

Coastal Lighting Pollution

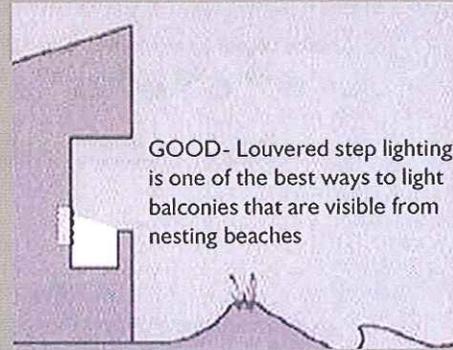
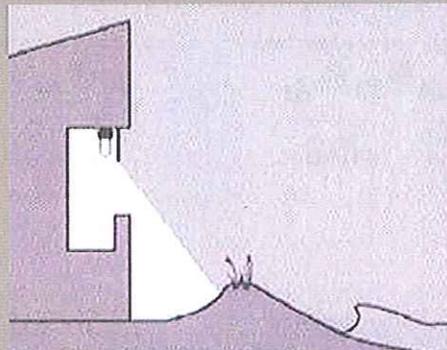
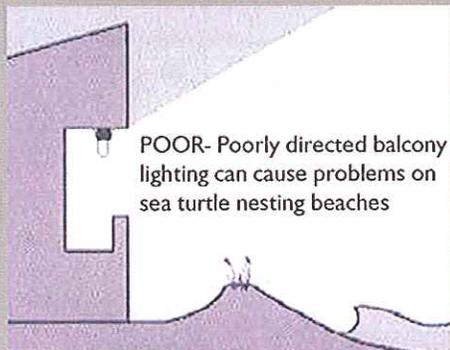
The Problem

Sea turtles navigate by celestial light. Artificial lighting that shines on the beach results in nesting females and hatchlings becoming disoriented. In 2007, over 12,000 sea turtle hatchlings in Palm Beach County were negatively impacted by beach front lighting.

Palm Beach County's Unified Land Development Code (ULDC) states that all light fixtures shall be designed and positioned so that they do not cause illumination (whether direct or indirect) that is visible from the beach. This includes open fires on the beach which are prohibited during sea turtle nesting season. Furthermore, all windows or doors visible from the beach must be tinted to proper specifications to minimize coastal lighting.

The Ordinance

Solutions to Common Lighting Problems



From "Understanding, Assessing and Resolving Light Pollution Problems on Sea Turtle Nesting Beaches" by B.E. Witherington and R.E. Martin. FWRI Technical Report TR-2, Florida Wildlife Research Institute, St. Petersburg, Florida.

1 Turn off all non-essential beachfront lighting.

2 Replace incandescent bulbs with lower wattage, yellow "bug lights."

3 Reduce lighting visible from the beach by lowering, shielding, recessing, and/or redirecting fixtures.

4 Place security lights on motion sensitive switches.

5 Use blackout draperies or blinds to reduce interior lighting.

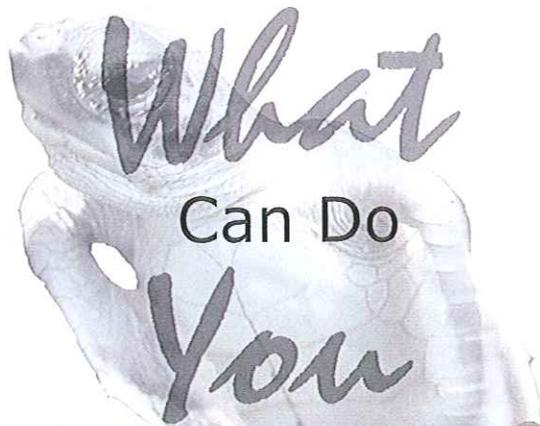


Image Courtesy of the Defense Meteorological Satellite Program

Aerial images of North America at night show that light pollution is not limited to coastal areas. Inland lighting is a major factor in light pollution, affecting not only sea turtles but migratory birds and views of the night sky as well. Lights must be properly directed to minimize illumination and contribute to dark skies.

For more information visit:
www.darksky.org



For More Information Contact:

Palm Beach County
Department of
Environmental Resources Management
(561) 233-2400
[http:// www.co.palm-beach.fl.us/erm](http://www.co.palm-beach.fl.us/erm)

Beach Obstructions to Sea Turtle Nesting

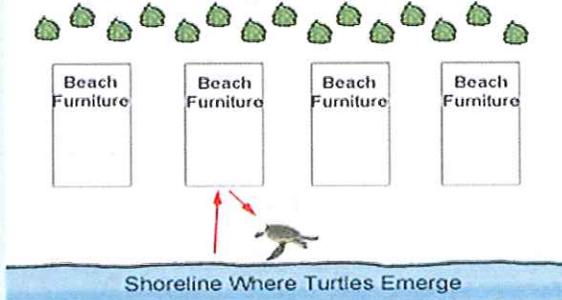
The Problem

Sea turtles lack the ability to easily maneuver around objects or crawl backwards. Therefore, beach furniture and equipment left on the sand during the night will create an obstacle between nesting sea turtles and acceptable nesting locations.

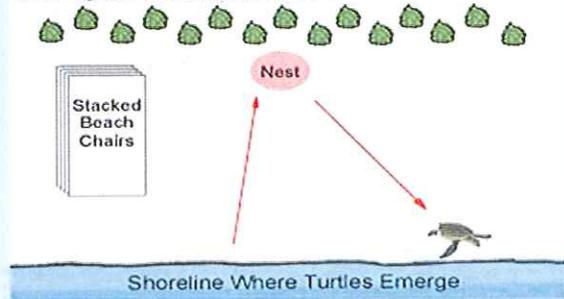
Palm Beach County Unified Land Development Code (ULDC) Article 14, Sea Turtle Protection and Sand Preservation, requires that beach obstructions (such as: beach umbrellas, beach furniture, cabanas, boats, kayaks, personal watercraft, etc.) are removed from the beach prior to 9:30 p.m., and shall not be placed on the beach before completion of a daily sea turtle nesting survey. Beach obstructions shall be placed as close to the toe of dune as possible in an area that does not impact native vegetation. The ordinance is in effect during sea turtle nesting season (March 1st - October 31st) for Palm Beach County.

The Ordinance

Dune Vegetation and Nesting Sites a Suitable Distance from Tides



Dune Vegetation and Nesting Sites a Suitable Distance from Tides



What
Can Do
You

- 1 Be turtle friendly by removing personal belongings including: chairs, toys, floats, and boats.
- 2 Replace wooden cabanas with lighter alternatives. Store light weight furniture behind the primary dune.
- 3 Don't replace furniture and personal belongings until the daily morning turtle survey has been completed.
- 4 When replacing beach furniture place at least 5-10 ft. apart and at least 5 ft. from marked sea turtle nests.
- 5 Remember to fill in holes created by sand castle building and shell collecting.



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Failed Nesting Attempts due to beach obstructions.