Delaware has four different species of sea turtles that visit our coastal waters. These include the loggerhead, Kemp's ridley, Leatherback, and Green sea turtle. The loggerhead is an endangered species in many areas of the world, but is listed as threatened in this area of the Atlantic ocean. The Leatherback, Kemp's ridley, and Green sea turtles are listed as endangered species. When a sea turtle is sick, injured, entangled, or deceased, it is stranded. The MERR Institute provides rescue and veterinary treatment for sea turtles that are living, and conducts research on those that have died so that we can learn more about the animal, the cause of the stranding, and ocean health.

Sea turtles swim many thousands of miles each year, and spend time in the Delaware Bay, Inland Bays and coastal waters of Delaware due to its abundance of prey sources for foraging. The loggerhead eats different species of crabs, and especially likes to eat horseshoe crabs during their "teenage" years. That makes the Delaware Bay an important foraging area for the loggerhead due to the availability of horseshoe crabs. It is important to protect species like horseshoe crabs, who provide important high protein prey source for other animals, including their eggs. The loggerhead is the most prevalent of the sea turtle species in Delaware waters.

Leatherback sea turtles eat primarily jellyfish, and have a specially formed beak that looks like two fangs to help them snag the jellies. Turtles also have a protective layering of spiney projections at the back of their mouth that point toward their throat and go all the way to their stomach. This protective lining protects them from the venomous sting of the jellyfish, and helps the jellies to go down smoothly. Leatherbacks often mistake plastic bags and balloons for jellyfish, and ingest these toxic items until they block the esophagus and stomach, causing the turtle to starve to death.

The Kemp's ridley sea turtle feeds on crabs, shrimp, snails, clams, jellyfish, sea stars, and fish. They are susceptible to shark scavenging, boat propeller injury, and poaching of their eggs. The Kemp's ridley is the most endangered sea turtle species.

Green sea turtles are herbivores, feeding primarily on sea grasses. They are not truly green in color, but in cultures that eat sea turtle meat, the flesh of the green turtle turns green when it is cooked because they have taken on the color of their food source, grass. This is similar to flamingoes who take on the color of the shrimp that they eat.

All of these endangered and threatened species of sea turtles are in need of conservation. Many human impacts in their ocean habitat cause illness, injury, entanglement, and death for these animals, such as trash (marine debris), fishing line and hooks, entanglements in fishing gear, illness from toxins such as oil spills, getting trapped in nets, and boat propeller injuries, most of which are fatal. Boat propeller injury is responsible for more than 50% of the sea turtle strandings that occur in Delaware.