

Rookery Bay National Estuarine Research Reserve

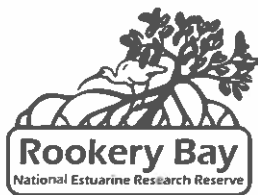
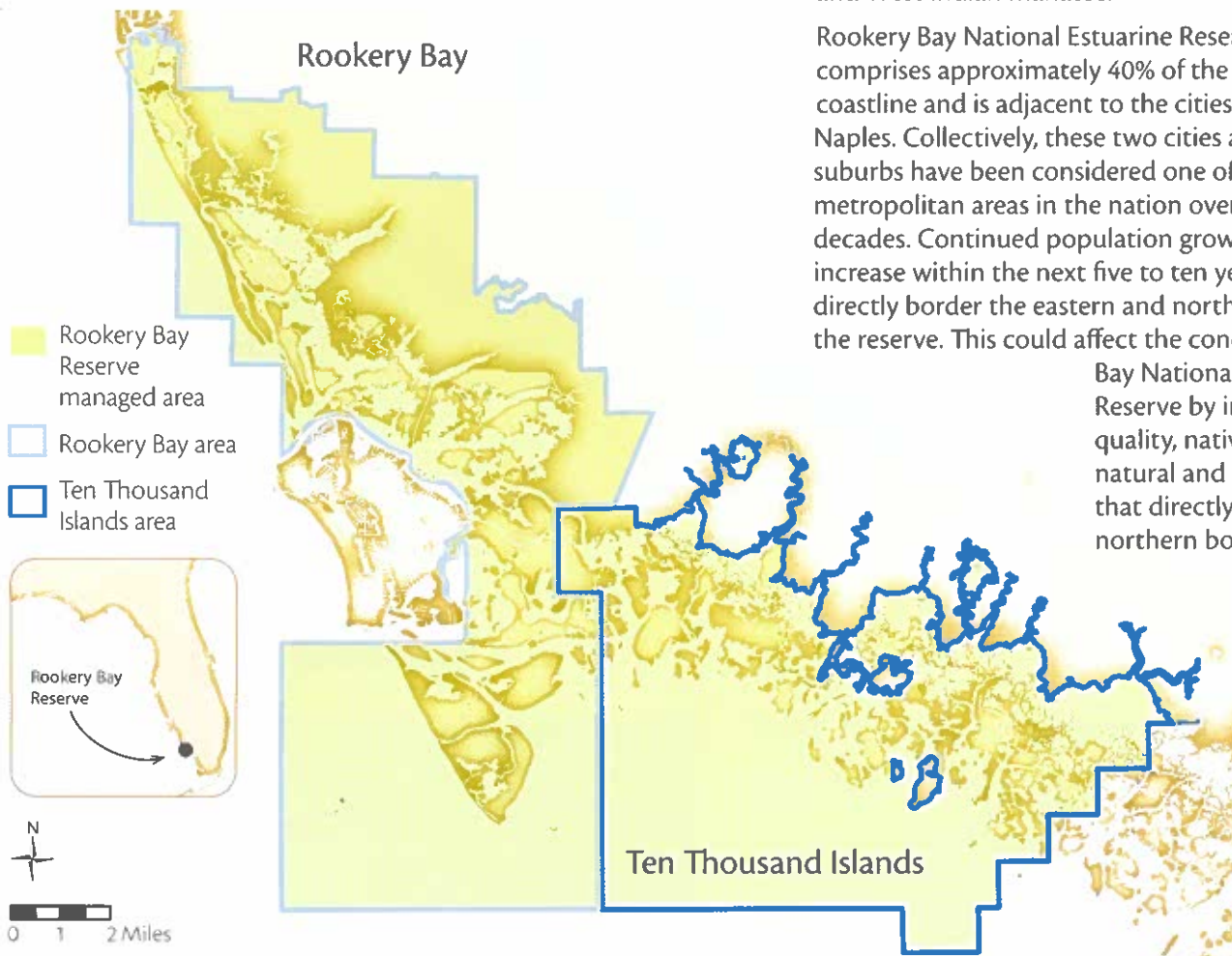
A Diverse Ecosystem

The Rookery Bay National Estuarine Research Reserve protects 110,000 acres of coastal lands and waters in Collier County on the Gulf coast of Florida. It is comprised of fresh to salty marshlands, mangroves, and upland habitats. The Rookery Bay and Ten Thousand Islands ecosystems contain bays, lagoons, and tidal streams along with freshwater drainage sources, including tidal creeks, canals, and sloughs.

The estuarine environment provides an excellent setting for a variety of recreational activities such as kayaking, boating, fishing, sailing, or bird watching. Delivering a significant contribution to the economy of local communities, recreational fishing represents an essential public use of the Reserve's resources. Snook, mangrove snapper, sheepshead, redfish, tarpon, and flounder are just some of the major recreational species. The Reserve is also home to a variety of bird species, including the roseate spoonbill, reddish egret, and mangrove cuckoo. Threatened and endangered animals also thrive in the estuary, such as the Florida panther and West Indian manatee.

Rookery Bay National Estuarine Research Reserve comprises approximately 40% of the Collier County coastline and is adjacent to the cities of Marco Island and Naples. Collectively, these two cities and surrounding suburbs have been considered one of the fastest-growing metropolitan areas in the nation over the past few decades. Continued population growth is expected to increase within the next five to ten years in the areas that directly border the eastern and northern boundaries of the reserve. This could affect the conditions of Rookery

Bay National Estuarine Research Reserve by impacting water quality, native biodiversity, and natural and cultural resources that directly border the Reserve's northern boundary.



The Rookery Bay National Estuarine Research Reserve is managed by the Florida Department of Environmental Protection's Coastal Office in cooperation with the National Oceanic and Atmospheric Administration (NOAA).

Layout and design in collaboration with the University of Maryland Center for Environmental Science's Integration & Application Network

What makes up Ro

Development increasing around Rookery Bay

The Rookery Bay Reserve takes its name from the mangrove rookery islands that serve as a nighttime roost and nesting site for more than a dozen species of coastal water birds. A community effort in the 1960s led to the preservation of lands and waters that later became designated as the Reserve, but they are not fully protected from human impacts. Over the decades, urban areas and agriculture have gradually crept up to the Reserve's western boundary. Paved surfaces, along with a web of stormwater canals and water control structures, have changed the quality, timing, and amount of fresh water entering the Rookery Bay estuary.

Did you know?

One of the main features of this region is Keewaydin Island, a barrier island that stretches nearly eight miles along the Gulf of Mexico and is only accessible by boat.



Natural features

- Seagrass
- Mangrove forests
- Freshwater flow
- Tidal flux
- Saltwater
- Oysters
- Macroalgae
- Wildlife
- Nesting birds

Human-made features

- Municipal wells
- Urban centers
- Suburbs
- Golf courses
- Recreation
- Agriculture

Threats

- Water control structures
- Canals and weirs
- Altered salinity
- Septic systems
- Excess Nitrogen and Phosphorus
- Excess algae
- Seagrass loss

What you c

With your help we can all do better

No matter where you are in Florida, you are close enough to the coast to have an impact. To make your impact be a positive one, at your home, work place, or hotel, and in your community, please consider the following:

- Be mindful of your water usage—conserve and reuse water whenever possible.
- Dispose of trash and other hazardous waste in the proper manner.
- Ensure your landscape professional is licensed by the State of Florida if they apply fertilizers on your property.
- Landscape with native plants to reduce or eliminate the need for fertilizers, pesticides, and herbicides.
- Stay informed of environmental issues and make your voice heard!



Volunteers help restore a mangrove wetland as part of a kayak launch project in Isles of Capri.

Rookery Bay Reserve?

Mangrove forests in Ten Thousand Islands

The Ten Thousand Islands region represents one of the largest remaining intact mangrove estuaries in the United States, with a maze of barrier islands sheltering estuarine bays. Land uses across the watershed have impacted water quality here to some degree. Agriculture, a major road (US 41) crossing the entire watershed, and housing developments affect the quality, timing, and amount of fresh water flowing to adjacent estuaries. To the north, a failed 1960s housing development with 48 miles of canals drains 85 square miles of wetlands. These canals drain too much fresh water to one bay, while estuaries to the west are starved for fresh water. The eastern-most portion of this watershed is relatively unimpacted. A large-scale restoration effort in Picayune Strand is underway as part of the Comprehensive Everglades Restoration Plan.

Did you know?
Decaying leaves from mangroves serve as a vital base of the food web in the Rookery Bay Reserve estuary.



What we can do to help



Staff and volunteers monitor nesting sites to protect important species such as the black skimmers seen in this photo.

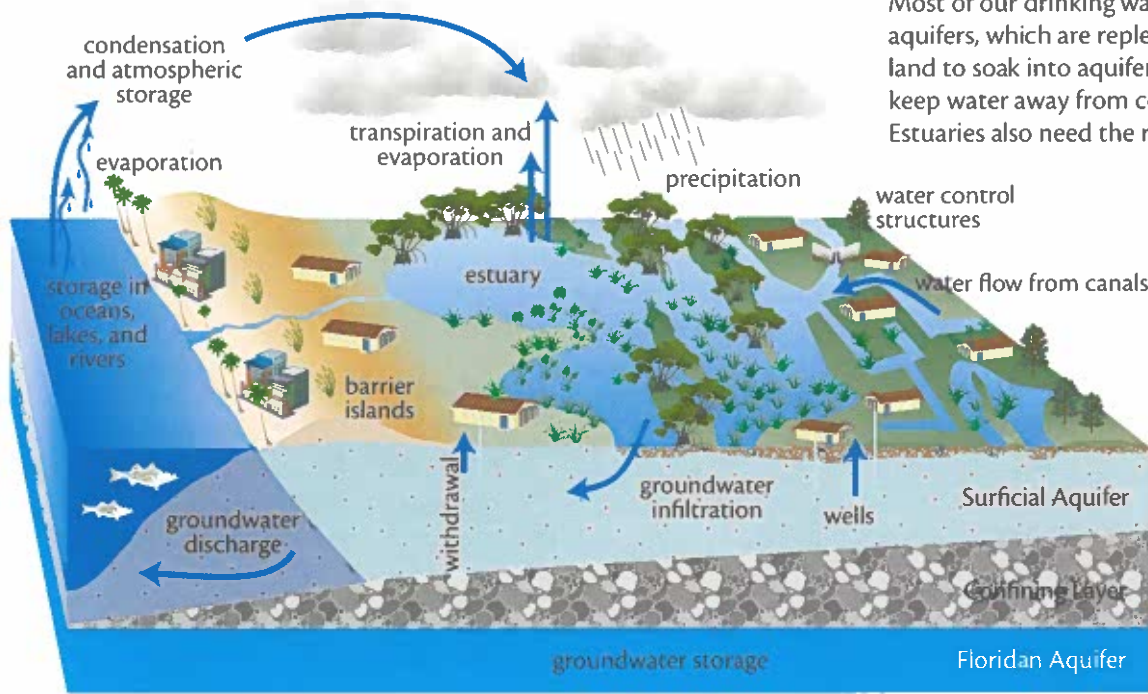
Get involved at the Rookery Bay Reserve

Become part of the team! If you are interested in volunteering or joining the Friends of Rookery Bay, visit rookerybay.org or call us at (239) 530-5940.

Rookery Bay Reserve is a great place to visit and learn something new. There are many events at the Reserve, including photography classes, birding workshops, art classes, kayaking, boat tours, and more! Come visit the Rookery Bay Environmental Learning Center composed of four research laboratories, classrooms, and a 140-seat auditorium, and two story visitor center. Learn about Rookery Bay Reserve with hands-on experiences, including a 2,300-gallon aquarium and interactive exhibits that address research and stewardship efforts within the Reserve.

The Water Balancing Act

Maintaining **aquifers**, preventing **flooding**, and protecting **estuaries**

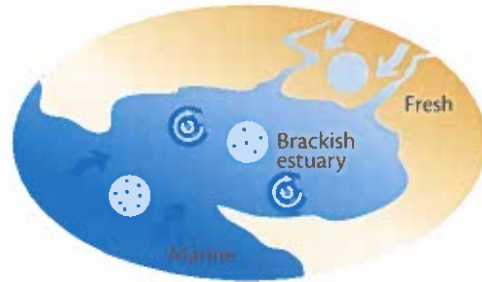


Most of our drinking water comes from underground aquifers, which are replenished by rain. Holding water on land to soak into aquifers is important, as is the need to keep water away from communities to prevent flooding. Estuaries also need the right amount of fresh water from land to stay healthy. The biggest challenge to water managers is to maintain estuarine health despite the need to recharge aquifers and prevent flooding.

49 million
49 million gallons are pumped from the Surficial Aquifer every day.

Estuaries are the heart of Rookery Bay

Estuaries are areas where **fresh water** from streams, rivers, or canals mixes with **salt water** from the ocean, resulting in **low salinity** (brackish) water.



70%
70% of rainfall occurs from May through October, while peak water usage by seasonal visitors and agriculture occurs from January through March, which is during the dry season.

\$1.2
Tourism generates \$1.2 billion each year in Collier County.

Estuary wetlands help protect communities from **flooding** and **storms**, while removing pollutants from the waters heading to the Gulf of Mexico.

500,000
500,000 pounds of stone crab claws are harvested annually in Collier County, which includes Rookery Bay Reserve.

750,000
750,000 pounds of other seafood is harvested in Collier County annually.

\$23 billion
Coastal wetlands provide storm protection that saves \$23 billion per year.

