



## Cover Memorandum/Staff Report

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**File #:** 25-295

**Agenda Date:** 3/11/2025

**Item #:** 7.C.

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**TO:** Mayor and Commissioners  
**FROM:** Kent Edwards, Sustainability Officer  
**THROUGH:** Terrence R. Moore, ICMA-CM  
**DATE:** March 11, 2025

### CORAL REEF RESTORATION

#### **Recommended Action:**

Review a presentation regarding coral reefs and coral reef restoration activities, and provide comments.

#### **Background:**

The only coral reef system in the continental United States is found in Florida. This reef system has undergone tremendous degradation over the past 30 years, losing more than 95% of its historical coverage in the Florida Keys. A main reason for the loss of coral, is the very warm water temperatures which have occurred during extended periods of the summer. These temperatures are stressful to coral, weakening the organisms and making them susceptible to bleaching and disease, potentially leading to death. Relatively elevated water temperatures will continue to be experienced, as the trend toward a warmer climate continues.

The northern extent of the Florida reef tract runs offshore of Delray Beach. With the southern part of the reef tract degraded and facing continued stress from increased temperatures and disease, many researchers and marine resource management agencies are looking to the northern part of the reef tract as an opportunity for outplanting corals, which could serve to accelerate the succession of the reef system, and even save some coral species from extinction in the wild. The northern reef tract is dominated by soft corals, but research and outplanting projects are in the initial phases, to evaluate the potential for growth of hard coral species. Generally, the northern part of the reef tract is in deeper water, which could prove to be conducive to hard coral colony establishment, as deeper depths typically experience lower water temperatures compared to shallower reefs.

The Reef Institute (TRI) is a 501(c)(3) nonprofit organization. TRI is the only operation of its kind in Palm Beach County. Overall, TRI aquaria are holding 24 different coral species, 2680 individual coral colonies, plus approximately 17,000 smaller colonies formed by larvae which settled in a specialized tank in the TRI lab. TRI serves as one of only two biobanks for the genetic library of staghorn (*Acropora cervicornis*) and elkhorn (*Acropora palmata*) coral in Florida, both of which are threatened species. TRI is moving into a new 23,000 square foot facility, expanding their operations more than sevenfold. Another part of the TRI operation involves coral outplanting, where they have attached 110 total colonies from 4 different species at 2 separate outplanting sites.

TRI's operations encompass all aspects of coral reef habitat restoration, including rescue, aquaria holding, laboratory spawning, colony preparation for outplanting, site assessment and preparation,

outplanting, and follow up monitoring.

**City Attorney Review:**

NA

**Funding Source/Financial Impact:**

None at this time, but funding could be a subsequent consideration depending on Commission comments.

**Timing of Request:**

NA