



## Behavior Change Action Plan

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Brevard County, FL, USA

### Case Overview

With the increase in coastal development along Florida’s barrier islands, the dunes are disappearing and artificial lighting is on the rise. The Archie Carr National Wildlife Refuge hosts among the highest densities of nesting loggerheads in the world, as well as thousands of green turtle nests and dozens of leatherback nests each year. For many years, this group has conducted surveys showing that artificial light from new construction and increased development is negatively affecting hatchlings by causing disorientation. An emerging factor is the increase of coastal properties available to visitors through short-term rental companies such as Airbnb and Vrbo. With this behavior change strategy, we are targeting the following behaviors: **1) At night, keep lights off in Airbnb rentals in the Archie Carr Refuge, and 2) outfit and maintain Airbnb rentals in the Refuge with sea turtle friendly lighting.**

### Target Audience

There are three key audiences that this behavior change campaign will target, all occurring within a 20-mile stretch of beach of barrier island that encompasses the Archie Carr National Wildlife Refuge in Brevard and Indian River Counties in Florida.

**Tenants:** The first audience includes tourists or other transient occupants of Airbnb rentals within the target geographic area. This group is not a monolith; many value systems, worldviews, and demographics are likely present. A commonality is the desire to spend time and make memories at the beach, as well as a likelihood to be in the “vacation mindset.” Motivations to keep their lights on at night could be safety-related (i.e. concern with an unfamiliar area), activity-related (i.e. staying up late during vacation), or due to vacation mode (i.e. not thinking about whether lights are on or not). Some barriers to turning lights off at night may include: 1) lack of awareness (not recognizing there is a conservation need), 2) safety concerns, 3) vacation mode (thinking more about other things), 4) interference with late-night activities, and 5) not prioritizing sea turtle conservation over the other aforementioned barriers.

**Property Managers:** A second key audience includes property owners and managers of Airbnb rentals in the same target geographic area. Again, this group is likely diverse in terms of demographics and value-belief systems, but a shared concern may be avoiding impacts to the bottom line - either on an individual or company level. However, they may be motivated to pursue good deeds, as a commitment to conservation is highly favorable in today’s court of public opinion (especially among Millennials and Gen Z) and could lead to increased booking interest from environmentally-minded prospective tenants.

**Leadership:** Lastly, we must consider company leadership at Airbnb, Vrbo, and other short-term rental businesses. Leadership will certainly approach any proposed strategy with an eye towards feasibility,



economic benefit, and brand impact. The elevator pitch should (efficiently) address the concern, plans to make participation easy, and primarily focus on positive impacts to the brand and the bottom line.

## Key Stakeholders

- City officials, including the Tourism Committee and Chamber of Commerce
- Sea turtle conservation organizations and groups that conduct research and monitor nesting beaches
- Local business owners that sell lighting or could help to spread conservation messaging in other ways
- Municipal code enforcement officials
- Lighting companies
- Electric utility companies
- Three outlined target audiences: short-term rental Tenants, Property Managers, and Leadership

## Theoretical Framework

The [Theory of Planned Behavior](#) is a useful framework for considering behavior change interventions or strategies that will encourage sea turtle friendly behavior, specifically as it relates to mitigating artificial light pollution on Florida’s beaches.

In particular, three areas of focus emerge: 1) Improving attitudes towards engaging in desired behaviors, 2) Using subjective/social norms to encourage desired behaviors, and 3) Removing intervening factors and barriers (i.e. increasing both perceived and actual behavioral control) that could be interfering with the ability to perform desired behaviors.

In the case of **Tenants**, tailored message framing will be critical to position the action of turning lights off at night as a simple and easy behavior that has important implications for nesting and hatching sea turtles. A targeted messaging effort coupled with strategic removal of intervening factors (e.g. it may be helpful to introduce resources that remind Tenants to turn off their lights), will be likely to encourage more widespread adoption of the desired behavior.

The same constructs apply for encouraging Airbnb **Leadership** and **Property Managers** to consider sea turtle lighting-friendly retrofits for coastal rental units. From an Attitudes perspective, it will be important to address recent increases in turtle nesting to set the narrative around why sea turtle-friendly lighting is so important for sea turtle recovery in the area. Perceived control can be improved by periodic progress reports that share disorientation rates back to Leadership and Property Managers - this will demonstrate the control they have by making these adjustments to their business practices.

## Key Message

### **Tenants**

Messaging for vacationing **Tenants** should be 1) rooted in optimism, and 2) promote agency around the ability for individuals to make a meaningful impact with little effort. Further, the message must be able to “cut through the noise” of all the targeted advertising that vacationers will inevitably receive during their stay. For consistency and to encourage recall, existing slogans (such as, “*Sea Turtles Dig the Dark*”)



may be used, but should be supplemented with clear and simple instructions outlining how one may accomplish this directive while occupying the rental unit. Messaging for this audience should avoid evoking feelings of guilt, doom, or helplessness.

In addition to keeping lights off and/or turtle-friendly in the unit, this strategy may also consider messaging around the use of flashlights (even red flashlights) on the beach at night.

Spokespeople should include the short-term rental company itself (to set an official tone and encourage compliance), but could also include a partnership with a local sea turtle organization such as Stella Maris, or a consortium like CLICK. This will lend credibility to the cause and hopefully encourage a more meaningful connection between Tenants and the desired behaviors.

### **Company Leadership**

The clear message for Airbnb **Leadership** is, “Sea turtle conservation is good for business.” A visible, discernable, and authentic commitment to the environment on behalf of businesses is an important differentiator for Millennial and Gen Z patrons in the marketplace. As these generations are the primary users of Airbnb and Vrbo, conservation-minded rental options may encourage younger visitors to opt for short-term rentals over hotels in the area. Emphasizing both the positive impact to the brand and to the bottom line should interest Leadership in learning more.

It is important to not cloud this simple message with too many facts about sea turtles or the threats facing them. Business leaders are not biologists; paint a clear picture and immediately get to the pitch, emphasizing the impact that they can take credit for with a relatively low lift.

### **Property Owners/Managers**

Getting **Property Managers** on board may require a messaging strategy rooted in subjective/social norms. If they know that Leadership is supportive and encouraging of them to make their rentals more sea turtle friendly, and if they see some of their peers “dive in,” they may be more inclined to follow suit. Early on, it will be important to identify a handful of Property Managers that are already conservation-minded and eager to go on this journey. Highlighting their successes, both from a conservation standpoint and sharing the feasibility of participating and the support they received to be successful, will help to get others on board. Further, lighting retrofits such as reducing the number of outdoor fixtures, conversion to long wavelength bulbs and turtle-friendly fixtures, and installation of turtle-friendly window tint, are known to reduce utility costs.

## **Implementation**

### **Tenants**

Key messaging for tenants of short-term rentals should be delivered before and during their stay. Modes of delivery can include, but are not limited to: pre-arrival welcome message, signage in rental units, nightly push notifications through an official app, and inclusion of the desired behaviors in the “house rules” section of the rental listing. Additional methods for encouraging behavioral compliance may include: timers on lights and curtains in rental units, and additional safety measures to offset concerns that may arise from turning off lights at night.

### **Company Leadership**

A lighting retrofit program targeted at coastal short-term rentals should be proposed, potentially funded by Airbnb and accompanied by an advertising campaign to allow recognition of this sustainable action made by the company. Retrofits need not only include outside lighting; additional options also include installation of sea turtle-friendly window tint on ocean-facing windows and doors. A small fee can accompany other established fees and taxes during booking, but instead can go directly towards sea turtle conservation by way of local nonprofit turtle conservation organizations. Work with Airbnb and similar companies to establish clear indicators of “sea turtle-friendly properties”. This work can, and should, align with existing sustainability goals of the Company, and should take advantage of granting or funding opportunities associated with these goals.

If there are challenges in making initial contact with Airbnb leadership, consider partnering with a few “friendly” property owners and learning more about their process of communicating with company leaders. They may have some suggestions for direct pathways to reach the right people.

### **Property Owners/Managers**

Once Leadership is on board, they may serve as partners for encouraging adoption of the strategy among **Property Managers**. Depending upon agreements reached with Leadership, their participation in the sea turtle-friendly lighting strategy could be anywhere from “mandatory” to “encouraged.” If participation is voluntary, it may be important to rely on social norms to encourage behavioral compliance (e.g., a contest in the online portal that shows how many rental units have already been retrofitted). Incentives could also be explored, but it becomes important to monitor that behavior (e.g., converting homes to become turtle-friendly) is maintained over time.

A list of readily available partners to aid in implementation (again, to reduce barriers around perceived and actual control) will help to ensure Property Managers get on board and ultimately are successful. For example, a partner could include a local energy company that has a joint alliance with Airbnb to offer discounted turtle-friendly lighting in their catalogs to Property Managers looking to retrofit their short-term rental. Look for additional opportunities to be proactive with eliminating barriers; this will require more work on the front end, but will increase your long-term and scaled success.

## **Evaluation**

Evaluation indicators representing both behavior change outputs and conservation outputs should be employed in tandem to measure the impact of the proposed action plan.

Examples of **behavior change outputs** include:

- Lighting survey violation rate (collaboration with code enforcement; measured pre- and post-implementation)
- Percentage of short-term rental properties retrofitted with sea turtle-friendly lighting (measured pre- and post-implementation)
- Self-report question added to Airbnb feedback survey to understand if the tenants received information regarding sea turtle friendly practices and if they participated in those practices.

Examples of **conservation outputs** include:



- Change in disorientation rate of nests seaward of short-term rentals (collaboration with permitted turtle groups to share these data)
- Number/percentage of nesting females and hatchlings successfully reaching the water

Work to establish an evaluation plan that includes both conservation and behavior change indicators of success. Determine how these indicators will be measured and which partners you might need in order to gain the information necessary to evaluate success against the selected indicators.

## Conclusion

In summary, managing light pollution on Florida's sea turtle nesting beaches is a widespread and complex challenge, but one that can benefit immensely from science-based messaging efforts and behavior change strategies. Spend time exploring each specific audience you must reach, and prioritize developing custom action plans for each of them. Develop your evaluation plan alongside your action plan to ensure you are measuring relevant indicators of success that align with your action plan.

You might find helpful resources on our webpage: <https://www.seaturtlestatus.org/team-beach>.

Thank you for choosing to partner with Team BEACH to begin to tackle this conservation challenge. We look forward to continued collaboration!