



## **What is an Estuary?**

An estuary is a body of water formed where freshwater from rivers and streams flows into the ocean, mixing with the seawater. Estuaries and the lands surrounding them are places of transition from land to sea, and from freshwater to saltwater. Although influenced by the tides, estuaries are protected from the full force of ocean waves, winds, and storms by the reefs, barrier islands, or fingers of land, mud, or sand that surround them.

## **Why Are Estuaries Important?**

The sheltered waters of estuaries are home to countless plants and animals that like to live in water that is part fresh and part salty. Examples include horseshoe crabs, ospreys, manatees, mangroves, and seagrasses. Hundreds of fish and shellfish, such as scallops, shrimp, and salmon, live in estuaries at some point in their life. Estuaries protect water quality by filtering out dirt and pollution. In addition, estuaries and the land surrounding them are places where people live, sail, fish, swim, and bird watch. As a result, estuaries are often the centers of our coastal communities.

## **What Challenges Do Our Estuaries Face?**

Estuaries face a host of common challenges. Because we love and depend on the water, more than half of the people in the United States live within 100 miles of the coast, including on the shores of estuaries. And more and more people are moving to these areas. Coastal communities are growing three times faster than counties elsewhere in the country.

Unfortunately, as more people flock to the shore, we are upsetting the natural balance of estuaries and threatening their health. We endanger our estuaries by polluting the water and building on the lands surrounding them. These activities can contribute to unsafe drinking water, beach and shellfish bed closings, harmful algae blooms, declines in fisheries, loss of habitat, fish kills, and a host of other human health and natural resource problems.

## **Too Many Nutrients**

Plants and animals need nutrients, or “food,” such as nitrogen and phosphorus, in order to grow. However, if an estuary has too many nutrients, too much algae will grow, creating algae blooms. These algae blooms block sunlight and can suffocate fish and plant life by using up valuable oxygen from the water. Nutrients can enter estuaries from sewage treatment plants, septic systems, fertilizers used in farming and on lawns, and polluted air from power plants and cars.