Managing light

Protecting sea turtles, saving energy

Artificial light that shines onto the beach disrupts critical night behavior of adult and hatchling sea turtles. Fortunately, light from homes, condominiums, businesses, signs, streetlights and other structures near the beach can be managed effectively so they do not harm sea turtles. This can be accomplished without a great deal of effort, expense or compromise to personal safety, security and convenience. In many instances, good light management improves the appearance of the property and reduces energy costs.

Be a considerate beach user and minimize beach lighting

The lighting issue

On beaches where artificial light is visible, hatchlings' crucial journey to the ocean is disrupted. Hatchling sea turtles emerging from nests at night are attracted to light sources along the beach and will crawl toward streetlights, porch lights or interior lighting visible through windows. Disoriented hatchlings may fail to find their way to the ocean, succumbing to attacks by predators, or becoming weak and dehydrated by the morning sun.

A single light left on or near a sea turtle nesting beach can disorient and kill hundreds of hatchlings. Cases where hatchlings have crawled to their deaths into the flames of unattended fires are testimony to the strong attraction hatchlings have for light.

Artificial lighting also affects the nesting of female sea turtles. Studies have shown that brightly lit beaches are used less frequently as nesting sites. In addition, females attempting to return to the ocean after nesting can be led astray by nearby lighting.

Failure to protect sea turtles from harmful lighting can result in hearings before the Volusia County Code Enforcement Board. This board has the ability to fine violators up to $1,000 per day for an initial violation; $5,000 per day for repeat violation, or a one-time fine not to exceed $15,000. Criminal and/or civil prosecution by Florida and/or the U.S. government may result if lighting harasses or causes a sea turtle injury or death.

The most important aspect of light management is to confine light to the property and not let it stray onto the beach. The greater the amount of light near the beach, the greater the potential for harm to sea turtles. Evaluate the level of light illumination and, if possible, implement some of these recommended changes.

- Position fixtures so the light source cannot be seen from the beach.
- Aim lights down and away from the beach.
- Apply shields to light fixtures.
- Eliminate fixtures that allow light to shine in many directions. Replace them with fixtures that direct light only to the area where it is needed.
- Recess porch lights into the underside of a structural component, such as a beam, arch, staircase or cornice.
- Lower the mounting height of pole lights.
- Position walkway fixtures close to the ground.
- Plant native vegetation to block light from shining on the beach.
- Replace blue, green and white emitting lights with long wavelength lights that appear yellow, amber and red to the human eye, such as bug lights. Colors at the red end of the spectrum are less visible to sea turtles.
- Replace high-pressure sodium vapor parking and security lights with shielded low-pressure sodium vapor lights.
- Turn off nonessential lights during sea turtle nesting season.
- Eliminate accent lights and decorative fixtures.
- Reduce the number of fixtures used to illuminate the property.
- Reduce the wattage of bulbs used in exterior fixtures.
- Place lights on timers so they are on only when needed.
- Place security lights on motion detection settings so they activate only when someone is on the property.
- Install 45 percent transmittance window tint (saves on energy costs too.)
- Position interior lights away from windows.
- Draw curtains and window shades at night so interior light does not shine to the beach.
- Do not use flashlights and lanterns on the beach at night during turtle nesting season. Bonfires are prohibited on the beach.