

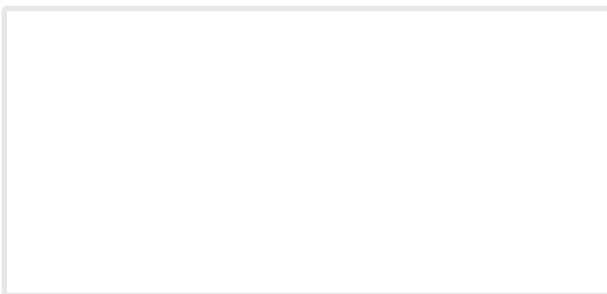
What You Can Do

- Many of Florida's coastal communities have passed lighting ordinances that encourage residents to turn off beachfront lights during sea turtle nesting season. Understanding and following the requirements of these ordinances is vital to the survival of sea turtles;
- Go out to the beach at night and identify what lights on your property are visible from the beach. If the lights are not needed for safety, simply turn them off. If the lights cannot be turned off, shield, redirect or lower the height of the lights so they are no longer visible from the beach;
- Replace problematic lights with turtle friendly fixtures designed to direct light where you need it and away from the beach;
- Use red or amber LED bulbs (which are less disruptive to nesting sea turtles and hatchlings), in shielded, downward directed turtle friendly fixtures;
- Replace high pressure sodium vapor lights with low pressure sodium lights;
- Reduce interior lighting problems by applying window tint at a 15% light transmittance level or close opaque curtains or blinds after dark to reduce the amount of visible light reaching the beach;
- Only light for safety, avoid decorative or uplights during the nesting & hatchling season;
- Place security lighting on motion-sensors. Having a light suddenly turn on can be effective security.

Questions?

Coastal counties and municipalities are responsible for developing and enforcing local lighting ordinances. The guidelines in these ordinances varies from place to place. Make sure to check with your local municipality/county to see what regulations may apply to the lights on your property. If you live in an area without an ordinance, it is still your responsibility to make sure your lights are not disturbing sea turtles.

Call the Sea Turtle Conservancy at (352) 373-6441 if you have any additional questions regarding lighting. Or visit www.conserveturtles.org/lighting.



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Sea turtle artwork © Dawn Witherington.

Sea Turtles & Lighting



Lights that shine onto a nesting beach can draw turtle hatchlings away from the ocean and off the beach, where they have a slim chance of survival. Beach lights can also scare away females crawling ashore to nest.



Sea Turtle Conservancy
4424 NW 13th St, Ste B-11
Gainesville, FL 32609
352-373-6441
www.conserveturtles.org

The Problem

Nesting sea turtles once had no trouble finding a quiet, dark beach on which to nest; now they must compete with tourists, businesses and coastal residents for sandy beaches. U.S. beaches, popular with humans and turtles alike, are lined with condominiums, private residences, businesses and hotels. Lights from these developments can be problematic for nesting females and hatchlings.

The lights can discourage females from coming ashore to nest. If a female fails to nest after multiple attempts, she will often resort to a less-than-optimal nesting spot resulting in few, if any, hatchlings surviving from the nest.

Beachfront lighting can also cause sea turtle hatchlings to become disoriented and wander away from the ocean towards the brightest lights. Hatchlings that head toward artificial lights often die from dehydration, exhaustion, terrestrial predation and passing cars.



Ceiling Mounted Fixture



Wall Mounted Fixtures



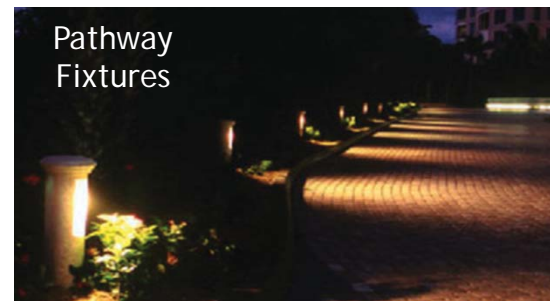
Red & Amber LED



Shielded Spotlight



Shielded Wall Fixture



Pathway Fixtures



Coated Light

Choosing Turtle Friendly Fixtures & Lights

Beachfront lighting can be properly managed to benefit humans and sea turtles. In general, a good sea turtle friendly lighting fixture directs light down to the ground where it is needed for safety, shields the light source from being visible from the beach, and is outfitted with a red or amber LED light bulb. When choosing lighting for your coastal property, please remember these three simple rules:

1. KEEP IT LOW - Low mounting height and low bulb wattage. Flood, spot and pole lighting are highly discouraged.
2. KEEP IT SHIELDED - Use full cut-off fixtures that direct the light down to the ground. Shield fixtures so you cannot see the bulb, lamp or glowing lens.
3. KEEP IT LONG - Sea turtles are less disturbed by the long wavelengths of light (570 nanometers or longer), such as lights that are yellow, amber, or red in color.



Existing problematic lights can be retrofitted with shielding while waiting to be replaced with new sea turtle friendly fixtures. To improve a light that is problematic for sea turtles, shield the fixture so the light source (i.e. bulb) is no longer visible from the beach, make sure all light is being directed down and use a red or amber LED bulb. Shielding a fixture that shines in all directions will actually increase the amount of light reaching the ground where you want it. You can purchase a shield for most fixtures or you can make a shield with materials such as heat dispersing aluminum flashing (available at most hardware stores).

It is estimated that one third of all lighting in the U.S. is wasted in the form of light trespass and sky glow. With an annual expense of approximately 30 million barrels of oil and 2 million tons of coal on unnecessary lights, the cost of wasted lighting is about \$2 billion each year!