

ensure that light pollution does not interfere with sea turtle nesting and hatching events while at the same time protecting public safety. In order to further the objective of full implementation, this Ordinance also includes provisions designed to educate residents and beach users in the **City/County of _____** on the benefits of appropriate coastal lighting and provides for regular inspections to ensure compliance with the acceptable lighting standards.

Sec. ___-1.4. - Definitions

1. **Artificial Light**: the light emanating from any human-made device.
2. **Beach**: the zone of unconsolidated material that extends landward from the mean low water line to the place where there is marked change in material or physiographic form, or to the line of permanent vegetation.
3. **Certified Wildlife Lighting**: lighting fixtures and bulbs reviewed and approved with conditions of use through the Florida Fish and Wildlife Conservation Commission's Wildlife Lighting Certification Process and published at <https://myfwc.com/conservation/you- conserve/lighting/criteria/certified/>.
4. **Cumulatively Visible**: light from numerous artificial light sources that as a group can be seen by an observer standing anywhere on the beach.
5. **Directly Visible**: occurs when glowing elements, lamps, globes, or reflectors of an artificial light source can be seen by an observer standing anywhere on the beach.
6. **Foot-Candle**: the English unit for measuring illuminance; the uniform illumination of a surface one foot away from a point source of one candela; one lumen per square foot; equal to 10.76 lux.
7. **Frontal Dune**: the first natural or man-made mound or bluff of sand which is located landward of the beach and which has sufficient vegetation, height, continuity, and configuration to offer protective value.
8. **Full Cutoff**: a lighting fixture constructed in such a manner that no light emitted by the fixture, either directly from the lamp or a diffusing element or indirectly by reflection or refraction from any part of the luminaire, is projected at or above 90° as determined by photometric test or certified by the fixture manufacturer.
9. **Fully Shielded**: a lighting fixture constructed in such a manner that the glowing elements, lamps, globes, or reflectors of the fixture are completely covered by an opaque material to prevent them from being directly visible from the beach. Any structural part of the light fixture providing this shielding must be permanently affixed.
10. **Indirectly Visible**: light reflected from glowing elements, lamps, globes, or reflectors of an artificial light source that can be seen by an observer standing anywhere on the beach without the light source being directly visible.
11. **Long Wavelength**: a lamp or light source emitting light wavelengths of 560 nanometers or greater and absent wavelengths below 560 nanometers.

12. **Nesting Season:** For the **City/County of _____**, the sea turtle nesting period is from _____ of each year.

Guidance: For Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward Counties, the sea turtle nesting period is from March 1 through October 31 of each year. For Bay, Charlotte, Collier, Dade, Duval, Escambia, Flagler, Franklin, Gulf, Lee, Manatee, Monroe, Nassau, Okaloosa, Pinellas, St. Johns, St. Lucie, Santa Rosa, Sarasota, Volusia, and Walton Counties, the sea turtle nesting period is from May 1 through October 31.

13. **Nighttime:** the locally effective time period between sunset and sunrise.
14. **Non-egress Lighting:** exterior lighting that is not being used to light a distinct route or meet minimum requirements for emergency access to or from a building, including but not limited to decorative lights (e.g. strobe lights, string lights, etc.), balcony lights, landscape lights, and uplights.
15. **Outdoor Area:** any portion of a property that could have an artificial light source not attached to a permanent structure, including but not limited to pathway lighting, landscape lighting, pool lighting, etc.
16. **Sea Turtle:** any turtle, including all life stages from egg to adult, of these species: Green (*Chelonia mydas*), Leatherback (*Dermochelys coriacea*), Loggerhead (*Caretta caretta*), Hawksbill (*Eretmochelys imbricata*), and Kemp's ridley (*Lepidochelys kempii*). For the purposes of this ordinance, the term sea turtle is synonymous with marine turtle.
17. **Sea Turtle Nesting Habitat:** all sandy beaches adjoining the waters of the Atlantic Ocean, the Gulf of Mexico, and the Straits of Florida in all coastal counties and all inlet shorelines of those beaches. Nesting habitat includes all sandy beach and unvegetated or sparsely vegetated dunes immediately adjacent to the sandy beach and accessible to nesting female turtles.
18. **Temporary Lighting:** any non-permanent light source that may be hand-held or portable including but not limited to tiki torches, lanterns, flashlights (including cell phone flashlights), candles, flash photography, etc.
19. **Tinted glass:** glass modified via tinting, film or other material to reduce the inside to outside light transmittance value.

SECTION ____-2. - SEA TURTLE LIGHTING DISTRICT

Sec. ____-2.1. - Applicability

1. An overlay district, known as the *Sea Turtle Lighting District*, is hereby established within the **City/County of _____**.
2. The *Sea Turtle Lighting District* shall include all properties within the **City/County of _____**, that may produce artificial light directly, indirectly, or cumulatively visible from any portion of the beach, regardless of whether those properties are beachfront properties.

3. The provisions of this Ordinance apply to new and existing artificial lighting visible from the beach from all buildings and related infrastructure, including streetscapes, parking lots, outdoor areas, landscaping, as well as public parks and recreational areas and all other activities within the *Sea Turtle Lighting District*.
4. The provisions of this Ordinance are not intended to prevent the use of any design, materials or method of installation or operation not specifically prescribed herein, provided any such alternate has been approved. The **City/County of _____** may approve any such proposed alternate provided it:
 - a. Provides at least approximate equivalence to the applicable specific requirements of this Ordinance, and;
 - b. Is otherwise satisfactory or complies with the intent of this Ordinance, and;
 - c. Has been designed or approved by a registered lighting or electrical engineer and is supported by calculations showing that the design submitted meets that intent of the Ordinance. This sub-section shall not have the effect of waiving the lumen caps specified in this Ordinance.
 - d. Has been determined to meet requirements for Certified Wildlife Lighting and/or lights that meet FWC’s Wildlife Lighting Guidelines, including long wavelength light sources (without the use of filters), full cut-off, and fully shielded fixtures.
5. Any person substantially aggrieved by any decision of the *Beach Lighting Inspector* or the *Building Official* made in administration of this Ordinance has the right and responsibilities of appeal to the *Advisory/Appeals Board* of this jurisdiction.

*Guidance: This Model establishes an Overlay District for the purpose of implementing the ordinance. This ordinance could be applied by simply consolidating (2) and (3) above and making it applicable to “all properties within the **City/County of _____** that may produce artificial light directly, indirectly, or cumulatively visible from any portion of the beach, regardless of whether those properties are beachfront properties.” However, creating a District may have other benefits which include incorporating other Sea Turtle best management practices not related to lighting, as well as raising awareness through signage, etc.*

Sec. ___-2.2. - Annual Public Notice

At least thirty days prior to the commencement of every sea turtle nesting season, the **City/County of _____** shall provide notice to affected persons within the *Sea Turtle Lighting District* of the provisions contained in this Ordinance.

Declaring an official annual “lights out for sea turtles” day either the first Monday in February or April depending on the county, could also be useful. Another alternative would be designating the responsible department or official for implementing the ordinance and noticing the public.

SECTION ___-3. - LIGHTING PROVISIONS

Sec. ___-3.1. – General

Guidance: In order to provide the highest level of protection for nesting marine turtles and their hatchlings, local governments are encouraged to adopt all of the following standards for artificial beachfront lighting sources.

1. The following standards for artificial light sources are intended to help minimize harmful effects of light pollution in sea turtle nesting areas. The use of Certified Wildlife Lighting will provide the highest level of protection for nesting sea turtles and their hatchlings. Certified Wildlife Lighting refers to lighting fixtures and bulbs reviewed and approved through the Florida Fish and Wildlife Conservation Commission's Wildlife Lighting Certification Process and published at <https://myfwc.com/conservation/you-serve/lighting/criteria/certified/>. Certified Wildlife Lighting and/or lights that meet FWC's Wildlife Lighting Guidelines, must be installed and maintained according to the approved conditions of use to achieve the light pollution reduction objectives of this Ordinance.

Guidance: The FWC Certified Wildlife Lighting website references the required options and bulleted caveats for each certified fixture. These conditions of approved use are also included in the certification letter issued to the manufacturer for the fixture. FWC Sea Turtle Lighting Guidelines can be accessed at the Sea Turtles and Lights webpage at <https://myfwc.com/wildlifehabitats/wildlife/sea-turtle/lighting/>.

2. New construction refers to all new construction of or additions and alterations to buildings, pools, pavement, other structures, landscape areas or lighting systems, including the change or resumption of land use. The most protective lighting standards apply to new construction visible from the beach.
3. Existing artificial lighting refers to lighting fixtures, sources and systems operating prior to the effective date of this ordinance. Existing lights and light sources that are visible from the beach shall be replaced or modified to conform to standards given in Section -3.7. In order to bring existing lighting systems into future compliance with this Ordinance, standards for new coastal construction shall be applied when permits are sought for new structures or the alteration, movement, enlargement, replacement or installation of new lighting systems.

Sec. ___-3.2. Exterior and Interior Lighting Affixed to New Structures, New Construction and Improvements to Existing Structures

1. All lighting affixed to the exterior of new permanent structures, construction or additions shall be long wavelength, downward directed, full cutoff, fully shielded and mounted as close to the ground or finished floor surface as possible to achieve the required foot-candles.
2. As an exception to -3.2.1. above, non-egress lighting may be affixed to the landward exterior of permanent structures provided that the fixtures are fitted with a long wavelength source and are not directly, indirectly, or cumulatively visible from any portion of the beach.

3. Lighting at egress points shall be limited to the minimum number of fixtures and foot-candles necessary to meet federal, state, and local safety requirements.
4. Locations including but not limited to stairwells, elevators, parking garages, or courtyards shall not produce light that is directly, indirectly, or cumulatively visible from any portion of the beach. Light screens, shades or curtains shall be used to block visibility of interior lights from the beach. Light screens shall be used on open or enclosed staircases on the seaward or shore-perpendicular side of a building or for parking garages to limit visibility of lights from the nesting beach.
5. All glass windows, walls, railings and doors on the seaward and shore-perpendicular sides of any new construction shall use tinted glass with an inside to outside light transmittance value of 45 percent or less.

Guidance: Local governments may apply special considerations to control interior lighting from being directly visible from the beach.

6. Emergency lights are not subject to the above standards if on a separate circuit and activated only during power outtages or other situations in which emergency lighting is necessary for public safety.

Sec. ___-3.3. - Outdoor Areas

1. All lighting of outdoor areas shall be long wavelength, downward directed, full cutoff, fully shielded and mounted as close to the ground or finished floor surface as possible to achieve the required foot-candles.
2. Lighting of paths, walks and routes of building access shall use low level fixtures such as step, paver, path, recessed wall or bollard lights. Bollard lights are not to exceed 42 inches in height and other low level fixtures are to meet the height requirements of FWC's Wildlife Lighting Guidelines. Fixtures shall be downward directed and utilize long wavelength lamps and beachside shields.
3. As an exception to -3.3.1. above, non-egress outdoor lighting may be installed landward of buildings or other opaque structures provided that they are fitted with long wavelength light sources and are not directly, indirectly, or cumulatively visible from any portion of the beach.
4. Internally or externally lighted signs shall not be located on the seaward and shore-perpendicular sides of any structures, and shall not produce light that is directly, indirectly, or cumulatively visible from any portion of the beach.
5. Ponds and fountains on the seaward and shore-perpendicular sides of any structures shall not produce light that is directly, indirectly, or cumulatively visible from any portion of the beach.
6. Fire pits located on the seaward and shore-perpendicular sides of any structure shall be shielded with an opaque structure or partition, and positioned such that the flame is not directly, indirectly, or cumulatively visible from any portion of the beach. Bonfires and bonfire pits are prohibited within sea turtle nesting habitat during sea turtle nesting season.
7. Televisions or other illuminated screens shall be located landward of the dune and shall be shielded or positioned such that they are not directly, indirectly, or cumulatively visible from the beach.

Sec. ___-3.4. - Parking Areas and Roadways

1. All lighting of parking areas and roadways shall be long wavelength, downward directed, full cutoff, fully shielded, and mounted to the minimum level required to maintain compliance with federal, state and local law.
2. Parking area and roadway lighting shall be shielded from the beach via vegetation, natural features, or artificial structures rising from the ground. These shall prevent artificial light sources, including but not limited to vehicular headlights, from producing light that is directly, indirectly, or cumulatively visible from any portion of the beach.
3. Lighting of roadways and parking areas shall produce no more lighting than the minimum requirement as outlined by federal, state and local law.
4. Lighting of parking areas and roadways shall consist of either:
 - a. Ground-level downward-directed fixtures, equipped with interior dark-colored, non-reflective baffles or louvers, mounted either with a wall mount, on walls or piles, facing away from the beach, or
 - b. Bollard-type fixtures, which do not extend more than 42 inches above the adjacent floor or deck, measured from the bottom of fixture, equipped with downward-directed louvers that completely hide the light source, and externally shielded on the side facing the beach, or
 - c. Pole-Mounted Lights, if required, shall adhere to the restrictions located in subsection -3.4.5.
5. Pole-mounted lights shall only be used in parking areas and roadways when mounting the lights at lower elevations cannot practicably comply with minimum light levels set forth in applicable federal and state laws designed to protect public safety. If required, pole-mounted lights shall be:
 - a. Located on the landward sides of buildings and shall not produce light that is directly, indirectly, or cumulatively visible from any portion of the beach,
 - b. Mounted at the minimum height required to meet the minimum light level requirement-, and
 - c. Downward-directed onto non-reflective surfaces.

Guidance: Roadway and parking area lighting designed pursuant to Section 231.2.1 Wildlife-Sensitive Conventional Lighting of the Florida Department of Transportation (FDOT) Design Manual (January 1, 2020) available at <https://www.fdot.gov/roadway/fdm/default.shtm>, and meeting the requirements of Section 992-2.4.2, Luminaires for Wildlife-Sensitive Conventional Lighting, of the FDOT "Standard Specifications for Road and Bridge Construction (January 2020)," and available at <https://www.fdot.gov/programmanagement/implemented/specbooks/default.shtm>, are expected to meet the minimum standards of this section.

6. Equipment yards, storage yards, and temporary security lights shall also adhere to the lighting restrictions contained in this Section.

Sec. ___-3.5. - Pool Areas

1. Lighting of pool decks, pool facilities, swimming pools, and spas shall be long wavelength and fully shielded.
2. Lighting of the pool water surfaces and the pool wet deck surfaces shall comply with the minimum light levels set forth in applicable federal and state laws designed to protect public safety.
3. Above-water lighting of pool decks, pool facilities, swimming pools, and spas shall otherwise adhere to the applicable requirements for acceptable light fixtures contained in Section 1 and Section 2 of this Section.
4. Underwater lighting of pools or spa light shall:
 - a. Be mounted horizontally in the wall,
 - b. Not produce light that is directly, indirectly, or cumulatively visible from any portion of the beach, and
 - c. Shall comply with minimum light levels set forth in applicable federal and state laws designed to protect public safety.

Sec. ___-3.6. - Beach Access Points and Dune Walkovers

1. Lighting of beach access points shall be located and configured to only illuminate areas landward of the beach and frontal dune. All lighting of beach access points shall be long wavelength, downward directed, full cutoff and fully shielded and shall not be directly, indirectly, or cumulatively visible from the beach.
2. Lights are allowable on dune walkovers or elevated boardwalks only as required for building code purposes and may only be installed landward of the frontal dune. Walkover lighting shall not be directly, indirectly or cumulatively visible from the beach.

Sec. ___-3.7. – Existing Exterior and Interior Lighting

1. Reduce or eliminate the negative effects of existing exterior artificial lighting through the following measures:
 - a. Reposition, modify or remove existing lighting fixtures so that the point source of light or any reflective surface of the light fixture is no longer directly, indirectly or cumulatively visible from the beach;
 - b. Replace fixtures having an exposed light source with fully shielded fixtures;
 - c. Replace any light source, light bulb or lamp that is not long wavelength (e.g. incandescent, fluorescent, or high intensity lighting) with the lowest wattage long wavelength (e.g. LED or low pressure sodium) light source or lamp available for the specific application;

- d. Replace non-directional fixtures with directional fixtures that point down and away from the beach;
 - e. Provide shields for fixtures visible from the beach and not practical to immediately be replaced. Beachside shields are to cover 270 degrees and extend below the bottom edge of the fixture on the seaward side so that the light source or any reflective surface of the light fixture is not visible from the beach;
 - f. Replace pole lamps with low-profile, low-level luminaries so that the light source or any reflective surface of the light fixture is not visible from the beach;
 - g. Plant or improve vegetation buffers between the light source and the beach to screen light from the beach;
 - h. Construct a ground level barrier landward of the beach and frontal dune to shield light sources from the beach. Ground-level barriers are to be considered a last resort when no other remediation of the light source is feasible. Ground level barriers may be subject to state coastal construction control line regulations under section 161.053, Florida Statutes, and must not interfere with sea turtle nesting or hatchling emergence, or cause short- or long- term damage to the beach and dune system;
 - i. Permanently remove or permanently disable any fixture which cannot be brought into compliance with the provisions of these standards.
2. Take one or more of the following measures to minimize interior light emanating from doors and windows within line-of-sight of the beach:
 - a. Apply window tint or film that meets the light transmittance standards for tinted glass;
 - b. Rearrange lamps and other moveable fixtures away from windows;
 - c. Use opaque shades or room darkening window treatments (e.g., blinds, curtains, screens) to shield interior lights from the beach.

Guidance: In order to provide the highest level of protection for nesting marine turtles and their hatchlings, local governments are directed to adopt all of the above standards for existing artificial beachfront lighting sources.

Sec. ___-3.8. – Pier Structures

1. Lighting of pier structures projecting over the beach or over water shall be long wavelength, downward-directed, and fully shielded.
2. Lighting of pier structures projecting over the beach, or over water, shall be mounted no higher than 42 inches above the deck surface. These shall be directed onto the deck surface only, preventing light pollution or light spillage beyond the walking surface.
3. Lighting of pier structures projecting over the beach or over water shall comply with minimum light levels set forth in applicable federal and state laws designed to protect public safety.

Guidance: Note that the pier light standards do not address light sources from illuminated screens or signage associated with restrooms or bait shops on piers.

Sec. ___-3.9. - Special Events, Motor Vehicles, and Temporary Lighting

1. Lighting associated with a special event that may directly, indirectly, or cumulatively be visible from any portion of the beach shall not be authorized at nighttime during sea turtle nesting season.
2. The operation of all motorized vehicles, except emergency and law enforcement vehicles or those permitted on the beach for sea turtle conservation in accordance with Florida Statute 379.2431 (1), or other research and conservation, shall be prohibited on the beach at nighttime during sea turtle nesting season.
3. Within sea turtle nesting season, temporary work zone lighting for roadway construction and during declared emergencies shall be directed away from the beach to avoid illumination of or direct visibility from the beach. Work zone luminaires shall be shielded to avoid lighting areas outside of the immediate construction area.
4. All other temporary construction lighting shall be:
 - a. Inclusive of all the standards of this Section, including using fixtures that are long wavelength, downward directed, full cutoff, and fully shielded so light is not directly or indirectly visible from the beach, and
 - b. Turned off during nighttime in sea turtle nesting season, or if authorized by the *Beach Lighting Inspector* during sea turtle nesting season, shall only be allowed from 6:00am to 9:00pm, must be restricted to the minimal amount necessary, and shall incorporate all the standards of this Section, and
 - c. Mounted less than eight feet above the adjacent floor or deck, measured from the bottom of fixture, and
 - d. Restricted to the minimal number of foot-candles necessary to conform to the applicable construction safety regulations.
5. Handheld and other portable temporary lighting shall not be directed toward or used in a manner that disturbs sea turtles or other coastal wildlife.

SECTION ___-4. - COMPLIANCE AND ENFORCEMENT PROCEDURES

Sec. ___-4.1. - Beach Lighting Inspector

1. A position, known as the **City/County of _____** *Beach Lighting Inspector*, is hereby established.

Guidance: While the model creates a beach lighting inspector, local governments may choose to identify someone already on staff, such as a code enforcement officer, for the position. It is

most important that the designated individual receive appropriate training.

2. It shall be the duty of the City/County Manager to appoint the *Beach Lighting Inspector*. The *Beach Lighting Inspector* shall have the necessary training, technical knowledge, and resources to enable them to effectively carry out the duties of this office. The *Beach Lighting Inspector* may access resources provided by other local, state or federal agencies such as the *Sample Beach Lighting Survey Worksheet*, training, and other information available from the Florida Fish and Wildlife Conservation Commission.
3. The *Beach Lighting Inspector* shall be responsible for:
 - a. Inspecting the entire beach within the jurisdictional boundaries of the **City/County of _____** regularly during sea turtle nesting season to determine the extent of compliance with this Ordinance.
 - b. In the event of the finding of a violation at a particular public or private property, conducting further inspections at the property at any time beginning on the night after the deadline date given on the written notice of violation. These follow-up inspections shall continue until the lighting has been brought into compliance with this Ordinance.
 - c. *Beach Lighting Inspector* responsibilities may also include preparation of reports, issuance of non-compliance notices, outreach and education, supporting administrative actions before a review board or special magistrate, or attending building permit pre-application and pre-construction conferences.

Guidance: At minimum, night time lighting surveys and compliance inspections are recommended before and during sea turtle nesting season. Compliance inspections that are conducted frequently throughout the nesting season may be beneficial to local governments in identifying and addressing noncompliant lighting.

4. It shall be unlawful for any person to interfere with, or in any manner hinder the *Beach Lighting Inspector*, or any of their assistants, while in the discharge of their duties under the terms of this Ordinance.
5. It shall be unlawful for any person to knowingly conceal or disable any lighting on a property before it has been inspected by the *Beach Lighting Inspector*.

Sec. ___-4.2. - Notice of Violation

1. Upon finding any violation of this Ordinance, the *Beach Lighting Inspector* shall deliver a written notice of the violation of this Ordinance to the property owner and direct said owner to promptly remove or remediate lighting not in compliance with this Ordinance.
2. The time allowed for making the repairs shall be stated in the notice and should the responsible party neglect or refuse to remove or remediate non-compliance within the specified time stated in the notice, the party so offending shall commit a violation of this Ordinance and be penalized as provided in Subsection ___-4.3 of this Ordinance.

Sec. ___-4.3. - Penalties

1. Any person who takes any action or omission in violation of any provision of this Ordinance and fails to resolve such violation after proper notice is provided, shall be subject to a fine of up to \$ ___ per day per violation for initial violations, and \$ ___ per day per violation for repeat violations. All penalties incurred as a result of violation of this Ordinance shall continue to accrue until such violations are cured.
2. The **City/County of** _____ shall have the right to encumber such property in violation of this Ordinance with a lien for an amount equal to the total amount of fines owed at the time such lien is recorded.

Sec. ___-4.4. - Sea Turtle Fund

1. A *Sea Turtle Fund* is hereby established within the **City/County of** _____.
2. All funds collected as a result of the issuance of fines under Section 3 of this Part shall be deposited in the *Sea Turtle Fund*. The funds in this account shall be used for:
 - a. Assistance to property owners for the procurement of light systems equipment and materials that comply with this Ordinance and reduce the amount of artificial beach lighting,
 - b. Educational materials to inform the general public on the threats of artificial lighting to sea turtles, including but not limited to signs, door knockers, pamphlets, stickers, public service announcements, and other awareness campaigns, and
 - c. Equipment, materials and other resources supporting compliance assistance and enforcement by the *Beach Lighting Inspector*.
 - d. Other reasonable efforts to protect the sea turtle population within the **City/County of** _____, including but not limited to research and conservation projects.
3. The **City/County of** _____ may contribute funding from other sources into the *Sea Turtle Fund* for uses consistent with the purposes set forth above.

SECTION ___-5. - OTHER CLAUSES

Sec. ___-5.1. - Conflict with Other Ordinances

If this Ordinance conflicts with any other Ordinance or requirement of the **City/County of** _____, then this Ordinance shall control during sea turtle nesting season. Deviations from this Ordinance shall be subject to the variance procedures as established by this City/County.

Sec. ___-5.2. - Severability

If any Section or Subsection of this Ordinance is invalidated for any reason, the effected portion may be eliminated or modified to correct the reason of invalidation, if feasible without materially altering or negating the Ordinance Goals and the principles of sea turtle lighting.

Sec. ___-5.3. - Effective Date

The **City/County of** _____ Lighting Ordinance for Sea Turtle Protection shall become effective upon recommendation by _____ and approval by the _____.