

Lighting

Light pollution on nesting beaches is detrimental to sea turtles because it alters critical nocturnal behaviors. Namely, artificial lights affect how sea turtles choose nesting sites, how they return to the sea after nesting, and how hatchlings find the sea after emerging from their nests. When light shines on beaches from buildings, street lights and other urban sources, hatchlings can become misdirected. Instead of natural nighttime illumination leading sea turtle hatchlings to the ocean, artificial light often leaves them unable to find the water and likely to experience high mortality rates from dehydration and predators.

★ To ensure that lights are on only when needed, timers and motion-detector switches can be installed.

Interior lighting can be reduced by moving lamps away from windows, drawing blinds after dark, and tinting windows. ★

★ Turn off or shield exterior lights to avoid them shining directly onto the beach at night.

The Beach Front Lighting Display at the Marine Science Center was made possible by grant funding from Florida Fish and Wildlife Conservation Commission. Additional support was provided by Olson Electric.

For further information regarding the lighting fixtures seen in the display, please contact Olson Electric at (386) 258-8551.

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Sea Turtle Facts

These ancient creatures have been on Earth for more than 100 million years--even surviving when the dinosaurs became extinct 65 million years ago. Now sea turtles are on the brink of extinction. All seven species are listed as endangered or threatened and are protected under the Endangered Species Act in the United States. Three of these species, loggerhead, green, and leatherback, nest on the beaches of Volusia County. Sea Turtle nesting season lasts from May 1st to October 31st.

Nesting Sea Turtles

The East Coast of Florida is the second largest nesting site for loggerhead sea turtles in the world. If undisturbed, the female leaves the water (usually at night) and crawls up to the beach to a point well above the high tide line. There, using her rear flippers, she digs an egg chamber cavity about 8 inches in diameter and about 18 inches deep. After resting briefly, she fills the hole with approximately 100 eggs the size of ping-pong balls and gently covers them with sand. She then leaves the nest site and reenters the water. Each female will lay an average of 3 nests per season, with about 14 days rest between each nest. Most sea turtles probably do not nest every year, instead opting for biannual migrations.

Sea Turtle Hatchlings

Hatchlings ready to emerge from their nest wait just beneath the sand surface until conditions become cool. This temperature cue prompts them to emerge primarily at night, although some have emerged in late afternoon or early morning. It takes hatchlings 2-3 days to dig out of the nest. They usually dig and emerge as a group. Once at the surface, hatchlings orient to the brightest horizon to find the ocean. Unfortunately, artificial lights often confuse hatchlings and cause them to crawl inland, away from the water.

It is estimated that only 1 in 1,000 to 10, 000 hatchlings will survive to adulthood.

For more information on turtles, go to:
www.volusia.org/environmental and www.marinesciencecenter.com

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