

Speed Restrictions

Please refer to motor exclusion zones and shallow water cautionary zones on the map. Vessel speeds are regulated to improve safety in high traffic areas (as near marinas or passes under bridges), protect swimmers, boaters, or manatees.

Idle speed: a vessel operating in an "idle speed zone" must slow to the minimum speed that allows steering control.

Slow speed: a vessel operating in a "slow speed zone" must come down off plane and completely settle in the water. The vessel's wake must be minimal, so as not to create a hazard to other vessels.

Resume Normal Safe Operation: When exiting an "idle speed" or "slow speed" zone, boaters will see a sign that states, "Resume normal safe operation." Boaters may increase their speed to one appropriate for their vessel, the water conditions, and local traffic considerations.

Salt marshes

Salt marshes occur in the shoreline zone between high and low tide water levels. Many of Florida's marine fish, shellfish, and crustaceans spend the early part of their lives safely hiding from predators in the thick vegetation of the salt marsh nursery. The leaves of the salt marsh grasses die each year, becoming the base of the estuary food web, feeding microscopic animals. The extensive root systems of salt marshes can withstand storm surges and help protect uplands. Salt marsh plants can also trap nutrients, pollution, and sediments, keeping bay waters clearer.

To participate in restoring salt marshes, call **Tampa Bay Watch: 727/867-8166.**

Barrier Islands

These long, narrow strips of sand protect the mainland and estuaries behind them from storm impacts. Constantly reshaped by wind, waves, and tides, the sandy beaches of barrier islands are crucial nesting sites for sea turtles, Laughing Gulls, terns, Snowy and Wilson's plovers, Black Skimmers, and American Oystercatchers. Sea oats, railroad vine, and dune grasses stabilize dunes. On the back side of barrier islands, seagrasses flourish; the mud and sandflats and salt marshes host crabs, marine invertebrates, and mollusks, foraging birds, and juvenile fish. Large flocks of migrating birds depend on barrier islands' beaches and mudflats for critical foraging stopover sites, havens where these long-distance travelers can rest and replenish energy stores.



Three Rooker Island, left, © John Landon. Mangroves, right, host a White Ibis rookery on Three Rooker Island. © Jim Gray.

Resources

Emergency: 911
NOAA Weather Service Broadcast
 24-hour weather and marine forecast:
813/645-2506, www.srh.noaa.gov/tbw.
 Radio: **162.450 KZVHF**

U.S. Coast Guard
www.uscg.mil, Pinellas/St. Petersburg:
727/824-7506, Clearwater Beach/Sand
 Key Station: **727/596-8666**. National
 Pollution Response Center: **800/424-
 8802**, U.S. Coast Guard Auxiliary:
877/875-6296, offers boater training,
 education, safety classes.

The Coast Guard Marine Safety and Security Task Force asks boaters to stay well away from all commercial vessels and facilities, including power plants, to increase public safety and reduce the threat of terrorist attacks. To report suspicious activities, call **911 or VHF Channel 16**. Information: **727/824-7531**.

U.S. Fish and Wildlife Service
www.fws.gov, National Manatee and Sea Turtle Coordinator: **904-731-3328**.

National Marine Fisheries Service
www.nmfs.noaa.gov, Hot line: **800/853-1964**. Whales, dolphins, sea turtles injury, harassment, or abandonment, regulations for protection. Local Protected Resources line: **727/824-5312** or **727/824-5301**.

Florida Fish and Wildlife Conservation Commission
www.myfwc.com. To report oil spills, marine violations, boating accidents, and manatee or dolphin injuries of strandings: **888/404-3922**. For fish and wildlife questions, general information, hunting and fishing licenses: **863/648-3200** or **888-347-4356**.

Fish and Wildlife Research Institute
www.myfwc.com/research. Fisheries monitoring & biology, stock assessment, coral reefs, marine habitats restoration, algae/red tide blooms, marine mammals, marine turtles, technical support for marine catastrophes: **727/896-8626**. To report fish kills: **800/636-0511**.

Department of Environmental Protection
www.dep.state.fl.us. Oil spills, environmental regulation questions: **813/632-7600**.

State Warning Point, Department of Community Affairs, Division of Emergency Management
www.dep.state.fl.us/southeast/emergency/emeresponsemain.htm. Oil spills, major environmental emergencies: **800/320-0519**.

Tampa Bay Aquatic Preserves
www.dep.state.fl.us/coastal/programs/aquatic.htm. Manages Pinellas County Aquatic Preserves including aquatic resources in Pinellas County and the state-owned islands: **850/245-2094**.

Florida State Parks, Florida Division of Recreation and Parks
www.floridastateparks.org, Caladesi Island State Park, Honeymoon Island State Park, Three Rooker Island, Anclote Key, and Anclote Bar: **727/469-5942**, Caladesi Connection, Honeymoon/Caladesi Island Ferry: **727/734-5263**.

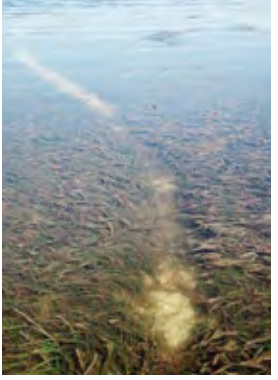
Southwest Florida Water Management District
www.swfwmd.state.fl.us. Surface Water Improvement and Management Program: Habitat restoration and water quality improvement projects: **800/836-0797** or **813/985-7481**.

Pinellas County
www.pinellascounty.org. Planning Department: **727/464-8200**, Parks Department: **727/582-2100**. Environmental Management: Environmental issues, complaints, habitat restoration and preservation: **727/464-4761**. Coastal Coordinator: **727/453-3385**. Public Works, navigational markers: **727/464-4425**. Sheriff's Office: Non-emergency **727/582-6200**, Marine Unit: **727/518-3434**.

Tampa Bay Regional Planning Council, Agency on Bay Management
www.tbrc.org/abm. Regional agencies coordinate development and bay protection activities: **727/570-5151 ext. 32**.

Seagrasses

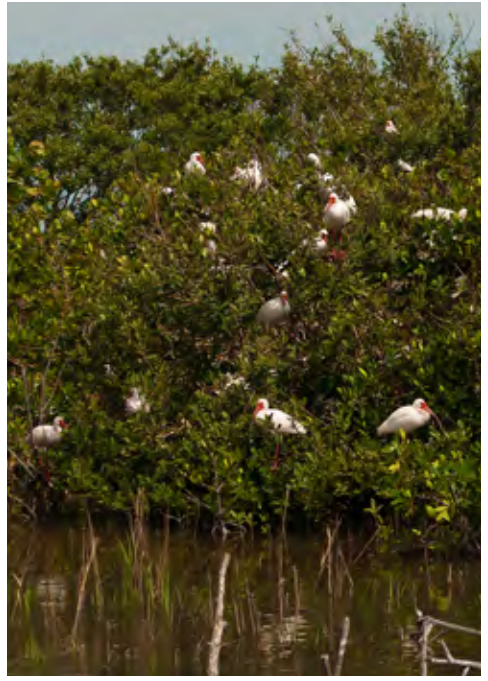
Seagrasses are underwater flowering plants that use strong roots to anchor themselves to shallow bay bottoms. Like land plants, seagrasses use photosynthesis to make energy from sunlight. Seagrasses provide critically important food and habitat for many animals, including manatees, turtles, seahorses, sea trout, redfish, tarpon, and shrimp. Seagrasses trap sediment, cleaning the water, and dampen waves near shorelines, reducing erosion. Densely growing, healthy seagrass beds carpet large portions of Clearwater Harbor and St. Joseph Sound. Please note motor exclusion zones and shallow water caution areas on the map. Most of our seagrass beds occur in shallow waters, 3-6 feet deep; at low tides, these areas are very vulnerable to prop-scars—damage caused by boat motors plowing deep furrows through grass in shallow water.



Prop-scar © Carol Cassels.

Mangroves

Mangroves are trees that thrive in the salty intertidal zones of sheltered tropical islands and estuaries. These trees' special adaptations, including salt-excreting leaves and roots that can block salt, allow them to live in salty water where other plants cannot survive. Mangrove shorelines and forests are vital for healthy coastal ecosystems. The fallen leaves and branches provide nutrients for the intricate food web of the estuary. Mangroves offer refuge and nursery grounds for juvenile fish, crabs, shrimps, and mollusks, plus a nesting substrate for wading birds, Brown Pelicans, and cormorants. Mangroves slow wave action, protecting shorelines from erosion and storm damage. The International Ramsar Convention on Wetlands has identified mangrove forests as one of the most threatened habitats worldwide, with widespread losses in Thailand, the Philippines, Ecuador, and Vietnam. The Clearwater Harbor and St. Joseph Sound area has lost substantial areas of coastal mangrove and salt marsh wetlands to development, dredging of channels, and creation of waterfront lots with deep water access. Still some shorelines and islands in Clearwater Harbor and St. Joseph Sound host vigorous, healthy mangrove shorelines.



White Ibis rookery on Three Rooker Island. © Jim Gray.



This guide is produced by Audubon of Florida. For copies, contact Clearwater Audubon Society or Audubon's Florida Coastal Islands Sanctuaries.

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This guide is not intended for navigational use. For local navigation, see NOAA Chart 11411.



Boater's Guide to Clearwater Harbor & St. Joseph Sound including Three Rooker Island, the Anclote Keys and Anclote Bar

A Black Skimmer and chick. Photo © Jim Gray.

Clearwater Harbor and St. Joseph Sound are located on the north and west side of the Pinellas Peninsula, north of "the Narrows" which connects the Intracoastal Waterway to Boca Ciega Bay, inside of the barrier islands of Sand Key (Indian Rocks Beach and Belleair Beach), Clearwater Beach, Caladesi Island, Honeymoon Island, and Three Rooker Island, with Anclote Key and its bars as the northern boundary, and bordered on the east side by the communities of Harbor Bluffs, Belleair, Clearwater, Dunedin, and Ozone. Key biological sites and other areas of special interest are described below.

Areas of Special Interest

Caladesi Island, Honeymoon Island, Three Rooker Island, Anclote Key, and Anclote Bar are eastern Gulf of Mexico natural sand barrier islands managed collectively by the Florida Division of Recreation and Parks as the Gulf Islands GEOPark (727/469-5942), a Florida State Park.

Anclote Bar State Preserve is a sandbar located north of Anclote Key. Rising just above sea level, the beaches of Anclote Bar are appreciated by boating visitors. Middle portions of the bar have emerged high enough that they are not washed over by most tides and are vegetated with sparse coastal dune plants. These areas have become important nesting sites for some of Florida's rarest ground-nesting species, Least Terns, Snowy and Wilson's plovers, Willets, and American Oystercatchers nest on higher sections of Anclote Bar in the spring and summer. Posted areas help island visitors avoid impacting nesting birds. Camping, picnicking and leashed dogs are allowed on the south end of the island.

Anclote Key State Preserve is located in the Gulf of Mexico three miles west of Tarpon Springs. It consists of several barrier islands, totaling about 440 acres. The state acquired the key in 1960 through a trade with the United States government for state-owned in-holdings in the Ding Darling National Wildlife Refuge. Three Rooker Island to the south was added to the preserve in 1988 and the Anclote Key Lighthouse, built in 1887, was added to Florida from the United States in 1996. Beaches, beach dunes, coastal strand (Florida privet, cabbage palm, beach elder, poison ivy, saffron plum, necklace pod, and strangler fig), maritime hammocks (cabbage palm, southern red cedar, Spanish stopper, poison ivy, snowberry, wax myrtle, and marlberry), mesic flatwoods (slash pines with a wax myrtle and tropical shrubs understory), and mangrove-lined shores on the east side are important habitats on Anclote Key. Healthy seagrass beds flourish east of Anclote Key. Gray Kingbirds and Prairie Warblers nest in the mangrove forests. Ospreys, Great Horned Owls, and a pair of Bald Eagles nest in the tall, sturdy slash pines. American Oystercatchers and occasionally loggerhead turtles nest on the beaches.

Three Rooker Island State Preserve, located in the Gulf of Mexico south of Anclote Key and north of Honeymoon Island, ranks among Florida's most important bird areas (IBAs) for its seabird nesting and shorebird wintering habitats and is listed as globally significant by BirdLife International and the National Audubon Society. Regularly resculpted by storms, wind, tides, and waves, this barrier island hosts large colonies of ground-nesting birds, including Laughing Gulls, Caspian, Royal, Sandwich, and Least terns, Black Skimmers, Snowy and Wilson's plovers, Willets, and American Oystercatchers. In a small grove of cabbage palms and mangroves, Great, Snowy, and Reddish egrets, Tricolored Herons, Black-crowned Night-Herons, and White Ibis nest. Three Rooker Island is the most northern nesting site along the Florida coast known for Reddish Egrets, the rarest heron in North America. The island also hosts spectacular flocks of wintering and migrating birds, including rare Piping Plovers, Roseate Spoonbills, five tern species, Red Knots, Dunlin, Short-billed Dowitchers, Black-bellied, Wilson's, Snowy, and Semipalmated plovers, sandpipers, and Sanderlings. Posted bird-nesting areas help island visitors avoid injuring the vulnerable nests and chicks. Three Rooker Island is off-limits to dogs year-round.

Honeymoon Island State Park is a spectacular link in the chain of barrier islands located north of Clearwater Beach. Separated from Caladesi Island by a hurricane in 1921, and operated as a honeymoon resort, the island

was connected to the mainland near Dunedin by a causeway in 1964. Its 385 upland and 2,400 submerged acres were acquired as a state park in 1974. Habitats include sand dunes, salt marshes, mangrove swamps, and tidal flats. Ospreys (as many as 50 pairs) and Great Horned Owls nest in the slash pine hammock near the north end of the Osprey Trail area. Gopher tortoises and Eastern indigo snakes (both listed species) occur there. Healthy seagrass beds and a motor exclusion zone to protect them are located on the east side of the island. Honeymoon Island is internationally known for hosting large migrating and wintering flocks of many species of birds. Facilities include a visitors' center, nature trails, bath house and restrooms, picnic tables and shelters, a pet-walk beach area, snack bar, and the ferry to Caladesi Island.

Caladesi Island State Park, located south of Honeymoon Island, another of the exquisite barrier islands of the Gulf Islands GEOPark, exhibits beach dunes bordering the Gulf of Mexico, handsome mangrove shorelines facing the Intracoastal Waterway, and coastal strand, maritime hammock, mesic flatwoods, and salt marshes. Donated to the state by the City of Dunedin, the park includes 1,474 acres. Cultural remains include a burial shell mound of the Tocobago culture and the Scharrer Homestead ruins. Management includes a 400-foot zone buffer bordering the island. A motor exclusion zone (includes jet skis) on the east side of Caladesi Island was established in 1994 to protect seagrasses (see map). Caladesi Island was selected as America's best beach in 2008 and has a 3-mile nature trail and a 3-mile kayak trail. Mudflats to the north host large numbers of migrating and wintering shorebirds. Gopher tortoises, ancient turtles state-listed as "species of special concern," dig tunnels and eat grass on the island. Moonshine, Malone, and Core islands are part of Caladesi Island State Park. Access is by boat or a ferry from Honeymoon Island (727/734-5263). A small marina, gift shop, and overnight docking are located at the north end.

The Pinellas Aquatic Preserve Islands are state-owned and managed by the Department of Environmental Protection (DEP). These islands include those located along the Intracoastal Waterway in St. Joseph Sound and Clearwater Harbor (see map). Some host bird nesting colonies and are posted and co-managed by Audubon's Florida Coastal Islands Sanctuaries. The bird colony islands include Marker 26, located north of the Ozone Channel. Birds that nest on Marker 26 include Double-crested Cormorant, Great Blue Heron, Great Egret, Reddish Egret, all the small herons, White Ibis, and American Oystercatcher. Marker 26 is the largest wading bird nesting colony between Dunedin and Cedar Key. It is posted off-limits year-round. Bird colonies occur on Ozone Spoil East. Smith Bayou North, and Pope Channel Island. The other islands of the Pinellas Aquatic Preserve

This guide invites you to explore the spectacular boaters' destinations, special habitats and high quality natural history resources of Clearwater Harbor and St. Joseph Sound. Through it, we hope to inform boaters, tourists, residents, and members of the public about these sites and the living natural resources that rely upon them, and to enlist your help in their protection. This guide includes information on areas of critical importance for birds and other wildlife, habitat protection strategies, wildlife protection guidelines for dolphins, manatees, sea turtles, and fish, and a resources section with contact information.

are mixed-use islands, open to the public for picnicking, swimming, and nature enjoyment. DEP staff and volunteers work to replace non-native invasive plants with native coastal vegetation.

A large "boiling spring" is located in St. Joseph Sound in the expansive seagrass meadow west of Seaside Point, south of Crystal Beach. At low tide, the spring water can be seen bubbling above the seawater.

Home Port Marina, a "Clean Marina" on the southeast part of St. Joseph Sound at 135 Orange Street, Palm Harbor, offers high & dry boat storage, wet slips, fuel, a ship store, and the Ozone Bay Gulfside Grill (727/784-1443).

Dunedin Sand Key West Bird Island is owned by Pinellas County and posted and co-managed by Audubon's Florida Coastal Islands Sanctuaries. This small sandy island is located south of the Dunedin Causeway and east of the Intracoastal Waterway. Nesting species include Brown Pelican, Double-crested Cormorant, Great Blue Heron, Great, Snowy, and Reddish egrets, the small herons, and American Oystercatcher.

The Clearwater Harbor I-25 Bird Colony is the largest wading bird colony in the Clearwater Harbor/St. Joseph Sound estuary and one of the largest in Pinellas County. Located south of the Memorial Causeway and east of the



I-25 Bird Colony by Libby Carmahan

Clearwater Beach Marina, this mangrove island is surrounded by extensive grassflats exposed during low tides, offering foraging for wading and shore birds. Owned by the City of Clearwater and co-managed by

Audubon's Florida Coastal Islands Sanctuaries, I-25 hosts nesting Brown Pelicans, Great Blue Herons, Great Egrets, Reddish Egrets, all the small herons, White Ibis, Willets, Roseate Spoonbills and American Oystercatchers. A strategically placed rock wave-break on the south side protects the island from erosion.

Clearwater Beach is listed among the world's "best beaches." A famous tourist mecca, the beach community has hotels, restaurants, beach facilities, and parking for thousands of beach-goers. A marina offers docking facilities, restaurants, day and evening cruises, deep-sea fishing boats, and fuel (727/462-6954). The Clearwater Marine Aquarium offers marine wildlife and habitat educational exhibits.

Sand Key has a full-facility County Beach Park, as well as first-class hotels catering to international tourists. Loggerhead turtles nest occasionally on the beach here, as well as a large colony of Black Skimmers. Posted areas help beach-goers avoid disturbance to nesting skimmers and turtles.

The Belleair Beach Bird Colony includes two mangrove islands nestled in a healthy seagrass meadow south of the Belleair Causeway. Posted by the City of Belleair Beach, the colony islands host nesting cormorants, Brown Pelicans, Great Blue Herons, Great Egrets, all the small herons, White Ibis, Roseate Spoonbills, Willets, and American Oystercatchers. The Indian Rocks Beach Bird Colony, surrounded by residential waterfront homes, hosts nesting Brown Pelicans, Great Blue Herons, Great Egrets, small herons, and oystercatchers. The smaller Indian Rocks Beach South Colony, located west of the Intracoastal Waterway above the Narrows, hosts nesting Great Blue Herons, small herons, American Oystercatchers, and Gray Kingbirds.

Birds of the Bay

Pelicans, herons, ibis, spoonbills, gulls, terns, and skimmers that nest in groups (called colonies) are among the most visible, beautiful, and popular wildlife species in Florida. The breeding population in Pinellas County and Tampa Bay, including Clearwater Harbor and St. Joseph Sound, totals 40,000-50,000 nesting pairs annually of 29 species. This is one of the largest bird populations in Florida, outside of the Everglades. Important nesting sites include Clearwater Harbor I-25, the Belleair Beach Bird Colony Islands, Marker 26, Dunedin Sand Key West, Three Rooker Island, and Anclote Bar.

American Oystercatcher

With less than 400 pairs in Florida, American Oystercatchers are one of our rarest birds. A large black and white sandpiper-like bird with a giant red/orange bill, oystercatchers nest in shallow scrapes just above the high tide line on beaches. If disturbed, these flamboyantly colored adults walk away from their nests, counting on camouflaged eggshells to protect their young. Unshaded on the hot sand, the embryos will quickly overheat and die in the hot late spring/early summer sun. Please give them a wide berth if encountered between early April and late July.



Left: American Oystercatcher family. © Jim Gray. Above: Oystercatcher eggs in the nest. © Rich Paul.

Bird Nesting

People and dogs on nesting islands create problems for nesting birds. They may cause the parent birds to leave their nests. Fish crows or other birds will eat unprotected eggs or young. Visitors may accidentally step on well-camouflaged eggs in ground nests. In the summer sun, embryos in the eggs and young chicks overheat quickly, dying in about 20 minutes if parent birds cannot shade them. Dogs running through a colony cause chicks to flee, getting trampled or separated from their parents. In the mix-up, other birds may injure or kill a young bird looking for its parent. A brief visit for boaters can destroy an entire year's nesting effort for a whole colony of birds.

Indian Rocks Beach Bird Colony, Belleair Beach Bird Colony, Clearwater I-25 Bird Colony, Marker 26, Dunedin Sand Key West, and portions of Honeymoon Island, Three Rooker Island, and Anclote Bar are posted bird sanctuaries and are off limits to people and dogs all year. Honeymoon Island State Park has a pet beach for use by people and their pets.

Please protect nesting birds.

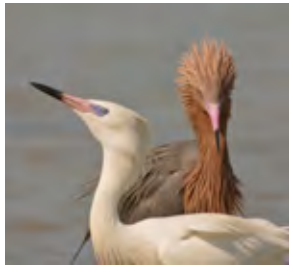
- ♦ Comply with signs and posted areas on nesting islands. Stay offshore or walk around nesting areas.
- ♦ Never let dogs run through nesting birds. Birds know dogs are effective predators and are highly disturbed by them.
- ♦ Between April and August, gulls, terns, and skimmers may nest on unmarked sites. If you notice birds circling and calling over your head, you may be in a nesting colony. Leave quietly, and enjoy the spectacle of the colony from a distance.
- ♦ Birds resting and feeding on sandbars and mudflats should not be disturbed. Migrating birds depend on the area's resources to provide a nourishing and restful stop-over. Disturbance of birds on sandbars can interfere with feeding and resting behavior, reducing weight gain and the endurance needed for long-distance flights.



Laughing Gulls nesting (left) and flying (right). © Jim Gray.

Laughing Gull

Laughing Gulls form large nesting colonies in dune grasses on islands, notably Three Rooker Island. Over 80% of all the Laughing Gulls in Florida nest in three colonies in the Tampa Bay/Pinellas region.



Left: Reddish Egret coming in for a landing. Above: Two Reddish Egrets, white morph & dark morph. © Jim Gray.

Reddish Egret

The rarest heron in North America, the Reddish Egret has a shaggy head and neck feathers and mating plumes that stretch past its tail. Its bill is pink, with a black tip. Most are rusty-headed, blue-gray bodied animals, but a small proportion of Reddish Egrets are all-white birds. Hunted to near extinction for their breeding plume feathers, this species is making a slow recovery (only about 400 pairs in Florida). Small numbers of Reddish Egrets nest at Clearwater Harbor I-25, Marker 26, and Three Rooker Island, the most northern site for nesting of this species known along the Florida Gulf coast. They can often be seen foraging actively on the shallow flats at Caladesi Island, Honeymoon Island, Three Rooker Island, and Anclote Key.

White Ibis

A white wading bird with black-tipped wings, bright red legs, and a red bill which curves distinctly downward. White Ibis nest at Clearwater Harbor I-25 Bird Colony Island and Three Rooker Island State Preserve in mangrove trees. The number of White Ibis in Florida has decreased 80% since the 1940s due to freshwater wetlands destruction. White Ibis is a state-listed "species of special concern."



Adult Snowy Plover and two chicks. © Lou Neuman.

Snowy Plover

Tiny relatives of Killdeer, Snowy Plovers are very rare in Florida, with only 50 pairs along the peninsular Gulf coast. Snowy Plovers are sand-colored, and use camouflage to hide nests and tiny chicks. They nest in the white sand in late spring and forage for tiny flies and insects on mud and sand flats.



Brown Pelican

An expert fisherman and one of Florida's most recognizable birds, the Brown Pelican dives powerfully into the water to scoop unwary fish into its expandable pouched bill. Pelicans nest on Clearwater Harbor I-25, the Belleair Beach Bird Colony islands, and the Dunedin Sand Key West Bird Colony Island. Chicks hatch out naked with gray skin but quickly grow white downy feathers. They reach adulthood at three to four years of age.



Royal Terns nesting on the beach at Three Rooker Island. Photo © Jim Gray.

Like all estuaries, Clearwater Harbor and St. Joseph Sound are places where freshwater and saltwater mix. This dynamic system experiences constantly changing tides, water levels, salinity, and water temperatures. Special adaptations of the plants and animals that live here help them survive in this demanding ecosystem. More than 95% of Florida's recreationally and commercially important fish, crustaceans, and shellfish live in estuaries, including Clearwater Harbor and St. Joseph Sound. The shallow waters, salt marshes, mangroves, and seagrasses provide places for young sea-life to hide from larger predators. Estuaries, the "nurseries of the sea," are among the most productive landscapes in the world. Rivers and streams drain into them, bringing nutrients and sediments that foster growth by salt marsh plants, mangroves, and seagrasses. These plants' leaves become food for billions of microscopic small animals, beginning the food web. Snorklers will be pleased to find soft and hard corals in St. Joseph Sound.

The bird and other animal diversity is singularly high as Clearwater Harbor and St. Joseph Sound are located between more tropical regions of the Caribbean and the rest of the North American continent and is on the Atlantic Flyway. Birds generally associated with tropical regions such as Roseate Spoonbills, Reddish Egrets, and Gray Kingbirds nest here, as do Caspian, Royal, Sandwich, and Least Terns and the very rare Snowy Plovers and American Oystercatchers. Migrating and wintering birds such as Red Knots, Piping Plovers, and other shorebirds, Common Loons, and rafts of ducks rely on habitats here. Hawks and falcons travel following migrating birds in spring and fall. The woods and hammocks of Caladesi and Honeymoon Islands, and Anclote Key are critical stop-overs for migratory warblers and other songbirds. In the spring, tarpon roll in balls over the grassflats.

Fishing Line: Wildlife Killer

Fishing line and other trash that tangles around birds, manatees, fish, turtles, and other wildlife is a real problem in the environment. Carelessly discarded fishing line can become a persistent killer, snagging animal after hapless animal, dooming them to a remorseless death. Hundreds of birds die each year from entanglement in fishing line. Sea turtles and manatees, as well as fish, are also killed.

What can we do?

- ♦ Properly dispose of fishing line, nets, and other line that could entangle wildlife.
- ♦ Collect fishing line if you see it in the harbor or sound, and dispose of it properly.
- ♦ If you are fishing, and you catch a bird by accident, reel it in carefully. Remove the fishing line as gently as possible. Note: the bird will try to "defend" itself against you. Wear sunglasses to protect your eyes. Cover the bird's head with a cloth or towel to calm it. Hold the wings and legs firmly and put your hat or other object in the bird's beak so it will bite that and not your hand. Cut the bars on any hooks, and remove them from the bird; untangle any line. Once the line is removed, hold the bird so that its head points away from you, then release it.
- ♦ If a bird is too sick for release, take it to the Suncoast Seabird Sanctuary on Indian Rocks Beach (727/391-6211).
- ♦ Participate in the Annual Monofilament Cleanup of Colonial Waterbird Colonies, held each fall when birds are not nesting. Call Audubon (813/623-6826) or Tampa Bay Watch (727/867-8166) for information.



Above: Roseate Spoonbill killed by becoming ensnared in fishing line. © Mark Rachal.

Below: Young pelican snagged by a fishing hook & line. © Jim Gray.



Black Skimmer

Only 2,000 pairs of Black Skimmers, a state-listed species of special concern, nest in Florida. Colonies on Sand Key beaches near the hotels and condominiums, Three Rooker Island, and Anclote Bar account for about 20% of the state's population.

Skimmers nest on sandy beaches just above the high tide line. These colonies are very vulnerable to being washed out by high tides and storms. Human disturbance, forcing adults off nests which leaves eggs to cook on the hot sand, is another major cause of nest failure.



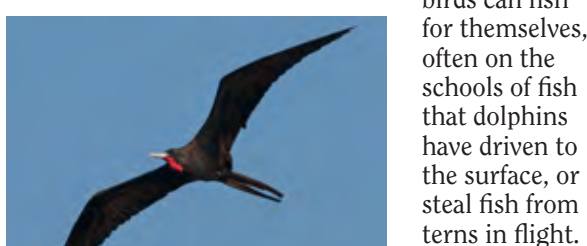
Black Skimmer nests are simple shallow scrapes in sand or shell on the beach. Skimmer eggs, above. © Bonnie Shea, Etcetera Photography.

Skimmers get their name from their distinctive foraging behavior (above left).

Photo of Magnificent Frigatebird, left, and both photos of Black Skimmers, above left, © Jim Gray.

Magnificent Frigatebird

Once their winter nesting season in the Dry Tortugas has ended, Magnificent Frigatebirds visit Clearwater Harbor and St. Joseph Sound.



Audubon staff joined Tampa Bay Watch volunteers in removing derelict crab traps. Photo © Jim Gray.

Volunteers: Making it Better

Volunteers can participate in a variety of activities to help conserve fish, wildlife, and other natural resources of Clearwater Harbor and St. Joseph Sound. Audubon's Florida Coastal Islands Sanctuaries and Tampa Bay Watch join forces each fall to coordinate the Annual Monofilament Cleanup, to remove fishing line and other trash from bird nesting islands and habitats that might ensnare and kill birds, fish, dolphins, turtles, and other wildlife. In summer, Tampa Bay Watch coordinates a Derelict Crab Trap Removal Day, during the short closure of all crab fishing by the Florida Fish and Wildlife Conservation Commission. During that period, all crab traps in the estuary are considered abandoned, and volunteers can participate in the Derelict Crab Trap Removal to collect unattended "ghost" traps that indiscriminately kill crabs, fish, and turtles. Coastal Cleanup events held in spring and fall are coordinated by Keep Pinellas County Beautiful.

See the Resources section for contact information to participate in these volunteer efforts.



© Lou Neuman.

Least Tern

The smallest tern in North America, this threatened species nests on sandy, unvegetated or sparsely vegetated barrier island beaches. As so many of these beaches in Pinellas County and on Florida's coastline are developed, some Least Terns nest on gravel rooftops too. Pinellas County has about 30 colonies on rooftops, more than any other county in Florida.

To report unposted beach colonies, call the Florida Fish and Wildlife Conservation Commission 863/648-3200; to report rooftop colonies, call St. Petersburg Audubon Society 727/753-9731.



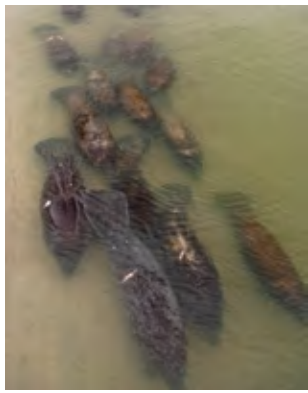
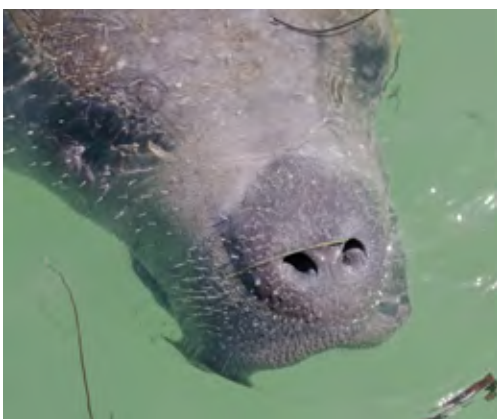
Gregory Breese/USFWS

Red Knot

Red Knots nest on the Arctic tundra and upland glacial gravel. This gregarious species forms dense and spectacular feeding and roosting flocks, stopping at only a few sites, including Three Rooker Island and Honeymoon Island, as they travel from the Arctic Circle to over-winter in Argentinian Knots often fly long distances between staging posts. The knot above, photographed on the Delaware Bay shoreline, may have stopped at Three Rooker Island for a brief rest on its long flight.

Manatees

The West Indian Manatee is a large, grayish brown aquatic mammal, with a tube-shaped body and a flat, rounded tail. Its head has a blunt snout with prominent nostrils and a few coarse whiskers. Manatees are an endangered species, protected by state and federal laws. Manatees are commonly seen in Clearwater Harbor and St. Joseph Sound, so boaters should be alert for their presence here. Grassflats are important feeding sites for these vegetarians. Manatees seek areas with a combination of seagrass patches, quiet areas, and sites with deep "holes" for safe retreats where they can avoid boat collisions.



Manatee photos © Jim Gray.

Because manatees feed in shallow water on seagrasses, and swim near the surface (these mammals breathe air and surface regularly to inhale), most manatees in Florida have been hit by boat propellers and have scars on their thick skin. Manatees are susceptible to cold and may die if stranded in cold water in the winter. When bay temperatures drop in the fall and winter, manatees in the Tampa Bay area rely on the warm-water discharged from power plants or springs. They leave these warm-water sites during the day to forage. Collision with boats is a major cause of death for manatees in Florida. Please note special manatee speed zones on the map.

Dolphins

Bottle-nosed dolphins are large, intelligent, active aquatic mammals with sleek, gray-brown bodies, a large dorsal fin, and a distinctive, rounded snout. Family groups can be found year-round in Clearwater Harbor and St. Joseph Sound. Scientists use photo-identification of distinctive marks on dolphins to study animals in Sarasota and Tampa bays. Apparently dolphins use "home" regions of bays during their entire lifetimes. Other species of dolphins and whales that use the Gulf of Mexico and rarely venture into waters near Clearwater Harbor and St. Joseph Sound include spotted, striped, rough-toothed, spinner, Risso's, and Fraser's dolphins and sperm, dwarf sperm, pygmy sperm, and Bryde's whales.

Keep our estuary and gulf clean:

- ♦ Dispose of yard waste properly, don't over-fertilize lawns and plants, and don't pour oil or other poisons into gutters or waterways leading to the bay.
- ♦ Dispose of human waste at marina pump-out stations.



Hatchling sea turtles, race for the safety of Gulf waters. Females will return years later to nest on the very same beach where they hatched. Photo © Blair Witherington.

Sea Turtles

Sea turtles are air-breathing reptiles well-suited to life at sea. Essentially unchanged for 110 million years, their hydrodynamic shapes and powerful front flippers allow them to swim long distances. Once male turtles reach the water as tiny hatchlings, they never return to shore. Females clamper up on Florida's beaches in the summer to lay about 100 eggs in sandy pits dug with their back flippers. After about two months of incubation, 2-inch hatchlings emerge from the sand all at once, usually at night, and scramble frantically for the relative safety of the seawater. Sea turtles can remain underwater for hours while resting or sleeping; while active, they typically surface several times each hour to breathe. Turtles have no teeth but crush, bite, and tear their food with powerful jaws. Mortality factors include boat collisions (causing 50% of deaths), entanglement in fishing line and other line, incidental catch in nets, and disease. Scientists believe that local marine turtle populations were once robust; turtles were overharvested for food, resulting in great population losses by the end of the 1890s.

Green turtles, a federally listed endangered species, are more streamlined than bulky loggerheads, but larger, weighing up to 350 pounds with a back shell length of 42 inches. Not green, this olive-brown turtle with a yellow belly shell eats seagrass in shallow water meadows and algae. Green turtles often suffer from a virus causing tumor growth, which is sometimes fatal. Biologists suspect that water pollution makes turtles more susceptible to the virus.

Loggerheads nest on the beaches of the Pinellas coast and Anclote Key. These are large sea turtles, weighing as much as 275 pounds, with shells 3 feet long. Loggerheads eat clams, crabs, whelks, and other mollusks and animals. Loggerheads are federally listed as threatened and can be found year-round in Clearwater Harbor and St. Joseph Sound.



Loggerhead © Blair Witherington.



Sanderlings © Jim Gray.

Shorebirds

Shorebirds visit the beaches, mudflats, and sandbars of Clearwater Harbor and St. Joseph Sound in large numbers during migration and winter. Long-distance migrants that nest as far north as the Arctic Circle tundra, shorebirds stop here to refuel energy reserves for their southward journey. Key stopover places include Anclote Bar, Anclote Key, Three Rooker Island, Honeymoon Island, Caladesi Island, and Pinellas County beaches. Repeated disturbance of resting and feeding shorebirds may inhibit their ability to successfully complete these incredible journeys; please leave these marathons in peace.



© Jim Gray.

Long-billed Curlew

Fairly rare winter visitors to Florida, these large shorebirds boast an extraordinarily long downward curving beak, useful for probing deep into sand and mud to catch worms and invertebrates. In winter months one or two may be observed on north Honeymoon or Three Rooker Islands.

Help protect manatees:

- ♦ Look out for manatees, especially in shallow water. Watch for "swirls" or "glassy" areas on the water, and the backs, tails, and snouts of manatees at the surface.
- ♦ Wear polarized sunglasses that cut the glare, increasing visibility beneath the water's surface.
- ♦ Stay within marked channels to avoid shallow waters where manatees feed and rest.
- ♦ Follow posted speed zones and sanctuary signs.
- ♦ Go slowly in shallow water or over seagrasses.
- ♦ Dispose of trash properly, especially fishing line, gear, ropes and plastics, that can entangle manatees and injure them. Manatees can mistake floating plastic for seagrass and eat it accidentally.
- ♦ Don't feed manatees. A natural diet is best for them.
- ♦ Report dead or injured manatees to the Florida Fish and Wildlife Marine Unit: 888/404-3922 (Mobile phone: *FWC) or Fish and Wildlife Research Institute: 727/896-8626 (www.myfwc.com/research)

PLEASE: Do not chase or approach manatees; let these curious and friendly creatures come to you. Be gentle with these wild animals.