



Brevard County Board of County Commissioners

2725 Judge Fran Jamieson
Way
Viera, FL 32940

Legislation Text

File #: 6529, **Version:** 1

Subject:

Florida Department of Environmental Protection Grant INV43 - Ultrasonic Algae Treatment Performance Testing in Brackish Sykes Creek Canal - District 2

Fiscal Impact:

Grant revenue of \$199,500 with no match requirement.

Dept/Office:

Natural Resources Management

Requested Action:

It is requested that the Board of County Commissioners 1) authorize the Chair to execute this grant contract; 2) authorize the County Manager to execute any future amendments to this contract; and 3) authorize the County Manager to approve related budget change requests.

Summary Explanation and Background:

Grant funding of \$199,500 has been awarded to Brevard County Natural Resources from fiscal year 2022-2023 Legislative Appropriations through the Florida Department of Environmental Protection Innovative Technology Grant for a project titled Ultrasonic Algae Treatment Performance Testing in Brackish Sykes Creek Canal.

The Indian River Lagoon is affected by harmful algal blooms (HABs) which limit light penetration to seagrass beds, destroying this critical habitat. Conventional ways to treat HABs can cause unintended consequences, including sudden toxin release if cell walls are broken. However, the use of ultrasonic sound has been shown in the lab and freshwater applications to prevent the growth of HABs and mitigate existing cyanobacteria blooms without cell lysis and associated toxin release. Use of this technology in estuarine waters is new and offers innovative opportunities for Florida's coasts. This project will compare cell counts and water quality in multiple treated canals to adjacent untreated canals to determine whether ultrasonic control of HABs can help tip the scales from conditions that favor harmful nano-, pico-, and cyano-dominated blooms to a more resilient, macrophyte-dominated, thriving marine ecosystem.

Clerk to the Board Instructions:

Please execute 2 copies of the grant agreement, one copy for the Florida Department of Environmental Protection office and one for Natural Resources.