

## **Sea Turtles and Artificial Lighting: Frequently Asked Questions**

### **General:**

#### **The nest in front of my house hatched, can I turn my lights back on?**

Not yet. Sea turtle nesting season runs from May 1 to October 31, and the ordinance is in effect for that entire period, whether there is a nest in the vicinity of your property or not. Because females lay nests into October, there is always the possibility of a new nest being laid near your property or your lights impacting a nesting female or nest elsewhere on the beach.

#### **Why don't we just put a barge offshore with bright lights on it to attract all the turtles to?**

While this may seem like a good idea, federal law prohibits tampering with the natural behavior of sea turtles. It could also have a negative impact on sea turtles. The hatchlings would be drawn to these lighted areas where they would be at risk of being eaten by large, predatory fish who would also congregate under the lit area. They would also be wasting valuable energy swimming toward the light and around the area instead of out to the Gulf Stream which they are able to navigate to naturally.

#### **Why can't you move the nests to a darker portion of the beach instead of changing lights?**

Moving nests may seem like a solution, however this doesn't solve the root of the issue and can cause more problems. By relocating nests, nothing is done to prevent the lighting from deterring other females from nesting in the area or interfering with the turtles' orientation on the beach. Our permits only allow for nests to be relocated under a couple of very specific circumstances and data shows that moving eggs after they are deposited can result in poor hatching rates. Female turtles instinctually select spots to lay their eggs, as the environment that the eggs incubate in is critical to their survivorship and the determination of the hatchlings' sex ratio.

#### **What about other lights on the beach?**

Some of the most common sources of light noted on the beach in recent years have been cell phones and flashlights. While those may seem like small lights with little impact, they are quite bright and can be very disruptive to sea turtles and other nocturnal wildlife on the beach especially when many people are out on the beach using them. No light is best, and if you give your eyes time to adjust, most people will be able to comfortably walk on the beach without the use of a light. If you feel a light is needed, it is recommended to use a red, low watt flashlight and to only use it when necessary. You should also dim your phone to the lowest possible level and avoid using flash if taking photos.

#### **So, I have to keep all of my lights off and live in the dark?**

Not at all. We actually do not advocate for turning lights off and only make that recommendation if the lights in violation are purely decorative. Staff will always try to work with property owners to find solutions to prevent them from having to do so. There are multiple options for shielding or modifying lights that are affordable and relatively simple.

#### **There are other lights near my beachfront property that are visible from the beach. Why should I modify my lights?**

Staff monitors all 36 miles of beach and makes every effort to notify and work with all properties who have lighting issues. There are situations when we do have to prioritize some violations over others, but we do our best to be fair and usually we are already aware of the other lighting issues in your area. While it may be frustrating or seem unfair to have to address your lights when there are other lights visible, any positive change in lighting makes a difference to sea turtles.

**Where can I find examples of compliant properties or compliant sea turtle lighting fixtures?**

All Volusia County off beach parks have compliant, turtle safe lighting. The Sea Turtle Habitat Conservation Plan office in Daytona also has multiple examples of compliant lighting fixtures, including a display generously donated by the Sea Turtle Conservancy. You are welcome to stop by during business hours to view these examples, or you can contact the Sea Turtle Lighting Specialist for more information.

**County staff only care about sea turtles. How can the sacrifice of human safety and security to save a few sea turtles be justified?**

Aside from this being untrue, there is no such sacrifice that needs to be made. It is possible to light your property safely and effectively to be compliant with health and safety codes without being in violation of the lighting ordinance. The goal of reducing disruptions and harm to sea turtles caused by artificial lighting is to manage light so that it performs the necessary functions without reaching the nesting beach and there are numerous ways to accomplish that. Technology, availability, and knowledge of sea turtle and wildlife friendly options for lighting have greatly improved in recent years. While it may take time, financial resources, and sometimes creativity, the options are out there, and our staff is here to help guide you. We do not want to make your property or the beach unsafe for humans (after all, we're out there at night too!), but it is our job to ensure the beach remains a habitat for sea turtles to safely utilize for nesting. Some may still argue that the options are not ideal and any inconvenience to them or concerns of humans should outweigh those for sea turtles. We encourage those who may feel that way to remember that sea turtles were nesting on these beaches long before us and that sea turtles are ecologically and intrinsically valuable.

**What should be done with misdirected hatchlings found on the beach?**

If on Volusia County beaches, please contact Beach Safety at 386-239-6414. You can also contact FWC at 888-404-3922. Please do not handle hatchlings.

**There is not enough sea turtle nesting on this beach to justify these lighting regulations.**

Even beaches with low nesting numbers are vital for sea turtles. Because groups of turtles can be genetically unique and most females practice natal homing (returning to the same beach from which they hatched), any beach where nesting occurs needs to be protected. Low nesting numbers could also be a result of artificial light in an area, so addressing those lighting issues nesting could mean increased nesting numbers in the future.

**If you are seeing an increase in nesting numbers, why do we still need to protect sea turtles?**

It is true that we have seen an increase in nesting numbers all along Florida's coast for the past couple of years. While this is a positive sign for sea turtle populations, there are numerous threats that sea turtles face, many of which are caused by humans. Artificial lighting, plastic pollution, bycatch, gear entanglement, and boat strikes are all threats that continue to negatively impact sea turtles. There is a lot of research that goes into the decision to protect a species and what protections to put into place and removing those protections too soon could be detrimental to that species.

### Interior Lights and Window/Sliding Glass Door Tint:

#### **Why do I have to have tint on my windows and sliding glass doors?**

Interior lights that are visible from the beach are just as hazardous to sea turtles and can sometimes be even brighter than exterior lights. Even if they are not directly visible, interior light emitted through windows contributes to light pollution by increasing the ambient light and skyglow in the area. Interior lighting may also cause beach illumination, leading to an overall brighter beach.

Currently, the state of Florida's Model Lighting Ordinance and Volusia County's Sea Turtle Lighting Ordinance require all glass within line of sight of the beach to be tinted to 45% (0.45) or less visible light transmittance (VT). Although recent studies suggest that VT values of 30% (0.30) or less are the best option, with 15% (0.15) being Florida Fish & Wildlife Conservation Commission's recommendation.

Tinting is also beneficial to you as a property owner. Window tint can reduce energy usage and lead to a lower power bill for you!

#### **Why do I have to close my blinds or turn off lights if I have turtle tint?**

Although tint does help to reduce the amount of light emitted by interior lights, it does not make lights invisible and any visible light or beach illumination occurring is a violation of the lighting ordinance. To assure compliance and protect sea turtles, the best option is to utilize window treatments such as curtains or blinds and limit the use of unnecessary interior lights after dark.

### Exterior Lights:

#### **Why is my light a violation? A sea turtle crawling on the sand probably can't even see it.**

To maintain a standard for the enforcement process, we use the verbiage from the ordinance which reads that any light visible by a person standing on the beach is in violation of the ordinance. Because sea turtles do not see light or have the same field of vision as humans, it really is not possible for us to see lights from their perspective, even if we laid on the sand like a turtle. Beach conditions fluctuate often, so different lights may be visible or not depending on those conditions. Therefore, managing lights that are visible to human observers is the most reliable method for consistently identifying problem lights.

#### **Is any red or yellow light in compliance with the ordinance? I've heard red and amber lights are invisible to sea turtles.**

The short answer is no. While it is true that lights with longer wavelengths (such as those in the red, amber, and orange spectrums) are *less disruptive* to sea turtles, they are not invisible and are not considered compliant on their own. Some parts of the state do allow for amber light to be visible, but in Volusia County we only allow long wavelength lights to be visible for specific utilizations in the Core Redevelopment Area of Daytona Beach. While we do encourage the use of lights with a wavelength of 560 nm or greater, they still must be shielded and follow the same rules for compliance as a fixture with a white light.

### Lighting Ordinance and Enforcement:

#### **What happens if I don't correct my lights?**

The Sea Turtle Lighting Specialist follows the same process as Volusia County code enforcement. We always try to work with properties before escalating any lighting issues and hope that those with lighting issues will make a good faith effort to work with us and correct them. If additional enforcement is necessary beyond the initial notice of violation, a certified notice of violation is sent out, followed by a request for hearing for Code Enforcement Board. While the Sea Turtle Lighting Specialist can make recommendations, it is ultimately up to the Board to decide on the outcome. This can range from a finding of non-compliance, a one-time and/or daily fine, up to a lien on the property. If a property is found in non-compliance by the Code Board and has violations in the future, they could be considered a repeat violator and could be taken back to Code Board immediately without the initial notice of violation.

### "Certified" Sea Turtle Lighting:

#### **I bought a sea turtle friendly certified fixture - why is it in violation of the ordinance?**

Even though a fixture or lamp may be certified, it may not be appropriate on every property or at every location on a property. Compliance can depend on multiple factors including fixture type, location on the property, type of bulb used, and elevation from the beach. If a light fails to meet any one of the criteria in the Lighting Ordinance (visible source of light, visible reflective surface of the fixture, and direct or indirect beach illumination), then it is considered non-compliant. When looking at lighting options, it is important to consider the location and application of the fixture and to read any installation recommendations and required options (such as lamp type or shield) provided by the manufacturer and/or certifying organization (such as FWC.) Unfortunately, there are companies out there that claim to be certified, even though they are not, or their certification has expired. If you have questions about compliance or specific fixtures, please reach out to the Sea Turtle Lighting Specialist.