



Around the Archipelago

The official newspaper of
Apostle Islands National Lakeshore



Stormin' the Beach at Stockton Island

THE LANDING CRAFT GROANED UNDER THE WEIGHT OF the heavy vehicle being driven aboard in the pre-dawn hours, but not a complaint was heard among the troopers who would soon be doing the dirty work in this little-known mission. Like good recruits, they knew that their best work would never be seen nor appreciated. But that was fine with them. Some things are best left unseen...

The armada moved slowly and carefully through the rough seas, arriving at Presque Isle shortly after sunrise. Eager for the opportunity to move and warm their chilled bodies, the troopers emerged quickly from the landing craft as its huge metal ramp swung down into the surf. Low water levels prevented the landing craft from getting close to the beach – that last 200 feet was going to be a cold, hard slog through icy water. Undeterred, the heavily-burdened troopers slogged onward towards their objective.

It was a target-rich environment – specifically chosen for that reason. As silently as ghosts, the troopers slipped through the camp on the island stronghold, past slumbering sentinels who were probably better off not knowing what was happening in their midst. The first target was quickly reached – a small building less than 50 yards from the shoreline.

The troopers swiftly and skillfully removed a chair from within the building, revealing a hidden chamber housing their adversary. Reports about the buildup were accurate. The team arrived in the nick of time. They rigged the opening, and after a brief burst of radio traffic, the go-ahead signal was given. The target was eliminated in minutes, but the action left the troopers breathless. They were close to retching from the sights and smells of what they had done, but bravely stood their ground, knowing that their work was not over. There was always mop-up work to be done...

The heroes of this story are not United States Marines, but rather employees of the National Park Service. Their mission: to pump outhouse vaults nearing the limits of their holding capacity. To accomplish this, these brave men and women load a pumper truck designed to empty septic systems (also known as a “honey wagon”) onto the park’s Korean War-era landing craft along with hundreds of feet of hose, which is dragged to their brimming objectives. Powerful pumps aboard the honey wagon move the “cargo” from shore to ship, where it is transported to the mainland for proper disposal. It is unquestionably, indisputably, unspeakably unpleasant work, especially when trash that has been thoughtlessly tossed into an outhouse vault clogs the suction line and halts the pumping until the line can be cleared.

Ponder what it would be like to clear such a line if you’re ever tempted to throw trash down an outhouse...

The author joined this brave crew for a day last June, and was



Top: The “honey wagon” arrives at Stockton on the NPS Pelican, a Korean war-era landing craft.

Middle: Workers lay hose to pump the outhouses at Presque Isle campground.

Bottom: Garbage thrown in the vault toilets clogs the suction hose used to pump the outhouses, making a difficult job even more unpleasant.

astonished at how professionally and good-naturedly these employees carried out their task. The taxpayers of the United States can sleep well at night, secure in the knowledge that they have received every last nickel of value that they can possibly receive from these men and women...and then some.

Salute these heroes if you run across them in your travels through the park. They bravely go where too many have “gone” before!

Taking Care of Business...

Apostle Islands National Lakeshore has 62 vault toilets (a.k.a. outhouses) on 14 islands and the mainland. Some of those toilets need to be pumped two to three times each year. In 2007, the park paid about \$6000 to pump out toilets. As explained in the adjoining article, this can be quite an undertaking. Weather, equipment problems, contractor availability, and lake levels can all delay the process. Visitors can help facilitate this important work. If you notice a vault toilet that is almost full (near the base of the stool), report it to park staff ASAP. Never dispose of garbage in the toilets. If a vault toilet is full and temporarily closed, be prepared to walk to another toilet or to dig a cathole at least six inches deep and 200 feet from any campsite or body of water.

And then there is the toilet paper. The Friends of the Apostle Islands National Lakeshore generously donated a dozen cases of toilet paper for use in park outhouses in 2007. Park staff generally replenishes the toilet paper supply at outhouses as often as possible, but many toilets are in remote locations. Visitors should be prepared to supply their own toilet paper. Please be conscientious to fellow visitors and do not take rolls of toilet paper from the outhouses.

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).

2, 4 Summer Info



3 Deadly Fish Virus



3 Climate Friendly



6 What’s New





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.

Mailing Address

Park Superintendent
Apostle Islands National Lakeshore
415 Washington Avenue
Bayfield, WI 54814

Phone

(715)779-3397

Website/Email

www.nps.gov/apis/
APIS_Webmaster@nps.gov

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

From the Superintendent: Looking Down the Road

By Bob Krumenaker

Please take a few moments to look with me behind the scenery of this, and other national parks. I'd like to call your attention to two notable national park milestones visible on the no-longer-so-distant horizon.

The first, and decidedly more positive one, is the upcoming 100th anniversary of the National Park Service a scant eight years from now in 2016. I'm delighted to say that the buildup has already begun, with the tangible evidence right here being nine additional park staff serving visitors or helping to protect or restore Apostle Islands' resources this summer. These employees are one part of the Service's "Centennial Initiative," which we hope, with Congressional support, will revitalize the national parks in preparation for our second century. All told, there are 3000 more seasonal employees in the national parks this summer than last year. This effort is not just about staff, but about building technical capacity, solving big problems, preserving significant historic buildings, strengthening our partnerships, and making sure that the national parks are playing a vital and relevant role in this country in their second century. It promises to be an exciting time.

Scientists from the US Geological Survey predict that we'll pass the second landmark in or about 2022, only 15 years from now. That's when our warming climate is likely to cause the last permanent ice sheet to disappear from Glacier National Park. While no one is suggesting we change the park's name, loss of glaciers at Glacier National Park or Joshua trees at Joshua Tree National Park (also predicted for this century) are dramatic evidence that climate change is very real.

Last year in this space we introduced the issue of climate change and its predicted impacts on Lake Superior and our national park. Climate change news was everywhere and the dramatic low level of Lake Superior dramatized the issue locally. While our recent drought has abated and Lake Superior has risen somewhat, the lake level

is still well below average and the issue of climate change remains of grave concern to those of us who steward the nation's natural, cultural, and recreational heritage. Think of the national parks as the canaries in the global mines; as the parks go, perhaps so will go the rest of the planet.

Apostle Islands staff have taken some major steps to reduce our carbon footprint, described on page 3 of this year's park newspaper. We hope you are also inspired to take actions where you can. Through the National Park Service's Do Your Part! program, park visitors are urged to dedicate their carbon reductions in the name of their favorite national parks. Global carbon emissions since 2000 are already exceeding what last year's Nobel Prize winning climate change scientists used as a worse-case scenario, so there's no time like right now to get started.

Paradoxically, climate change will cause the national parks to change in ways, and at rates, unprecedented in our experience. Yet, as the optimism associated with the National Park Service's centennial grows, we are also reminded that the national parks are indeed enduring, and in many ways,

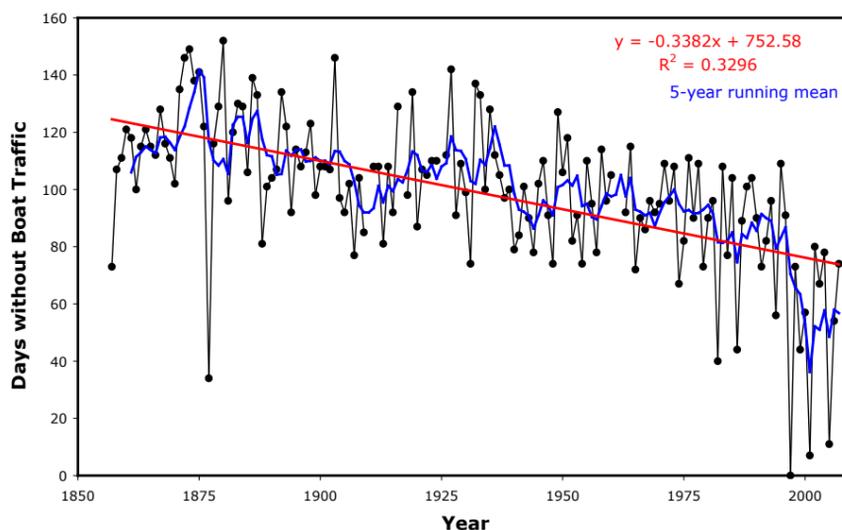
some of the few constants in our society. I can't tell you what the Apostle Islands National Lakeshore will look like 100 years from now. But I can tell you that if America continues to care as deeply in the future as it does today about its national park system, this will still be, as it is today, one of the gems in our nation's crown.

Thank you for your support, and please enjoy your visit.

Whither Winter?

One example of how the climate has been changing in the Apostle Islands region is the decrease in ice cover on Lake Superior. Data collected from the Madeline Island Ferry and issues of the Bayfield County Press dating back to 1857 indicate that the channel between Bayfield and Madeline Island has been freezing up later and opening up earlier than before. The ice season is now 33 days shorter than it was 100 years ago. The three shortest ice seasons (0, 7, and 11 days long) occurred since 1998. The 2007-2008 ice season lasted 74 days. For more details, attend the guest lecture in Bayfield on August 4 (see page 4).

Duration of Closed Navigation for Bayfield Harbor



Changes in Lake Superior ice cover measured at Bayfield, WI. 150 years of data shows that the length of time that the channel between Bayfield and Madeline Island is blocked by ice each winter has decreased by 33 days in the last century. (from F. and N. Howk, 2008)

Planning a Visit

Headquarters Visitor Center

Open Mon.- Fri. 8 am to 4:30 pm, May 1 - May 23
Open Daily 8 am to 6 pm, May 24 - Sep. 1
Open Daily 8 am to 4:30 pm, Sep. 2 - Oct. 12
Open Mon.- Fri. 8 am to 4:30 pm, Oct. 13 - May 22, 2009

Little Sand Bay Center Hours

Open 9 am to 5 pm May 24 - 26
Open Daily 9 am to 5 pm, June 14-Sep. 1

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 campsites (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 on page 4). See the brochure "Camping in the Apostle Islands" for more information. 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 between 6 pm and 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, \$5/launch at Little Sand Bay. All watercraft must be decontaminated before launching in the lake (see article on page 3). 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 (jet skis) 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 (see article on page 3). 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. The Apostle Islands Cruise Service will transport a canoe or kayak to the islands for a \$20 fee. For more information check our website at www.nps.gov/apis/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 coho salmon. Emergency restrictions have been implemented in 2008 to prevent the spread of the deadly VHS virus (see article on page 3). 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 December. A muzzle loader deer hunt (by permit only) is held on the islands during the month of October. 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 write to Park Dispatch, Apostle Islands National Lakeshore, 415 Washington Avenue, Bayfield, Wisconsin 54814 or apis_resource_issues@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.

Deadly Fish Virus Threatens Lake Superior Fish

Viral Hemorrhagic Septicemia (VHS) is a deadly fish virus and while it does not pose a threat to human health, it threatens fish populations on a global scale. In this region, VHS has been detected in all the lower Great Lakes and several inland lakes in Wisconsin and Michigan. It is spreading rapidly and is known to cause large scale fish kills. It has been found in 32 species of fresh water fish, 28 of which inhabit the Lake Superior Basin. These include lake whitefish, rainbow trout, muskellunge, walleye, yellow perch, brown trout, largemouth bass, smallmouth bass, rock bass, northern pike, bluegill, pumpkinseed, burbot, and emerald shiners.

VHS causes bleeding in the organs, especially the liver, spleen, and intestines of infected fish. The ultimate cause of death is usually kidney failure. Fish infected with VHS may display symptoms like hemorrhaging (bleeding), bulging eyes, and bloated abdomens. Some fish may carry



Symptoms of VHS infection include bulging eyes and hemorrhaging (bleeding).

the disease without any outward signs of sickness. Lab tests are necessary to confirm the presence of VHS. Please report fish kills by calling the DNR TIP line at 1-800-847-9367. Be sure to include the body of water,

date, fish species, and approximate number of dead/dying fish. If you catch a suspicious looking fish, place the fish in a plastic bag and then in a cooler on ice. Please do not release the infected fish back into the water.

VHS thrives in cold water and is most capable of infecting many fish when stress factors are high. Fish contract VHS through:

1. Eating an infected fish.
2. Urine, feces, and sexual fluids of an infected fish transmitted to other fish through wounds or gills.
3. An infected female to the surface of her eggs.

Outbreaks of the disease often occur during spring spawning runs when the water is cold, many fish are close together, and the fish are stressed.

There are a number of ways VHS can move from one body of water to another. The most likely agents for VHS to enter Lake Superior are through human actions including:

1. Moving infected fish, either game fish or bait fish, from one water body to another.
2. Transfer of infected water in ballast tanks, live wells of fishing boats, and in bilges of recreational and fishing boats.
3. Moving infected fish and/or water from one water body to another.

Apostle Islands National Lakeshore, the three other Lake Superior National Parks, and tribal governments have joined together with state agencies to aggressively fight the spread of VHS. New state and federal rules have been put into place as the fight against this virus ramps up.

The following state laws apply to all anglers and boaters in the Lake Superior Basin:



Inspect, drain, and dry boats to prevent VHS spread.

- You must drain all water from boats, containers, and fishing equipment when leaving any state waters, banks or shores, or entering Wisconsin over land. This does not apply to any drinking water or up to 2 gallons of water being used to hold minnows that can be legally transported.

- You may not transport any live fish or live fish eggs away from any state waters. There is an exception for minnows obtained from a Wisconsin bait dealer. These minnows may be transported away live and used again:

- o On the same water, or
- o On any other waters if no lake or river water, or other fish were added to their container.

- You may not use dead fish, fish eggs, or fish parts as bait. There are three exceptions:

- o You may use dead fish, fish eggs, or fish parts as bait on any waters if they were preserved by a method that does not require freezing or refrigeration. (Note: freezing live bait will not kill the virus.)

- o You may use unpreserved or just frozen dead fish, fish eggs or fish parts as bait on the water from which they were collected.

- o Live minnows that die during a fishing trip may be used during that fishing trip (they may not be used on later trips unless you meet the two conditions above).

- You may not possess or use minnows for bait that are obtained outside of Wisconsin. All minnows must be obtained from a certified Wisconsin bait dealer.

Anglers who harvest wild bait for personal use:

- Lake Superior waters and all connecting waters upstream to the first barrier impassable to fish are closed to all minnow harvesting. The only exception is suckers, which are legally considered minnows and can be taken but may not be transported away alive.

- Many other state waters are closed to minnow harvest. However, even legally harvested minnows cannot be used in the Lake Superior Basin.

- People who live on a lake or are vacationing at a resort may keep live bait in floating or submerged containers tethered to a dock or boat. Any unattended containers holding minnows or fish must be labeled with the owner's name and address.

In addition to state rules, the following emergency restrictions apply within the authorized boundary of Apostle Islands National Lakeshore. This boundary extends a distance of ¼ mile into Lake Superior from every island and the park's mainland unit.

- Uptake and/or discharge of ballast water are prohibited.
- All watercraft and gear or equipment must be decontaminated prior to launch into NPS administered waters.

(Continued on page 7)

Apostle Islands National Lakeshore Joins...

Recent reports by the U.S. Global Change Research Program, the National Academy of Sciences, and the United Nations Intergovernmental Panel on Climate Change, give a clear indication of a warming world and related changes in our global climate system. The climate is changing, and there is little scientific doubt that most of the temperature increases since the mid 20th century are due to greenhouse gases (GHGs), such as carbon dioxide, methane, and nitrous oxide, produced by human activities (like burning fossil fuels).

Climate change presents significant risks and challenges to the National Park Service. At Apostle Islands National Lakeshore, the combination of reduced winter ice cover, warmer lake temperatures, and greater evaporation contributes to low lake levels on Lake Superior. The consequences of these changes may include impaired species habitat and recreation opportunities. Taking action now will diminish the risks associated with climate change, and reduce the likelihood of catastrophic and far more expensive consequences.

In March of 2008, Apostle Islands National Lakeshore became a member in the "Climate Friendly Parks Program." This program stems from a partnership between the National Park Service (NPS) and the U.S. Environmental Protection Agency (EPA). It creates a network of parks that are putting sustainability planning and climate friendly behavior front and center. In July 2007, a group of NPS and EPA experts came to our area to help park staff and local community members develop a plan to help reduce the "climate footprint" of National Park Service operations at the Apostle Islands National Lakeshore. By conducting an emission inventory; setting an emission reduction target;



CLIMATE Friendly PARKS

developing an Action Plan; and committing to educate park staff, visitors, and community members about climate change; Apostle Islands National Lakeshore is serving as a model for climate friendly behavior within the NPS.

Apostle Islands National Lakeshore staff inventoried the park's GHG emissions in 2006. It is estimated that GHG emissions totaled 672 metric tons of carbon equivalent (MTCE). (One metric ton is equal to 1,000 kilograms or 2,205 pounds. One metric ton of carbon is equivalent to approximately 3.66 metric tons of carbon dioxide.) Transportation accounted for the largest portion of the total (628 MTCE). Most of these emissions were generated by vessels (NPS – 33 MTCE, concession – 85 MTCE, visitor vessels – 483 MTCE). Apostle Islands National Lakeshore has committed to reducing greenhouse gas (GHG) emissions by 12.5% below 2006 levels by 2012. To meet this goal, the park will implement the following strategies:

- 1: Reduce GHG emissions resulting from activities within the park by increasing energy efficiency, reducing waste, increasing lake-travel efficiency, and promoting climate-friendly recreation.
- 2: Increase climate change outreach and education efforts.

To implement the first strategy, Apostle Islands National Lakeshore staff will rely on more efficient management of transportation,

energy use, and waste. Reducing vehicle and watercraft miles and hours traveled, upgrading the NPS fleet to use the most efficient technology, and using alternative fuels can significantly reduce Apostle Islands National Lakeshore's emissions. Improving energy efficiency and implementing alternative energy sources reduces park-based fuel use, lowers GHG emissions, decreases electricity consumption, and offers monetary benefits for the park. Reducing the park's waste stream through recycling efforts and waste management procedures will reduce the amount of waste sent to landfills, save energy, and reduce GHG emissions. For details on how the park plans to meet these goals, consult the Action Plan at <http://www.nps.gov/apis/naturescience/climate-change-and-sustainability.htm>.

Climate change is a complex issue that the park can help communicate to the public. A better understanding of the problem and the benefits of reducing GHG emissions can motivate staff, visitors, and community members to incorporate climate friendly actions into their own lives. Apostle Islands National Lakeshore recognizes that the greatest potential impact the park can have on mitigating climate change is through public education. The park's goal is to motivate 10% of Apostle Islands National Lakeshore visitors to reduce their household emissions by 10% annually by 2012.

One way that park visitors can help reach that goal is by participating in "Do Your Part!

For Climate Friendly Parks", a new on-line program that empowers visitors and employees to reduce their carbon emissions and thereby help to protect America's national parks from the impacts of climate change. Using EPA's household emissions calculator, visitors and employees determine their carbon emissions and select actions to address those emissions such as driving less, recycling more and using energy efficient appliances. Do Your Part! then tracks the individual's emissions and reports the results in real time, allowing each participant in the program to see how individual efforts can make a difference.

Do Your Part for Climate Friendly Parks!

Visitors can sign up for the "Do Your Part!" program at <http://www.nps.gov/climatefriendlyparks/doyourpart.html>.

Step 1 — Pick a Park

Choose among the parks that participate in the Do Your Part! program.

Step 2 — Sign Up

Create a personal profile that is linked to your carbon footprint and the park of choice.

Step 3 — Calculate & Pledge

Calculate your carbon footprint by entering basic information about your household's energy needs. Next, calculate your household's environmental and economic savings based on future climate-friendly actions. Once you hit "submit," you have pledged to help your national park achieve its emissions reduction goals! After 6 months, we will ask you to return to the website to update the progress you have made toward reducing your carbon footprint.

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.apostleisland.com



Park Fees

Camping (per site per night)

Individual site or camping zone:	\$10
Group site:	\$20

Docking (between 6 pm and 6 am)

Boats less than 40 feet:	\$10
Six-night docking ticket book:	\$50
Boats 40 feet or more:	\$20
Six-night docking ticket book:	\$100

Parking

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

Guided tours/interpretive programs

Per person:	\$3
Per immediate family:	\$8



Fees are now charged for camping, overnight docking at public docks, parking at Meyers Beach, and Raspberry Island lighthouse tours.

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.

Most nightly camping fees are 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.

The National Park Service relies heavily on self-registration to collect fees for parking, overnight docking, and interpretive tours. Self-service collection stations are available at Meyers Beach, Little Sand Bay, Bayfield visitor center, Basswood 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 are available at each self-service collection station.

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 federal recreational user fees charged for facilities and services such as camping, docking, parking and guided tours.

Detailed information on fees is available at park headquarters in Bayfield as well as on line at <http://www.nps.gov/apis/planyourvisit/recreation-user-fees.htm>.

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 14 through late 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, Michigan, and Sand islands from mid-June to September. Tours will generally be available daily on request from about 9 am to 4:30 p.m. Guided tours will NOT be available before 9 am or after 4:30 p.m. 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. Starting times vary through the season.

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.

Apostle Islands Cruise Service Tour Summary - 2008

Cruise Name	Description	Dates/Times
Grand Tour \$37.95/adult, \$22.95/child	3.25 hour nonstop cruise around Devils Island	10 am daily May 10-Oct. 14
Stockton Shuttle \$39.95/adult, \$23.95/child	4.5 hour shuttle to Stockton Island (day hike/camp)	1 pm daily June 21-Sep 1
Raspberry/Oak Island Shuttle \$39.95/adult, \$23.95/child	4 hour shuttle to Raspberry Island (lighthouse tour) or to Oak Island (camp)	8:30 am daily June 14-Sep. 1
Islander Lighthouse Cruise \$28.95/adult, \$16.95/child	2 hour nonstop cruise past Basswood & Hermit Islands to Raspberry Island and back	2 pm daily, June 21 - Sep. 1
Evening Grand Tour-\$37.95/adult, \$22.95/child	3.25 hour nonstop cruise around Devils Island	5:45 pm, Tue-Wed-Thur-Sat June 21-Aug. 30
Lighthouses & Sea Caves Cruise -\$39.95/adult, \$23.95/child	3.75 hour cruise past 2 lighthouses and mainland sea caves	5:45 pm, Fridays June 20-Aug. 22

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 7 Introduction to Digiscoping

Ryan Brady and Dick Verch, local ornithologists/photographers, explain how to photograph birds and other wildlife with your point-and-shoot digital camera connected to the eyepiece of a spotting scope.

July 14 Viral Hemorrhagic Septicemia (VHS) - The Disease, Why It's Important, and What's Being Done

Ron Johnson, Aquaculture Outreach Specialist, discusses the deadly fish disease, its potential consequences for Lake Superior fish populations, and how visitors can help slow its spread.

July 21 The Mystery of the Apostle Islands Visitor

Thomas Heberlein, UW Professor of Sociology, has conducted a long-term study on who visits the Apostle Islands and why. He will discuss surprising changes and trends over the years.

July 28 Arch in the Park

Christy Baker, Apostle Islands Cultural Resource Specialist, describes what has been learned from archeological studies in the Apostle Islands.

August 4 The End of Winter as We've Known It

Neil and Forrest Howk describe the changes in Lake Superior ice cover measured at Bayfield between 1857 and 2007. Forrest, a recent graduate of Bayfield High School, presented results from his study at National and International Science Fairs this spring.

August 11 Wisconsin Shipwrecks - New Discoveries and New Stories

John Broihahn, Wisconsin Historical Society archaeologist, will discuss recent shipwreck discoveries that shed new light on our rich maritime heritage.

August 18 Making a Dream Come True: Serving as a Volunteer Lighthouse Keeper

Karen Halbersleben, president of Northland College, spent one month on Michigan Island during the summer of 2006. Come learn why she went, what she learned, and why she describes the experience as the best thing she has ever done in her life.

August 25 Dragonflies and Damselflies of Apostle Islands National Lakeshore

Bob Dubois, with Wisconsin DNR, describes the ecology and identification basics of regional dragonflies and damselflies, and how you can enjoy them!

Safety is Your Responsibility

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.

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)

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 bacteria which causes an intestinal disorder.



Mishaps are more likely when the lake is not calm. Be sure to practice rescue techniques in a variety of situations and to monitor weather forecasts and conditions.

Paddling

Canoes should not be used for travel between the islands. Calm days may make canoe use possible along the mainland or island shorelines. 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 use wet suits or dry suits when paddling in the Apostles and carry a PFD 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



Bear proof food lockers are provided at campsites on several islands. Food should be locked up except during meals.

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 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 hazard trees especially during high winds. Report any such trees near visitor use areas to park staff as soon as possible.

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, garbage, cooking materials, condiments, utensils, and toiletries (such as toothpaste or soap) must be secured from wildlife contact. Bear-proof food lockers are provided for this purpose at campsites on Basswood, Devils, Manitou, Oak, Sand, Stockton, and York islands. 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.

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 mosquitos, 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.

...and did we mention?...

Fires

Campfires 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. Dead, loose wood on the ground in forested areas or unvegetated beach areas may be collected for firewood. Firewood can NOT be brought into the park or carried 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 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, campsite, dock, building, 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, wheelchair accessible toilets, and the campsite. The visitor center and restrooms at the Little Sand Bay visitor center are accessible. An accessible walkway also leads to the Hokenson 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.

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)



Gale Warning Flags

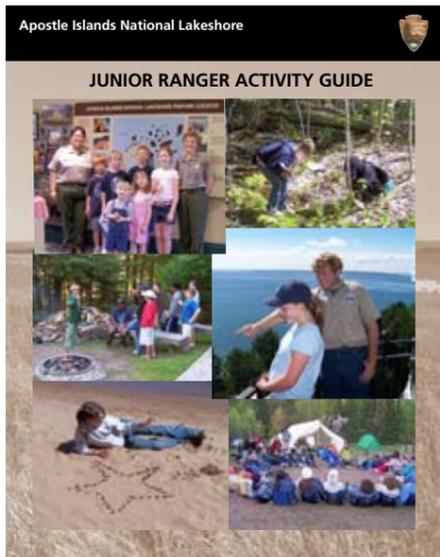
and gale warnings (34-47 knots) more frequent. Many of the islands are more than five miles from shore, so boaters should check both the nearshore (within five miles of shore) marine forecast and the open waters forecast. Marine weather forecasts are broadcast on marine channels 1 - 10 and are available 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 waters forecasts for Lake Superior as well as weather readings from the data buoy 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



Become a Junior Ranger!

The Apostle Islands have stories to tell. Young visitors can now 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 intriguing activities designed to promote a greater understanding of the unique cultural and natural resources of the Apostle Islands. The award-winning guide was designed by park ranger Damon Panek and Student Conservation Association (SCA) intern, April Morris.

The new booklet is available free to Junior Rangers of all ages. It was made possible with help from Eastern National, the National Park Foundation, the SCA, and through the generous support of Ocean Spray Cranberries, Inc., a National Corporate Partner of the National Park Foundation. Junior Rangers should also check out the National Park Service's online Junior Ranger program at www.nps.gov/webrangers.

General Management Plan Update

The National Park Service is still 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 for the next 15 to 20 years. Questions that they typically address include: What should the park visitor experience be like? How should the park's resources be managed? Which facilities are appropriate here, and how many of them are needed at Apostle Islands National Lakeshore?

The documents are complex, and require several years to develop. Two rounds of public involvement have already taken place, and we anticipate the next round to be the most interesting. Sometime in early 2009, we expect to release draft versions of these plans for public review and comment. Meetings will once again be scheduled throughout the region to provide opportunities for citizens to share their thoughts on the specific proposals outlined in the draft plans.

If you care about how 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/apis/gmp.htm.



2007 - A Great Year for Piping Plovers

Piping plovers are small, sandy colored shorebirds that are rarely found in Wisconsin. The Apostle Islands' wide, undisturbed beaches may be the only place where piping plovers nest in the state. In 2007, Apostle Islands National Lakeshore staff was excited to find more piping plover nests and eggs than ever before. Four nests with 11 chicks were found on Long Island, one nest with 2 chicks was discovered on Outer Island.

The National Park Service worked in cooperation with the U.S. Fish & Wildlife Service, the Wisconsin Department of Natural Resources, the Bad River tribe, The Nature Conservancy, and private land holders to watch and protect these birds. Areas immediately around the nests were temporarily closed and the nests protected by fenced enclosures. A "plover monitor" was stationed on Long Island to watch and protect the birds, and provide information to visitors. In early July, colored bands were placed on the young birds' legs in a pattern that indicates where they were born. This may help us track their movements and learn more about the birds. This past winter, two chicks born on Long Island during 2006 were sighted near Naples, Florida.

Visitors can help protect piping plovers by: respecting areas fenced or posted to protect wildlife, keeping pets on a leash and under control, and not approaching or lingering near piping plovers and their nests. With your help, perhaps 2008 will be another banner year for this rare and beautiful bird.



Guided Tours Offered at Manitou Fish Camp

For the first time since 2004, park staff will once again offer guided tours of the historic fish camp on Manitou Island. The unplanned assortment of rough buildings on Manitou's southern shore survive to illustrate part of the story of commercial fishing in the Apostle Islands over the past century. Hjalmer "Governor" Olson owned and fished from the camp for more than 40 years starting in the 1930s. The frontier lifestyle at the ramshackle camp attracted many local fishermen, particularly in winter.

Free guided tours of the Manitou Fish Camp will be available on request from late June through Labor Day. The camp will be open daily from 9 am to 4:30 pm.



Aldo Leopold Trail opens at the Northern Great Lakes Visitor Center

The Aldo Leopold Land Stewardship Trail includes two intersecting loops totaling one mile in length through a 42-acre site near the Northern Great Lakes Visitor Center. The trail features gravel and boardwalk surfaces traversing flat terrain and providing easy access. A trail booklet tells the story of Aldo Leopold's land ethic philosophy and how his ideas of land health and community are helping to shape the restoration efforts that are taking place today.

The Northern Great Lakes Visitor Center, located three miles west of Ashland, Wisconsin off U. S. Highway 2, welcomes explorers of all ages. Come learn of the rich natural resources that attracted explorers, fishermen, loggers, miners and farmers to the Lake Superior region. Hear Native American stories, songs of the voyageurs, and shipwreck tales. Enjoy panoramic views from the observation tower while comparing past and present land uses.

The Northern Great Lakes Visitor Center is operated as a partnership by the U. S. Forest Service, National Park Service, U. S. Fish and Wildlife Service, Wisconsin Historical Society, University of Wisconsin - Extension, and the Friends of the Center Alliance. The Center has free admission and is open daily year round from 9 am to 5 pm. Visit us at www.nglvc.org, or call us at 715-685-9983, for a schedule of programs.



Why all the Bare Trees?

In recent years, the Apostle Islands have been visited by a number of defoliating insects. Many visitors may remember the invasion of the native forest tent caterpillar in the early 2000s. In 2006 and 2007, islands such as Rocky and Stockton were hit hard by another native defoliating caterpillar, the "saddled prominent."

A third caterpillar has now reached the Apostle Islands. This time it isn't a native of North America. The gypsy moth - an invasive species and scourge of many forested areas in the eastern United States - arrived in the Apostle Islands in the early 2000s, and is just reaching the point where its caterpillars could begin defoliating some of the islands in the near future. Ordinarily, the trees survive the defoliation - unless they are stressed by other factors, such as droughts or previous defoliations. This combination of factors could threaten the health of many trees in the Apostle Islands.

If some parts of the park seem a little short on leaves in future years, it is likely due to one of these caterpillars. Feel free to report what you see to park staff, who may or may not be aware of the latest infestations. If gypsy moths reach outbreak levels, park staff will attempt to inform visitors so they can take steps to avoid unintentionally bringing them home and extending their range. The ban on transporting firewood between islands was implemented to help limit the spread of invasive species.



Storm Damages Park Trails and Campsites

A snowstorm featuring heavy wet snow and winds as high as 80 miles per hour pounded the Apostle Islands region in early April. This one-two punch snapped off branches and uprooted thousands of trees throughout the islands. Many of these downed trees obstructed park trails and created problems at campsites and maintained landscapes near structures in the park. Assessments of the damage began as soon as NPS boats could reach the islands in late April, but took several weeks to complete. The process of tree removal and facility repairs will take a prolonged effort lasting throughout the summer.

Contact park staff to find out the latest information about the condition of trails and campsites before starting your trip. Call 715-779-3397 for more information.



Maintenance Projects Planned at Sand, Manitou, and Little Sand Bay

Visitors to Sand Island, Manitou Island, and Little Sand Bay may find workers involved in a variety of efforts to maintain the buildings, docks, and trails in these locations. At Sand Island Lighthouse, workers will rehabilitate the exterior doors, windows, and trim at the lighthouse and repair the foundation of the oil storage building. The trail systems on Sand and Manitou islands will be improved. Staff will reroof, improve drainage around, and treat several structures at the historic Manitou Fish Camp to prevent infestation by animals and insects. Workers will also reconstruct the historic dock at Little Sand Bay's Hokenson Brothers Fishery this summer.

These activities will have little impact on the availability of guided tours at Sand Island Light, Manitou Fish Camp, and the Hokenson Fishery. For more details about these projects call 715-779-3397 ext. 401.

Unearthing the Story at Quarry Bay

If the islands could talk, oh the stories they might tell. Would they mention the logging camps, brownstone quarries, farming or maybe Native American encampments along the beautiful shores of Lake Superior? Would they tell us stories of the people who came and went, and their trials and tribulations of trying to survive off the land? In some ways, we can only speculate what the islands would say. Some of the islands' stories, however, are not a mystery. We know them from oral histories that have passed down through the generations, from written accounts (newspapers, diaries, and books), and from scientific interpretation of 5,000 years of remains left behind by people using the islands.



National Park Service archeologists inspect evidence of historic and prehistoric occupation at Quarry Bay.

Many, if not all the islands were inhabited or used at one time or another. Stockton Island alone holds a variety of cultural resources including five logging camps, a brownstone quarry, numerous fishing camps, a fur trading post and many prehistoric camps. Visitors to the island today might still notice evidence of these historic endeavors, such as historic cans and bottles from the camps, or rusted parts of machinery used by the workers who carved brownstone out of the earth. Many indications of historic and prehistoric uses

are not so readily seen. To the trained eye, however, evidence is everywhere.

One small area on Stockton is linked to all these varied cultural resources. We know it locally as Quarry Bay. Today's visitors use the area for camping, boating, picnicking, and enjoying the beach. Many of the same qualities that attract people today also attracted earlier users. Evidence suggests ancient peoples resided in the area during the warm spring and summer seasons. Since

the late 1970s archeologists have surveyed and studied Quarry Bay, finding it was used during the prehistoric and historic time periods. For the past two years National Park Service archeologists from the Midwest Archeology and Conservation Center (MWACC) have monitored several sites in the Quarry Bay area. Scientific analysis of their findings suggest Quarry Bay has been inhabited for 5,000 years, since what archeologists call the Late Archaic Tradition. To put that time period in

perspective, the earliest contact with Euro-Americans probably took place about 400 years ago in the early 1600s. Written records suggest that the earliest structure was built at Quarry Bay by the American Fur Company around 1871. Both historic dates were not that long ago when compared to prehistoric uses dating back 5,000 years.

The island may not be able to talk, but in some ways it can be read like a book. Many interesting stories of the past can be read at Quarry Bay. Ongoing research at Apostle Islands National Lakeshore will enable us to decipher more of the region's untold stories. To do this, it is important to keep all of the pages intact. The National Park Service has begun planning how to best locate facilities at Quarry Bay so as to leave the cultural resources undisturbed. One of the group campsites has been closed to protect recently discovered evidence of a prehistoric camp. Please keep in mind as you are visiting the park that National Park Service regulations prohibit destroying, injuring, defacing, removing, digging, or disturbing any cultural or archeological resources. Possession or use of a metal detector is also prohibited. Help us keep all the chapters of the Islands' history in place so they can be read by future visitors.

The Sentinel

Bald Eagle Nestlings Used to Help Assess the Health of National Park Ecosystems

By Bill Route, National Park Service, Great Lakes Inventory and Monitoring Network

Bald eagle nestlings make ideal sentinels for monitoring persistent chemicals. Many human-made chemicals end up in lakes and rivers through rain and snow fouled by polluted air, industrial and domestic effluent, and urban runoff. These chemicals move up the food chain to fish and other aquatic life. Adult eagles prey on these creatures and feed them to their young. The unknowing youngsters begin accumulating these chemicals at a very young age.



The Sentinel. A six-week old bald eagle nestling just prior to contributing blood and feather samples for contaminants analysis.

For over two decades scientists have been taking blood and feather samples from bald eagle nestlings to monitor chemicals in the Great Lakes. By doing so, we can determine the trends of these chemicals and better understand their effects on fish, wildlife, and humans. Bald eagles were nearly eliminated from the Great Lakes region during the 1960s when high levels of chemicals like DDT, PCBs, and Dioxins caused deformities, egg-shell thinning, and other reproductive and neurological problems in fish and wildlife. Scientists believe that DDE, the highly toxic breakdown product of DDT, caused egg-shell thinning and breakage, and was a major reason for the decline in U.S. bald eagle numbers to a low of 417 individuals in 1963. There are now over 11,000 bald eagles in the United States. This recovery resulted from decades of scientific research, public outcry, and key environmental laws and led to the removal of bald eagles from the Threatened and Endangered Species List in 2007.

In 2006 and 2007, National Park Service scientists took samples from nestling bald eagles at the Apostle Islands National Lakeshore, the St. Croix National Scenic Riverway, and the Mississippi National River and Recreation Area. Samples were tested for seven different human-made chemicals, including 86 different formulations.

Results indicate that DDE levels in eagle nestlings from the Apostle Islands are much

lower than the highs in the 1980s. However, we found active DDT in three nestlings on the Apostles and in one from the Mississippi National River and Recreation Area. This was unexpected since DDT was banned in North America in 1972. The eagles may have obtained it by feeding on birds that migrated up from Mexico or South America where DDT is still used.

A new chemical of concern showing up in the tests is polybrominated diphenyl ether (PBDE), a flame retardant used in a variety of house-hold

and industrial products ranging from carpets and drapes to appliances and computers. This chemical is highly persistent and has been found in wildlife and humans across the world. PBDEs were found in all nestlings at all three national parks, and the data suggests that this chemical has doubled in nestlings along the south shore of Lake Superior over the last five years.

This research reinforces the sentinel role played by bald eagles. Because of the persistence, bioaccumulative properties, and recent findings of toxicity to wildlife, some formulations of PBDEs have been banned in Europe and Canada and regulations are being sought or passed in several states. The NPS will continue monitoring bald eagles and fish in national parks around the Great Lakes.



Total polybrominated diphenyl ether (PBDE) levels found in blood of bald eagle nestlings at three national parks. Levels are in micrograms per liter. The toxicity and safe levels of PBDEs are currently being evaluated by scientists and regulators.

Fish Virus

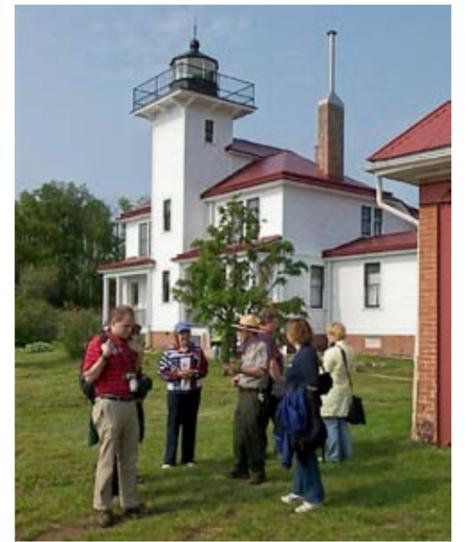
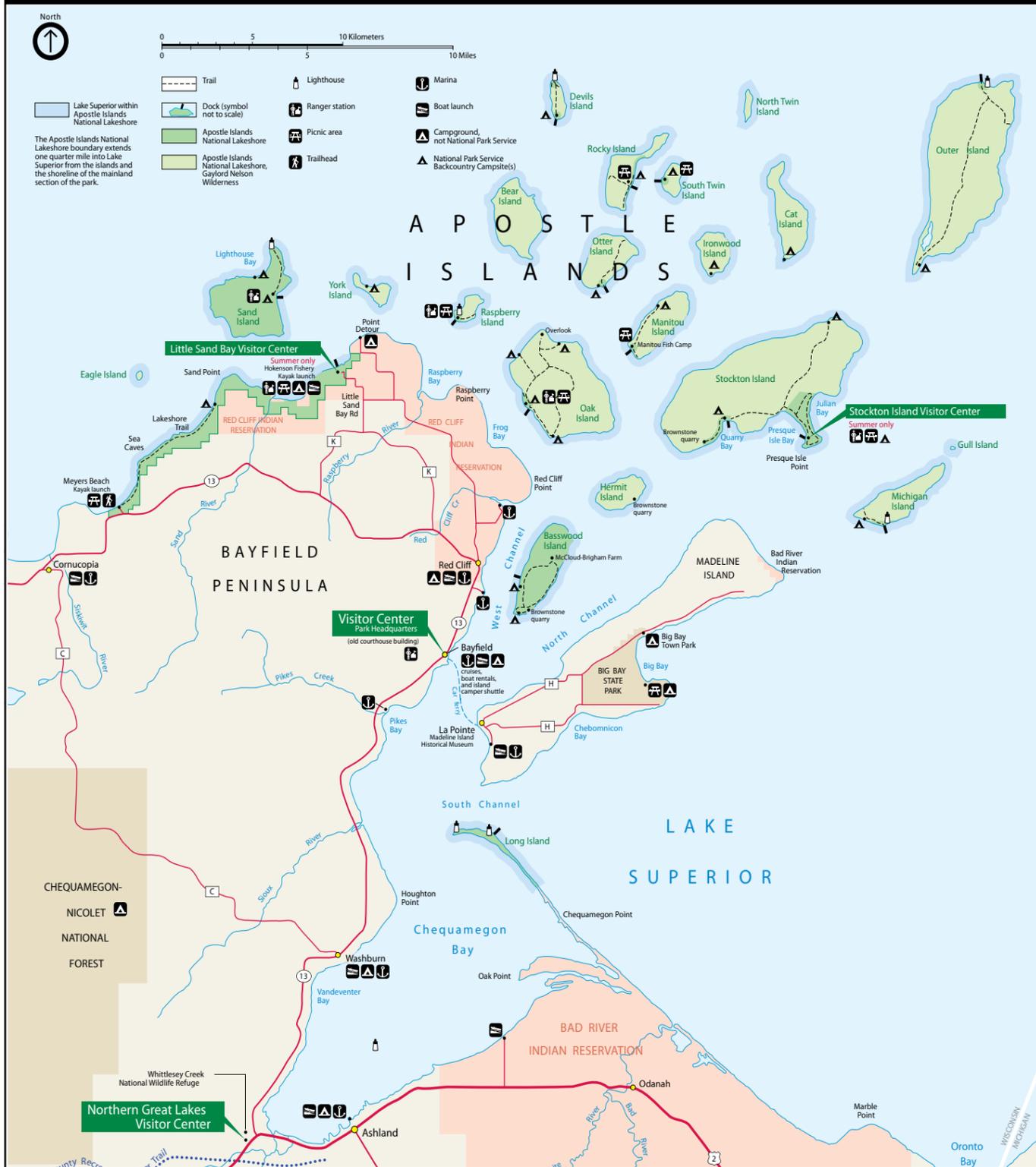
(Continued from page 3)...This means all watercraft and associated gear must be dried and free of any vegetation, animals, and mud. The bilges, live wells, and other compartments must be clean, dry, and free of all organic material. Organic materials that are removed must be disposed of in an NPS provided trash can or stored in a closed container that remains on land until it can be properly disposed of outside of the national lakeshore. If boaters have complied with state rules on their most recent trip, they should not need to take additional action to be in compliance with this park rule.

- All water from the bilge and vessel compartments or containers of non-potable water (except those carrying VHS-free certified baits in accordance with State of Wisconsin rules) must be disposed of where it will not drain directly into Lake Superior or inland waters onshore at least 100 feet from any water source.
- Only artificial bait may be used for fishing inland waters on any island.
- For all other waters, only the following may be possessed or used as bait:
 - o Any live or dead fish or fish part, including fish roe (eggs) otherwise permitted for use by the State of Wisconsin provided it was harvested from the Wisconsin waters of Lake Superior within Ashland or Bayfield Counties.

In addition, anglers are strongly urged to make sure the baits used on streams originating outside the National Lakeshore, but flowing through the lakeshore's mainland unit and then into Lake Superior, are both approved by the State of Wisconsin and are certified as VHS free.

For more information, details and frequently asked questions please visit our web sites at <http://dnr.wi.gov/fish/vhs> and <http://nps.gov/apis>.

Apostle Islands National Lakeshore



Rangers will guide tours of the restored Raspberry Island lighthouse this summer (fee required).



Guided tours of the Manitou Island Fish Camp will be available this summer.



Two new Junior Rangers earn their badges.



Sunset at Raspberry Island.

National Lakeshore looking for a few good "Friends"

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 national parks on Lake Superior through fund raising and advocacy. NPLSF supports the kinds of projects that are not federally funded.

One such project is the purchase of bear-proof food storage boxes for campsites at Apostle Islands National Lakeshore. NPLSF has been working with the Prairie Coast Paddlers from the Chicago area under the leadership of Steve Muntz. Steve is working with his club to raise funds for a bear box on Outer Island. He has also challenged other kayaking groups to contribute to the project. The Chicago Area Kayak Club accepted the challenge and will also fund a bear box. The bear-proof boxes will be installed this summer.

The National Parks of Lake Superior Foundation is excited about collaborating on this project for Apostle Islands National Lakeshore.



Proper storage of food, cooking materials, utensils, toiletries, and other scented items in bear-proof boxes (above), like those donated by NPLSF and the "Friends", can help prevent close encounters with bears (below).



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 fifth year of providing funds for special projects within Apostle Islands National Lakeshore. In 2008, the Friends have committed more than \$20,000 to fund the following projects:

- 1) Publication of the park newspaper.
- 2) Funding the "Around the Archipelago" guest lecture series.
- 3) Providing funds to purchase a bear-proof food storage box and two benches. The benches will be installed at the Presque Isle dock on Stockton Island.
- 4) Funding refurbishing of the Manitou Fish Camp.
- 5) Supporting research to develop a real-time wave warning system for the mainland sea caves.

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 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.

As a Friend of the Apostle Islands National Lakeshore you will receive periodic newsletters and e-mail blasts about current issues and topics related to the park. You will also be advised of areas where we will need your support for new projects and we will seek your ideas and suggestions for how the Friends support the national lakeshore.

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. For more information, please visit our web site at www.friendsoftheapostleislands.org