

Getting the Water Right in the Rookery Bay Estuary

The Rookery Bay watershed encompasses 167 square miles between Naples and Marco Island, and includes many land uses such as housing, golf courses, farming, rock mining, and recreational areas. An intricate system of canals, weirs, ditches, and ponds are operated seasonally to prevent flooding in the summer, while holding water back to recharge drinking water supplies in the winter.

What is a watershed?

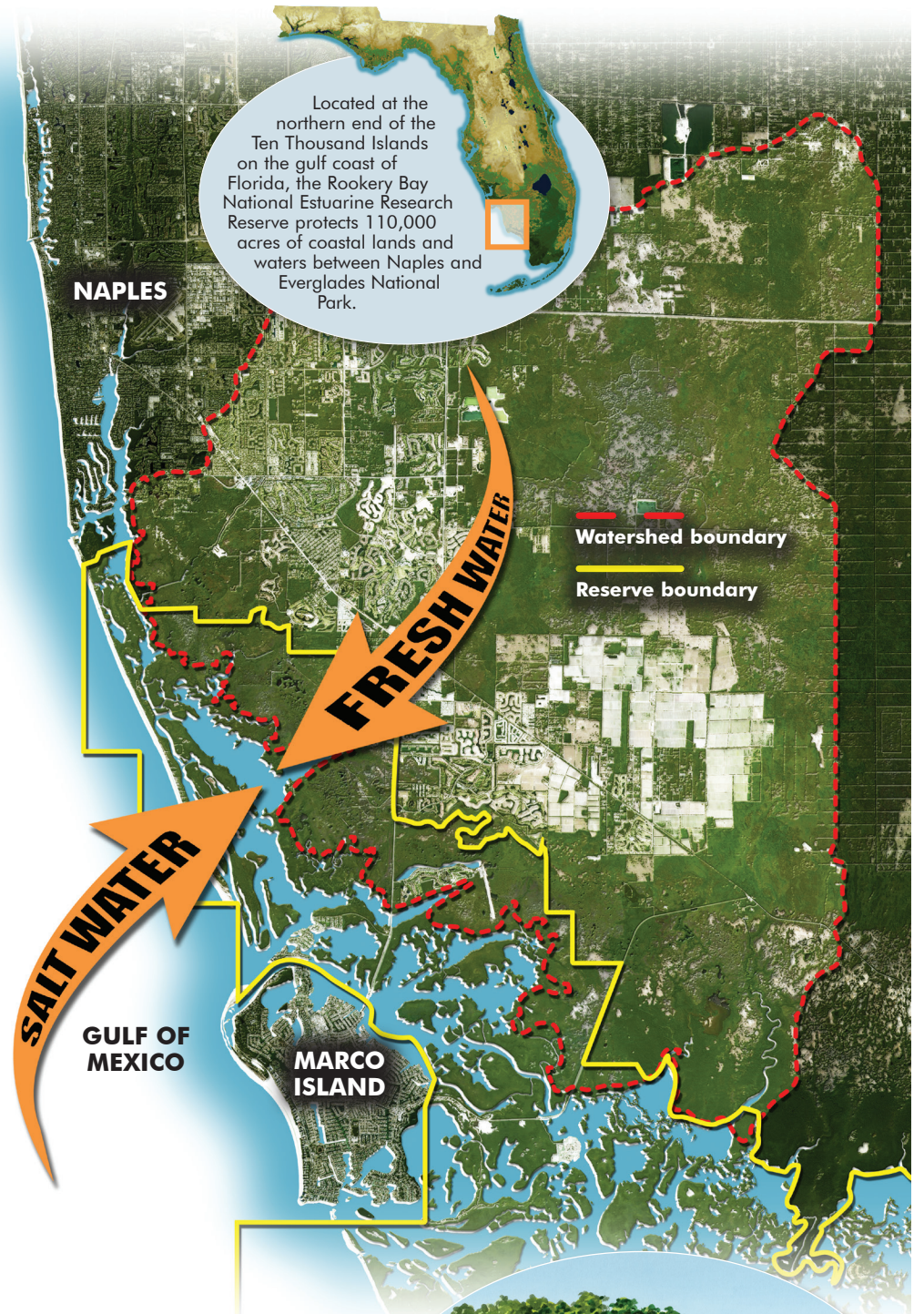
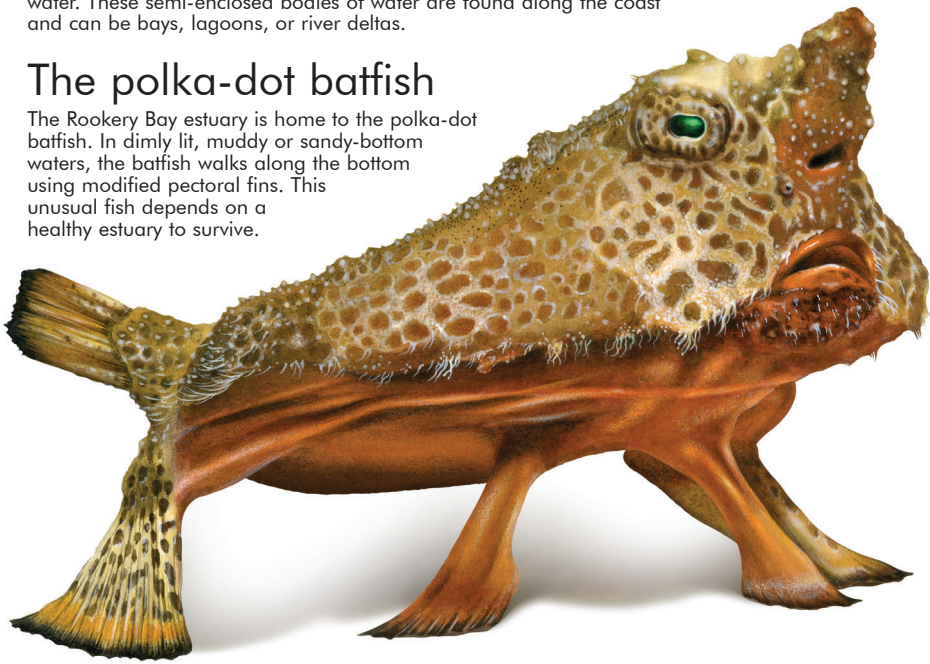
A watershed is an area of land that water flows across as it moves towards a common body of water such as a stream, river, lake, or estuary. All activities that take place within a watershed can affect the health of the downstream "receiving" waters.

What is an estuary?

An estuary is an ecosystem where fresh water and salt water mix to make brackish water. These semi-enclosed bodies of water are found along the coast and can be bays, lagoons, or river deltas.

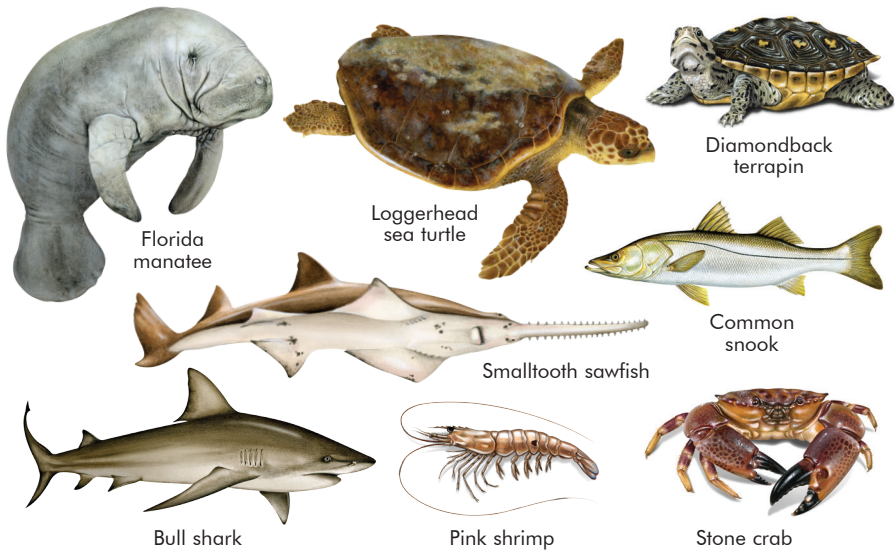
The polka-dot batfish

The Rookery Bay estuary is home to the polka-dot batfish. In dimly lit, muddy or sandy-bottom waters, the batfish walks along the bottom using modified pectoral fins. This unusual fish depends on a healthy estuary to survive.



What else lives in the estuary?

Where rivers and streams meet the sea, a unique habitat is formed. A myriad of wildlife, including 150 species of birds and many threatened and endangered animals, thrive in the estuarine environment and surrounding upland hammocks and scrub found within the Reserve.



Human impacts to our estuary

Land-use changes, development, and canals have altered the amount and timing of fresh water reaching the estuary. This upsets the delicate balance of fresh and salt water needed for healthy fish habitat and reproductive cycles.



Why a healthy estuary is important

Estuaries are nurseries for economically important fish and shellfish which people rely on for food and jobs. They also provide valuable opportunities for recreational activities including boating, fishing, bird watching, and shelling. Healthy beaches and estuaries are a primary draw for tourists from around the world who spend millions of dollars in the local community.



Research connection

To understand how fish are being affected by altered freshwater inflow to the estuary, the Rookery Bay Reserve conducted long-term fisheries research using a trawl net to sample four sites on a monthly basis in the 1970s, 1990s, and 2010s. The data showed declines in the quality of fish habitat and differences in the types of fish present by season.



Researchers use a trawl net to study fish in the estuary.

A valuable estuary

Our local waters are popular. Boaters and anglers seek the beauty of the Reserve's barrier island beaches and mangrove waterways. The estuary is home to hundreds of species of commercially and recreationally valuable fish and shellfish including snook, redfish, tarpon, and stone crab. Access is provided through several boat ramps and numerous guide and rental services.



Estuaries are valued for their contribution to our quality of life.

How to help

Protecting the watershed is everybody's responsibility...

- Prevent pollution – tune-up your car or other small engines to prevent oil and gas leaks which may pollute aquifers or estuaries.
- Manage stormwater – add water storage and beauty by building a rain garden. Never fill in ponds or ditches.
- Use Florida Friendly Landscaping™ – green spaces are important in a watershed because they filter pollution, retain water, and provide wildlife habitat.

