

10 ways you can help...

1. Turn off all unnecessary lighting!
2. Identify problem lighting – if you can see your shadow on the beach at night, the light is too bright.
3. Replace problematic lighting with approved sea turtle friendly bulbs and fixtures or shield the lights so it directs down and away from the beach.
4. Use red or amber LED bulbs, replace high pressure sodium vapor, incandescent, fluorescent and high intensity lights with low pressure sodium lights or low watt “bug light” bulbs.
5. Reduce interior lighting with tinting or blackout curtains. Move lights away from oceanfront windows.
6. Plant vegetation buffers between light sources and the beach.
7. Avoid decorative up-lights, only light for safety.
8. Place security lighting on motion sensors
9. Do not use flash lights or flash photography on the beach at night.
10. Become familiar with the city lighting ordinance. Understanding and following the requirements of the ordinance is vital to the survival of sea turtles.

Thank you for saving sea turtles!



Sea turtles are protected by Florida Statue 370.12, the Marine Turtle Protection Act. Anyone found harassing a sea turtle or interfering with the nesting process faces criminal and civil penalties.



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Questions?

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For more information on certified wildlife lighting please visit:
<http://www.myfwc.com/conservation/you-serve/lighting/certified/>
And for appropriate light fixtures and bulbs:
www.turtlesafelighting.com
www.starrynightlights.com
www.darksky.org/fixtures/fixtures.html



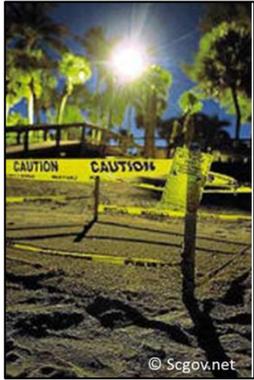
Sea Turtles and Artificial Lighting



Information for beach residents and visitors during sea turtle season in Key Biscayne



The Problem



The rise in coastal development has dramatically changed the beach environment for sea turtles. In order to find suitable nest sites, nesting female sea turtles now must compete with tourists, coastal residents, condominiums, private residences, businesses and hotels.

Artificial lighting is one of the biggest threats for sea turtles caused by these developments. With only one in one thousand sea turtles surviving to adulthood, conservation is vital to their survival.

Lighting can deter a nesting female sea turtle from coming ashore or after several attempts she may resort to laying her eggs in an unsuitable location. Artificial lights can also confuse the females making it hard for them to find the ocean and return to it. Lighting is an obvious problem in South Florida because darker beaches here have more nests than those with a great deal of visible artificial light.

Lights visible from the beach cause hatchlings to become disoriented and wander away from the ocean. It is instinctive for hatchlings to crawl towards the brighter horizon of the night sky reflecting off of the ocean. In many coastal areas however the sky over the dunes is lit up by thousands of artificial lights, confusing hatchlings so that they crawl far from the ocean, where they are more susceptible to dehydration, predators and the street.



Sea Turtle Friendly Lighting

Below are some examples of approved lighting fixtures that will not confuse sea turtles. All fixtures on the seaward and shore perpendicular sides of the building should be well shielded, full cut-off, downward directed type fixtures.



Wall and ceiling mounted fixtures



Recessed and wall mounted step lights



Recessed ceiling mounted canister



Bollards and path lighting (downward directed)



Lighting Pictures © FWC



Red and Amber LED bulbs

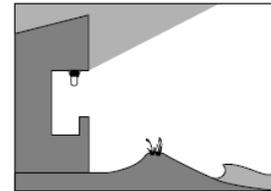


Beach Lighting Compliance

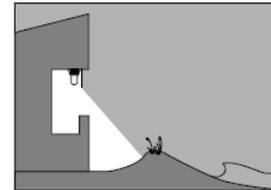
Turn it OFF – If the light is not needed, this is simply the best solution. Timers and motion sensors are also good solutions for keeping lights off and only on for short periods when needed.

Keep it LOW – Both in height and wattage. Shorter and low mounted fixtures are best and will help keep light from shining over dunes or the beach profile. The lower the wattage the less bright the light will be.

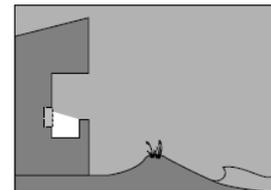
Keep it SHIELDED – Shield fixtures so that you cannot see the bulb, lamp or glowing lens. Tinting windows or doors with a 45% or less transmittance value, or using blackout curtains and blinds will aid in making indoor lighting less visible from condos/ apts/ hotel rooms.



POOR
Poorly directed balcony lighting can cause problems on sea turtle nesting beaches.



BETTER
Shielding fixtures with a sheet of metal flashing can reduce stray light reaching the beach.



BEST
Louvered step lighting is one of the best ways to light balconies visible on nesting beaches.

Keep it LONG – Long wavelengths of light (560 nanometers or longer) are less disturbing to turtles. These include lights that are yellow, amber or red in color.

