



Brevard County Board of County Commissioners

2725 Judge Fran Jamieson
Way
Viera, FL 32940

Legislation Text

File #: 2148, Version: 1

Subject:

Agency Cost-Share Agreement with the Indian River Lagoon (IRL) Council for Testing Steel Gabions and Concrete Core Modules for Use in Oyster Bars in the IRL

Fiscal Impact:

FY20-21: IRL Council Grant \$1,750, Save Our Indian River Lagoon Fund 1260, \$625

Dept/Office:

Natural Resources Management Department (NRM)

Requested Action:

It is requested that the Board of County Commissioners: 1) authorize the Chair to execute a Cost-Share Agreement with the Indian River Lagoon Council to complete a material testing study related to oyster restoration; 2) waive venue in the event of any legal proceedings to Indian River County; 3) authorize the County Manager or designee to execute any future amendments, change orders, or extensions; and 4) authorize associated budget change requests.

Summary Explanation and Background:

On October 17, 2013, the Board of County Commissioners approved a General Fund allocation of \$150,000 to develop and implement a County-Wide Community-Based Oyster Propagation Program in partnership with the Brevard Zoo. The program grew through a grant funded by the Florida Department of Environmental Protection on September 16, 2014. To date, over 1400 waterfront property owners have participated in this program by growing oysters in caged gardens under their docks. Additional community volunteers have assisted in building oyster bars from recycled shell and seeded with the gardened oysters. Due to the water quality, filtration and habitat benefits, oyster restoration continues with annual funding from the Save Our Indian River Lagoon Trust Fund. As this program continues to develop, exploring plastic-free materials to use in oyster bar construction is an important next step, for which we have obtained grant funding through the Indian River Lagoon National Estuary Program.

Background: Oyster reefs have been shown to increase water quality through filter feeding activity, reducing turbidity, sequestering nitrogen and phosphorus in their shells and tissues, and increasing denitrification under the reefs. Oyster restoration projects typically use plastic mesh bags to contain the recycled shell and live oysters needed to establish a reef. Recently, scientific and public concern has been growing regarding the occurrence and impacts of plastics in the environment, particularly the breakdown of plastics and the presence of microplastics in marine environments and organisms.

This project aims to test new non-plastic materials for oyster recruitment potential, longevity in the system, and ability as a substrate to support oyster reef development in Brevard County. By building on current efforts in material development in nearby environments, we can serve as an additional data source, while ensuring the

products will endure our local conditions and work to the site-specific constraints of the Indian River Lagoon in Brevard County.

The awarded grant will help Brevard County address the following questions: (1) Do the materials persist in the local environment long enough for oysters to secrete a sustainable reef formation? (2) How do the materials and designs tested compare for oyster recruitment? (3) Do oysters grow out of the footprint of the deployment material and form bridges? (4) How do they perform in relation to fouling? The results of this material test will help inform additional, plastic-free, options to incorporate into the design of oyster bars throughout the Indian River Lagoon. These oyster bar projects throughout the county filter and clarify lagoon waters, reduce erosion, provide habitat, and remove nitrogen from the water column.

Clerk to the Board Instructions:

Please execute two original Cost-Share Agreements and return to Natural Resources.