



Seasonal listings of activities, events, and ranger programs are available at seashore visitor centers.

## What's Inside:

### 2 & 3 The Basics

General park orientation, brief descriptions of park features, and other useful information.

### 4 & 5 Watching for Wildlife

Turn to these pages and learn about some of the seashore's resident wildlife.

### 6 & 7 Eight Incredible Facts about the Pirate Ship *Whydah*

An inside look at this infamous ship and its wreck off Marconi Beach in 1717 by Seashore Historian William Burke

**PLUS Family Activity: Search for Seashore Treasures!**

### 8 & 9 Restoring Wellfleet's Herring River

National Seashore Restoration Ecologist Tim Smith shares the compelling need to restore this impaired ecosystem and provides an update on the project status.

### 10 The Lighthouses of Cape Cod National Seashore

**PLUS Volunteering at the Seashore**

### 11 National Seashore and Cape Symphony Collaborate to Bring World Class Music to the Outer Cape

### Remembering Josephine Del Deo

A tribute by former Cape Cod National Seashore Superintendent, George E. Price, Jr. (2005-2017)

### 12 Historic Buildings at Cape Cod National Seashore

**PLUS Quench Your Thirst While You Reduce, Reuse, and Recycle**

### 13 Self-Guiding Trails

Twelve hiking trails invite your exploration!

### 14 Love the Seashore? Join Friends!

An invitation from Pat Canavan, President, Friends of the Cape Cod National Seashore

**PLUS Park Partners and Concession Operations**

### 15 Area Information

Contact information for chambers of commerce, bike rentals, shops, Outer Cape campgrounds, and more.

### 16 Park Map and Public Transportation

Follow us: [www.nps.gov/caco](http://www.nps.gov/caco)



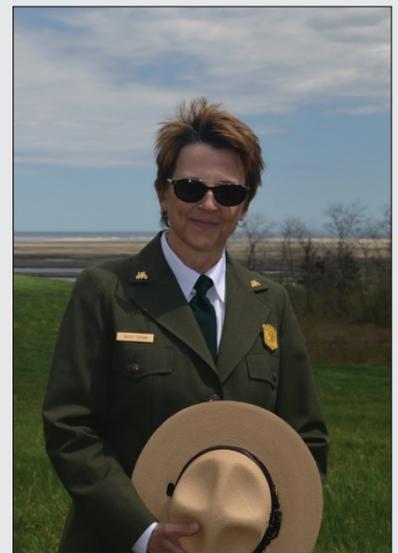
## Welcome

### Superintendent's Message

Welcome to Cape Cod National Seashore! We're basking in the glow of the 2016 National Park Service centennial. It is 100 years and counting since the creation of a federal agency to protect and provide for the enjoyment of our nation's most compelling natural and cultural places. The National Park Service, an agency within the Department of the Interior, consists of dedicated professionals managing 414 national park sites, plus affiliated areas through the Rivers and Trails program and Heritage Areas. Combined, these places provide a window to our country's most extraordinary resources and stories, with the invitation to the public to experience and enjoy them.

There is no shortage of ways to experience Cape Cod National Seashore! Explore miles of the Great Beach, following in the footsteps of Henry David Thoreau's 1800s journey. Stroll one of our 12 walking trails (each one offering something different in the way of scenery), or pedal your way along three bike trails nestled in forest and dune landscapes. Climb Cape Cod's oldest lighthouse, commissioned by President George Washington, or explore a whaling captain's home. Join a ranger for a canoe or kayak adventure, a hike, a beach campfire, or even a yoga program. Discover the park's fascinating environments and history, and gain an understanding of future challenges of preserving this special place, all while having fun!

The seashore is also a place where community members are actively engaged as volunteers. You may meet them providing assistance at our visitor centers, installing fences to protect shorebirds, monitoring critical indicators of ecosystem health, or trimming back vegetation along trails. Some of our volunteers are affiliated with our partner organizations, contributing in even greater



KATHY TEVYAW, ACTING SUPERINTENDENT

ways. Friends of the Cape Cod National Seashore provided funds for the rehabilitation of the Captain Penniman House, furnishings at Old Harbor Life-Saving Station, and new exhibits along the Province Lands Bicycle Trail. Recently, Friends helped fund the repair of the Red Maple Swamp Trail in Eastham. The Friends of Herring River is working with the towns of Wellfleet and Truro, the National Park Service, and other federal and state agencies on the restoration of 1,100 acres of wetland. This remarkable and complicated Herring River restoration effort will be a legacy gift for future generations.

Many exciting projects are coming to fruition. One of our signature centennial projects, the rehabilitation of the Salt Pond Amphitheater, was completed in the spring. Join us for programs at this revitalized space! Your beach fees enabled us to install new audiovisual systems at the Salt Pond Auditorium and amphitheater, and outdoor exhibits at Coast Guard Beach. We continue to work towards sustainable solutions at

*continued page 2*

## Superintendent's Message *continued*

Nauset Light Beach and at the Herring Cove Beach North Parking lot to be responsible stewards in the face of climate change and sea-level rise.

We hope your visit will be rewarding and will enable you to experience the best this special place has to offer. Our rangers and volunteers thrive on engaging with visitors and neighbors. If you have questions or need directions, just ask. If you have ideas on how to make this national park even better, please share them with us.

Kathy Tevyaw,  
Acting Superintendent

On the cover: Sunset at Herring Cove. Photo by Karst Hoogebloom, Cape Cod National Seashore Chief of Facilities and Maintenance



National Park Service  
U.S. Department of the Interior

### Cape Cod National Seashore

99 Marconi Site Road  
Wellfleet, MA 02667

Acting Superintendent: Kathy Tevyaw

E-mail: Superintendent\_CACO@nps.gov

### Salt Pond Visitor Center

508-255-3421

### Province Lands Visitor Center

508-487-1256

### Park Headquarters

508-771-2144

### Fax Number

508-349-9052

### Race Point Ranger Station

508-487-2100

### Oversand Office at Race Point Ranger Station

**Route Information:** 508-487-2100, ext. 0926 (April 15 through November 15)

### Permit Information:

508-487-2100, ext. 0927

### Nauset Ranger Station

508-255-2112

### North Atlantic Coastal Lab

508-487-3262

**Website:** [www.nps.gov/caco](http://www.nps.gov/caco)

**Emergencies:** 911

## CAMPING

The National Park Service does not operate a campground at Cape Cod National Seashore. Camping is available at private and state-operated facilities (see page 15). Overnight camping and parking within Cape Cod National Seashore are prohibited. A limited number of self-contained vehicle permits for overnight stays on Race Point Beach are available through the seashore's Oversand Station at Race Point Ranger Station, Provincetown. Telephone: 508-487-2100 ext. 0927

# General Information

Cape Cod National Seashore's 40 miles of pristine ocean beach and 44,000 acres make it a premier destination for exploring natural and cultural features and enjoying recreational activities.

## VISITOR CENTERS



View from Salt Pond Visitor Center terrace. NPS photo

Cape Cod National Seashore has two visitor centers: Salt Pond in Eastham and Province Lands in Provincetown. Both centers have staff to assist visitors with orientation and trip planning; and stores featuring books, maps, puzzles, games, apparel, and other seashore-related items provided by the park's education partner, Eastern National.

Salt Pond Visitor Center: open daily from 9 AM to 4:30 PM (later during the summer). This visitor center offers magnificent views of Salt Pond, Nauset Marsh, and the Atlantic; an outstanding museum; and regularly scheduled films in the theater. Exhibits showcase the Outer Cape's location in the Gulf of Maine ecosystem and Wampanoag culture and history. Restrooms are available in the parking area. The Nauset Marsh and Buttonbush trails and the Nauset Bicycle Trail are nearby. Location: 50 Nauset Road, Eastham. Telephone: 508-255-3421.



View from Province Lands Visitor Center observation deck. NPS photo/Keohan

Province Lands Visitor Center: open daily from 9 AM to 5 PM, mid-April to mid-October. Just two miles from the tip of the Cape, this center features an observation deck with 360-degree views; a small exhibit area; showings of park orientation films every half hour (9 AM to 4:30 PM). Whales are often viewable from here. Restrooms are available in the parking area. The Province Lands Bicycle Trail and Race Point Beach are nearby. Location: 171 Race Point Road, Provincetown. Telephone: 508-487-1256.

## PARK FILMS

Salt Pond and Province Lands visitor centers routinely show the following films throughout the day:

*The Sands of Time* (12 minutes) showcases the formation of Cape Cod by ice, wind, and waves, and describes the processes that continue to shape the Cape today.

*Wooden Ships and Men of Iron* (12 minutes) depicts Cape Cod's fascinating maritime history, including whaling and the lifesaving service. It contains graphic footage of an early 20th-century whaling ship hunting and processing whales.

*Voice of Cape Cod* (12 minutes) describes Guglielmo Marconi's history-making trans-Atlantic wireless communication that took place on the windswept bluffs of Cape Cod in January 1903, forever changing communication technology.

*Thoreau's Cape Cod* (12 minutes) is the story of Henry David Thoreau's 19th-century adventures, discoveries, and writings on Cape Cod.

*Return of the Tides* (10 minutes) discusses the Herring River estuary in Wellfleet and the planned tidal restoration project that will re-establish native salt marsh habitat in the area.

## CAMPFIRES

A limited number of campfire permits per day, per seashore beach, may be reserved up to three days in advance in person or by phone. Locations are: Salt Pond Visitor Center for Coast Guard, Nauset Light, and Marconi beaches; or Province Lands Visitor Center for Head of the Meadow, Race Point, and Herring Cove beaches. Fire permits for the Oversand Route are issued through the Oversand Station at Race Point. Permits are free and must be picked up at the reserving visitor center prior to 3:30 PM the day of the fire. Demand often exceeds the number of permits available. People waiting in line when the visitor centers open are given reservation priority over those who call in by phone.

**How to Reserve a Fire Permit:** Reserve on: Sun Mon Tues Wed Thurs Fri Sat  
For a fire on: Wed Thurs Fri Sat Sun Mon Tues

*In the future, Cape Cod National Seashore may use an online reservation system for fire permits. Check back in 2018 for details as available.*

## ACCESSIBILITY

Park trails near Doane Rock in Eastham and the Marconi Station Site in Wellfleet have been surfaced to accommodate wheelchairs. Buttonbush Trail is available for people with impaired vision. Some Park publications also have large print versions. Park films have captions and audio descriptions. Coast Guard and Herring Cove beaches provide accessible parking, restrooms, changing facilities, and beach wheelchairs. Herring Cove Beach features showers that accommodate wheelchairs.

## BIKING



NPS photo

There are three bicycle trails under the care and maintenance of Cape Cod National Seashore: Nauset Trail in Eastham (1.6 miles), Head of the Meadow Trail in Truro (2 miles), and the Province Lands Trail in Provincetown (loop trail 5.45 miles). Ask for a brochure with trail maps at both visitor centers, or check [www.nps.gov/caco/planyourvisit/biking-at-cape-cod-national-seashore.htm](http://www.nps.gov/caco/planyourvisit/biking-at-cape-cod-national-seashore.htm)

- Bike accidents injure more people each year at the seashore than all other activities combined.
- *Bike safety starts with helmets.* Regardless of age, all riders are urged to wear protective headgear. Massachusetts state law requires children 16 and younger to wear protective helmets when on a bicycle, even if only a passenger. Take time to fit your helmet properly – snug and level on your head.
- Test ride your bike to check brakes, seat, and handlebar settings.
- Trail conditions vary. Stay alert for sharp curves, steep hills, and sand-covered sections.
- Keep an eye out for park volunteers on bike patrols, and show them you care about safety and are a safe rider.
- Biking is prohibited on seashore beaches.

## SELF-GUIDING TRAILS



NPS photo/McQueeney

Self-guiding trails at the seashore that are open year round: in Eastham - the Fort Hill, Buttonbush, Nauset Marsh, and Doane trails; in Wellfleet - the Atlantic White Cedar Swamp and Great Island trails; in Truro - Pamet Area Bearberry Hill Overlook, Small's Swamp, Highlands Woods Walk, and Pilgrim Spring trails; and in Provincetown - the Beech Forest Trail. Interpretive folders with information on natural and historic features are available at some trailheads. Sections of the Red Maple Swamp Trail are reopening as repairs proceed. See page 13 for more detailed information about trails.

# Beach Activities and Fees

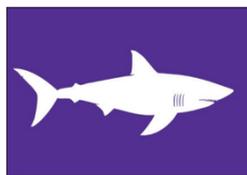
Cape Cod National Seashore manages six ocean beaches in four towns: Eastham (Coast Guard and Nauset Light beaches), Wellfleet (Marconi Beach), Truro (Head of the Meadow Beach), and Provincetown (Race Point and Herring Cove beaches). All national seashore beaches include the following facilities and services: showers, paved parking, restrooms, changing rooms, drinking water, water-quality testing, and lifeguards (late June through Labor Day). Two beaches, Coast Guard in Eastham and Herring Cove in Provincetown, are accessible to people with disabilities and have wheelchairs capable of traveling over sand.

## BEACH ENTRANCE FEES AND NATIONAL PARK PASSES

Beach entrance fees are collected daily from late June through Labor Day at all six seashore beaches. Fees are also collected on weekends and holidays from Memorial Day to late June, and after Labor Day through the end of September, at Herring Cove, Race Point, Nauset Light, and Coast Guard beaches.

Entrance Fees	
Private Vehicle	\$20
Motorcycle	\$10
Per Person ( <i>Walk-in, Bicycle</i> )	\$ 3
Groups	Inquire
Annual Passes	
Cape Cod National Seashore	\$60
Interagency ( <i>Multiple Federal Fee areas</i> ) *	\$80
Lifetime Passes	
Interagency Senior ( <i>Age 62+</i> ) *	\$10
Interagency Access Pass ( <i>Permanently Disabled</i> ) *	FREE
Other	
Annual Pass for U.S. Military Available to active U.S. military members and dependents in the Army, Navy, Air Force, Marines, and Coast Guard, and Reserve and National Guard members. (Must be obtained in person by showing a Common Access Card [CAC] or Military ID [Form 1173].) * Photo ID required for pass use.	FREE

## BEACH SAFETY



### BEACH WARNING FLAGS:

A colored flag is flown at the head lifeguard chair. A sign at each beach describes the meaning of each color.

GREEN: Low Hazard. Calm Conditions.

YELLOW: Medium Hazard. Moderate Surf and/or Currents.

RED: High Hazard. High Surf and/or Strong Currents.

RED: Water Closed to the Public (with no-swim symbol).

PURPLE: Dangerous Marine Life.

PURPLE WITH SHARK: Caution! White Sharks Feed in These Waters.

If there is a shark sighting, lifeguards will close the beach to all water activities. A closure may also occur if a school of bluefish is feeding in the lifeguarded beach area.

**LOCATING YOUR BEACH GEAR:** Do not settle in front of an on-duty lifeguard chair or one that is soon to be opened. This area must be kept clear for equipment. Lifeguards respond quickly to distressed or drowning swimmers. Stay out of this area to avoid an accident or delay a rescue.

**WHEN YOU HEAR A WHISTLE:** Lifeguards will signal swimmers when they are in or approaching a hazardous area or because they are swimming too far out for adequate supervision.

**RIP CURRENTS ARE DANGEROUS:** A rip current can carry a swimmer out from shore and be difficult to swim against. Do not panic if you get caught in one. Do not tire yourself out trying to swim against it. Normally, they are not wide. Swim parallel to the shore a short distance, then swim to the shore out of the current. Look for the "Break the Grip of the Rip" sign located at each beach.

## BEACH PARKING LOT TRENDS

Coast Guard Beach/Little Creek Tram, Eastham: (360 spaces) Tram parking area fills on most holiday weekends; moderate turnover. Beach access via Little Creek Tram and parking area, a half-mile away. Drop-off and pickup of passengers and belongings at the beach are PROHIBITED. Limited handicapped parking (state-issued plate or placard required) at the Coast Guard Station parking area.

Nauset Light Beach, Eastham: (94 spaces) Public parking area fills by 10 AM daily during the summer; minimal turnover. Drop-off and pickup of passengers and belongings at the beach are PROHIBITED.

Marconi Beach, Wellfleet: (528 spaces) Parking area fills during weekends and some weekdays during July and August; moderate turnover.

Head of the Meadow Beach, Truro: (285 spaces) Parking area rarely fills.

Race Point Beach, Provincetown: (360 spaces) Parking area rarely fills during June and July. When the parking area does fill, it is usually one to two hours after Herring Cove fills. Access is also available on *The Shuttle* with \$3 park entrance fee.

Herring Cove Beach, Provincetown: (North area, 140 spaces\*; South area, 400 spaces) Parking area rarely fills in June. Parking area fills occasionally in July and August; moderate turnover after 1 PM. Access is also available on *The Shuttle* with \$3 park entrance fee. Seasonal snack bar.

\*parking reduced due to storm damage

# General Safety and Regulations

National Park Service rangers provide assistance and enforce regulations that protect you and the national seashore.

Observe the following:

- Do not disturb natural or cultural features including wildlife; all are protected by federal law. Do not feed wildlife.
- Keep trails, roadsides, and other areas clean. Use trash receptacles and recycle bins, or take trash with you.
- Glass containers, flotation devices (rafts, rubber tubes), snorkels, and masks are prohibited on lifeguard-protected beaches.
- Public nudity is prohibited.
- Surfing, windsurfing, and stand-up paddleboarding are permitted in waters outside lifeguard-protected areas.
- Possession or use of metal detectors is prohibited.
- Permits are required for all beach fires. They may be obtained on a first-come, first-served basis at Salt Pond Visitor Center in Eastham, the Province Lands Visitor Center in Provincetown, and the Oversand Station at Race Point. Do not bury coals. (See campfire information on page 2.)
- Sand collapses easily. Climbing steep slopes or digging deep holes above knee level is hazardous and prohibited.
- Swim only where there are lifeguards, and obey their directions. Lifeguard-protected beaches are marked with signs. Be alert for rip currents and underwater obstacles. Keep children within reach. Use sunscreen to avoid sunburn. Use a waterproof sunscreen if you intend to go swimming.
- Smoking, including electronic cigarettes, is prohibited on protected swimming beaches when lifeguards are on duty.
- Drones are prohibited in the national seashore.
- Biking is prohibited on seashore beaches.
- Kite surfing is permitted at Duck Harbor on the bay side in Wellfleet, and in a posted 1 ¼ mile section of ocean beach between north of Coast Guard and Nauset Light beaches in Eastham.

For more information about park regulations, check the Superintendent's Compendium available at <https://www.nps.gov/caco/learn/management/compendium.htm>

## PETS

The national seashore requires that pets be controlled by a leash at all times. Leashes may not exceed 6 feet. Pets are not permitted in public buildings, on lifeguard-protected beaches, on trams, in posted sensitive habitats, on bicycle trails (unless otherwise posted), or on trails except for portions of the Great Island Trail in Wellfleet and the Highlands Woods Walk in Truro.

## HUNTING AND FISHING

Upland wildlife and migratory waterfowl may be hunted in certain areas in season. Federal, state, and local laws apply. Ask at visitor centers for a brochure about hunting, or check <https://www.nps.gov/caco/planyourvisit/hunting-fishing.htm> for more information and maps of open and closed areas.

A license is required for salt and freshwater fishing. Town licenses for shellfishing are required. Regulations and fees vary by town.

## TICKS, INSECTS, AND POISON IVY

Take precautions to avoid contact with insects. Deer ticks may carry Lyme and other diseases. Mosquitoes may carry encephalitis or the West Nile virus. Brown-tail moth "tents" cause skin irritation. Stay on trails, out of tall grasses, and inspect clothes and skin. Use bug spray and wear proper clothing. • Poison ivy is prolific in many locations. The rash it produces can cause severe discomfort. "Leaves of three, let it be."

## OVERSAND PERMITS AND SPECIAL PARK USES

Permits for driving on seashore oversand routes are required and available for purchase at Race Point Oversand Station in Provincetown. Oversand permits cannot be acquired for rental vehicles.

Bird-nesting activity, weather, and impassable conditions due to changing beach conditions may require some route closures during the spring and summer.

Call 508-487-2100, ext. 0927 for permit and general information (April 15 through November 15). Call 508-487-2100, ext. 0926, for route closure information, or access the park's website for an up-to-date map of open and closed areas:

<http://www.nps.gov/caco/cape-cod-national-seashore-oversand-beach-driving.htm>

Special-use permits are required for events, weddings, and commercial filming. Information and applications are on the park's website at <http://www.nps.gov/caco/planyourvisit/permitsand-reservations.htm>.

# Watching for Wildlife



NPS photo

## Gray Seals

Gray seals (*Halichoerus grypus*) pull themselves out of the water and onto nearby sandbars and the beach to rest. Resting, also called “hauling out,” is an important activity.

Human disturbance alters the natural behavior of seals. Noise, sudden movements, and people, boats, or pets getting too close can all disturb seals. When seals are disturbed, they may return to the water as individuals or as a group. Seals that are continually approached never get a chance to rest, leaving them vulnerable to predators and illness.

It's normal for seals to be on land. Seals are semi-aquatic, meaning they often spend a portion of each day on land. Young seals may haul out on land for up to a week. Many seals have scratch marks and scars from hauling out; this is no cause for alarm.

Once hunted to near extinction, seals are now protected under the Marine Mammal Protection Act and National Park Service regulation. It is against the law to disturb or harass them.

Seals consume a variety of fish, shellfish, and crustaceans. They do not eat on land.

Gray seals have been nicknamed “horse heads” because of the long, straight slope of their profile. Males are dark brown, gray, or black with small, lighter spots. Females are tan or lighter gray with darker spots. Males may reach 8 feet in length and weigh over 700 pounds. Females average 6.5 feet and weigh up to 450 pounds.

To protect the seals and to avoid a fine of up to \$5,000 or six months in jail:

- Remain at least 150 feet from the seals. In some circumstances it is better to keep even farther away. Move back if the seals begin vocalizing, going into the water, or if all seal eyes are watching you.
- Observe from a distance with binoculars.
- Keep pets on a leash. This is a national seashore regulation. Dogs are likely to startle a resting seal, causing an aggressive, defensive response that might injure your pet, you, or the seal.
- Do not approach haul-out sites in boats or on boards. Kayaks, canoes, and stand-up paddleboards can elicit an alarm response and cause seals to rapidly enter the water.
- Do not swim among seals. Seals can scratch and bite. Also, they are an important prey species for great white sharks that inhabit these waters.

**If you see an entangled, sick, or injured seal, call NOAA's Northeast Region Marine Mammal Stranding Network at 866-755-6622.**



NPS photo

## Piping Plovers

Piping plovers (*Charadrius melodus*) are small shorebirds that winter along the southeast coast of the United States. Each spring, they return to Cape Cod to establish territories and form pairs.

Starting in April and extending into summer, plovers build their nests and lay

eggs above the high-tide line, usually in front of the dunes. Their nests are little more than shallow depressions scraped directly into the sand.

The female typically lays four eggs that the male and female take turns incubating. The eggs hatch in about 25 days. Within hours of hatching, the tiny, downy chicks begin learning how to search for food.

Plovers feed by running and darting to catch insects, amphipods, and other invertebrates found on the surface of the sand and mudflats or living in the wrack deposited at the high-tide line. Wrack (washed-up seaweed and marsh grass) is rich in these invertebrates and is an important feature of natural beaches.

Piping plover adults, nests, and chicks all blend into their surroundings to avoid detection by predators. When predators (real or perceived) approach too closely, an adult will run down the beach dragging its wing, as if injured, or call loudly as a distraction. Although this behavior may prevent chicks from being eaten, it leaves the eggs and chicks vulnerable to cold or overheating. For chicks, the stress of running for cover burns calories needed for growth and maturation.

# Watching for Wildlife

## Cape Cod Great White Shark Safety

### SHARK ADVISORY

Great white sharks live in these waters.

Sharks prey on seals. Avoid swimming near seals.



Cape Cod's waters are part of a natural and wild marine ecosystem with a rich diversity of sea life, including sharks. Seals are the major prey species for great white sharks (*Carcharodon carcharias*), and as the seal population increases, the great white shark has become more numerous. In recent years, there have been confirmed reports of great white sharks feeding on seals close to shore near swimming beaches. While it is rare for a great white shark to bite a human, it did occur in Truro in 2012.

**Be shark smart. To stay safe and to protect wildlife:**

- Follow instructions of lifeguards and national seashore staff. Become familiar with the beach flag warning system. Take time to read signs at the beaches.
- Do not swim near seals.
- Swim close to shore, where your feet can touch the bottom.
- Swim, paddle, kayak, and surf in groups.
- Do not swim alone in the ocean at dawn and dusk.
- Avoid isolation.
- Limit splashing and do not wear shiny jewelry.

**Shark Sightings**

- Notify a lifeguard if a shark is spotted.
- Beaches will be temporarily closed to swimming or surfing.
- Beach-goers will be notified when they can re-enter the water.

**Shark Facts**

- Sharks have existed for more than 400 million years.
- As top predators, sharks are critical for maintaining a healthy and balanced marine ecosystem.



NPS photo

### Other Resources

Massachusetts Shark Research Program  
Division of Marine Fisheries:  
[www.mass.gov/marinefisheries](http://www.mass.gov/marinefisheries)

Global Shark Tracking  
OCEARCH:  
[www.ocearch.org](http://www.ocearch.org)

Supporting Local Shark Research and Education  
Atlantic White Shark Conservancy: [www.atlanticwhiteshark.org](http://www.atlanticwhiteshark.org)

### Sharing the Beach with Plovers is Easy if You Know How

At Cape Cod National Seashore, our goals are to protect the park's resources while providing visitors an opportunity to experience and enjoy them in a manner that leaves the resources unimpaired.

- Pay attention to signs and follow the instructions.
- Don't feed wildlife or leave food scraps or trash on the beach; this attracts predators to nesting areas.
- Keep your dog on a leash no more than 6 feet long at all times, and comply with dog restrictions.
- You might see pedestrian detours or be asked to move quickly through areas to minimize disturbance. Please follow the instructions, and in most cases you'll be able to continue your walk without harm to plovers or their young.
- Set up your beach blanket far from posts and strings (symbolic fencing) used to identify suitable shorebird nesting habitat. This fencing minimizes disturbance to nesting plovers from people walking by but not from the prolonged presence of people. Set up several meters away, or choose an area without symbolic fencing.
- Be aware of park rules and regulations regarding boat landing, kite flying, and dogs. If you are uncertain, check at a park visitor center or at the Oversand Office at Race Point Ranger Station.
- Plovers are fascinating! Check out the plover slide show at <http://www.nps.gov/caco/naturescience/the-piping-plover.htm>
- Learn more about piping plovers and their conservation at <https://www.fws.gov/northeast/pipingplover/>
- Bring your binoculars and field guide on your next beach walk to observe and enjoy these birds from a distance.

# Watching for Wildlife

## Eastern Spadefoot Toads at Cape Cod National Seashore



NPS photo

The Eastern spadefoot toad (*Scaphiopus h. holbrookii*) is one of 12 species of amphibians found at Cape Cod National Seashore. The toad has a plump body with tiny warts; vertically oriented pupils; and a golden, lyre-shaped marking on its back. It owes its name to a spade-like protrusion, called a tubercle, on its hind feet. The toad uses the tubercle to dig burrows, where it spends most of its life, only emerging to breed or feed. Spadefoots emerge on rainy nights in spring and summer, especially when water tables are high and rain is heavy, and move en masse to temporary pools, where they mate. Spadefoots have adapted to these unpredictable, infrequent, and short-lived conditions by being “explosive breeders.” Eggs hatch within one week into tadpoles. Tadpoles develop into toadlets in as few as two weeks if they can avoid predators and if their ponds do not dry out.

Data collected by Cape Cod National Seashore’s Inventory and Monitoring Program indicate that the Province Lands area supports perhaps the largest concentration of Eastern spadefoot toads in the northeast. Unfortunately, much of this data is based on animals killed on roads on rainy nights. During nighttime road surveys in 2001, almost half of 153 toads found were road-killed. In addition, there are concerns that reduction in groundwater levels may cause ponds to dry out more frequently, further reducing the odds for successful reproduction.

**How You Can Help** The first step in protecting these threatened toads, as well as other amphibians, is to be aware of their breeding habits and their vulnerability to vehicles. When driving on warm, rainy nights, slow down to avoid running over the many frogs, toads, and salamanders on roadways. Some roads within the park, such as Province Lands Road, may be closed on such nights to protect spadefoots and other amphibians. Please respect these closures to preserve this rare species in one of its last New England strongholds.

### Update on Shorebird Management Plan

Cape Cod National Seashore released a comprehensive shorebird management plan with an associated environmental assessment (EA) in 2016. The plan identifies, outlines, and supports a continued science-based approach to shorebird management and protection. As part of the EA process, the seashore hosted a variety of public informational meetings and collected public feedback during the 60-day comment period. The EA evaluates four alternatives to protect and manage nesting, staging and migrating state, federal, and special-status shorebirds and their habitat, while allowing for public access. The main differences among these alternatives lie in the extent of visitor access and methods of managing predator impacts.

Unnatural levels of predation on shorebird eggs and chicks has been the main reason productivity of these ground-nesting shorebirds, particularly the federally threatened piping plover, has been trending downward below US Fish & Wildlife Service recovery objectives. Because of this, the park proposes strategies to protect these species by implementing new or additional methods. In addition, the alternatives evaluate levels of protection for staging and migratory shorebirds, and with USFWS permits, promotes consistent recreational access by allowing the park to “under protect” a few nesting pairs of piping plovers at specific high visitor-use areas.

The park is presently evaluating the public comments and hopes to have a decision on the preferred alternative in 2018.

# Commonly Observed Birds at Cape Cod National Seashore

excerpts from an article by Robert P. Cook, Ph.D., Wildlife Biologist

Birds are perhaps the most conspicuous and easily observed of the Cape Cod National Seashore’s wildlife — at least some species are. The seashore’s 44,000 acres provide a wide diversity of freshwater, marine, and upland habitats for the roughly 370 species of birds that occur here. About 80 of these species nest here, during the spring and summer months, with the remainder using the park for migratory stopovers or to overwinter. While some birds are nocturnal, secretive, or well-camouflaged, many species are active and out in the open during daylight hours, providing even the most casual observer an opportunity to observe them. As you go about your activities visiting Cape Cod National Seashore, keep an eye out for these species. They are the “tip of the iceberg,” so to speak, of the many bird species that depend on the seashore for food and shelter.

The **GREAT BLACK-BACKED GULL** occurs in eastern North America and western Europe and is the world’s largest gull. Along with herring and ring-billed gulls, they are often referred to as “seagulls,” which is not quite accurate, since gulls are found on and along the coast, rather than out at sea. Much of the success of gulls is because they are opportunistic in their feeding habits. The great black-backed gull is both an effective predator of smaller water birds and a scavenger. It can be found along the beaches and mud flats of Cape Cod year round.



The **COMMON TERN** is one of four species of terns that nest at the seashore. The others are the diminutive least tern, the endangered roseate tern, and the Arctic tern. Terns are commonly observed patrolling the shallow waters along the beach, hovering and diving down into the water after small fish such as the sand lance. Terns spend their summers here on Cape Cod, nesting in colonies on sandy beaches. Their colonies afford them protection against many predators, which they drive off by collectively dive-bombing. Their use of the beach in summertime makes them vulnerable to disturbance by dogs and humans, and seashore staff protect tern colonies with “symbolic fencing.” Please stay out of these areas. Along with our many summer visitors, terns leave Cape Cod in September and migrate down to Central and South America.



While it can be seen on Cape Cod year round, the **GREAT BLUE HERON** does not nest here and is most abundant in late summer and early fall. They nest inland in colonial “rookeries” in wooded swamps. After the nesting season, many move to the coast, where they take advantage of the summertime abundance of fish and frogs in our many ponds and marshes. They feed during the day, especially when the tide is out, and spend the night perched together in treetop “roosts.”



The **RED-TAILED HAWK** is a year-round resident and the most common of the five species of hawks that nest in the seashore. It is a large, broad-winged, fan-tailed hawk, often seen perched in trees along Route 6 or soaring overhead. It hunts for small mammals, such as squirrels and rabbits, and its relative tolerance for humans has allowed it to maintain its numbers in a landscape increasingly dominated by human activity.



While these may be some of the more conspicuous of the seashore’s birds, there are many more species awaiting the interested visitor. Checklists and field guides can be obtained at the bookstores at Salt Pond and Province Lands visitor centers.

# An Ode to the Understanding of Dragonflies

By Ken Shea, Lead Dragonfly Citizen Scientist, Cape Cod National Seashore

Spring seasons on Cape Cod are typically unremarkable and cooler than most regions in Massachusetts. Yet each spring heralds the return of our first migrant dragonflies traveling from southern regions to breed in freshwater habitats on Cape Cod.

With the arrival of sustained, warmer days, and the onset of summer, resident dragonflies, which have spent the winter here as nymphs in our ponds and wetlands, begin to emerge. These began life up to four summers ago, or even longer, depending on species. Following egg hatching, dragonfly nymphs (larvae) develop through multiple stages. Some nymphs burrow into shallow mud, sand, and wetland sediment; some climb and hide amongst underwater vegetation, while still others simply creep along wetland bottoms in muck or sand.

Hundreds of millions of years ago, dragonflies were part of a formative landscape that preceded dinosaurs. Some ancient dragonflies were enormous, with wings over 2 feet in length. Modern dragonflies and their close relatives, “damselflies,” are considerably smaller in size. Scientists believe that this dramatic change was due to a reduction in the content of the high oxygen atmosphere over time.

Today, there are about 450 species of dragonflies documented in North America. Around 168 of them have been found in Massachusetts, and about 105 species inhabit Cape Cod.

Typically found along the wet margins of our local ponds, streams, and wetlands, dragonflies are one of the largest groups of insects and are technically known as “Odonates.” We have two sub-groups: “true dragonflies” and “damselflies.” True dragonflies are large, corpulent, and robust insects. They are prolific fliers in open areas. During rest, they usually spread their wings horizontally or straight out to their sides. Damselflies are smaller and have very thin, delicate bodies; they are weak fliers and usually hover near the ground just above the surface of water or amongst thick vegetation along pond and wetland edges. While at rest, they usually hold their wings, pressed together, behind their backs. Both sub-groups are collectively referred to as “odes” for short.

One may visit a small pond or wetland on a calm and sunny day in the peak summer months (July-August) to observe dragonflies and perhaps see their unusual activities. Adult dragonflies call for our attention. Their colors are akin to sparkling jewels and sometimes reveal their haunt-

ing markings and strange patterns on their wings and bodies. Their extraordinary, unique, and unusual flight patterns capture our imagination. “Odes” possess remarkable dexterity, and are quick, fast, and agile fliers. They hover and fly sideways, backward, or launch vertically upward. They are true visionaries, with remarkable eyesight – the largest, and possibly the keenest eyes in the insect world. They have the ability to see a person when flying toward a person, and still see the person when they fly away. Spectacular eyesight enables them to detect and capture prey at great distances with alarming efficiency. How marvelous to have full field vision!

Dragonflies are important indicators of a healthy environment, and their presence reflects good water quality. They possess economic value as predators and consumers of harmful insect pests, devouring large quantities of flying insects such as gnats, biting flies, and mosquitoes. Typically, an adult dragonfly may consume 10 to 15 percent of its own body weight in prey each day. In the larval stage, odonate nymphs feed opportunistically on all forms of aquatic life including mayfly nymphs, small crustaceans, small fish and tadpoles – almost anything small enough to devour. Odonates can spend upward of two



to four years, sometimes longer, depending on the species, as larvae before emerging as adults. Sometimes simultaneous emergence of multiple nymphs can create a massive exodus of ghostly forms (teneral) as these immature adults attempt to escape consumption by local predators such as fish, birds, and awaiting reptiles and amphibians.

The process of dispersal from aquatic environments to the shelter of forests and uplands to feed and mature before returning to wetland habitats to mate, lay eggs, and die, continues to be a beneficial process for dragonflies that has sustained them for more than 300 million years.

Frequenting the variety of local wetlands might help one to understand how odonates fit into the natural diversity of Cape Cod. The scene is set. Take only a few moments or spend a few hours to witness the incredible variety, spectacular colors, and dazzling aerobatics, choreographed by these ancient insects. The show is free; the effort - effortless!

# Eight Incredible Facts about the Pirate Ship *Whydah*

by William Burke, *Seashore Historian*

This year we commemorate the 300th anniversary of the wreck of the pirate ship *Whydah* off of Wellfleet, MA. On a foggy and stormy night in April 1717, it stranded on a sand bar 500 feet off the beach and shattered in heavy seas with the loss of all but two of her 146 crewmen. We take a look back at *Whydah's* entangled tale of trade, terror, rediscovery, and treasure.

**"Each shipwreck is a time capsule, and each artifact from the *Whydah* has its own stories to tell about what life was like on April 26, 1717."** Barry Clifford

## *Whydah* is the only authenticated pirate ship ever found.

Of the hundreds of ships known to have been pirate ships, *Whydah* is the only surviving one in existence. Dedicated marine explorer Barry Clifford discovered *Whydah* in 1984 a few hundred yards off the coast of Wellfleet near Marconi Beach. Divers located remnants of its scattered wreckage and treasure in 20 feet of water and under thick blankets of shifting sand. Clifford used historic maps, firsthand accounts and intimate knowledge of the coast to make the startling find. He made a positive identification of the wreck with the discovery of silver coins marked with the Spanish cross dated 1684, and the recovery of the ship's bell in 1985 with the words *The Whydah Gally 1716*. Since then, Clifford's team has uncovered more than 200,000 artifacts with the goal of telling a compelling and accurate story of *Whydah's* yearlong reign of terror through travelling and permanent exhibits.



History hunter Barry Clifford used his knowledge of local waters and a knack for utilizing old maps and new technology to discover *Whydah* in 1984.

**"...a vile crew of miscreants, to whom it was a sport to do mischief, where prodigious drinking, monstrous cursing and swearing, hideous blasphemies and open defiance of Heaven and contempt of Hell itself was the constant employment."** Philip Ashton, part of crew captured by pirates, 1722

## *Whydah* was originally built as a slave ship.

*Whydah* was built in England in 1715. Named after the African slave port of Ouidah, it was a fully rigged 300-ton galley ship that was originally built as a cargo and slave ship. Built with the latest nautical technology of the day, it was a shallow-drafted vessel that could be rowed or sailed. Its top speed was a swift 13 knots, and it was armed with 18 mounted cannon. On its maiden voyage, it carried 300 African slaves over the "Middle Passage" to the West Indies – just a small portion of the estimated 12 million enslaved Africans brought to the Americas. It was on its return voyage that the *Whydah* was captured by pirate Captain Samuel "Black Sam" Bellamy after a three-day chase and was refitted as his flagship.

## Pirates were very bad people.

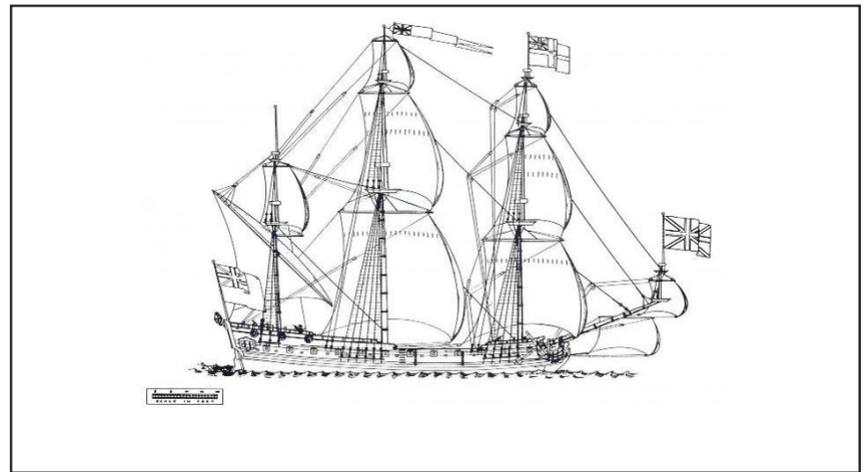
Pirates aboard the *Whydah*, like all pirates, preyed on shipping and plundered cargo. Piracy has been around for thousands of years and continues to this day. Pirate attacks were violent and frequently accompanied by torture and murder. By the "Golden Age of Piracy" in the early 1700s, when 2,000 pirates swarmed the Caribbean and the North Atlantic coast, they swore loyalty to no nation and attacked all shipping equally. When the *Whydah* sank in a storm on the evening of April 26, 1717, its load contained the plunder of over 50 vessels. Today, many view pirates through the lens of popular culture. From Robert Louis Stevenson's *Treasure Island* (1883) through today's *Pirates of the Caribbean* movies, pirates have been romanticized and oftentimes play the hero, not the villain.



Thousands of coins have been found in the *Whydah*, including pieces of eight that were the closest thing to a universal coinage in the Atlantic world at the time.



Numerous cannon have been recovered and carefully conserved so they can be displayed to illustrate the brute power pirate ships wielded on the high seas.



*Whydah* was a slave ship turned pirate ship that was heavily armed and designed for speed.



Sam Bellamy, commanding officer of *Whydah*, became one of the most successful pirate captains of his day.

## *Whydah* carried over 4 tons of silver and gold when she sank.

Only a small portion of the gold and silver has been recovered from *Whydah*. Aside from pieces of eight, archeologists have recovered rare Akan gold, considered some of the finest treasure recovered from the wreck. North African traders sold Akan jewelry to Europeans, and it was used as currency in the slave trade. *Whydah* also carried indigo, ivory, 60 cannon, pistols and everyday items like tools, shoes, and teapots. It is believed that much of the treasure still remains on the bottom. Clifford's crew returns every season to scour new sections of their permit area in hopes of finding more.

**"I was a history hunter and undersea salvor with a driving interest in bringing a great historic period back to life in a responsible way that an ordinary person could appreciate, as well as a historian."** Barry Clifford

## Pirate "Black Bellamy" had a Cape Cod connection.

Sam Bellamy was born into a poor family near Plymouth, England. By 1714, he travelled to America for a better life, and according to legend, stayed with relatives in Wellfleet. Soon after, he left to seek his fortune off the Florida coast after news of the Spanish wreck of the 1715 Treasure Fleet, which was loaded with gold and silver from the mines of Central and South America. Yet local lore has it that, before leaving, he vowed to his Wellfleet sweetheart, Goody Hallett, that he would reunite with her once he made his fortune. And return he did, only to perish on the beaches of Wellfleet. Whether the legend is true and Bellamy made the fatal mistake to return to Wellfleet because of their relationship will forever remain a mystery.

## Most of *Whydah's* survivors were executed.

The two survivors from *Whydah* and seven from another ship in the flotilla that went aground in Orleans were captured and brought to trial and prosecuted for piracy in Boston. The court sentenced six to hang, two others were set free, and the last, a Miskito Indian from Central America, was sold into slavery. A week later, the governor sent Captain Cyprian Southack to recover for the crown whatever treasure and survivors he could find. Finding the wreck impossible to access due to the cold deep water, all he found were a few guns and anchors and over 100 bodies on the beach. His greatest legacy was his detailed notes and map of the wreck, which hundreds of years later were invaluable to rediscovering the ship.

**"It is now almost impossible to divide myth from reality in the context of popular perception of piracy."** *The History of Pirates*, Angus Konstam

## Finding *Whydah* was really like "finding a needle in a haystack."

*Whydah's* violent end in the storm resulted in an "exploded site," where ship's masts and rigging, cannon, treasure and personal effects were all flung to the bottom and then mixed up and eroded over the centuries by swift ocean currents, saltwater corrosion and moving sand. While the search for the site began at the library with historical records, a team of technicians, divers, deckhands, conservators and archeologists have used a range of evolving technologies to excavate the wreck and restore and preserve what has been found. They have used magnetometers to locate large metal objects and used an ingenious contraption to blow away underwater sand by funneling the boat's propeller wake to expose new artifacts. Yet some of the most critical work of the expedition has been the painstaking work of cleaning concretions from artifacts in preservation labs and preserving precious items so they don't disintegrate once they are removed from salt water.

**The Whydah Discovery Project has a permit from the U.S. Army Corps of Engineers to continue its excavation.**

By state court decision, the Commonwealth of Massachusetts does not own *Whydah*, the group known as Project Whydah does. The group operates its recovery vessel, *Vast Explorer*, with a federal permit and under the terms of an agreement with the Advisory Council for Historic Preservation. The wreck is located within the ¼-mile boundary of the Cape Cod National Seashore, and the park and the commonwealth monitor activities in the two-mile-by-one-mile permit area. While the National Park Service rarely undertakes full excavation of underwater wrecks, it recognizes and appreciates the professional approach and educational mission of the project.

*"Carrying the choice plunder from 50 other vessels, the Whydah collection represents a priceless sampling of cross cultural material from the 18th century world and beyond. It is a unique touchstone to another place and time."* Barry Clifford



Known as the "Sun King" pistol, this stunning survivor was found wrapped with a silk ribbon likely used to improve the gunman's grip.



This shoe, stocking and leg bone were all discovered in the same concretion. Forensic scientists have determined the bone to be from a young boy, another example of the diversity aboard pirate ships.



Clifford's recovery of *Whydah's* bell was confirmation that the project had succeeded in finding a real pirate ship.



Barry Clifford's *Vast Explorer* has regularly combed the permit area off of Wellfleet for more artifacts from *Whydah*. All photos courtesy of Expedition Whydah.

**For More Information**  
 Whydah Pirate Museum, West Yarmouth, MA  
 discoverpirates.com · 508 534 9571  
 Expedition Whydah Museum, Provincetown, MA  
 whydah.com · 508 487 8899

## Calling all Kids — Search for Seashore Treasures!

Seeking and finding treasure is exciting and fun. But what is a treasure? For a pirate, treasure was a chest full of gold coins. A marine biologist might treasure the sight of a whale, and for a historian, a treasure may be the discovery of clues to people who were here before us. Your parents might think you are their greatest treasure!

What treasure will you find to always remind you of Cape Cod? Will it be a rock or a shell? Perhaps it will be the memory of seeing wildlife, hiking or canoeing with a ranger, or having a fire on the beach.

Cape Cod National Seashore is full of treasure-hunting opportunities. Use the map on the back of this newspaper to get started!



Fill this treasure chest with your Cape Cod experiences!

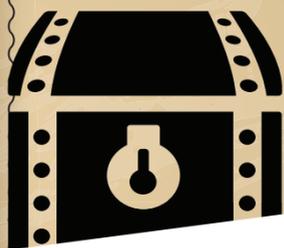
You might **SEE** seals, whales, shorebirds, and salt-marshes. Explore landscapes, such as heathlands in Truro and wild cranberry bogs in low-lying areas in the Province Lands dunes.

Have you **HEARD** the crashing ocean waves, and **OBSERVED** how pebbles are moved after a wave breaks and is pulled back to the sea?

**SMELL** the salt air on a foggy morning or a salt marsh at low tide!

**TOUCH** smooth, rounded pebbles on the beach.

Try **TASTING** seafood when eating at a restaurant with your family. If you're visiting in the fall, taste a cranberry you pick in a wild bog.



Three hundred years ago, the pirate ship *Whydah* wrecked off Marconi Beach in Wellfleet. Take a walk on Marconi Beach and imagine finding washed-up pirate treasure!



**Become a Junior Ranger**... a park protector, a planet caretaker, a leader! Join a growing group of young people who are interested in the natural world and history. Stop at a visitor center to request a free Junior Ranger booklet. After completing the activities and attending some ranger programs, return to a visitor center to receive your patch or badge.

Interested in learning even more about the seashore? Ask the rangers at the visitor centers about borrowing an Explorer Pack. The pack is full of guides and tools for in-depth investigation into the science and history of the national seashore.

For more Junior Ranger fun when you return home, check out Web Rangers at [www.nps.gov/webangers](http://www.nps.gov/webangers).



**SAFETY:** One memory you don't want is a poison ivy rash. "Leaves of three, let them be!" Only taste things your parents say are safe. Always do a tick check after spending time on trails.

**PROTECT RESOURCES:** Follow signs to protect yourself and natural resources, like dunes and nesting birds. Leave all living things where you find them. Metal detectors are not allowed in national parks.

My treasured memories of things I could:

See \_\_\_\_\_

Hear \_\_\_\_\_

Smell \_\_\_\_\_

Touch \_\_\_\_\_

Taste \_\_\_\_\_

My favorite activity \_\_\_\_\_

# Restoring Wellfleet's Herring River

By Tim Smith, *Restoration Ecologist*

*Thanks to the Friends of Herring River and John Portnoy for historical research. Historic photos used with permission of the Wellfleet Historical Society.*

Wellfleet Harbor is world famous for its shellfish. Since the 1800s, oysters and clams have been harvested and cultured in the harbor's clean, cold, and salty waters. Today, recreational and commercial shellfish make up a multimillion-dollar industry that is critical to the town's economy. But the area where people could gather the prized bivalves has been limited. The U.S. Environmental Protection Agency has classified the Herring River, the major river feeding into the harbor, as "impaired" according to the federal Clean Water Act. This designation stems from high levels of fecal coliform bacteria and heavy-metal contaminants found in the river. The impairment classification continues today and has led to closure of formerly available shellfishing areas in the Herring River.

U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, and the Massachusetts Division of Ecological Restoration. The HRRRC, aided by the local not-for-profit group Friends of Herring River, is currently working on public outreach, permitting, and fund-raising. Construction for the project is expected to begin by 2019-2020, beginning a long-term process to restore tidal flow.

The Herring River's colorful environmental history is summarized in the book *Tidal Water: A History of Wellfleet's Herring River*, recently published by and available from the Friends of Herring River. (For information about the book, email [klaroque@herringriver.org](mailto:klaroque@herringriver.org) or call 508-214-0656.) Until 1909, the Herring River was the main artery of a thriving estuary. Salt water from Wellfleet Harbor flowed freely up and down the river and into several smaller tributary streams and sub-basins. Salt marshes flourished in the intertidal area flooded twice daily at high

needed to stop the mosquito pest." At the time, kerosene was commonly used to smother and kill mosquito larvae.

In 1905, a town meeting article was passed requiring the owners of "salt and fresh meadows to cut ditches" and connect them to main creeks in order to reduce mosquito breeding habitat by draining wetlands; landowners who failed to comply would be charged for ditching undertaken or contracted by the town. Also in 1905, town meeting voted to "appoint a committee and petition the Legislature to build a dike (sic) across Herring River."

The committee was led by Lorenzo D. Baker Jr., a wealthy former ship captain and owner of the Chequessett Inn, a hotel built on piers in Wellfleet Harbor. The Massachusetts Legislature approved Baker's petition, contingent on town approval and appropriation of matching funds. In 1907, the town voted \$10,000 to dike the Herring River. The dike was constructed over the winter of 1908-1909.

culcation of salt water was drastically reduced, and habitats that were dependent on salt water all became fresher, creating a much less diverse ecosystem. Eventually, saltmarsh plants gave way to freshwater and brackish marsh plants and, in areas that were particularly well-drained after mosquito ditching, to the upland trees and shrubs, which give the flood plain much of its current unusual appearance.

Most notable was the impact to the Herring River's namesake species. The harvest of natural resources from estuaries like the Herring River was a major economic and social focus of the town, as indicated by the consistent attention given to the management of the herring run. According to Wellfleet records, the right to fish for herring was auctioned off by the selectmen for the first time in 1791. By the 1880s, the town's annual receipt from the auction ranged up to \$667 (about \$16,000 in 2016 dollars) and increased through most of the next decade. Proceeds from the sale of the fishing rights were enough to pay all elected town officials. A "fishery station," where herring were trapped and netted, was staffed daily throughout the spring run. The herring run was substantial, with over 200,000 fish harvested yearly. In 1920, the state fish biologist, David L. Belding, reported that Wellfleet's Herring River run was the second most productive in the state between 1890 and 1899.

Subsequent town appropriations indicate that the intended outcome of blocking the tide was not realized and that additional work was needed to control mosquitoes. In 1910, the year after the river was diked, the town voted: "To see what action the Town will take towards raising and appropriating a sum of money for the purpose of establishing proper outlets for the water in the different sections of the Meadow lands, which are affected by the Herring River Dike . . . ."

Although significant amounts were spent on ditch drainage for mosquito suppression shortly before building the dike, these expenditures increased greatly after the supposed mosquito-control dike was in place. Suppression included ditching and stream channelization, as well as the application of oil. Through the 1910s and 1920s, annual expenditures for mosquito control regularly exceeded \$1,000 (over \$24,000 in 2016 dollars). Between the diking of Herring River in 1909 and 1935, Wellfleet had spent over \$31,000 (over \$500,000 in 2016 dollars) on ditching and oiling diked wetlands. This expense was in addition to the cost of constructing and maintaining the Herring River dike.

The increase in mosquito-control expens-



Herring River flood plain, one of the most unusual and ecologically altered areas of Cape Cod National Seashore.

Shellfish closures are just one of several problems related to the Herring River, which for more than 100 years has been cut-off from tidal flow by a dike crossing the river. The lack of saltwater exchange has led to the loss of nearly 1000 acres of highly productive salt marsh, limited the ability of river herring to reach critical kettle pond spawning habitat, and altered chemical cycling to the extent that water and soil are highly acidic and lethal to aquatic life. Restricted tidal flow also allows naturally occurring bacteria to build up and slowly leach into Wellfleet Harbor.

But big changes are in store for the Herring River. At least that is the hope, according to the Final Environmental Impact Statement (Final EIS) released by the Herring River Restoration Committee (HRRRC) in September 2016. The EIS lays out a detailed plan for ecological restoration of the river and its associated flood plain habitats.

HRRRC has representatives from Cape Cod National Seashore, the towns of Wellfleet and Truro, the National Oceanic and Atmospheric Administration, the

tide. As salt water flowed upstream and mixed with inflowing fresh water, salinity gradually diminished, creating distinct habitats for shellfish, migratory river herring, diamond-backed terrapins, and other estuary-dependent wildlife.

These important habitats were destroyed when a dike was constructed at the mouth of the Herring River at Chequessett Neck, cutting off tidal salt water. More than 40 years earlier, a railroad had been built, connecting the sleepy settlement of Wellfleet to Boston and New York. In an effort to revive the Cape economy, devastated by overfishing by the late 1800s, development of the tourist industry was underway. Into the 20th century, increasing tourism elevated concerns about mosquitoes and fears that the pesky creatures would persuade visitors to seek other vacation destinations.

After several years of abundant rain and unusually high mosquito production, proposals for mosquito suppression first appeared in the Wellfleet Town Report in 1904, with a request for \$1,000 "to drain and dike (sic) meadows and use oil where

Designed to block salt water from flowing into the Herring River estuary while allowing fresh water to drain out, the dike had immediate and lasting effects on the vast upstream wetlands. The tidal range upstream of the dike was reduced from about 10 feet to less than two feet. Cir-



The Herring River dike on Chequessett Neck Road in Wellfleet was constructed over the winter of 1908-1909.

# Restoring Wellfleet's Herring River *continued*



A "Fishery Station," where herring were trapped and netted, was staffed daily throughout the spring run.

es was accompanied by a corresponding collapse in the herring fishery and its associated income after the diking of the Herring River. Herring had difficulty passing through the dike's tide gates and could not reach spawning areas upstream. By the 1920s, herring-related income was reduced to only a few dollars per year compared with the hundreds earned prior to constructing the dike and eventually petered out entirely.

Other natural resources of economic value were also lost by eliminating tidal influence from the Herring River. Saltmarsh hay was essential to the Cape's early agricultural economy, providing fodder for livestock that in turn provided manure to enrich otherwise sandy and unproductive upland farm soils. In 1913, the town appointed a committee to arbitrate the case of damage done to Levi Higgins's salt meadow; this man was harvesting salt hay that, with the blockage of sea water, succumbed to the invasion of freshwater wetland plants. As late as 1927, the town voted that "land damages on Herring River Meadows be left in the hand of the Selectmen for adjustment," presumably financial compensation for continuing damage to saltmarsh hay crops.

Even though saltmarsh hay and river herring are no longer major economic resources, for the past 40 years the scientific community has clearly documented, and society has increasingly recognized, the functions and values associated with coastal wetland systems. Estuarine communities are now known to be among the most ecologically productive ecosystems on the earth. The subtidal waters and intertidal salt marshes are vital for pollution control, storm-surge protection, fish and shellfish habitat, waterbird use, and overall near-shore productivity.

Unfortunately, the pattern of alteration of Wellfleet's Herring River was not an isolated incident. For decades, coastal marshes along the Atlantic Coast were subjected to long-term diking and drainage efforts with the intent of controlling mosquito populations and for agricultural and land development. These alterations dramatically changed the hydrologic patterns of tidally dependent wetlands. In the Gulf of Maine watershed (from Cape Cod to Nova Scotia), nearly 30 percent of coastal wetlands have been altered by tidal restrictions. In the last decade, con-

siderable efforts have been expended by agencies and groups in the region toward identifying impacted coastal wetlands and implementing plans for restoring the tides and thus the natural functions of these areas.

The National Park Service acquired management responsibility for more than 2,500 acres of diked and drained wetlands when the seashore was established in 1961. The seashore's General Management Plan, completed in 1998, states that one of the goals for water resources in the park is to "restore the natural hydrography and ecology of estuaries in consultation with affected municipalities," including salt marsh restoration at Herring River. From 1998 to 2003, tidal exchange was incrementally restored to about 90 acres at Hatches Harbor in Provincetown. East Harbor in Truro has undergone par-

tial tidal restoration by opening a closed clapper-type tide gate, allowing salt water to flow into the harbor. The Herring River restoration is the largest and most ambitious of these projects; in fact, at almost 1,000 acres of tide-restricted estuary, it is the largest project of its kind in New England.

The major component of the Herring River project is to rebuild the main dike at Chequessett Neck Road with a much wider opening, thereby allowing a higher volume of salt water to flow into and out of the estuary. A series of adjustable tide gates will be included within the dike. This will allow gradual, incremental openings of the gates, similar to Hatches Harbor, enabling controlled tidal restoration throughout most of the Herring River flood plain while protecting flood-prone private property and roads.

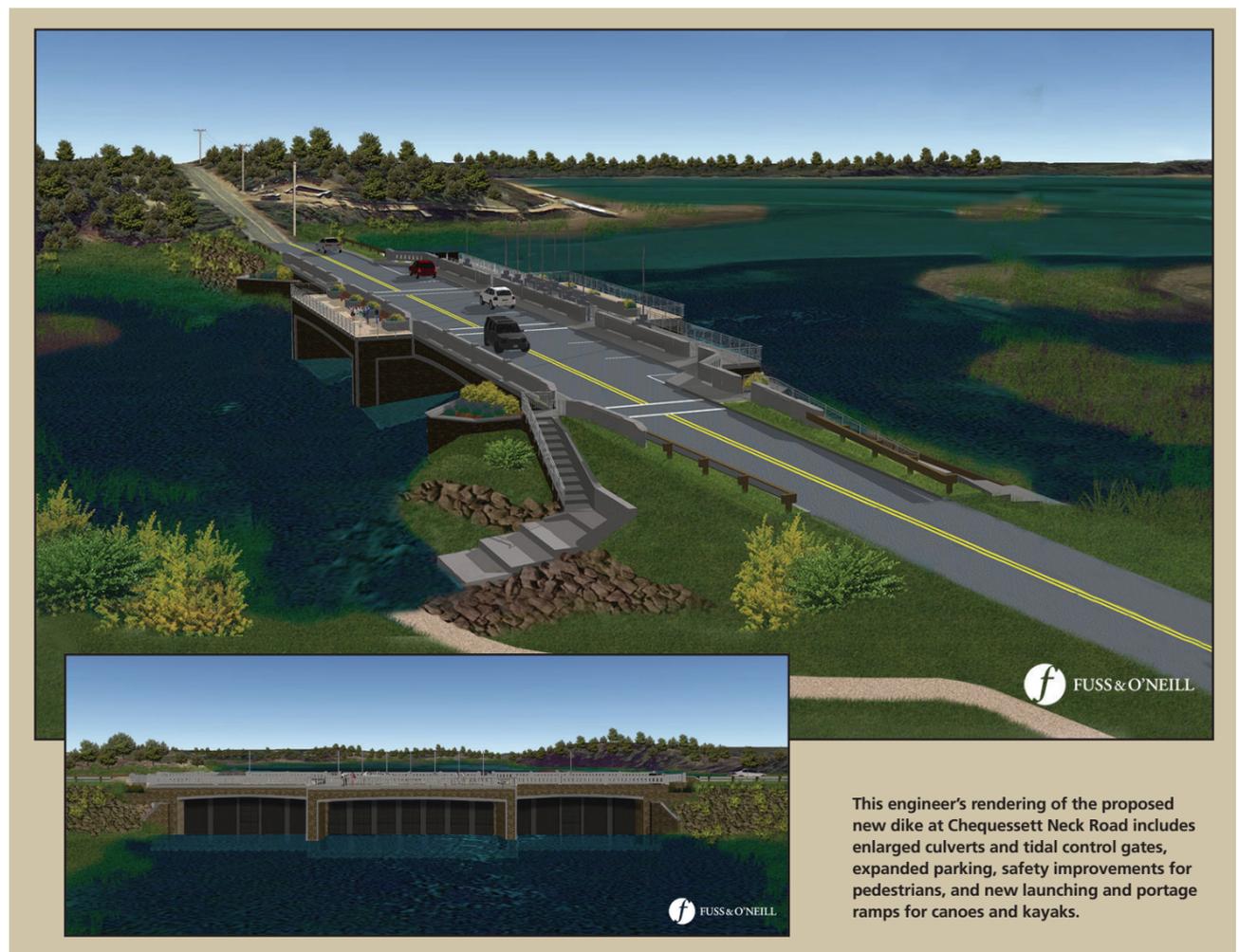
Tidal flushing will be increased, reducing mosquito breeding on the wetland surface and diluting the presently high bacteria counts that have closed shellfish beds at the mouth of the river. Water quality will be improved by flooding the wetland twice each day with oxygen-rich Cape Cod Bay water. Improved water quality also will reduce mosquito production by enhancing aquatic habitat quality for the mosquito's major predators: small but abundant estuarine fish like mummichogs and sticklebacks.

Restored salinity will stress many of the salt-sensitive non-native plants that have invaded the flood plain and enable recolonization of native saltmarsh plants. Higher salinity also would reduce the survival time of coliform bacteria, adding to the dilution effect of increased tidal flushing to further depress fecal coliform counts in shellfish beds.

The reestablishment of tidal range, salinity, water quality, and the saltmarsh plant community will restore hundreds of acres of wetland habitats and access to those habitats by fish, shellfish, marsh birds and mammals. For people, this means better boating throughout the Herring River estuary on higher tides across an open marsh instead of the presently drained shrub thicket, with fewer mosquitoes plus improved opportunities for observation, education, and harvest both within the estuary and in nearby coastal waters. More importantly, it also means a return to the extensive, abundant, and diverse marine resources that the Herring River provided for centuries to the people of Outer Cape Cod.

**For more information on coastal wetland restoration at the seashore and the Herring River project, visit:**  
<http://www.nps.gov/caco/naturescience/estuaries-and-salt-marshes.htm>

Friends of Herring River is a 501(c)(3) tax exempt organization that promotes education, research, and public awareness of the Herring River estuary. For more information, visit: <http://www.friendsofherringriver.org/>



This engineer's rendering of the proposed new dike at Chequessett Neck Road includes enlarged culverts and tidal control gates, expanded parking, safety improvements for pedestrians, and new launching and portage ramps for canoes and kayaks.

# The Lighthouses of Cape Cod National Seashore and Beyond

## 1. Race Point Light, Provincetown

The first Race Point Light was erected in 1816. The current lighthouse and keeper's house date from 1876. Over 100 ships wrecked on the treacherous shoals here between 1816 and 1946. *Directions:* Inaccessible by road. From Route 6, turn at the lights onto Race Point Road and follow to its end. Park in the Race Point Beach parking area. Walk along the beach about 2 miles to Race Point Light. *Beach fees apply during summer months and on weekends in late spring and early fall.*

## 2. Wood End Light, Provincetown

A twin to Long Point Light guarding the entrance to Provincetown Harbor, Wood End Light is located toward the end of the breakwater. Built in 1873, the lighthouse is now solar-powered. *Directions:* Inaccessible by road. Park at the rotary at the west end of Commercial Street. Walk across the breakwater, then bear straight across the neck about ½ mile to Wood End Light. Summer boat service from MacMillan Wharf.

## 3. Long Point Light, Provincetown

This light at the entrance to Provincetown Harbor was first lit in 1827. The lighthouse and keeper's cottage were rebuilt in 1875. In 1952, the light was automated. Solar panels were installed in 1982. *Directions:* Walk across Provincetown breakwater. Turn left and follow Long Point approximately 1½ miles to the end. Summer boat service from MacMillan Wharf.

## 4. Highland Light (Cape Cod Light), 27 Highland Light Road, North Truro

Traditionally, Highland Light was the first light seen on a voyage from Europe to Boston. In 1798, Highland was the first Cape Cod lighthouse built. The present brick lighthouse was erected in 1857 on the 100-foot-high cliffs above the ocean. It was moved inland in 1996. *Directions:* From Route 6 In North Truro, turn onto Highland Road, which is over 3 miles north of Truro Center. At the end of Highland Road, go right onto Lighthouse Road and into the parking area. *Open seasonally and operated by Eastern National, Inc. www.highlandlighthouse.org*

## 5. Nauset Light, intersection of Oceanview Drive and Cable Road, Eastham

Nauset Light was built as three brick towers in 1838 to differentiate the location from Highland and Chatham lights. When erosion claimed the originals in 1892, they were replaced by three wooden towers called the Three Sisters. The current tower, moved here from Chatham in 1923, succeeded them. *Directions:* Turn right off Route 6 at the lights at Salt Pond Visitor Center, Cape Cod National Seashore. Continue to Coast Guard Beach, then turn left onto Ocean View Drive. Drive 1 mile to the Nauset Light Beach parking area. *Operated seasonally for public access by agreement with the Nauset Light Preservation Society. www.nausetlight.org*

## 6. Three Sisters lighthouses, Cable Road, Eastham

Built at Nauset in 1892. Two of the three lights were sold to become a summer cottage in 1911. The third one was replaced in 1923 by one of the two Chatham lights. The Three Sisters are now located safely back from shore-front erosion in the Cape Cod National Seashore. *Directions:* Same directions as to Nauset Light Beach. Short walk inland on Cable Road from the parking area to Three Sisters. Limited parking at Three Sisters. *Repairs are underway in 2017 and tours may be adjusted.*

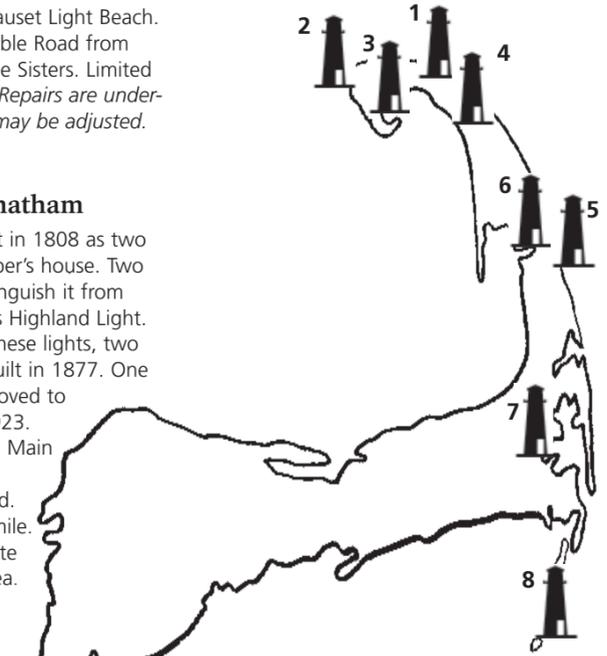
## 7. Chatham Light, 70 Main Street, Chatham

Chatham Light was built in 1808 as two brick towers with a keeper's house. Two lights were used to distinguish it from the single light at Truro's Highland Light. When erosion claimed these lights, two new metal ones were built in 1877. One of the two lights was moved to Nauset in Eastham in 1923. *Directions:* Drive east on Main Street, Chatham, to the junction with Shore Road. Turn right and drive ½ mile. The lighthouse is opposite the overlook parking area.

## 8. Monomoy Point Light, Chatham

The first Monomoy Light was erected in 1823 and rebuilt in

1849 with cast-iron plates lined with brick. The Monomoy Point Light was decommissioned in 1923 because the Chatham Light covered the area. Monomoy is now part of the Monomoy National Wildlife Refuge of the U.S. Fish & Wildlife Service. *Directions:* The island is accessible only by boat. The light is at the end of 5-mile-long South Monomoy Island.



Note: Some of the information included here has been drawn from Admont G. Clark, *Lighthouses of Cape Cod, Martha's Vineyard, and Nantucket: Their History and Lore* (1992); and Laurel Guadagno, *Cape Cod Lighthouses* (1994).



NPS image by Hunter Moore



## How can you help Cape Cod National Seashore as a Volunteer-in-Park (VIP)?

Volunteers bring their passion and expertise to nearly all park operations, ranging from trail work and resource protection, to leading tours of historic buildings and providing information at visitor centers. Consider the following opportunities to deepen your engagement with the national seashore.

- Staff information desks at Salt Pond and Province Lands visitor centers.
- “Adopt a trail” and prune brush along trails.
- Assist field staff in monitoring and protecting nesting shorebirds.
- Provide information to visitors viewing seals resting on sandbars at low tide.
- Orient visitors to the 1898 Old Harbor Life-Saving Station in Provincetown.
- Document seasonal changes in the natural world to build a phenological database.

*Join our dedicated team of volunteers and make Cape Cod National Seashore a better place.*

### For More Information:

Check the park's website at [www.nps.gov/caco](http://www.nps.gov/caco) and click on “Get Involved” to see a list of current volunteer opportunities.

# National Seashore and Cape Symphony Collaborate to Bring World Class Music to the Outer Cape

By Sue Moynihan, Chief, *Interpretation and Cultural Resources Management*

“...Sanctuary is what our national parks afford –  
To the grizzly bear and the roseate tern.  
To the redwood and the lady slipper.  
To the wearied souls whose eyes ache for the green of the forest, whose ears strain for the sound of the sea...” —Park Ranger Jenna Sammartino

These words, accompanied by an original musical score, and performed by 18 members of the Cape Symphony (CS), brought to a close Cape Cod National Seashore’s National Park Service (NPS) centennial celebration on August 25, 2016. The collaboration provided a foundation for future partnerships as the NPS heads into its second century and seeks innovative ways to connect visitors and neighbors with park values.

The event was underwritten by the national seashore’s education partner, Eastern National. The concert provided seashore staff the unique opportunity to collaborate with CS Artistic Director and Conductor Jung-Ho Pak on the selection of pieces to represent national park values, and composer David Cohen, who scored a new piece of music, Sanctuary, for the NPS centennial. Interpretive Ranger Jenna Sammartino penned the expressive words, spending several weeks writing and revising seven minutes of text, around which Cohen then crafted a 12-minute score. She worked closely with Pak, Cohen, and Ranger Dani Crawford, who provided a moving narration of Sammartino’s words, set to Cohen’s music. Pak maintains an East Coast-West Coast schedule, coaching Sammartino and Crawford via Skype from California. The performance of The Carnival of the Animals, a humorous suite of 14 movements by Camille Saint-Saëns, took a creative twist, becoming The Carnival of the (National Park) Animals. Saint-Saëns’ animals were exchanged for species found in national parks, and traditional Ogden Nash introductions were replaced by short poems that included bison, jumping mouse, pronghorn, trumpeter swan, reef fish, and Eastern box turtle.

With a nod to Grand Canyon National Park and its mules, the symphony performed Ferde Grofé’s On the Trail from Grand Canyon Suite. Jessie Little Doe Baird, Vice Chair of the Mashpee Wampanoag Tribe, introduced another Cohen composition, Sunrise on the National Seashore. Her evocative introduction described the Wampanoag as The People of the First Light, valuing and protecting land, water, and their inhabitants for the past 12,000 years.

The concert was held at the historic Salt Pond Amphitheater just prior to its rehabilitation. Construction was completed in May 2017, and to celebrate this revitalized venue, Cape Symphony is returning for another free concert on August 25, 2017. The national seashore’s non-profit partners, Friends of the Cape Cod National Seashore and Eastern National, plus the Lower Cape Outreach Council, will provide major funding for the free performance. The multi-media concert will reflect on the 2017 Kennedy centenary celebration—President Kennedy signed the national seashore legislation—as well as the indigenous Wampanoag people, maritime history, and the role of artists and writers in preserving natural areas.

The Cape Symphony is a highly-acclaimed, professional orchestra with deep roots on Cape Cod, possessing a strong desire to provide beautiful musical experiences to residents and visitors. The 2017 concert will connect the joy of music, words, and pictures to this magical place called Cape Cod. These concerts create opportunities for audiences to connect to parks on an emotional level. Across the country, landscape painters, photographers, composers, and musicians have given voice to the resources, stories, and values of our Nation’s most compelling places. The legacy continues through this unique musical partnership.

For the full text of Sanctuary, visit <https://www.nps.gov/caco/getinvolved/sanctuary.htm>



Josephine Del Deo and Superintendent Price, 2008

## Remembering Josephine Del Deo, 1925-2016

Josephine Del Deo is one of the heroines of Cape Cod National Seashore. As I’ve reflected on her life, her connection to her beloved Provincetown dunes, and her passions, she stands out as one of the most remarkable people I have met.

If you search the Internet for her name, you’ll see that she was an author, poet, and mother, and she was married to another amazing individual, artist Salvatore

Del Deo. If you dig a bit deeper, you’ll discover that she played a key role in the establishment of the national seashore, and in later years she helped shape our understanding of resources and she influenced policy decisions.

When the national seashore legislation was being discussed in the late 1950s, it was not a “slam dunk” proposal. There was significant opposition, misunderstanding, and uncertainty about what was being considered. The property in the Provincetown section of the seashore belonged to the Commonwealth of Massachusetts. The question was, “Should this area be carved out and be given to the town rather than the park?” As Josephine told me, the real plan of the opponents was for commercial development, not landscape preservation. Josephine and friends like Ross Moffett rallied significant support for the park proposal by forming The Emergency Committee for the Preservation of the Province Lands. Supporters outnumbered opponents. She later called inclusion of the Province Lands in the national seashore “a moment in conservation history which had brought to fruition a resolute stand on the environment.”

But Josephine did not stop there. In the 1980s, park managers decided that the isolated, man-made dune shacks in Provincetown and Truro should be leveled in favor of restoring the natural dune landscape. When the National Park Service demolished Charlie Schmid’s shack after he passed, the community was in an uproar. Josephine led the charge to designate the Dune Shacks of Peaked Hill Bars Historic District, over NPS objections. As a result, the shacks now have all of the protections of the 1966 National Historic Preservation Act. Josephine continued to be involved during the development of the 2012 Dune Shack Preservation and Use Plan to ensure the cultural significance of the dune shacks was recognized, preserved, and celebrated.

In 2008, we invited Josephine to address our entire staff during our summer kick-off training. I wondered if her presentation about her experiences helping to establish the park some 40 years earlier would resonate with our 200 employees. I need not have worried; she held everyone in the palm of her hand as she shared her personal connection with this special place. This memory stands out as a treasured moment during my tenure as superintendent.

The date of Josephine’s passing, August 25, 2016, was fitting for someone who spoke so fervently for resource preservation. Parks across the country, including the national seashore, were celebrating the centennial of the National Park Service Act, which established the National Park System. Josephine’s chosen path in life reminds us that every single person really can make a difference.

All of us who were fortunate to have met the Josephine Del Deo know that her spirit will remain in this place forever. The nation owes her special thanks.

George E. Price Jr.  
Superintendent 2005-2017



Chancel Shack in the Dune Shacks of Peaked Hill Bars Historic District



CAPE COD HEALTHCARE



## Healthy Parks, Healthy People

This is year 3 of a partnership between the national seashore and Cape Cod Healthcare focused on the benefits of the national seashore in helping people improve physical fitness and well-being. From June through August healthcare professionals are at the Salt Pond Visitor Center on weekdays from 8-11 am, helping the public set and measure their personal well-being goals, including blood pressure screenings, and providing a Passport to Health booklet for tracking fitness progress. Visit [www.capecodhealth.org/healthyparks](http://www.capecodhealth.org/healthyparks) for more information. In addition, look for the symbol in the national seashore’s seasonal activity listings for ranger programs that support physical fitness and well-being.



# Historic Buildings at Cape Cod National Seashore

## The Penniman House, 70 Fort Hill Road, Eastham



The Penniman House, completed in 1868, was styled after the French Second-Empire period. It included every known comfort of the day and many innovative ideas. The Captain Edward Penniman family enjoyed this fine home for nearly 100 years. *Directions:* Take Route 6, approximately 1 mile north of the Orleans rotary, at Fort Hill. Seasonal tours and open houses. Limited parking.

## Nauset Light, intersection of Ocean View Drive and Cable Road, Eastham



Nauset Light, moved back from the eroding bluff in 1996, remains a navigational aid. Nauset Light Preservation Society volunteers maintain the light and conduct tours on Sunday afternoons in late spring and early fall, and on Sunday, Tuesday, and Wednesday evenings in July and August. Free, donations accepted. [www.nausetlight.org](http://www.nausetlight.org). *Directions:* Take Route 6 to the traffic light at Salt Pond Visitor Center at Nauset Road and follow signs to Coast Guard and Nauset Light beaches. Park at Nauset Light Beach.

## The Three Sisters Lighthouses, Cable Road, Eastham



In 1838, three brick towers were built in a row 150 feet apart on the cliffs of what is now the Nauset Light Beach area. Known as the Three Sisters, the original brick towers fell victim to erosion in 1892 and were replaced with three movable wooden towers that are now arranged in their original configuration off Cable Road. Seasonal tours and open houses. Located ¼ mile west of Nauset Light on Cable Road. *Repairs are underway in 2017 and tours may be adjusted.*

## Atwood-Higgins House, 269 Bound Brook Island Road, Wellfleet



The Atwood-Higgins House is a fine example of a properly framed Cape Cod cottage, which grew from a half-house in the early 1700s to a full-Cape with eight rooms by the 19th century. The oldest house owned by the national seashore, it is flanked by an eclectic collection of later-vintage buildings. *Directions:* Take Route 6. Turn onto Pamet Point Road in Wellfleet at the Truro town line. Take Pamet Point Road and follow signs to Atwood-Higgins. Seasonal tours. Limited parking.

## Pamet Cranberry Bog House, 86 North Pamet Road, Truro



Originally constructed around 1830, the Bog House is located among former cranberry bogs in the Pamet Valley. It supported cranberry harvesting that occurred there until the 1960s. Views of the house can be seen from atop Bearberry Hill. *Directions:* Follow North Pamet Road in Truro, off Route 6, to its end. Limited parking.

## Highland House, 27 Highland Light Road, North Truro



The Highland House Museum is located in the historic Highland House, a former hotel built in 1907. Step back in time as artifacts, images, historical documents, exhibits, and programs explore stories of Native People, early Truro, maritime history and industry, and early tourism. Operated by the Truro Historical Society and open Mondays through Saturdays from late spring to early fall \$7 adults, \$5 for children and students age 6-17, free for under 6; \$1 discount with same-day admission to Highland Light. [www.truro-historicalsociety.org](http://www.truro-historicalsociety.org). *Directions:* Take the Cape Cod Light exit, Route 6, onto Highland Road, and follow signs.

## Highland Light, 27 Highland Light Road, North Truro



The first lighthouse on Cape Cod was erected in 1797 in Truro. The original Highland (Cape Cod) Light was eventually replaced by the current tower, built in 1857. Operated by Eastern National, the lighthouse and keeper's shop are open daily spring through fall. \$6 for adults, \$5 for student and seniors. \$1 discount with same-day admission to Highland House. [www.highlandlight-house.org](http://www.highlandlight-house.org). *Directions:* Take the Cape Cod Light exit, Route 6, onto Highland Road, and follow signs.

## Old Harbor Life-Saving Station, 191 Race Point Road, Provincetown



At Old Harbor, the National Park Service interprets the dramatic story of shipwrecks and the role of the U.S. Life-Saving Service in preventing shipwrecks and performing rescues. During the summer, re-enactments of the historical breeches-buoy drill are performed weekly. Seasonal open house. *Directions:* Take Route 6 to Race Point Road in Provincetown. Park at Race Point Beach. *Beach fee may apply.*

## Reduce, Reuse, Recycle!

### Victoria Babcock, AmeriCorps Cape Cod/National Seashore Planning Assistant

In just two seasons, our visitor center filling stations filled the equivalent of over 54,000 disposable plastic bottles! Help us make a difference— please refill your water bottle at one of our many bottle filling stations:

- Salt Pond Visitor Center: Outside at the restrooms, and inside the lobby
- Province Lands Visitor Center
- Herring Cove Beach Bathhouse
- Coast Guard Beach Bathhouse
- Highland Light Keeper's House Shop

Thank you to CARE for the Cape and Islands and Friends of the Cape Cod National Seashore for funding the purchase of the park's filling stations. Note: Salt Pond stations are available all year. Other stations are available from spring through fall.

## Do Your Part to Keep Our Beaches Clean

Cape Cod National Seashore is cutting back on waste with our beach recycling bins.

Recycling reduces our pollution and greenhouse gas emissions.

Do your part and recycle. Recycling bins are now located at all beaches.

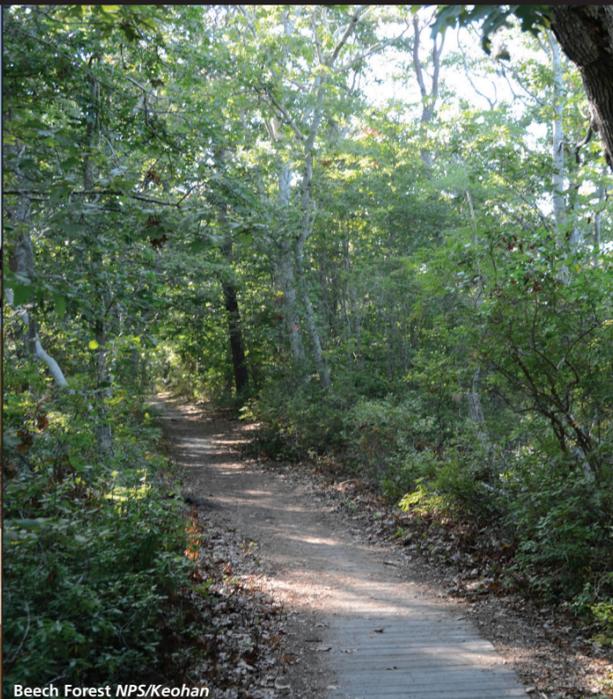


Photo by Jesse Mechling

## Self-Guiding Trails



Nauset Marsh Trail NPS



Beech Forest NPS/Keohan



Atlantic White Cedar Swamp Trail NPS/Keohan

- Self-guiding trail folders with information on specific features are available at some trailheads.
- Pets and bicycles are prohibited on self-guiding trails year round except as noted.
- Natural and archeological features are protected by federal law and must remain undisturbed.
- Taking, feeding, or harassing wildlife is prohibited.

### Fort Hill Trail, Eastham

**Length:** 1-mile loop, one hour. **Location:** 70 Fort Hill Road. Turn off Route 6 at the brown Fort Hill sign on Governor Prentice Road. Continue to the parking area on the left across from the Penniman House. The trail may also be accessed from Hemenway Landing, just north of Fort Hill on Route 6. **Features:** This loop trail crosses open fields, connects with the Red Maple Swamp Trail, and offers vistas of the Nauset Marsh area. **Conditions:** Easy; some log steps on slopes; seasonal restrooms near Hemenway Landing.

### Red Maple Swamp Trail, Eastham

**Length:** .8 miles round trip, 30 minutes. **Location:** 70 Fort Hill Road. Enter this trail from the Fort Hill Trail or Hemenway Landing, just north of Fort Hill on Route 6. **Features:** Boardwalk sections of this trail meander through the heart of the Red Maple Swamp. *Trail repairs are underway and sections will be opened as work is completed.* **Conditions:** Moderate difficulty; seasonal restrooms near Hemenway Landing.

### Buttonbush Trail, Eastham

**Length:** .3-mile loop, 15 minutes. **Location:** 50 Nauset Road, adjacent to Salt Pond Visitor Center amphitheater, off Route 6. **Features:** This trail, which includes guide rope, text in braille, and large print, involves all the senses as it winds through forest, crosses over the Buttonbush Pond on a boardwalk bridge, and traverses formerly cultivated areas. *Ask at the Salt Pond Visitor Center for a fun activity guide to take along.* **Conditions:** Easy; some log steps on the second half of trail; moderate grade; restrooms at visitor center.



kid-friendly trail

### Nauset Marsh Trail, Eastham

**Length:** 1.3-mile loop, plus spur to Coast Guard Beach, one hour. **Location:** 50 Nauset Road, adjacent to Salt Pond Visitor Center amphitheater, off Route 6. **Features:** This trail winds along the edge of Salt Pond and Nauset Marsh, crosses fields and returns to the visitor center through a recovering forest. There are

### Nauset Marsh Trail, continued

several spectacular vistas along the way. **Conditions:** Easy; some log steps; moderate grade; use caution when crossing the bike trail; restrooms at visitor center parking area. *Sections may be submerged at highest tides. Check at visitor center for conditions.*

### Doane Trail, Eastham &

**Length:** .6-mile loop, 30 minutes. **Location:** Doane picnic area, on Nauset Road, 1 mile east of Salt Pond Visitor Center (leading to Coast Guard Beach). **Features:** This paved, wheelchair-accessible trail with interpretive text winds through an emerging pine and oak forest and offers vistas of Nauset Marsh. A picnic area is adjacent to the parking area. **Conditions:** Easy; wheelchair-accessible grade (also good for strollers); seasonal restrooms. *2-hour parking limit.*

### Atlantic White Cedar Swamp Trail, Wellfleet

**Length:** 1.2-mile loop, one hour. **Location:** 195 Marconi Station Road. At stop light, turn east off Route 6 into the Marconi Station Area, South Wellfleet. Follow brown signs to the Marconi Site and White Cedar Swamp. **Features:** This trail descends through a stunted oak and pine forest into a mature woodland, leads to a boardwalk that winds through the picturesque Atlantic White Cedar Swamp, and returns via the historic "Wireless Road" (a sand road) to the starting location. **Conditions:** Moderate difficulty; some steep stairs; return route is ½ mile in soft sand; swamp portion of this trail is boardwalk; seasonal restrooms.

### Great Island Trail, Wellfleet

**Length:** 3.9 to 8.8 miles round trip (3.9 for tavern loop round trip to parking area; 8.8 for round trip to Jeremy Point overlook and including tavern loop). Allow three to five hours to explore Great Island. **Location:** Corner of Chequessett Neck and Griffin Island roads. From Route 6, follow green signs to Wellfleet Center; turn left onto East Commercial Street (follow signs to Wellfleet Harbor); continue along the shoreline from the town pier via Chequessett Neck Road to the Great Island parking area. (Keep the water view on your left after leaving Route 6.) **Features:** This trail follows sandy stretches between the elevated heights of Great Island and Great Beach Hill. Its higher elevations punctuate spectacular vistas, which emerge from an even-aged, pitch-pine forest. Part of this trail leads to a colonial-era tavern site (no remains visible). Other sections skirt salt marsh

### Great Island Trail, continued

embayments. A picnic area is adjacent to parking area. **Conditions:** Difficult; mostly soft sand; some log steps; portions are submerged at high tide; hats, sturdy footwear, and drinking water are advisable; seasonal restrooms.

**CAUTION:** Trail options can be confusing.

- Check tide table. Do not attempt to walk to Jeremy Point if the tide is rising.
- This trail does not provide direct access to the beach.
- Do not traverse dune to reach beach (enforced).
- Stay on designated trails to protect fragile resources.
- Leashed dogs are permitted along portions of the trail as indicated by signs.
- Temporary detours and closures may be in effect during shorebird nesting periods.

### Pamet Area Trails, North Truro

**Length:** .6 miles each way, plus extensions, 45 minutes. Adjacent fire roads offer additional miles for walking. **Location:** 111 North Pamet Road. Take Truro Center/Pamet Road exit off Route 6 in Truro. Proceed 1½ miles on North Pamet Road to the end. Trail begins at the parking area adjacent to the Environmental Education Center (a hostel in summer). **Features:** Spectacular views of the Pamet landscape, the Atlantic, the glacial terrain of the Pamet valley, and a former bog house. Outdoor exhibits and a folder keyed to trail markers describe the area. **Conditions:** Moderate difficulty; log steps; steep grade to overlook. No restrooms.

### Woods Walk at Highlands Center, North Truro

**Length:** 1 mile, 30 minutes. **Location:** 43 Old Dewline Road. Take Route 6 to the Highland Light exit in North Truro. Go east on Highland Road. Turn right onto South Highland Road. After .6 miles, turn left onto Old Dewline Road and go to the end. **Features:** Winding through the back woods of the emerging Highlands Center for arts, science, and education, it offers a glimpse of the Cold War past amidst forest, heathlands, and ocean bluffs. **Conditions:** Moderate difficulty; a mix of paved and unpaved roads; sections with fairly steep terrain. No restrooms. Leashed dogs permitted.

### Small's Swamp Trail, North Truro

**Length:** .6-mile loop, 30 minutes. **Location:** In North Truro, turn right off Route 6, 1.2 miles past the brown Head of the Meadow Beach sign on the right, at the Pilgrim Heights sign. Walk begins and ends at the covered picnic shelter. **Features:** Chosen by Native people for living sites for thousands of years for water, protection, and food sources, early-European settlers sought to make a living on this landscape. Gradually, the soil gave out, and farms were abandoned. The forest now hides most, but not all, of the former land uses. **Conditions:** Easy; some log steps; moderate grade; short boardwalk surface; picnic area and seasonal restrooms in adjacent parking area.

### Pilgrim Spring Trail, North Truro

**Length:** .7-mile loop, 30 minutes. **Location:** In North Truro, turn right off Route 6, 1.2 miles past the brown Head of the Meadow Beach sign on the right, at the Pilgrim Heights area sign. Walk begins at the covered shelter. Upon exiting the trail near the restrooms, proceed ahead across the parking area to your vehicle. **Features:** Path leads to a site representative of where the Pilgrims drank their first fresh water in New England. This short loop trail winds through recovering forest and passes a marker that commemorates the Pilgrims' initial exploration of the area. **Conditions:** Easy; some log steps; moderate grade; picnic area and seasonal restrooms in parking area at end of trail.

### Beech Forest Trail, Provincetown

**Length:** 1-mile loop, (pond loop ¾ mile, extension loop ¼ mile), one hour. **Location:** 36 Race Point Road. Turn right (north) at the traffic light on Route 6 onto Race Point Road. Proceed approximately ½ mile to the Beech Forest parking area on the left. **Features:** This trail provides a journey into the heart of a picturesque beech forest and offers great bird-watching opportunities. It skirts the shallow Beech Forest Pond. **Conditions:** Easy; extension loop has steep log steps; some soft sand; picnic area and seasonal restrooms at trailhead; access to Province Lands Bicycle Trail from parking area.

**Remain on designated trails to prevent damage and reduce exposure to disease-carrying insects, poison ivy, and other natural risks. Observe trail conditions and be aware of naturally occurring hazards.**



## Love the Seashore?

Join the *Friends of the Cape Cod National Seashore*

By Pat Canavan, *President, Friends of Cape Cod National Seashore*

Welcome to Cape Cod National Seashore!

This wonderful place provides opportunities for biking, for kayaking, for discovery, for relaxation. You can do nothing but watch the waves on a quiet ocean. The waves come in, and then they go out. In they come and out they go. Is there anything more relaxing?

Friends shares your love for the seashore. That love fuels us to act, guided by our mission to preserve, protect, and enhance this fragile environment and unique cultural heritage. Over the past thirty years, we have tackled projects from Fort Hill to Race Point.

Most recently, our volunteers focused on the reopening of Eastham's beloved Red Maple Swamp Trail boardwalk, closed because of serious deterioration. Donors provided over \$25,000 through our summer fundraiser and subsequent contributions. Repair work started last September and in March, the park announced an award of federal funds. You can check with the visitor center on the status of the trail. Thank you to our contributors and hardworking, creative volunteers.

While at Fort Hill, check out the Penniman House, recently repainted thanks to the Friends. Our \$100,000 contribution leveraged federal resources to breathe new life into this historic house and its surroundings.

Have you explored the Old Harbor Life-Saving Station? Friends' funds furnished this Race Point gem. This past winter, we also provided the resources needed to repair several of the buildings' windows, pounded constantly by wind and sand.

Not only do we dig into our pockets to protect precious resources, we also support summer concerts and lectures and winter programs. These entertaining and educational events provide no-cost opportunities for people of all ages to enjoy a winter afternoon or summer evening. Just show up!

Along with financial support, Friends provides hundreds of hours of volunteer time. Some members develop new initiatives and strengthen our organization. Others work within the park, recording natural events through the park's phenology program, educating visitors on seal biology, and clearing trails.

Our payback is to experience the wonder of the seashore. The wildlife, the often-hidden quiet beauty of ponds, the long stretches of uncrowded shoreline, the history, both natural and manmade, is ours to experience throughout the year. These experiences are available to you, too, through the public ownership of this wonderful place.

Special places need special friends. Please do your part to preserve and enhance this beautiful area through your membership in the Friends of the Cape Cod National Seashore. You can join through our website [fccns.org](http://fccns.org).

Have a wonderful time at the national seashore.

## PARTNERS ARE KEY TO THE NATIONAL SEASHORE'S SUCCESS

Many passionate partners support the national seashore. Our partner organizations come in all shapes and sizes. Some have membership programs for those who want to engage with the national seashore on a deeper level.



### Friends of the Cape Cod National Seashore

**(FCCNS):** Founded in 1987, Friends was established to help preserve, protect, and enhance the fragile environment and unique cultural heritage of the national seashore. FCCNS leverages existing federal support with additional private philanthropy, engaging members, donors, and visitors in the shared values of cultural appreciation, environmental stewardship, and historical preservation. FCCNS sponsors many volunteer, education, and performance-based events. [www.fccns.org](http://www.fccns.org)



### Eastern National:

Founded in 1947, Eastern National is a not-for-profit cooperating association that operates the book and gift stores in seashore visitor centers and the tours and Keeper's Shop at Highland Light. Eastern National supports the interpretive, educational, and scientific programs at many national park sites across the US. [www.easternnational.org](http://www.easternnational.org)



### CAPE COD HEALTHCARE

### Cape Cod Healthcare (CCH):

CCH supports the Healthy Parks, Healthy People program, focused on the benefits of the national seashore in helping people improve physical fitness and well-being. From June through August healthcare professionals are at the Salt Pond Visitor Center on weekdays from 8-11 am, helping the public set and measure their personal well-being goals, including blood pressure screenings, and providing a *Passport to Health* booklet for tracking fitness progress. [www.capecodhealth.org/healthyparks](http://www.capecodhealth.org/healthyparks)



### Barnstable County AmeriCorps Cape Cod:

This national service movement engages Americans of different ages and backgrounds in service to our nation's communities. Focus areas include education, literacy, public safety, the environment, and disaster response. Corps members at the national seashore support park planning and resource protection. <http://www.americorpscapedod.org/>



### Payomet Performing Arts Center:

Payomet is one of Cape Cod's leading presenters of performing arts, including professionally staged theater productions. Located at the Highlands Center in Truro, Payomet's mission is to produce exciting professional live music, circus, theatre, and humanities events rooted in strong social values. [www.payomet.org](http://www.payomet.org)



### Center for Coastal Studies (CCS):

The mission of the CCS is to understand and protect our coastal environment and marine ecosystems. Located in Provincetown, CCS collaborates with the national seashore on research projects that help park managers better understand and protect park resources. <http://coastalstudies.org/>

Look for other partners and non-profit lessees noted elsewhere in Park News and in our seasonal activity flyers. These include organizations such as the Nauset Light Preservation Society, Truro Historical Society, and Cape Cod Modern House Trust that preserve and offer tours of historic buildings, and Castle Hill Center for the Arts and other arts organizations that provide public programming. In addition, Hostelling International operates the Truro Hostel under lease to the National Park Service. [www.hiusa.org/truro](http://www.hiusa.org/truro)

## Concession Operations

There are three concession operations in Cape Cod National Seashore--the Herring Cove Snack Bar, Nauset Knoll Motor Lodge, and Highland Golf Links.



### Herring Cove Snack Bar

Herring Cove Beach, Provincetown

Operated by *Far Land at the Beach*

This food and beverage service is located at Herring Cove Beach and is open from Memorial Day through Columbus Day. It offers healthy food options. Herring Cove Beach is relatively gentle and ideal for families. View Race Point Light while you look for whales, which are common in spring. Free concerts are held here on Sunday and Wednesday nights in summer. <https://www.facebook.com/Far-Land-on-the-Beach-1592264207694243/>



### Highland Golf Links,

10 Highland Light Road, North Truro, MA 02652  
Phone 508-487-9201 Fax: 508-487-0275

Operated by *Johnson Golf Management*

One of Cape Cod's oldest golf courses, Highland Links is perched high along windswept bluffs overlooking the Atlantic Ocean. Founded in circa 1892-1898, Highland Links has seen more than one hundred years of golf. Come for golf, and also take in a tour of Highland Light and a visit to the Highland House Museum for full immersion into the site's history. <http://www.highlandlinkscapedod.com/>



### Nauset Knoll Motor Lodge

237 Beach Rd. PO Box 642, East Orleans, MA 02643  
Phone 508-255-2364

Operated by *Benz Corporation*

Nauset Knoll Motor Lodge is located on the Atlantic Ocean, in East Orleans, within Cape Cod National Seashore. Every room commands a superb view of the great beach and the ever-changing sea. Swimming, sunbathing, and fishing are at your front door. The motor lodge is open seasonally. <http://www.nausetknollmotorlodge.com/>



### Vacation Rentals Offered by the National Seashore

Looking for a place to stay on your next trip to Cape Cod? We've got you covered, from remote locations off the beaten path, to cottages with commanding ocean views and within walking distance of beaches with great surf. Superb locations and flexible booking options. Funds collected from these rentals directly support Cape Cod National Seashore.

## Local Area Information

### Chambers of Commerce:

**Cape Cod Chamber of Commerce:** 5 Patti Page Way, Centerville  
Website: [www.capecodchamber.org](http://www.capecodchamber.org) Email: [info@capecodchamber.org](mailto:info@capecodchamber.org)  
Phone: 508-362-3225

**Chatham:**  
2377 Main Street, Chatham  
[www.chathaminfo.com](http://www.chathaminfo.com)  
Email: [chamber@chathaminfo.com](mailto:chamber@chathaminfo.com)  
Phone: 800-715-5567  
Info Booth: 508-945-5199

**Wellfleet:**  
1410 State Highway, Wellfleet  
[www.wellfleetchamber.com](http://www.wellfleetchamber.com)  
Email: [info@wellfleetchamber.com](mailto:info@wellfleetchamber.com)  
Phone: 508-349-2510

**Orleans:**  
Eldridge Parkway at Route 6A,  
and 44 Main Street, Orleans  
[www.orleanscapecod.org](http://www.orleanscapecod.org)  
Email: [info@orleanscapecod.org](mailto:info@orleanscapecod.org)  
Phone: 508-255-7203  
Info Booth: 508-255-1386

**Truro:**  
State Highway at Head of the Meadow Road,  
North Truro  
[www.trurochamberofcommerce.com](http://www.trurochamberofcommerce.com)  
Email: [info@trurochamberofcommerce.com](mailto:info@trurochamberofcommerce.com)  
Phone: 508-487-1288

**Eastham:**  
4730 State Highway, Eastham  
[www.easthamchamber.com](http://www.easthamchamber.com)  
Email: [info@easthamchamber.com](mailto:info@easthamchamber.com)  
Phone: 508-240-7211  
Info Booth: 508-255-3444

**Provincetown:**  
307 Commercial Street, Provincetown  
[www.ptownchamber.com](http://www.ptownchamber.com)  
Email: [info@ptownchamber.com](mailto:info@ptownchamber.com)  
Phone: 508-487-3424

### Outer Cape Bicycle Rentals:

Arnold's, 329 Commercial Street, Provincetown	508-487-0844
Gale Force, 144 Bradford Street Ext., Provincetown	508-487-4849
Idle Times, 4550 State Highway, Eastham	508-255-8281
Idle Times, 2616 State Highway, Wellfleet	508-349-9161
Idle Times, 29 Main Street, Orleans	508-240-1122
Little Capistrano, 30 Salt Pond Road, Eastham	508-255-6515
Little Capistrano, 1446 State Highway, Wellfleet	508-349-2363
The Bike Shack, 63 Shank Painter Road, Provincetown	508-487-0232
Provincetown Bikes, 42 Bradford Street, Provincetown	508-487-8735

### Shellfishing in Eastham:

Eastham Natural Resources Office (permits) 555 Old Orchard Road	508-240-5972
--	--------------

### Whale Watching in Provincetown:

Dolphin Fleet, 307 Commercial Street #1	800-826-9300
Provincetown Whale Watches, 309 Commercial Street	508-487-1102

### Dune Tours in Provincetown:

Art's Dune Tours, 4 Standish Street, Provincetown	508-487-1950
---	--------------

### Kayak and Boat Rentals:

Goose Hummock, 15 Route 6A, Orleans	508-255-0455
Nauset Marine East, 235 Main Street, Orleans	508-255-3045
Castaways Marine, 4655 State Highway, North Eastham	508-255-7751
Jack's Boat Rental, 2616 State Highway, Wellfleet	508-349-9808
Wellfleet Marine, 25 Holbrook Avenue, Wellfleet	508-349-6417
Flyer's Boat Rental, 131 Commercial Street, Provincetown	508-487-0898
Venture Athletics Water Sports, 237 Commercial Street, Provincetown	508-487-9442
Provincetown Aquasports, 333R Commercial Street, Provincetown	508-413-9563

### Eco Tours:

Educational Adventures on the Outer Cape, Orleans and Cape Kayaking, Orleans	508-247-7402
Blue Claw Boat Tours, Orleans	508-240-5783
Great Marsh Kayak Tours, Mashpee	508-328-7064
Wellfleet Bay Wildlife Sanctuary, Wellfleet	508-349-2615
Center for Coastal Studies, MacMillan Wharf, Provincetown	508-487-3622

### Outer Cape Campgrounds, RV Parks, State Parks:

Atlantic Oaks, 3700 State Highway, Eastham	508-255-1437
Maurice's, 80 State Highway, Unit 1, Wellfleet	508-349-2029
Paine's, 180 Old Kings Highway, Wellfleet	508-349-3007
Adventure Bound Camping Resorts: North Truro Campground, 46 Highland Road, and Horton's Campground, 71 Highland Road, North Truro	508-487-1847
North of Highland, 52 Head of the Meadow Road, North Truro	508-487-1191
Coastal Acres, 76R Bayberry Avenue, Provincetown	508-487-1700
Dune's Edge, 386 State Highway, Provincetown	508-487-9815
Nickerson State Park, Brewster	508-896-3491
Truro Hostel	<a href="http://www.hiusa.org/truro">www.hiusa.org/truro</a>

Several local businesses have Commercial Use Authorizations and concession contracts to provide services in the national seashore. Visit <https://www.nps.gov/caco/getinvolved/current-authorized-services.htm> for more information.



## BECOME A FRIEND OF THE SEASHORE

Friends of the Cape Cod National Seashore, the not-for-profit fundraising partner of the seashore, is committed to the conservation and preservation of the park through volunteerism and philanthropic support. Friends lends a hand by:

- ✦ Supporting a summer season of free, fun, and educational events for the entire family;
- ✦ Promoting the interpretive, environmental, historical mission of the seashore;
- ✦ Encouraging much-needed private donations to support seashore projects and programs;
- ✦ Providing volunteers for important seashore projects such as seal education training, dune restoration, and trail maintenance.

*Love the Seashore? Join the Friends!*  
Visit us at [www.fcns.org](http://www.fcns.org) and find us on Facebook



## The Museum Stores at Cape Cod National Seashore

Remember your stay after you're home.

Visit the stores at  
Salt Pond Visitor Center  
Highland Lighthouse  
Province Lands Visitor Center



**Eastern National**  
Serving Visitors to America's National Parks and other Public Trusts

Eastern National is a private, nonprofit organization that provides quality educational products and services to park visitors. Proceeds are donated directly to Cape Cod National Seashore to support interpretive and educational programs, including the printing of this publication.

# Park and Local Area Map

## Rules of the Road

### MOTORIST WARNING

Wear your seat belt. It's the LAW. Massachusetts state law provides pedestrians the right of way in a crosswalk.

Be aware of pedestrians, bicyclists, and other park users, and share the road.

## Public Transportation

### Cape Cod Regional Transit Authority (CCRTA)

The *Flex* bus picks up and drops off passengers at designated stops and also "flexes" off its route up to 1/4 of a mile by reservation.

The *Flex* bus travels from Brewster on Route 6A, down Route 6 through the towns of Orleans, Eastham, Wellfleet, and Truro to Provincetown. It connects to the *H2O Line* at Stop & Shop, Orleans, and in the summer, to the Provincetown/North Truro Shuttle at Highland Road, Truro, and Stop & Shop in Provincetown, with Hyannis as its destination.

*Flex* also connects with the Plymouth & Brockton bus service to Boston.

Fares: \$2 one way per person for adults and youth; \$1 for 60 and older, and for people with disabilities. Day and monthly passes are available.

Website for schedules: [www.capecodtransit.org](http://www.capecodtransit.org)

*Cape Flyer* Bring your bike for FREE! Weekends from Memorial Day through Labor Day, travel comfortably by train from Boston's South Station to Hyannis. See more at [www.capeflyer.com](http://www.capeflyer.com).

### Ferry Information:

Martha's Vineyard and Nantucket

Steamship Authority [www.steamshipauthority.com](http://www.steamshipauthority.com)

Hyline Cruises [www.hylinecruises.com/](http://www.hylinecruises.com/)

Freedom Cruise Lines [www.nantucketislandferry.com](http://www.nantucketislandferry.com)

### Provincetown

Bay State Cruises [www.baystatecruisecompany.com](http://www.baystatecruisecompany.com)

Boston Harbor Cruises [www.bostonharborcruises.com/provincetown-ferry](http://www.bostonharborcruises.com/provincetown-ferry)

