

**INDIAN RIVER COUNTY, FLORIDA  
BOARD MEMORANDUM**

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**TO:** Jason E. Brown, County Administrator

**THROUGH:** Richard B. Szpyrka, P.E., Public Works Director

**THROUGH:** Eric Charest, Natural Resources Manager

**FROM:** Quintin Bergman, M.S., Environmental Specialist

**SUBJECT:** Florida State University - Sea Turtle Lighting Study

**DATE:** November 3, 2020

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**DESCRIPTION AND CONDITIONS**

Indian River County's Sea Turtle Habitat Conservation Plan (HCP) outlines the adverse effects of artificial lights to nesting and hatchling sea turtles that typically emerge at night along the County's beaches. It is a goal of the Habitat Conservation Plan to decrease these impacts and improve the nesting habitat for all three protected species of sea turtle that utilize the County's beaches.

Artificial lights on the beach at night can cause confusion in sea turtle hatchlings, attracting them away from the ocean. This makes them waste energy and become more vulnerable to predators. These events are called a Disorientation. During sea turtle surveys Staff and other Marine Turtle Permit Holders complete a report for each disorientation. Since the HCP inception in 2005, an average of 72 nests per year are reported to have disorientated, equating to negatively impacting around 8,000 hatchlings per year.

Section 932.09 of the Indian River County Code of Ordinance depict regulations for coastal properties that serve to protect sea turtles. In summation the code states: that lights seen from the beach must be shielded so they do not illuminate the beach and must be an amber or red light bulb.

Staff has been approached by Dr. Mariana Fuentes an Associate Professor at Florida State University where she leads the Marine Turtle Research Ecology & Conservation Group. Dr. Fuentes would like to conduct a sea turtle lighting study along portions of Indian River County's beaches and has asked for assistance from County Staff.

The study includes utilizing a novel technology to determine and measure the light field surrounding artificial lights along the beach, contributing to a better understanding of how the artificial light impacts hatchling turtles.

This study is dependent on a grant application from Dr. Fuentes requesting resources from the Florida Sea Turtle License Plate Grant Fund. If awarded the grant, Dr. Fuentes has asked for participation from the County by contributing Staff time and the use of equipment. Staff would be included as a co-author if any peer-reviewed publications resulted from the study.

**FUNDING**

No funding is required for Staff participation as Staff salary is accounted for in the FY 20/21 budget cycle.

**RECOMMENDATION**

Staff recommends the Board of County Commissioners to allow the County’s Sea Turtle Environmental Specialist to assist Dr. Fuentes in the described lighting study. Staff also recommends the Board of County Commissioners authorize the Chairman to sign the STLP Letter of Support to meet a requirement of the grant application.

**ATTACHMENT**

STLP Grant Letter of Support

**APPROVED AGENDA ITEM FOR: NOVEMBER 10, 2020**