 2008. In tribute to their fallen friend, Weller and Rummel hatched an idea: What if they could capture a killer shot of the Milky Way rising, create a framed limited edition fine arts print and donate all the proceeds to The Friends in Martin’s name. Thus was hatched the series they call: “The Lights of the Apostle Islands”.

With support from the National Park

Service and The Friends organization, in June 2009 Weller and Rummel found themselves on the lawn looking south at the Outer Island Lighthouse with the brightest part of the Milky Way settling amongst the tree tops. The photograph they took was a hit and recently sold out. So with equal parts luck, talent and a proven track record, Weller and Rummel have returned twice since their original trip to capture the Milky Way over

the Sand Island Lighthouse and the Lighthouse on Raspberry Island. Sales of these prints have raised tens of thousands of dollars for various park projects. This summer they are once again returning to the islands in an attempt to capture the Milky Way over the Devils Island Light.

If interested in purchasing a framed print from “The Lights of the Apostle Islands”, and supporting the Friends of the Apostle Islands National Lakeshore, visit the Friends web page at www.friendsoftheapostleislands.org/ or visit several of the art galleries in Bayfield and La Pointe.

National Parks of Lake Superior Foundation

The National Parks of Lake Superior Foundation (NPLSF) is a 501 (c) 3 organization with a mission to support the five U. S. national parks on Lake Superior through fund raising and advocacy. NPLSF supports projects that are not federally funded. This year, NPLSF will help fund improvements to the park’s busiest trail.

The Lakeshore Trail begins at Meyers Beach parking lot and leads to overlooks of the mainland sea caves. Due to muddy conditions in recent years, sections of the trail have widened significantly causing resource damage and impacting visitor experience. NPLSF is providing funds for the National Park Service to purchase materials to construct about 600 feet of plank boardwalk along the trail this year. This will enable the park to target the highest priority areas, helping to improve trail conditions and mitigate resource damage.

We’re grateful for the growing collaboration between the NPLSF and Apostle Islands National Lakeshore. NPLSF is seeking board members with particular interest in the Apostle Islands. See <http://www.nplsf.org> or the park superintendent for more information.