Raspberry Island Lighthouse Reopens

OCTOBER 13, 1906 – MR. R. G. HURST WITH HIS MEN LEFT
the station at 3:30 pm, after completing the new dwelling. Made the
general inspection. Found everything in good order...This has been
a very fine day.

When keeper Charles Hendrickson penned these words in his log
book, he was celebrating the completion of the new lighthouse
and keepers’ quarters that was built in 1906 to replace the 1863
Raspberry Island lighthouse. A century of exposure to Lake
Superior’s harsh environment took its toll on the building called
the “showplace of the Apostles”. To restore the Raspberry Island
lighthouse and ensure its sustainability, the National Park Service
initiated a major rehabilitation project in August 2005. This
$1.3 million project was designed by Bahr, Vermeer & Haeccker,
Architects, Ltd from Lincoln, Nebraska. It involved a wide variety
of tasks including:

• Replacing the roof and repairing the foundation.
• Repairing and repainting the interior and exterior walls.
• Restoring windows and refinishing doors.
• Installing new well, septic and utility systems.
• Restoring the tower by repairing glazing, rebuilding
  railings, repairing the floor, and painting the lantern room.
• Installing a drainage system and grading the grounds to
direct water away from the lighthouse.
• Improving existing mechanical, electrical, plumbing and
  fire protection systems.

KBK Services Inc. of Ashland, Wisconsin was chosen to coordinate
this complex project. More than 60 different workers, mostly from
northern Wisconsin, worked to return the lighthouse to its original
glory. Ken Kontny, the project supervisor, noted that this job was
a bit different from the projects that KBK normally works on. He
described the work on the Raspberry Island lighthouse as a “tribute”
to the lighthouse’s rich history and the quality of the workmanship
displayed by the 1906 construction crew. The KBK crew took great
pride in doing their share to preserve a part of our national heritage.

According to National Park Service guidelines, rehabilitation returns
a property to a state of utility through alteration or repair, while
preserving its historical, architectural and cultural significance. As
the lighthouse reopens to the public this year, its south half will
be an interpretive museum furnished like it was in the early 1920s
when Lee Benton was the head lighthouse keeper. The north half
will serve as living quarters for National Park Service personnel.
The rehabilitated lighthouse will help visitors imagine life for the
keepers in the early 20th century. Guided tours of the head keeper’s
quarters and lighthouse tower are scheduled to begin on June 18,
2007. Tours will be available through late September.

The National Park Service appreciates the patience and support
the public has provided to help facilitate one of the most exciting

Lighthouse Tour Fees

Starting June 18, 2007, Apostle Islands National Lakeshore will charge a fee for
guided tours of the Raspberry Island lighthouse. The cost for guided tours at
Raspberry Island is $3/person or $8/family. (The family rate includes immediate family
members only.) The fee will be collected at the lighthouse. Visitors possessing Golden
Age, Senior, or Access passes are entitled to a 50% discount on these fees. Access to
the Raspberry Island lighthouse tower and the refurnished head lighthouse keeper’s
quarters are included in tours provided by park staff.

Staff may be available to provide tours at lighthouses on Devils, Michigan, and Sand
islands in 2007. There is no fee for tours at those locations.

All of the fee revenue collected at Apostle Islands National Lakeshore will stay in the
park and be used for critical and highly visible projects which will benefit the public.

What is an Archipelago?

Webster's Dictionary defines archipelago as
1) A large group of islands, or
2) A sea containing a large group of islands.

Emergencies

Call
715-779-3397 (day, NPS), or
715-373-6120 (night, Bayfield County
Sheriff), or
715-779-3950 (night, U.S. Coast Guard),
or 911 (land line only, NOT for cell
phones).

Middle: Painting the lighthouse, July 2006.
Bottom: The final result, November 2006.

historic preservation projects in Apostle Islands National
Lakeshore’s history. The wait to see the rehabilitated lighthouse will
soon be over and in the words of Charles Hendrickson, that will be
“a very fine day”.

2, 4 Summer Info  2 New Fees in 2007  3 Climate Change  6 What’s New

Around the Archipelago

2007

1, 3, 5 Summer Info  2 New Fees in 2007  3 Climate Change  6 What’s New

The official newspaper of
Apostle Islands National Lakeshore

This has been
a very fine day.
New Fees at Apostle Islands NL

As in life, the best things in Apostle Islands National Lakeshore are still free. It doesn't cost a penny to walk on a pristine beach, view a spectacular sunset, or take a dip in the bracing waters of Lake Superior. As of this spring, however, fees will be charged for several other recreational pursuits in the national lakeshore.

Each year Apostle Islands National Lakeshore hosts up to 200,000 visitors who not only admire the scenery, but also use the 13 public docks, 64 campsites, 59 miles of hiking trails, 37 outhouses, 3 visitor centers, and the 6 lighthouses that have been called, collectively, the “finest collection of historic lighthouses” in the country. It is increasingly difficult to maintain and care for these facilities.

Over the years Congress has established a variety of fee programs to enhance national park revenues and target these funds to help meet critical park needs. In 2004 Congress enacted the Federal Lands Recreation Enhancement Act (FLREA), a new, comprehensive and more uniform fee program for federal recreation areas. All of the fee revenue collected at Apostle Islands National Lakeshore under this new authority will stay in the park and be used for critical and highly visible projects to benefit the public. This new funding will supplement, not replace, appropriated revenues, and make a significant difference in the quality of services provided.

The park conducted an extensive public involvement campaign in 2005 and 2006 seeking comment on the proposed fee program, and the final fee schedule reflects that input. The 2007 recreational user fee schedule at Apostle Islands National Lakeshore includes fees for nightly camping, overnight docking, some interpretive programs or tours, day use parking at Meyers Beach, and overnight parking at park headquarters in Bayfield (see fee chart).

Most nightly camping fees will be collected at the visitor center in Bayfield. Annual parking passes for Meyers Beach and docking tickets that provide a discount for boaters wishing to pre-pay the overnight docking fee are also available at the Bayfield visitor center. Docking tickets may also be available at cooperating local marinas.

The National Park Service will rely heavily on self-registration to collect fees for parking, overnight docking, and interpretive tours. Self-service collection stations will be available at Meyers Beach, Little Sand Bay, Bayfield visitor center, Basswood Island, Devils Island, Manitou Island, Michigan Island, Oak Island, Otter Island, Raspberry Island, Rocky Island, Sand Island, South Twin Island, and Stockton Island. Fee envelopes and self-registration instructions will be available at each self-service collection station.

Fee revenue projections suggest that the park should keep at least $75,000 after expenses. All of this money will be used to improve the condition of park facilities and services. Initial fee dollars will be used to do emergency repairs to docks this year due to low lake levels. In future years, fee revenue may be used to rehabilitate campsites at Stockton Island and stabilize the historic Devils Island dock and boathouse.

Detailed information on fees is available at park headquarters in Bayfield as well as on line at http://www.nps.gov/apls/planyourvisit/recreation-user-fees.htm. We hope you continue to enjoy all the best aspects of Apostle Islands National Lakeshore and appreciate your cooperation in implementing the new fees.

Planning a Visit

**Headquarters Visitor Center**

Open Mon. - Fri. 8 am to 4:30 pm, May 7 - May 25
Open Daily 8 am to 6 pm, May 26 - Sep. 3
Open Daily 8 am to 4:30 pm, Sep. 4 - Oct. 14
Open Mon. - Fri. 8 am to 4:30 pm, Oct. 15 - May 23, 2008

**Camping**

Camping is available on 18 of the lakeshore’s 21 islands and at one campsite on the mainland. Permits are required for all camping in the national lakeshore. Individual campers (for one to seven campers) can be reserved beginning one month before the start of a trip. Group campsites (for eight to 20 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 at top of page). See the brochure “Camping in the Apostle Islands” for more information. Pictures and descriptions of Apostle Islands campgrounds are available online at http://www.nps.gov/apls/planyourvisit/camping.html.

**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 between 6 pm and 6 am. The fee is $10 for vessels up to 40 feet long and $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, $5/launch at Little Sand Bay. Marinas are in Ashland, Bayfield, Cornucopia, LaPointe, Pikes’ Bay, Port Superior, Red Cliff, Roys Point, Schooner Bay, and Washburn.

**Personal Watercraft (Jet skis)**

The use of personal watercraft (jet skis) is not allowed within the national lakeshore’s boundaries.

**Paddling**

Sea kayaks are very popular for travel among the Apostle Islands. 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. For a day use parking fee at Meyers Beach. A kayak launch site is located to the 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. Long term parking is located in the parking lot adjacent to the Town of Russell campground. The Apostle Islands Cruise Service will transport a canoe or kayak to the islands for a $20 fee. For more information ask for the brochure “Paddling in the Apostle Islands” or check our website at http://www.nps.gov/apls/planyourvisit/kayaking.htm

**Scuba Diving**

A free dive permit is required to scuba dive within national lakeshore boundaries. Permits are available from Park Headquarters or Little Sand Bay visitor centers.

**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 chinook salmon. Summer fishing takes place in deep water with lake trout being the most commonly targeted fish. More information is available on our website at http://www.nps.gov/apls/planyourvisit/fishing.htm

Fishing is allowed in the national lakeshore. Hunting activity may occur from September (after Labor Day) through December. A muzzle loader deer hunt (by permit only) is held on several islands during the month of October. Interested hunters must apply for the permit lottery between June 15 and July 15. For detailed information and an application form write to Park Dispatch, Apostle Islands National Lakeshore, 415 Washington Avenue, Bayfield, Wisconsin 54814 or apls.resource_issue@nps.gov. All hunting is conducted in compliance with state law.

**Collecting**

Reasonable quantities of fruit, berries, and nuts can be gathered for personal use only. Collecting other natural objects such as rocks, wildflowers, and driftwood is not allowed.

2 Around the Archipelago
From the Superintendent: Climate Change and the Apostle Islands

By Bob Krumenaker

Melting ice sheets, rising sea levels, more intense hurricanes, endangered polar bears. Do these popular images of global warming have anything to do with the Great Lakes?

Perhaps the images don’t, but the issue of climate change certainly does. In fact, it could be the most important issue we will face at the Apostle Islands National Lakeshore in the coming decades.

You may have noted that I quickly went from “global warming” to “climate change.” According to the National Academy of Sciences, climate change is the more accurate term, as the rise of average global temperatures impacts precipitation, winds, storminess and other climate factors.

There seems to be little debate amongst reputable scientists that climate change is already occurring, and will accelerate in the next decade no matter whether or not we, as a global society, limit our greenhouse gas emissions. The conversation is shifting to the impacts of climate change and the need for adaptation. For Lake Superior and the Apostle Islands, like everywhere else, how these changes will ripple through the ecosystem and human society will be far more important than whether it will be warmer or colder, wetter or drier.

The climate-driven changes to the ecosystem will translate to changes to the park experience, with implications for the park’s future. We are already seeing signs of these effects, however, and therefore this is no longer a theoretical discussion but an issue for today.

Some of these things are already happening. There are documented increases in air and lake temperature and reductions in ice cover locally, and evidence that spring events are happening earlier regionally. While it may be only the result of the current drought, what we have seen here the last two years seems to be a harbinger of things to come: hotter, drier summers; warmer winters, less ice; warmer water levels; rapidly increasing range of exotic insects such as gypsy moths, resulting in unprecedented defoliation of island forests.

More generally, climate change makes ecosystems, including the Apostle Islands, far less resilient to disturbances. Changes in the Apostle Superior will also affect the economy and quality of life of the park’s gateway communities. Since many people live and vacation here because they love what the lake offers today, will it still offer the same amenities fifty or 100 years hence?

I sometimes say that national parks are “in the perpetuity business.” We’re here for the long run. The NPS mission, established by Congress in 1916, is to “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The challenge is that we don’t know what “unimpaired” should mean under the expected climate change scenarios.

CLIMATE CHANGE AT APOSTLE ISLANDS NL

<table>
<thead>
<tr>
<th>Predicted Climate Change</th>
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<tbody>
<tr>
<td>Warmer summers</td>
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<tr>
<td>Warmer waters, with more precipitation falling as rain rather than snow</td>
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<tr>
<td>Later freeze-up and earlier ice breakup and snow melt</td>
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<tr>
<td>Irregular, high intensity storm events</td>
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<table>
<thead>
<tr>
<th>Predicted Direct Effects</th>
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<tbody>
<tr>
<td>Less winter ice</td>
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<tr>
<td>Increase in evaporation</td>
</tr>
<tr>
<td>Lower lake levels</td>
</tr>
<tr>
<td>Ephemeral wetlands, hugely important biological areas, will dry up. Some current wet areas will become wetlands.</td>
</tr>
<tr>
<td>Warmer and more extensive warming in the water column will affect lake turnover, nutrient cycling, and potentially lead to permanent lake stratification</td>
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<table>
<thead>
<tr>
<th>Probable Indirect Physical and Biological Effects</th>
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<tbody>
<tr>
<td>Habitats will shrink or disappear for species at the edges of their ranges (which includes almost all of the unique species on Great Lakes islands)</td>
</tr>
<tr>
<td>Increases in invasive insects and diseases</td>
</tr>
<tr>
<td>Changes in phenology (timing of natural events in an annual cycle), potentially disconnecting some critical ecological interactions</td>
</tr>
<tr>
<td>Cold water fish habitat will shrink, warm water habitat will increase</td>
</tr>
<tr>
<td>More algae growing in the lake</td>
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<tr>
<td>More turbidity in the lake</td>
</tr>
<tr>
<td>Rain-on-snow events will cause more winter and spring flooding</td>
</tr>
<tr>
<td>Forest fires will grow in frequency, size, and intensity</td>
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</tbody>
</table>

Probable Indirect Effects on the Park Experience

- Longer summer season
- Shorter winter season
- Infrastructure problems: fixed docks will be too shallow to allow access to some docks
- Navigation hazards exposed
- Recreational fishing quality will change
- Degradation of submerged cultural resources (lake not as cold or sterile)
- People will bring more boats not suited for cold Lake Superior conditions; more inexperienced boaters who may not have skills to handle storms
- Visitor safety issues increase; more rescues

Warmer winters mean less ice, later freeze-up, and an early ice breakup.

Lake Superior Near Record Low Level

In April 2007, Lake Superior was 44 inches below its all time high (1985), and 20 inches lower than it was in mid-summer 2006. In a normal year, Lake Superior fluctuates about 13 inches, with the end of winter being the low point of the cycle. Spring and summer rains usually cause a gradual rise which typically peaks at the end of summer. The Lake has been below normal since April 2005 and began dropping precipitously in September 2006. Since December 2006, we’ve been just inches above our one-month record low level, which was recorded in 1923-26.

The Lake Superior basin has been much drier than normal for two years. Scientists indicate that lake levels are driven more by evaporation than precipitation, however, so less-than-normal ice cover in recent years may be most responsible for the low lake level.

Near record low levels mean that park docks are high above the water, and that there is less-than-normal water available at the docks for deep-draft boats. As most park docks were not designed for these water levels, conditions may be hazardous. Small boats may be able to slide under the horizontal rails at many docks, where the superstructure may be exposed and be dangerous. If you are able to safely moor to a park dock, the step up from most boats will also be much larger than you are accustomed to.

Please use extreme caution when approaching or mooring at docks, and stepping from your boat to the dock and vice-versa!

NPS staff is installing vertical rub rails approximately every 6 feet along the Rocky Island dock, where the problem is most acute, with funding generously provided by the Friends of the Apostle Islands National Lakeshore. This will make mooring to the dock much safer.

An “advance” on fee revenue is funding the installation of additional vertical rub rails at Michigan Island and Stockton-Quarry Bay docks. Fee money will also permit the NPS to dredge the Little Sand Bay Marina to improve access for deeper draft boats, although with the Lake so much below its normal levels, it is unlikely that we will be able to provide as much water depth as some boats will need.

Park Superintendent Bob Krumenaker announced in April that the park will do critical dredging at Stockton-Quarry Bay despite not having a guaranteed funding source to cover the costs. “It’s a critical need and we need to take the gamble,” he said, “but I hope boaters understand that we will not be able to modify docks or dredge everywhere it’s needed if the Lake continues to drop.” The Friends of the Apostle Islands NLP are accepting donations to help the park cover the estimated $21,000 cost of dredging at Stockton.

We need to identify under what circumstances we should or should not make the changes (regardless of cause) and when we should acquiesce, however reluctantly, to the changes. Creating refuges for vulnerable species somewhere else, where the climate is expected to remain (or become) favorable, sounds like a great idea when it’s not our species and the place is elsewhere. It may not sound so attractive if the Apostle Islands is proposed to be the new home of a species from hundreds of miles south. Is there a difference between a transplanted species and a new invasive species?

I have more questions than answers at this point, and I’m glad that discussions are beginning within the agency as well as in the park’s gateway communities. In the meantime, we are taking some tangible steps at the Apostle Islands:

1. We have increased our commitment to sustainability across the board, and are active participants in community sustainability efforts, which fortunately are very strong in our area.
2. We’re identifying our own contribution to climate change and working to reduce them. Community members will be invited to participate in a summer workshop to broaden the discussion to those most affected by the changing lake.
3. We will be stating our assumptions about the changing environmental conditions in our General Management Plan, and making sure that all alternatives consider those conditions.
4. We’re increasing our educational efforts on climate change and its local effects, presenting peer-reviewed science in a manner that is accessible to non-scientists.
5. This summer, in response to near-record low lake levels, we are modifying some docks and taking other short-term mitigation steps, while we consider what, if any, infrastructure changes are appropriate for the long-term.

Climate scientists predict a slight loosening of the current drought conditions for this summer, but record low lake levels remain a distinct possibility. The low lake will be a challenge to both visitors and the park staff but will afford us the opportunity to reflect on what the future of the Apostle Islands may look like. Join us, as we consider what that means for the future of the park.

Around the Archipelago 3
Planning a Visit

Island Tours/Shuttles

The Apostle Islands Cruise Service (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.apostleislands.com.

Hiking Trails

Hikers can enjoy more than 50 miles of maintained trails at Apostle Islands National Lakeshore. Here are a few highlights:

**Stockton Island Julian Bay Trail**
- **Start:** Presque Isle Visitor Center
- **Length:** 0.4 mile one way
- A short walk through the forest, past a bag overlook, to the beach at Julian Bay. The Anderson Point Trail (1.4 miles) along the rocky shore of Presque Isle Point provides an alternate route to return to the visitor center.

**Raspberry Island Sandspit Trail**
- **Start:** Raspberry Island Sandspit
- **Length:** 0.75 mile one way
- An easy walk from the beach, through the old growth forest, to the Raspberry Island lighthouse. The lighthouse, dock, and the grounds will once again be open to the public starting June 18, 2007.

**Sand Island Lighthouse Trail**
- **Start:** Sand Island East Bay Public Dock area
- **Length:** 2 miles one way
- The trail passes through an old farm field, along the beach at Justice Bay, and through a stand of old-growth white pines in route to the lighthouse.

**Stockton Island Tombolo Trail**
- **Start:** Presque Isle campground
- **Length:** 2.8 miles one way
- Leaving the Quarry Bay trail 0.6 mile from the Presque Isle dock, this trail travels through forest and bog and then onto the beach ending at the Julian Bay Lighthouse. A lagoon outlet stream occasionally bisects the beach and may require hikers to wade across.

**Oak Island Overlook**
- **Start:** Oak Island Dock
- **Length:** 3.4 miles one way
- A gentle climb past the highest point in the Apostle Islands to an overlook 200 feet above the lake with a view of ten islands and the “Hole-in-the-Wall” sea arch.

**The Lakeshore Trail**
- **Start:** Meyers Beach parking area
- **Length:** 4.5 miles one way
- A fairly rugged hike crossing drainages, through the forest, and along the cliff tops of the park’s mainland unit. Nice views of a natural bridge (not for foot travel) and the mainland sea caves are reached 2-2.5 miles from the trailhead. Hikers must use caution at cliff edges. The trail ends at a backcountry campsite.

**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.

**Apostle Islands Cruise Service Tour Summary - 2007**

<table>
<thead>
<tr>
<th>Cruise Name</th>
<th>Description</th>
<th>Dates/Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Tour</td>
<td>3.25 hour nonstop cruise around Devils Island</td>
<td>10 am daily May 12-Oct. 14</td>
</tr>
<tr>
<td>Stockton Shuttle</td>
<td>4.5 hour shuttle to Stockton Island (day hike/camp)</td>
<td>1 pm daily June 30-Sep 3</td>
</tr>
<tr>
<td>Raspberry/Oak Island Shuttle</td>
<td>4 hour shuttle to Raspberry Island (lighthouse tour) or to Oak Island (camp)</td>
<td>8:30 am daily June 18-Sep. 3</td>
</tr>
<tr>
<td>Raspberry Island Cruise</td>
<td>2.89/adult, $16.95/adult</td>
<td>2 pm daily, June 17 - Sep. 4</td>
</tr>
<tr>
<td>Evening Grand Tour</td>
<td>3.25 hour nonstop cruise around Devils Island</td>
<td>5:45 pm, Tue-Wed-Thursat June 19-Sep. 1</td>
</tr>
<tr>
<td>Lighthouses &amp; Sea Caves Cruise</td>
<td>3.75 hour cruise past 2 lighthouses and mainland sea caves</td>
<td>5:45 pm, Fridays June 22-Aug. 24</td>
</tr>
</tbody>
</table>

Call 800-323-7619 for Reservations

Around the Archipelago Guest Lecture Series

A grant from the Friends of the Apostle Islands National Lakeshore will fund the “Around the Archipelago” guest lecture series this summer. The free presentations are scheduled on Monday evenings at 7:30 p.m. at Apostle Islands National Lakeshore’s Bayfield visitor center.

**July 9**  Geology & Poetry of the Apostle Islands  
Prof. Ed Nuhfer, Idaho State University, describes how “a visit to the islands permits one to experience the scientific observations of the geologist in a setting fitting to the romantic reflection of the poet.”

**July 16**  A Two Year Exploration of the National Park System, to Celebrate Life  
Gabrielle & Michael Sedor describe their journey to visit every National Park Service area in the continental United States.

**July 23**  Shipwrecks Among the Apostle Islands  
Thomas R. Holdren, Director, Lake Superior Maritime Visitor Center Duluth, MN. The Apostle Islands’ historic lighthouses usually helped mariners avoid the island’s hidden dangers. Come listen to the stories of ships that even the lighthouses couldn’t save.

**July 30**  Rapid Warming of Lake Superior: A Local Consequence of Climate Change  
Prof. Jay Austin, Large Lakes Observatory, UMD. While the upper Midwest has warmed significantly over the last few decades, Lake Superior’s summer surface temperatures have warmed even faster. What role does declining ice cover play in changing the lake’s temperature?

**August 6**  Changes Observed during 35 Years of Birding around Chequamegon Bay  
Dick Verch, Retired Professor of Ornithology, Northland College describes the changes in the variety of species and numbers of individuals within specific species he has noted in 35 years.

**August 13**  A Storied Wilderness: Nature, History and Reviving the Apostle Islands  
Asst. Prof. Jim Feldman, University of Wisconsin - Oshkosh. An environmental historian explores how wild nature and human history combined to create today’s island landscapes.

**August 20**  The Piping Plovers of Long Island  
Summer Matteson, Wisconsin DNR, describes the return of piping plovers to what is presently their only successful nesting area in Wisconsin (see page 7).

**August 27**  Global Warming and Lake Superior: What Lies Ahead?  
Prof. Thomas C. Johnson, Large Lakes Observatory, UMD examines the evidence for global warming, how we know that we are experiencing more than just natural climate variability, and what climate models are predicting for the Lake Superior region in the coming decades.

4 Around the Archipelago
Apostle Islands National Lakeshore encompasses more than 500 square miles of Lake Superior. After a lifetime of living and working around the lake, commercial fisherman Julian Nelson described it this way... “The lake is the boss. No matter how big you are or what kind of a boat you’ve got, the lake is still the boss. Mother Nature dictates a lot of things.” Visitors must be aware of the risks and hazards associated with the lake and island environments. Response times to areas on Lake Superior can be far greater than for similar distances on the mainland. The National Park Service will make reasonable efforts to respond in emergency situations, but the lake IS the boss. So be careful out there, because maybe we can save you, and maybe we can’t.

Boating

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

• Do not overload your boat.

• Use life jackets, also known as personal flotation devices (PFDs). A U.S. Coast Guard approved, wearable PFD must be provided for each person aboard any boat.

• 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.

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 bacterium which causes an intestinal disorder.

Weather and Climate

Typical summer conditions feature winds of 5 - 20 knots and waves of 1 to 4 feet. Winds of 30 to 40 knots with 6 to 12 foot seas are possible. 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 channels 1 - 10 and are 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 water forecasts for Lake Superior as well as weather readings from the data buoy at Devils Island.

Bear proof food lockers are provided at campsites on several islands. Food should be locked up except during cooking. Bear proof food lockers are provided for each person on board. 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, dry storage containers, and provisions for at least one extra day.

Swimming

The average annual water temperature of Lake Superior is about 40 degrees Fahrenheit, but on calm sunny summer days, 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 Devill’s Island or the mainland sea caves is not permitted.

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 and picnic areas. Do not linger in areas adjacent to hazardous trees especially during high winds. Report any such trees near visitor use areas to park staff as soon as possible.

...and did we mention?...

Fires

Campos must be built in metal fire receptacles where provided. Beach fires must be built on bare beach sand and be no more than three feet in diameter. Leave loose wood on the ground in forested areas or uvegetated beach areas may be collected for firewood. To limit the spread of harmful insects, DO NOT bring firewood into the park or carry wood between islands. 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 allowed on Raspberry Island beaches, at Julian Bay and Presque Isle Bay on Stockton Island, or on beaches within 150 feet of all campsites where fire receptacles are provided. Fires are not permitted in portable grills or stoves on docks or on boats tied to public docks. Open fires will be prohibited during times of high fire danger.

Pets

Pets must be kept on a leash that is six feet or shorter and never left unattended. Persons having pets within the park must dispose of all pet excrement. Excrement must be deposited in wooded areas at least 100 feet from any trail, campsites, docks, buildings, picnic area, or water source. Pets are not allowed in public buildings or on scheduled Apostle Islands Cruise Service trips (except guide dogs accompanying visually or hearing impaired people).

Accessibility

Campsite #1 in the Presque Isle campground on Stockton Island offers accessibility with assistance to park visitors. A ramp leads from the main dock to the visitor center, whether accessible toilets, and the campground. The visitor center and restroom at the Little Sand Bay visitor center are accessible. An accessible walkway also links the W.E. Henningsen Brothers Fishery at Little Sand Bay. The Headquarters visitor center in Bayfield features accessible parking and restroom facilities. A wooden ramp leads to the west entrance of the building. The Apostle Islands Cruise Service can accommodate visitors with wheelchairs. Deckhands will carry wheelchair-bound visitors onto the main deck of the “Island Princess.” The aisle on the main deck is extra wide and one of the restrooms is accessible.

Gale Warning Flags

Marine weather forecasts are broadcast on marine channels 1 - 10 and are 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 data buoy at Devils Island.

What's the Weather?

What's the Weather?

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 3.38

Average temperature (degrees F) and precipitation measured on Madeline Island.
Park News

General Management Plan Update

As you may already know, the National Park Service is in the process of developing a new General Management Plan/Wilderness Management Plan for Apostle Islands National Lakeshore. These plans are vision documents that are meant to guide the management of the Apostle Islands National Lakeshore and the Gaylord Nelson Wilderness are managed, we encourage you to engage in this public planning process. Study documents and schedules can be viewed or downloaded at www.nps.gov/aps/gmp.htm.

Repairs Continue at Chequamegon Point Light

Last year the National Park Service began fixing the damage caused to the Chequamegon Point Light during an attempt by the U.S. Coast Guard to move the lighthouse back from the Long Island shoreline in 1987. The tower’s metal legs have been straightened and mounted on new cement footings. The work will continue this year with the replacement of the cast iron deck for the catwalk around the lantern room. When that is completed, a new railing will be installed around the exterior of the lantern room and new glass will be placed in the tower. The floor of the tower workroom will also be replaced, and the tower will be painted.

Lighthouse Maintenance Continues at other Light Stations

Visitors to the light stations at Devils, Michigan, and Raspberry islands this summer may see workers involved in a variety of different efforts to maintain the buildings at these historic sites. On Michigan Island, the contract painting of the 1929 light tower’s exterior will be completed early this summer and the roof on the 1857 lighthouse will be replaced. Workers will be replacing the roof on the keeper’s quarters at the Devil’s Island light station. Work is also scheduled for several of the outbuildings at the Raspberry Island light station. Workers will tackle the brick walls of the fog signal building. Roofs on several other buildings will also be replaced.

These activities should have little, if any, impact on the availability of guided tours at these light stations. For more details or information about the scheduling of these projects call 715-779-3199 ext. 401.

Exotic Species Target Apostle Islands

Exotic species come in many forms – plants, insects, animals, both by land by water. Often lacking natural predators, they can be devastating to native plants and animals. The Apostles, being islands, may make it more difficult for some exotic species to invade – however, the isolation that can protect the islands can also make them more vulnerable once an exotic species becomes established. Most beach and sand spit areas in the park are surprisingly free of exotic species – but a recent threat, spotted knapweed, seriously threatens these beautiful and fragile areas. Spotted knapweed is a purple, thistle-like plant. You may have noticed it along the roadside. It is very invasive and has recently been found along Meyers Beach Road and at the north end of Outer Island. Its seeds are easily spread on the soles of shoes, on boots, packs or other gear. Other invasive plant species of concern include purple loosestrife, Japanese knotweed, and orange hawkweed.

Exotic insects are increasingly becoming a concern in the park. Gypsy moths are the most serious pest of oak and other hardwood forests in the eastern United States. Unfortunately, gypsy moths have rapidly increased in the park and are on nearly every island. Emerald ash borer is a potential menace we still have a chance of keeping them under control. Usually lacking natural predators, they can be devastating to native plants and animals. Often lacking natural predators, they can be devastating to native plants and animals.

Help Fight the Exotic Species Invasion!

1. Do not bring any firewood out to the islands and do not transport firewood between islands.
2. Keep clean – check all your gear to make sure there are no plant parts or seeds on your boots (especially the soles), boats, packs, and other gear.
3. Check your boat and gear for hitchhiking insects, insect larvae, zebra mussels, and plants.

New Junior Ranger Activity Booklet

The Apostle Islands National Lakeshore is proud to announce the completion of a new Junior Ranger activity booklet. The new booklet is full of intriguing activities designed to enhance and promote a greater understanding of the unique cultural and natural resources of the Apostle Islands.

The new booklet is available free to Junior Rangers of all ages. It was made possible with help from the National Park Foundation, the Student Conservation Association intern, April Morris, designed the new booklet to help tell the stories of the Apostle Islands, and ask Junior Rangers to add theirs as well.

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Skittering down the beach is a small, round, sand-colored bird, with a single chest band and rapid little feet. When you hear the plaintive whistle—peeep-loo, peeep-loo—you know you've been lucky enough to see a piping plover...a very rare find. This small shorebird makes its home on wide, sandy, undisturbed beaches...the same areas where people love to recreate. This coincidence means that much of the habitat used by piping plovers for breeding and wintering has been lost to development, and their population has drastically declined.

The Great Lakes population of piping plovers was listed as endangered by the state of Wisconsin in 1979. It made the federally endangered list in 1985. There are, however, a few recent rays of hope for piping plovers in this region. The plover population in Michigan has been growing in recent years. After a 15-year hiatus, piping plovers were found nesting on Long Island in 1998. This is presently the only successful nesting location for plovers in all of Wisconsin. In 2001, the U.S. Fish and Wildlife Service listed Long Island and the western tip of Michigan Island as critical habitat for piping plovers. Even so, results of nesting have been sporadic on Long Island, with only a few nests successfully producing young birds since 1998. That is, until 2006, when there were three successful nests on Long Island and, for the first time, a nesting attempt on Outer Island.

Protection of piping plovers is a joint effort between the National Park Service, Wisconsin Department of Natural Resources, the Bad River Tribe, U.S. Fish and Wildlife Service, University of Minnesota researchers, and volunteers. To protect any nests that are found, the area within a quarter of a mile of the nest is posted closed to the public and an "exclusion," or fence is placed around any nests to help prevent predation. May, June, and July are times when birds are easily disturbed. In May, nesting territories are first being established and birds can easily be scared away from a potential breeding area. Plovers nest in the month of June. If disturbances cause adults to be off their nest for very long, their eggs will not survive. When disturbed, the adults may act like their wing is broken and try to lead the cause of the threat away from the nest. If all goes well, the eggs hatch in July.

Young plovers are "precocial," meaning that they are mobile, have down, and can feed shortly after birth. These tiny balls of fluff can move amazingly fast, but are no match for a variety of predators including hawks, gulls, foxes, and dogs! Dogs allowed to roam off-leash are an especially great threat to plovers. Even if a dog is just being curious, it can disturb the birds long enough to harm the eggs—or worse, some dogs will prey directly on the birds.

You can help the recovery of piping plovers in the Apostle Islands and in Wisconsin, by:

1. Respecting areas posted as closed to protect the plovers. Closed areas are marked by signs and extend out into the lake. Please do not hike, wade, or beach your boat in a closed area.
2. Always keep your pet on a leash and under control.

We often note that there is no place else in Wisconsin like the Apostle Islands. This is especially true for piping plovers. A few simple acts will help us protect this important haven for a very special creature.

**Rare Bird Finds Haven in the Apostle Islands**

### 150 Years of Lighthouses in the Apostle Islands

Lighthouses in Apostle Islands National Lakeshore are described by historian F. Ross Holland, Jr. in his book, Great American Lighthouses, as the "largest and finest single collection of lighthouses in the country." Six light stations were built on Michigan (1856), Long (1857), Raspberry (1862), Outer (1874), Sand (1881), and Devils (1891) islands to provide safety for the many ships passing through the southwestern portion of Lake Superior.

It was the lighthouse that wasn’t supposed to be. In 1852, Congress appropriated $4500 for a lighthouse to be built on Long Island. For reasons that are still unclear, Abraham Smolk, representing the lighthouse board in the Lake Superior Region, instructed the contractors to build the lighthouse on Michigan Island instead. The tower was remote, 19 miles from the town of La Pointe where supplies and materials were purchased for construction of the lighthouse. By the time the lighthouse was completed at Michigan Island, the cost was more than $12,000, almost three times the projected cost of building a lighthouse on Long Island.

Sitting on top of a high clay bluff overlooking Lake Superior, the Michigan Island lighthouse went into service at the start of the 1857 navigation season. The building included a one-and-a-half story keeper’s dwelling and its attached conical tower made of rough stone with its exterior walls stuccoed and whitewashed. The lighthouse was closed and its lens removed after only one season of service when the Lighthouse Board realized that the light was built on the wrong island. A lighthouse was hastily erected on Long Island and put into service in 1858. By 1889, the government decided to repair the lighthouse on Michigan Island, install a new three-and-a-half order Fresnel lens, and re-activate the light.

As the shipping industry grew, more vessels were traveling to and from Western Lake Superior ports. Navigation around the Apostle Islands could be hazardous, and ship captains requested more lights to guide them around the rocky shorelines. Boat captains complained that the lighthouse on Michigan Island was too low to be seen from ships approaching from the northeast. In 1891 a 112-foot high light tower from Pennsylvania’s Delaware River was brought to Michigan Island, and eventually erected near the old Michigan lighthouse in 1929. Ed Lane, lighthouse keeper from 1901-1939, wrote this in the lighthouse logbook about the first day he used the new light tower:

Oct 29, 1929—Put window shades and worked in old tower. Started up new tower at sunset. Everything in good shape, but station looked odd, the old tower being dark for the first time in navigation in (60) years.

Endangered Piping Plover Nesting Area

Beach areas adjacent to piping plover nests will be posted with signs like this. The closure applies to all lands and waters within one quarter mile of a nest. Please do not hike, wade, or beach your boat in a closed area.

**Beach and Surrounding Area Closed**

Nine head lighthouse keepers were stationed on Michigan Island over the years. Many were accompanied by their families. For many lighthouse keepers’ wives, life on an island could be lonely. Some had assistant lighthouse keepers’ families to socialize with, but others were by themselves with the children. The hardships these women faced on the desolate island were often very stressful. On one such occasion Anna Carlson, wife of Robert Carlson (head lighthouse keeper at Michigan Island from 1893-1898) faced 4 days of fear.

On a winter day in 1893, Robert decided to go ice fishing with his brother and dogs. Anna was left alone with her three small children. Expecting her husband to return home that night she waited up for him but he did return as promised. The next morning she had to milk the cow to feed her two-year old and nine-month old twins. She was so afraid of the cow that she cut a hole in the side of the stall with an axe so she could reach through and milk the cow without being kicked. A second day and night came and went without any sign of her husband. Anna believed her husband was dead. She wrote, “On the third day I could stand it no longer...I fell to the floor, screaming. I screamed at the top of my voice, until I was exhausted...I think if I had not screamed I would have lost my mind.”

Robert and his brother returned four days after they left. A strong wind came up the day they went ice fishing, breaking up the ice and blowing the men all the way to Madeline Island. They found an old boat and patched it up sufficiently to maneuver their way through the ice floes and return to Michigan Island. Needless to say, the Carlsons never stayed on Michigan Island during the winter months again.

This year marks the 150th anniversary of the lighting of the first Apostle Island light. Though the last full-time lighthouse keepers left the Apostle Islands in 1978, automatic lights still shine from all six stations. The National Park Service preserves the historic lighthouses as a tribute to the region’s rich maritime heritage. Just as importantly, we also strive to preserve the stories of people like Anna and Robert Carlson. One hundred fifty years of harrowing tales of survival and amazing stories about the everyday lives of the light station inhabitants inspire amazement, gratitude and awe at the role the keepers and their families played in protecting vessels from danger. Hopefully stories like these, and the personal experiences that this and future generations have at these lighthouses, inspire support for preserving these historic places for another 150 years.

Around the Archipelago 7
National Lakeshore looking for a few good “Friends”

Friends of the Apostle Islands National Lakeshore

By Ruth Goetz, Chairman of the “Friends” Board of Directors

The Friends of the Apostle Islands National Lakeshore was established to promote an appreciation for and preservation of the cultural and natural heritage and the natural environment of the Apostle Islands. The “Friends” are in their fourth year of providing funds for special projects within the Apostle Islands National Lakeshore. In 2007, the Friends have committed more than $40,000 to fund the following projects:

1) Publication of the park newspaper.
2) Funding to staff Meyers Beach with a park ranger and a student intern.
3) Funding the “Around the Archipelago” guest lecture series.
5) Providing vertical rub rails for the Rocky Island dock.
6) Providing funds to extend the Bayfield visitor center hours.
7) Printing brochures on high priority natural resource issues.
8) Supporting the “Pathfinders” environmental learning project.
9) Sponsoring volunteer work projects on Stockton Island, Raspberry Island, and at Little Sand Bay for Friends members.

We are always looking for more “Friends” to help ensure that these projects will be completed this year. We invite all visitors and fans of the Apostle Islands National Lakeshore to consider joining this organization. Your tax deductible contribution to the Friends goes to projects within the national lakeshore not funded in the National Park Service budget.

For a contribution of $30 or more you will receive a 2007 Voluntary Passport which can be displayed on your car, boat, kayak, etc. to show that you support the Apostle Islands National Lakeshore and help to preserve it for others to enjoy. We are very pleased that funds collected last year through the passport program helped in refurnishing the historic Raspberry Island Lighthouse. The head lighthouse keeper’s quarters will be refurnished as it was in the 1920s when it reopened for tours this year. The “Friends” will continue to support this wonderful historical site and are proud to be a partner with the National Park Service.

We hope you enjoy your stay among the Apostle Islands and experience a true sense of relaxation as you explore the beauty of these islands. Please consider joining us to help preserve this outstanding natural environment for generations to come.

National Parks of Lake Superior

The National Parks of Lake Superior Foundation (NPLSF) formally signed an agreement with the superintendents of Apostle Islands and Pictured Rocks National Lakeshores, Isle Royale National Park, and Grand Portage National Monument in May 2007. This makes the NPLSF an authorized fundraising partner with the park, along with the Friends of the Apostle Islands. The NPLSF board made a small grant to each of the four national parks in 2006, and ours will be used this summer to improve the beach stairs and boardwalk at Meyers Beach. NPLSF intends to seek significant regional corporate and philanthropic donations to assist the four parks, complementing the role of local Friends groups. We appreciate their commitment and passion. For more information, see www.nplsf.org or their ad in Lake Superior Magazine.