

## Section 10 Beach Lighting Management Plan

### Purpose

Reducing the probability of hatchling disorientation events from point-source beachfront lighting along the unincorporated beaches of St. Johns County and along the City of St. Augustine Beach will reduce one of the principal factors impacting sea turtles in St. Johns County.

### Relevant ITP Condition - G.2.k.

**k. Beach Lighting Management Plan.** “Within thirty (30) days of the effective date of this permit, the Permittee shall develop and submit for U.S. Fish and Wildlife Service review and approval a comprehensive Beach Lighting Management Plan that unifies local and county codes regarding management of beach-front lighting in accordance with actions described in Chapter 7 of the HCP. Beginning May 1 during the first full nesting season following the issuance date of this Permit, the Permittee shall implement such Plan. The Permittee may amend the approved Beach Lighting Management Plan both prior to and after its implementation upon review and approval of the U.S. Fish and Wildlife Service.”

### HCP Performance During 2012

**Implementation:** In September 2006 the Beach Lighting Management Plan (BLMP), County Ordinance 99-33 was submitted and approved through the USFWS. In May 2007, the City of St. Augustine Beach officially adopted County Ordinance 99-33 (Appendix J) allowing the Beach Lighting Officer to begin an education effort within the City limits and conduct surveys of the locale. Prior to the start of the 2007 nesting season a part time seasonal Beach Lighting Officer was employed to implement and enforce the BLMP during the sea turtle season. This position has now been replaced with the Environmental Technician position that is an annual full time employee absorbing the job requirements of the Beach Lighting Officer. This position also provides staff support during the winter months as the Habitat Conservation Section prepares for the next nesting season. Additionally, a part time seasonal Beach Lighting Officer was retained to assist the full time position. With both positions the beaches of St. Johns County were surveyed seven nights a week throughout the entire nesting season of 2012.

Each year the Environmental Technician follows a routine approach to informing coastal residents, management companies and visitors that sea turtle season is approaching and that the Beach Lighting Management Plan will be implemented.

### **Community Education Effort**

April            A letter (Appendix K) is sent to all beachfront property owners, managers and representatives providing information on the Sea Turtle Nesting Season that officially begins on May 1<sup>st</sup> and extends through October 31<sup>st</sup>. Methods to reduce lighting impacts are included in the letter (Appendix L).

- April Florida Power and Light (FPL) is contacted regarding street lights that need to be brought into compliance by May 1<sup>st</sup>.
- April Public Service announcements sent to Government TV and area Media Outlets regarding Sea Turtle Nesting Season and the Beach Lighting Management Plan.
- May – Oct Environmental Technician(s) conduct nightly surveys of coastal properties, issuing Alert of Violations (AOV) for any non-compliant lights. Included with the AOV were recommendations to bring the lighting into compliance. Throughout the season there is continued contact with FPL discussing issues arising with customer complaints and any additional FPL lights that may have during the course of the season become a problem due to new construction or landscape changes.

### **Standards for New Construction**

All properties must pass a nighttime lighting inspection prior to receiving a Certificate of Occupancy (CO). Daily the Environmental Technician reviews the Inspection report provided by the Building Department for pending Building Inspections. Contractors are contacted by the Environmental Technician to schedule a lighting inspection for the property. The nighttime lighting inspections occur after sunset and from the surface of the beach. If the property is in compliance the Environmental Technician approves the property through an online tracking method allowing the property to receive a CO from the Building Department. If the property is not in compliance and has resulted in a failed inspection the CO is withheld until the property is re-inspected and determined to be in full compliance. A total of twenty inspections were conducted in 2012 for nighttime turtle lighting.

### **Standards for Existing Construction**

During the months of March and April the Environmental Technician gathers information relative to non-compliant FPL Street Lights. Nighttime lighting inspections begin each May and continue weekly during the sea turtle nesting season to determine compliance with the County Ordinance. Properties not in compliance with the ordinance are documented on an “Alert of Violation” (AOV). The AOV is posted at the property with instructions to turn off or disable all non-compliant lights and contact the Habitat Conservation Section within 24 hours. Failure to comply within the time specified results in a “Letter of Non-Compliance.” The Letter is sent to the property owner as Certified Return Receipt and includes a copy of the AOV. Failure to respond to the Letter within the time specified results in a “Written Warning” sent to the property owner. Failure to correct the violation by the time specified results in a Uniform Code Citation pursuant to Sec. 162.21 F.S. Additional site inspections shall occur following each correspondence until the property is brought into compliance.

### **Complaint and Investigation Log**

Complaints concerning potential lighting violations received from the public are recorded in a complaint and investigation log. The complaints are investigated within 24 hours of receipt. All

findings regarding compliance or non-compliance are documented in the log and provided to the complainant at their request. Any violations noted are addressed in the same manner as previously indicated.

### Formal Education Programs

During annual HCP and Protected Species Training the BLMP is presented. The intent of the training is for individuals to leave with the understanding that light pollution can cause severe problems for sea turtle and beach mice activities. Education tables are set up at various festivals, including but not limited to, the 5K Turtle Trot, surf contest, and the annual sea turtle festival that provides recommendations to beach front property owners on how to limit light pollution on beaches throughout the year and specifically during sea turtle season. The display shows examples of compliant lights and a list of modifications for coastal properties.

### Disorientation Events

Eleven incidents, all Loggerhead (*Caretta caretta*) species, were reported on St. Johns County beaches during the 2012 season by the Principal Permit Holders.

- **Date:** June 24<sup>th</sup>. **Location:** 0.9 miles south of A St. **Observations:** Documented as a false crawl. Large adult Cc had long, curvy crawl on beach. She went back to the ocean where she was found swimming North and South in a long tide pool. Re-nourishment project 2 miles north of this location created a sandbar off shore. The turtle was shepherded and encouraged to climb up the sand bar to the ocean. Many pedestrians were observed around the turtle. **Report Filed:** Yes. **Investigation by BLO:** No. **Light of Concern:** No light source identified as a concern.
- **Date:** June 24<sup>th</sup>. **Location:** 1.0 miles south of A St. **Observations:** Adult Cc came onto the beach and laid her nest. She left a long, twisting trail back out to the ocean. She was found during turtle patrol swimming North and South in a large tide pool. Re-nourishment project occurring to the north of area possibly created the sandbar which caused the tide pool. Turtle was lifted and encouraged over the sand bar. Many pedestrians in the area and around the turtle. **Report Filed:** Yes. **Investigation by BLO:** No. **Light of Concern:** No light source identified as a concern.
- **Date:** June 25<sup>th</sup>. **Location:** Around the Ocean Trace Rd Ramp. **Observations:** This event was documented as a false crawl, Adult Cc. This area is 3 miles south of re-nourishment work area at the time of incident. Many pedestrians in the area who stated that many flashlights on beach at night. The turtle was found on beach resting with many pedestrians around her. She was assisted into the ocean where she swam away. Her entrance crawl onto the beach was found straight to the dune at 0.2 miles south of ocean Trace. She attempted a body pit in dune then turned north and walked a curvy trail in dune 0.1 miles north of Ocean Trace where she turned east and went into the ocean. **Report Filed:** Yes. **Investigation by BLO:** No. BLO was not notified of DISO until end of season. **Light of Concern:** Undetermined.

- **Date:** July 22<sup>nd</sup>. **Location:** 565 Ponte Vedra Blvd. **Observations:** Incident was documented during morning survey. 5-10 Cc hatchlings disoriented. 5-10 Cc hatchlings reached the water. **Report Filed:** Yes. **Investigation by BLO:** No. BLO was not notified of the DISO until November 1<sup>st</sup>. **Light of Concern:** No light source identified as a concern.
- **Date:** July 23<sup>rd</sup>. **Location:** 11 Surfside Ave/Surfside Park parking lot. **Observations:** The nest was located in dunes near the beach access ramp (vehicle access). Cc Hatchling appeared to follow the ramp west towards the parking lot. A beach bystander found a smashed hatchling and turned it over to St Johns County rut removal staff. Rut removal staff turned the hatchling over to Cat Eastman (permit holder staff). 1 Cc hatchling disoriented. 1 Cc hatchling was found dead. **Report Filed:** Yes. **Investigation by BLO:** Yes on 7/23/12. **Light of Concern:** No light source identified as a concern.
- **Date:** July 24<sup>th</sup>. **Location:** 7790 A1A South (South end of Belmar condos). **Observations:** Disorientation observed during AM patrol at sunrise. The Cc hatchling tracks headed towards the easternmost building of Tradewinds condos for approximately 130-140 yards to the center of the Windjammer condos (7780 A1A) where the tracks were no longer visible. 2 Cc hatchlings disoriented. **Report Filed:** Yes. **Investigation by BLO:** No. BLO was not notified until end of season. **Light of Concern:** Undetermined.
- **Date:** July 30<sup>th</sup>. **Location:** 3580 Coastal Highway. **Observations:** The nest was in heavy vegetation next to a condemned house. The nesting female Cc, encountered the driveway and concrete, almost entering A1A herself when initially nesting. The driveway is steep, and the hatchlings went down hill into the road. 7 Cc hatchlings were found on Coastal Highway. Silt fencing was installed after first disorientation event. 9 Cc hatchlings disoriented. 9 Cc hatchlings found dead. **Report Filed:** Yes. **Investigation by BLO:** Yes on 7/30/12. **Light of Concern:** No light source identified as a concern.
- **Date:** August 9<sup>th</sup>. **Location:** 50 ft. south of Vilano Jetty/St Augustine inlet (Viejo and Zamora are the 2 roads that run perpendicular to the beach and are landmarks to the nests location). **Observations:** 5 Cc hatchlings disoriented following the contour of the beach landward. 2 Cc hatchlings were found along the dune path from Viejo Rd to the beach. 1 Cc dead hatchling was observed in the middle of Viejo Rd. The live hatchlings were released at night. 2 Cc live hatchlings were found on either side of the garage door of 75 Zamora. Silt fencing was used to create a barrier path toward the water for the hatchlings to follow. 5 hatchlings disoriented. 1 Cc hatchling was found dead. 4 Cc hatchlings were found alive. **Report Filed:** Yes. **Investigation by BLO:** Yes on 8/9/12. **Light of Concern:** No light source identified as a concern.
- **Date:** August 11<sup>th</sup>. **Location:** Just south of A St. **Observations:** Possible pier lights or lights from the re-nourishment construction. 2 Cc hatchlings walked north. 1 track moved 200 yards north and then disappeared. The 2<sup>nd</sup> hatchling went north 100 yards and then west into the dune where it was lost. 70 plus hatchlings made it to the ocean. Nest was west of 1<sup>st</sup> dune. At the direction of the PPH County staff installed black cloth fencing around the west side of the nest. **Report Filed:** Yes. **Investigation by BLO:** No. **Light of concern:** Possible pier lights or lights from the re-nourishment construction at pier.

- **Date:** August 21<sup>st</sup>. **Location:** 0.2 miles south of Ocean Trace Rd. **Observations:** High in dune, north side of Ocean Drive. This event is linked to Cc false crawl that had a disorientation report filed on June 25<sup>th</sup>. 12 Cc hatchlings were found in and around yard of 5 Surf Drive. Volunteers placed black tarp on west side of the nest stakes. **Report Filed:** Yes. **Investigation by BLO:** Yes on 8/21/12. **Light of Concern:** Visible yellow/amber lights were observed at the hotel “Ocean Village Club” directly southwest of the nest. In addition, bright sky glow and the moon set in the west were observed. The light sources observed were not in violation of St Johns County ordinance 99-33.
- **Date:** September 21<sup>st</sup>. **Location:** 7780 A1A South (Windjammer Condos) Exterior Condominium lights were identified as lights of concern and probable/possible light source that caused the disorientation. Cc hatchlings disoriented toward dunes westward of the nest. An outside balcony light was identified as a possible light of concern. 23 Cc hatchlings identified through tracks in dunes to the water. 3 live Cc hatchlings were observed. **Report Filed:** Yes. **Investigation by BLO:** No. **Light of Concern:** Exterior balcony light observed and identified as a light of concern by permit holder surveyor.

### Seasonal Modifications

In conjunction with the annual mailing of the beach lighting letter a separate lighting letter (Appendix M) was mailed to individual property owners identifying lights of concern. The letter acknowledged the lights of concern on the property and methods to reduce the lights of concern were included in the letter.

During the 2012 season an Assistant Beach Lighting Officer worked to provide nighttime light surveys on 3 nights allowing for 7 nights of surveys weekly. The assistant allowed for the permanent beach lighting officer to work one day during morning/day hours to provide education outreach and follow up meetings with residents that had lights of concerns. This day shift allowed for a weekly informational breakfast meeting at The Beach Club (2 Ocean Trace St) to educate about beach front lighting and sea turtle nesting to the guests and weekly time share holders visiting throughout the summer season. Informational breakfast meeting at the Beach Club occurred every Monday starting in the month of July. Approximately 15 weeks of educational outreach with approximately 50 people in attendance each time for a total of 750 people being educated about sea turtle awareness. Beach lighting was the main focus of the agenda but we also addressed beach furniture, holes, and what to do if you encounter a nesting female or hatchling.

April 17<sup>th</sup> a Beach lighting presentation was held prior to the sea turtle nesting season. The Beach Lighting Presentation, “Wildlife and Lights – The Official Marine Turtle Lighting Course: Balancing Property Rights, Safety, and Sea Turtle Survival.” Karen Schanzle from FWC presented along with SJC Jessica Miller. The presentation was a huge success with 22 participants. FWC also brought their educational lighting trailer for public display.

Since 2009, the County decorative street lights on Vilano Road and Anahma Drive are turned off to eliminate any point source lighting visible from the beach surface. Individual lights

determined to be a point source are scheduled to be turned off seasonally. Yellow shields remain installed on several of the decorative lights being turned on due to citizen complaints. In addition FPL light shields are installed on several lights facing the beach that was previously turned off. A total of seven shields were installed allowing for some shielded street lights to remain on during the sea turtle nesting season. Lights located closest to the beach were not shielded and will continue to be turned off during the nesting season.

During the 2012 beach lighting season the St Johns County Shore Protection Project occurred and was monitored for lighting through out the nesting season. The St Johns County Shore Protection Project – Project Number: 1510 was approximately 2.75 miles long, located along the Atlantic shoreline. The project was completed by the United States Army Corps of Engineer and coordinated by the SJC Engineering Department. The following are observations made by the Beach Lighting Officer:

1. **May 10, 2012:** A nighttime lighting survey was conducted of the SJC Shore Protection Project. Two (2) lights, bright and white, southeast facing was observed to be of concern. The lights were visible from as far south as Matanzas Avenue on Crescent Beach.
2. **July 8, 2012:** A nighttime lighting survey of A Street to the pier was conducted. Two large stadium/spot lights were observed from all areas of the beach. The lights of concern were immediately addressed with the construction workers on site. The workers made prompt adjustments to the lights to position them to face away from the beach.

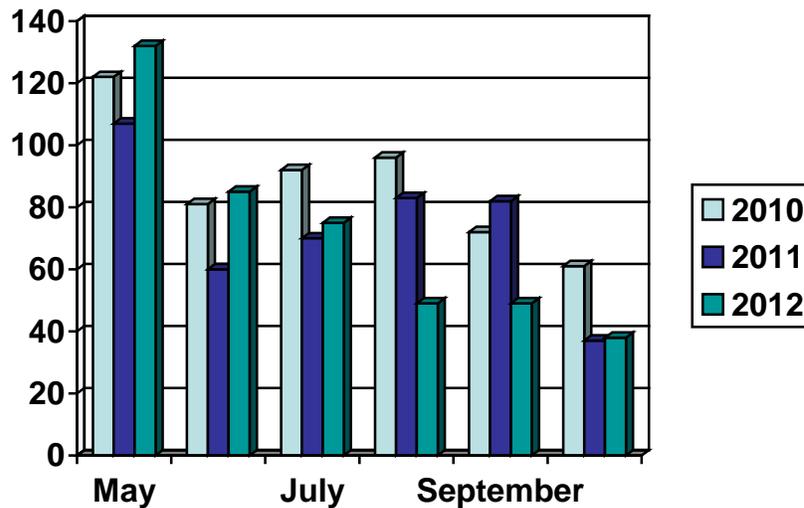
Correspondence, awareness, and monitoring of the lighting and sea turtle nests were made between St Johns County, Florida Fish and Wildlife and the permit holder surveying that section of beach.

**Assessment:**

Beachfront properties along the County beaches were evaluated for compliance with lighting regulations contained in the County Beach Lighting Ordinance. These regulations mimic those contained in the Florida's Model Lighting Ordinance for Sea Turtle Protection and apply to all County beaches, including within the City of St. Augustine Beach city limits.

During the 183 days of sea turtle season a total of 428 AOVs (Graph 11) were issued to coastal homeowners in St. Johns County. Map Figures 8 and 9 identify the locations of lighting violations. The AOVs are hand delivered to the front door of the homes in violation by the Beach Lighting Officer. Typically the offending property owner or manager will contact the Officer directly to report their property is in compliance. This season no official written warnings or citations were issued.

Graph 11. Lighting Violations Summary



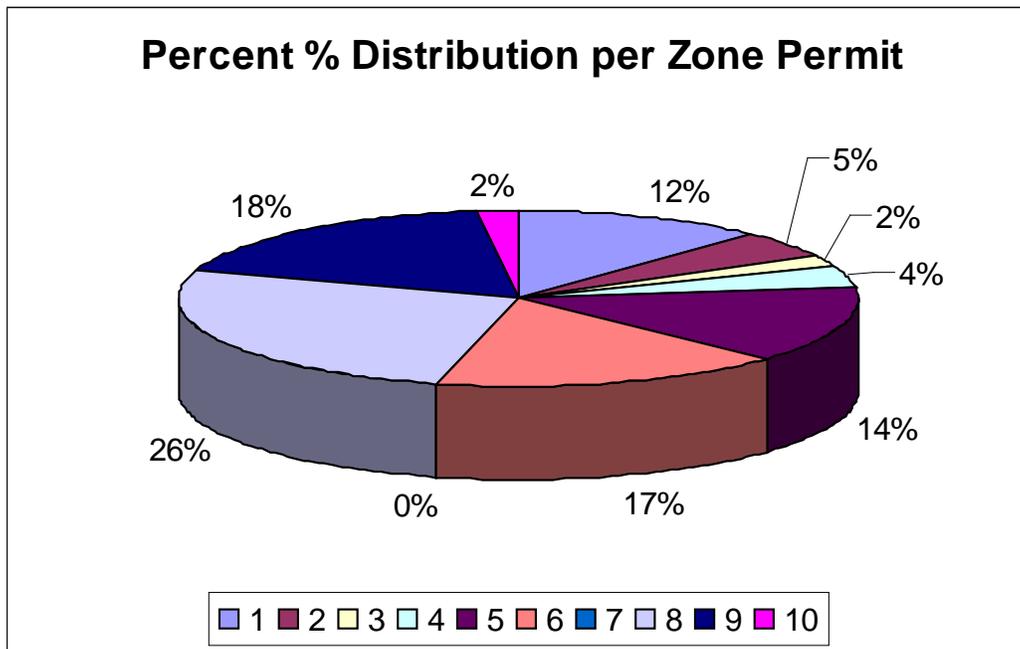
St. Johns County beaches are divided into eight zones by the FWC Imperiled Species Management Section to authorize sea turtle patrolling activities. Each permit holder is responsible for varying lengths of linear beach to patrol and each has varying levels of density of homes, condos and resorts. Table 12 and Graph 12 below demonstrate the Percent Distribution of AOVs for each permit holder.

Table 12. Beach Lighting Zone Distribution

| Zone         | Beginning                               | End                           | Km   | # of Violations | %    |
|--------------|---|-------------------------------|------|-----------------|------|
| 1            | 49 Ponte Vedra Blvd.                    | Sawgrass Beach Club           | 5    | 54              | 12   |
| 2            | Sawgrass Beach Club                     | Old Ponte Vedra Condominiums  | 5.6  | 21              | 5    |
| 3            | Old Ponte Vedra Condominiums            | GTMNERR                       | 1.81 | 8               | 2    |
| 4            | 2343 S. Ponte Vedra Blvd.               | 2683 S. Ponte Vedra Blvd.     | 6    | 17              | 4    |
| 5            | 2700 S. Pont Vedra Blvd. (Gate station) | 4100 Coastal Hwy (Reef)       | 8.29 | 60              | 14   |
| 6            | 4100 Coastal Hwy (Reef restaurant)      | 2 Viejo Road (Porpoise Point) | 4.39 | 72              | 17   |
| 7            | Anastasia State Park                    | Anastasia Stat Park           |      | 0               | 0    |
| 8            | 300 A1A Beach Blvd.                     | Crescent Beach Ramp           | 9.81 | 111             | 26   |
| 9            | Crescent Beach South                    | Matanzas Ramp North           | 6.22 | 78              | 18   |
| 10           | Summer Haven                            | 9443 Old A1A                  | 4.11 | 7               | 2    |
| <b>Total</b> |   |                               |      | 428             | 100% |

\*\*Refer to Map Figures 11 and 12 to see a complete layout of Alert Of Violations.

Graph 12. Percent Distribution per Zone/Principal Permit



**Program Improvements:**

The County will be distributing magnets, window decals, and light switch stickers prior to the start of the 2013 season. Distribution will be to hotels, condo associations, rental properties, and the general public in an attempt to increase awareness of decreasing indoor and outdoor beach light impacts.

A 2<sup>nd</sup> Annual Beach Lighting Workshop and online slide presentation will be presented as a resource for the community prior to the sea turtle nesting season in 2013 to bring further awareness to homeowners, builders, contractors, and anyone interested in the affects and concerns of beach lighting to sea turtles.

Increased knowledge of sea turtle lighting concerns and ways to improve awareness and minimization of beach light impacts will be improved through increased self awareness with participation at the beach lighting round table discussion at the 2013 Permit holder meeting and continued frequent communication with other area beach lighting officers.