

## HOUSE OF REPRESENTATIVES STAFF FINAL BILL ANALYSIS

**BILL #:** CS/HB 1181 Seagrass Restoration

**SPONSOR(S):** Agriculture, Conservation & Resiliency Subcommittee, Robinson, W., Sirois and others

**TIED BILLS:** **IDEN./SIM. BILLS:** CS/CS/SB 724

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**FINAL HOUSE FLOOR ACTION:** 119 Y's      0 N's      **GOVERNOR'S ACTION:** Approved

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### SUMMARY ANALYSIS

CS/HB 1181 passed the House on May 2, 2023, as CS/CS/SB 724.

Seagrasses are grass-like flowering plants that live completely submerged in marine and estuarine waters. Although seagrasses occur throughout the coastal areas of Florida, they are most abundant in Florida Bay and from Tarpon Springs northward to Apalachee Bay in the Gulf of Mexico. There are six widespread seagrasses in Florida: Turtle grass, Shoal grass, Manatee grass, Widgeon grass, Stargrass, and Paddle-grass.

Seagrasses are important to Florida in many ways. They provide food and habitat to numerous species, stabilize the ocean bottom, maintain water quality, and help support local economies. It is estimated that 7,400 acres of seagrass were lost between 1943 and 1994. Between 2011 and 2019, approximately 58 percent of seagrasses were lost.

The Office of Resilience and Coastal Protection (RCP) within the Department of Environmental Protection (DEP) is working with other agencies to improve seagrass protection, augment habitat recovery through proven scientific restoration techniques and increase the public's awareness of the importance of seagrass. RCP has employed a variety of seagrass restoration methods throughout the state. These projects have been conducted in Charlotte Harbor, Indian River Lagoon, Biscayne Bay, the Big Bend, the Florida Keys, St. Joseph Bay, St. Andrews Bay, and Pensacola Bay. Results have been mixed, and RCP is continuing to monitor these projects and work with other researchers to find more effective ways to revegetate.

The bill establishes the Seagrass Restoration Technology Development Initiative (Initiative) within DEP, in partnership with Mote Marine Laboratory and the University of Florida, to develop cost-efficient innovative and environmentally sustainable technologies needed to restore coastal seagrass ecosystems. The bill also establishes the Initiative Technology Advisory Council as part of the Initiative.

The bill requires Mote Marine Laboratory and the University of Florida to create a 10-year Florida Restoration Plan to implement the tools and technologies developed under the Initiative.

The bill requires the Initiative to submit an annual report to the Governor, the Legislature, the Secretary of Environmental Protection, and the executive director of the Fish and Wildlife Conservation Commission.

Beginning with fiscal year 2023-2024, and continuing through fiscal year 2027-2028, the bill appropriates \$2 million per year from the General Revenue Fund to DEP for the purposes of implementing the Initiative.

The bill was approved by the Governor on May 11, 2023, ch. 2023-47, L.O.F., and will become effective on July 1, 2023.

## I. SUBSTANTIVE INFORMATION

### A. EFFECT OF CHANGES:

#### Background

##### Seagrass

Seagrasses are grass-like flowering plants that live completely submerged in marine and estuarine waters.<sup>1</sup> Although seagrasses occur throughout the coastal areas of Florida, they are most abundant in Florida Bay and from Tarpon Springs northward to Apalachee Bay in the Gulf of Mexico, which are two of the most extensive seagrass beds in continental North America. There are six widespread seagrasses in Florida: Turtle grass<sup>2</sup> (*Thalassia testudinum*), Shoal grass<sup>3</sup> (*Halodule wrightii*), Manatee grass<sup>4</sup> (*Syringodium filiforme*), Widgeon grass<sup>5</sup> (*Ruppia maritima*), and Stargrass (*Halophila engelmannii*), and Paddle-grass (*Halophila decipiens*).<sup>6</sup>

Since they evolved from land plants millions of years ago, seagrasses are significantly different than seaweed (algae) in their ecology, morphology, and physiology. While both algae and seagrasses have photosynthetic capabilities, seagrasses use their leaves and roots to obtain nutrients from sediment and water rather than directly from the water through diffusion.<sup>7</sup> Each of the six species found off Florida's coast has unique physical requirements for survival, such as light, salinity, and nutrient availability.<sup>8</sup>

##### Seagrass Loss

Seagrasses are important to Florida in many ways. They provide food and habitat to numerous species, stabilize the ocean bottom, maintain water quality, and help support local economies. The threats facing seagrasses could cause regional die-offs, which can affect many aspects of human life. It is estimated that 7,400 acres of seagrass were lost between 1943 and 1994. Between 2011 and 2019, approximately 58 percent of seagrasses were lost, with off shore ends of canopies moving shoreward and to shallower areas.<sup>9</sup>

There are various natural occurrences that can threaten seagrass survival, including storm activity and other climate changes. The wave energy introduced by storms can uproot seagrasses and cause extensive damage. Other climate conditions, such as floods and droughts, can affect seagrasses by

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<sup>1</sup> Florida Department of Environmental Protection (DEP), *Florida Seagrass*, <https://floridadep.gov/rcp/seagrass> (last visited March 13, 2023).

<sup>2</sup> Turtle grass, the largest of Florida's seagrasses, has deeper root structures than any other seagrass. It has large ribbon-like leaves that are 4 to 12 mm wide and 10 to 35 mm long. It is temperature limited and does not occur along the northeast Florida coast, but it forms extensive beds in Florida Bay. *Id.*

<sup>3</sup> Shoal grass is an early colonizer of vegetated areas and usually grows in water too shallow for other species. It is common in inlets along Florida's east coast. *Id.*

<sup>4</sup> Manatee grass has thin cylindrical leaves that are up to half a meter long. The northern limit of manatee-grass is the Indian River, near Cape Canaveral. Manatee grass is usually found in mixed seagrass beds or small, dense monospecific patches. *Id.*

<sup>5</sup> Widgeon grass grows in both fresh and salt water and is widely distributed throughout Florida's estuaries in less saline areas, particularly in inlets along the Florida east coast. *Id.*

<sup>6</sup> There are three species of *Halophila* found in Florida: stargrass (*Halophila engelmannii*), paddle-grass (*Halophila decipiens*), and Johnson's seagrass (*Halophila johnsonii*). These are smaller, more fragile seagrasses. There is limited information about them, although surveys are underway to define their ecological roles. Johnson's seagrass grows only in the Indian River Lagoon south to Biscayne Bay and is listed as a federally threatened species. *Id.*

<sup>7</sup> Florida Fish and Wildlife Conservation Commission (FWC), *Learn About Seagrasses*, <https://myfwc.com/research/habitat/seagrasses/information/learn/> (last visited March 13, 2023).

<sup>8</sup> *Id.*

<sup>9</sup> Florida Atlantic University (FAU), *Unique FAU seagrass nursery aims to help Florida's starving manatees*, <https://www.fau.edu/newsdesk/articles/seagrass-tanks-manatees.php#:~:text=More%20than%201%2C000%20of%20them,along%20the%20state's%20east%20coast.> (last visited March 14, 2023).

changing the salinity of the water, which can affect their distribution. Grazing is another natural factor affecting seagrasses. Marine animals, such as the endangered Florida manatee and green sea turtle, feed directly on seagrasses. Many smaller organisms often forage for food within seagrass beds, such as crabs, fish, skates, and rays, which can distribute seagrasses.

In addition to natural threats, seagrass communities are also at risk of damage from human activities. Reduced light transmittance through the water column is one of the major factors implicated in losses of seagrass coverage since a lack of light interferes with their ability to produce food. Seagrass loss due to light attenuation usually starts at the outer (deeper) edges of the seagrass beds, where the light reaching the plants is only marginal, and progresses towards the shallower regions as conditions deteriorate.<sup>10</sup> In areas where water quality and clarity are poor, seagrasses may only be found in the shallowest waters.<sup>11</sup> Several factors reduce the amount of light that can penetrate a given depth of the water column:

- Light absorption by phytoplankton and macroalgae;
- Suspended particle loads; or
- Color in water resulting from dissolved organic materials.<sup>12</sup>

Researchers believe that the majority of seagrass loss can be primarily attributed to reduced availability of light, which often coincides with blooms of phytoplankton.<sup>13</sup> Intense blooms increase the amount of shading and result in the loss of seagrasses.<sup>14</sup> Blooms occur in waters that have high concentrations of nutrients, particularly nitrogen and phosphorus, from nonpoint source pollution.<sup>15</sup> Common nonpoint source pollution sources include sediment, leaf litter, pet waste, landscape inputs such as fertilizers, herbicides and insecticides, and nutrients from septic systems. Run-off is a major problem because it changes water quality and reduces the amount of light reaching the plants. While salinities and temperature can reach levels that cause stress to the grasses, these effects can be mitigated if enough light is available.

Dredging and sediment resuspension caused by boat propellers introduce suspended particles into the water column, further reducing light transmittance.<sup>16</sup> Additionally, docks and boats can shade seagrass beds, also causing them to die from lack of light.<sup>17</sup> Another major threat to seagrasses is propeller scarring from boats.<sup>18</sup> Scarring occurs when boat propellers in shallow water impact roots, stems, and

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<sup>10</sup> UF/IFAS, *Seagrass beds*, <https://fme1.ifas.ufl.edu/general-information/natural-habitats-at-fme1/seagrass-beds/> (last visited March 14, 2023).

<sup>11</sup> DEP, *Seagrass Restorations*, <https://floridadep.gov/rcp/rcp/content/seagrass-restoration-efforts> (last visited March 14, 2023).

<sup>12</sup> UF/IFAS, *Seagrass beds*, <https://fme1.ifas.ufl.edu/general-information/natural-habitats-at-fme1/seagrass-beds/> (last visited March 14, 2023).

<sup>13</sup> Phytoplankton are microscopic marine plants that contain chlorophyll and require sunlight to live and grow. Under certain environmental conditions, such as the introduction of too many nutrients from land-based sources of pollution, phytoplankton may grow out of control and form blooms. National Oceanic and Atmospheric Association (NOAA), Florida Keys National Marine Sanctuary, *Phytoplankton are microscopic marine plants*, <https://floridakeys.noaa.gov/plants/phyto.html> (last visited March 14, 2023).

<sup>14</sup> FAU, *Unique FAU seagrass nursery aims to help Florida's starving manatees*, <https://www.fau.edu/newsdesk/articles/seagrass-tanks-manatees.php#:~:text=More%20than%201%2C000%20of%20them,along%20the%20state's%20east%20coast.> (last visited March 14, 2023).

<sup>15</sup> Nonpoint source pollution is the result of runoff from stormwater picking up and carrying natural and human-made pollutants from diffuse sources and depositing them into lakes, rivers, springs, wetlands, coastal waters, and groundwater. DEP, *Nonpoint Source Pollution Education*, <https://floridadep.gov/wra/319-tmdl-fund/content/nonpoint-source-pollution-education> (last visited March 15, 2023).

<sup>16</sup> DEP, *Seagrass Restorations*, <https://floridadep.gov/rcp/rcp/content/seagrass-restoration-efforts> (last visited March 14, 2023).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

leaves of seagrasses, producing long, narrow furrows devoid of vegetation. This damage takes years to heal; and repeated prop scarring can completely destroy seagrass beds.<sup>19</sup>

#### Department of Environmental Protection (DEP)

DEP is the state's lead agency for environmental management and stewardship, protecting Florida's air, water, and land.<sup>20</sup> The agency is divided into three primary areas:<sup>21</sup>

- Land and recreation programs acquire and protect lands for preservation and recreation.
- Regulatory programs safeguard natural resources by overseeing permitting and compliance activities that protect air and water quality and manage waste cleanups.
- Ecosystems restoration programs protect and improve water quality and aquatic resources including the Everglades, iconic springs, and coastal resources.

#### *Office of Resilience and Coastal Protection*

In January 2019, the Governor issued Executive Order 19-12, creating the Office of Resilience and Coastal Protection (RCP) to help prepare Florida's coastal communities and habitats for impacts from sea level rise by providing funding, technical assistance, and coordination among state, regional, and local entities.<sup>22</sup> In August 2019, the Governor appointed Florida's first Chief Resilience Officer, who reports to the Executive Office of the Governor and collaborates with state agencies, local communities, and stakeholders to prepare for the impacts of sea level rise and climate change.<sup>23</sup>

RCP has a multi-faceted approach to resilience, including coral reef protection; preservation of coastal and aquatic management areas; beach and inlet management; and the implementation of ecosystem restoration projects to prepare Florida's coastal communities and state-managed lands for the effects of sea level rise, coastal flooding, erosion, and storms.<sup>24</sup>

#### *Aquatic Preserve Program*

In 1975, the Aquatic Preserve Act<sup>25</sup> was enacted to ensure the continuation of aquatic preserves' natural conditions so that "their aesthetic, biological and scientific values may endure for the enjoyment of future generations".<sup>26</sup> The Aquatic Preserve Program, established within RCP, is charged with the protection of Florida's living waters to ensure they will always be a home for bird rookeries and fish nurseries, freshwater springs and salt marshes, and seagrass meadows and mangrove forests.<sup>27</sup> There are currently 42 aquatic preserves that have been established across the state.

Much of Florida's distinctive character lies in the beauty of its coastline.<sup>28</sup> These waters act as critical nurseries for fish and other aquatic life that are an integral part of the Florida way of life. Florida's natural beauty is a major attraction for both tourists and residents, but these features are endangered by increased population pressures. For this reason, some of the best coastal landscapes as well as several inland waters have been set aside for protection as aquatic preserves.

#### Fish and Wildlife Research Institute

The Fish and Wildlife Research Institute (FWRI) is a division of the Florida Fish and Wildlife Conservation Commission (FWC) that conducts collaborative research and monitoring to provide timely

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<sup>19</sup> *Id.*

<sup>20</sup> DEP, *About DEP*, <https://floridadep.gov/about-dep> (last visited March 13, 2023).

<sup>21</sup> *Id.*

<sup>22</sup> Office of the Governor, Executive Order Number 19-12, 5 (2019), available at <https://www.flgov.com/wpcontent/uploads/2019/01/EO-19-12-.pdf> (last visited Feb. 2, 2023).

<sup>23</sup> Governor Ron DeSantis, News Releases: *Governor Ron DeSantis Announces Dr. Julia Nesheiwat as Florida's First Chief Resilience Officer* (Aug. 1, 2019), available at <https://flgov.com/2019/08/01/governor-ron-desantis-announces-dr-julia-nesheiwat-asfloridas-first-chief-resilience-officer/> (last visited Feb. 2, 2023).

<sup>24</sup> DEP, *Office of Resilience and Coastal Protection*, <https://floridadep.gov/RCP> (last visited March 13, 2023).

<sup>25</sup> Sections 258.35-258.394 and 258.40-258.46, F.S.

<sup>26</sup> Section 258.36, F.S.

<sup>27</sup> DEP, *Aquatic Preserve Program*, <https://floridadep.gov/rcp/aquatic-preserve> (last visited March 13, 2023).

<sup>28</sup> *Id.*

information and guidance to protect, conserve, and manage Florida's fish and wildlife resources.<sup>29</sup> FWRI integrates its research with management efforts of other FWC divisions and provides science-based assessments to FWC and others responsible for managing and regulating activities that depend on Florida's unique and diverse natural resources. Research staff at FWRI provide resource managers with data necessary to make effective decisions about the preservation, management, and restoration of seagrass communities.

FWRI scientists are involved in many research projects<sup>30</sup> that help increase the available knowledge about seagrasses and improve the state's ability to protect this important ecosystem.<sup>31</sup> These include mapping seagrass distribution, examining possible links between sediment nutrients and phytoplankton blooms, and measuring changes in light available to seagrasses. Currently, research is being done on a tissue-culture technique, known as micropropagation,<sup>32</sup> that could provide sustainable stocks of seagrass for restoration projects without causing extensive damage to existing seagrass beds. This is how widgeon-grass is grown in a lab setting. Widgeon grass is the easiest seagrass to micropropagate; other species, such as Shoal grass, Manatee grass, and Turtle grass, are increasingly difficult to micropropagate.<sup>33</sup>

According to FWC, micropropagation will be the key to successful seagrass restoration and mitigation.<sup>34</sup> Traditionally, seagrass has been planted by hand. However, a new method using a boat with a planting wheel is in development for mechanical planting. This technique is predicted to reduce damage to the plantlets during transplantation, increase the planting rate, and cause less disturbance to sediment structure.<sup>35</sup>

#### Mote Marine Laboratory

Mote Marine Laboratory (Mote Marine) is a private marine research laboratory, nonprofit organization, and leader in research programs that are relevant to the conservation and sustainable use of marine biodiversity, healthy habitats, and natural resources.<sup>36</sup> Mote Marine has been conducting important research on seagrass, including a study of water quality and its impact on seagrass loss in Sarasota Bay and Florida Bay.<sup>37</sup>

#### University of Florida

The University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) is a federal-state-county partnership.<sup>38</sup> The mission of UF/IFAS is to develop knowledge in agricultural, human, and natural resources and to make that knowledge accessible to sustain and enhance the quality of human life. UF/IFAS employs more than 2,000 faculty and staff statewide and has offices in each of Florida's 67 counties.

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<sup>29</sup> FWC, *Inside FWRI*, <https://myfwc.com/research/about/> (last visited March 13, 2023).

<sup>30</sup> See, FWC, *Active Projects*, <https://myfwc.com/research/habitat/seagrasses/projects/active/> (last visited March 13, 2023).

<sup>31</sup> FWC, *Learn About Seagrasses*, <https://myfwc.com/research/habitat/seagrasses/information/learn/> (last visited March 13, 2023).

<sup>32</sup> Micropropagation is a way to clone plants axenically (sterile). Terminal buds collected from branches of mature plants are surface sterilized and placed in test tubes containing a specific nutrient medium. Plantlets grown from buds of the same plant, barring mutation, will be clones (i.e., genetic replicates) of the plant from which they were cut. FWC, *Seagrass Restoration*, <https://myfwc.com/research/habitat/seagrasses/projects/active/restoration/> (last visited March 14, 2023).

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> Mote Marine Laboratory and Aquarium, *Mission and Vision*, <https://mote.org/about-us/mission-vision> (last visited March 13, 2023).

<sup>37</sup> Mote, *Innovative Research*, <https://mote.org/pages/2021-annual-report-innovative-research-taking-the-pulse-of-our-marine-envir> (last visited March 14, 2023).

<sup>38</sup> UF Institute of Food and Agricultural Sciences (UF/IFAS), *About UF/IFAS*, <https://ifas.ufl.edu/about-us/> (last visited March 14, 2023).

UF/IFAS's Reynolds Coastal and Marine Ecology Lab integrates approaches from population and community ecology, biogeochemistry, and plant physiology to better understand how environmental and individual variability influence the functions and stability of nearshore marine ecosystems, including seagrasses.<sup>39</sup>

#### Seagrass Restoration Efforts

RCP is working with other agencies to improve seagrass protection, augment habitat recovery through proven scientific restoration techniques, and increase public awareness of the importance of seagrass.<sup>40</sup> RCP has employed a variety of seagrass restoration methods throughout the state. These projects have been conducted in Charlotte Harbor, Indian River Lagoon, Biscayne Bay, the Big Bend, the Florida Keys, St. Joseph Bay, St. Andrews Bay, and Pensacola Bay. Results have been mixed, and RCP is continuing to monitor these projects and work with other researchers to find more effective ways to revegetate.<sup>41</sup>

#### *St. Martin's Marsh Aquatic Preserve*

RCP's St. Martins Marsh Aquatic Preserve has partnered with the UF/IFAS Nature Coast Biological Station to stabilize and restore prop scars with sediment tubes.<sup>42</sup> Sediment tubes accomplish this by returning the scarred areas to ambient elevations, preventing additional erosion and scouring by water currents, and protecting rhizomes from excessive sunlight exposure. The technique involves installing biodegradable fabric tubes filled with sediment into scarred areas that biodegrade in about 12 months. Seagrass beds can be fertilized passively to encourage regrowth through the placement of bird roosting stakes, which has been shown to be quite successful in Ft. Pickens Aquatic Preserve.<sup>43</sup>

#### *St. Joseph Bay Aquatic Preserve*

The Central Panhandle Aquatic Preserves (CPAP) is conducting a Deepwater Horizon NRDA Early Restoration Phase III Project to address boat damage to shallow seagrass beds in the Florida Panhandle by restoring propeller scars located primarily in turtle grass habitats in St. Joseph Bay Aquatic Preserve.<sup>44</sup> Approximately 45,000 sediment tubes were placed into 370 propeller scars to enhance seagrass recovery. CPAP staff will monitor the success of restoration efforts over a three-year period.

#### *Northwest Florida Aquatic Preserve*

Northwest Florida Aquatic Preserve has been utilizing salvaged seagrass cores from areas impacted by dock pilings in restoration areas.<sup>45</sup> The salvaged material is utilized to fill propeller scars as well as bare or declining areas. This has proven quite successful in the Panhandle estuaries. Historically, widgeon grass has grown via propagules in a laboratory setting and used in restoration efforts in the Panhandle.

#### *Lemon Bay Aquatic Preserve*

The removal of derelict vessels after Hurricane Irma damaged seagrass beds in Lemon Bay Aquatic Preserve.<sup>46</sup> Funds were acquired to restore prop scars and holes using 1,300 sediment tubes, which helped stabilize and bring sediment back up to grade. Natural colonization of seagrass from adjacent beds has occurred and monitoring by aquatic preserve staff has documented the restoration effort as a success.

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<sup>39</sup> UF/IFAS, *Reynolds Coastal and Marine Ecology Lab*, <https://soils.ifas.ufl.edu/coastal-and-marine-ecology-lab/research/> (last visited March 14, 2023).

<sup>40</sup> DEP, *Seagrass Restorations*, <https://floridadep.gov/rcp/rcp/content/seagrass-restoration-efforts> (last visited March 14, 2023).

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> DEP, *Seagrass Restoration Efforts*, <https://floridadep.gov/rcp/rcp/content/seagrass-restoration-efforts> (last visited March 14, 2023).

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

### *Big Bend Seagrasses Aquatic Preserve*

In Taylor County, derelict crab traps have accumulated on the shallow seagrass meadows within the Big Bend Seagrasses Aquatic Preserve's Deadman Bay area.<sup>47</sup> RCP staff are restoring this area by removing debris in the winter, dormant months to allow the seagrass to naturally recover during the summer growing season. Success is being measured through the monitoring of 25 sites within this region as part of a three-year seagrass restoration grant project to assess natural seagrass regrowth within the derelict trap footprint.

### *Johnson's Seagrass Restoration Plan*

RCP also is working with FWC to develop a restoration plan for Johnson's seagrass, the nation's only marine plant to be listed threatened by the federal Endangered Species Act.<sup>48</sup> With the help of Miami-Dade County Department of Environmental Resources Management, RCP has observed Johnson's seagrass outside of its known critical habitat range and has identified several areas in Biscayne Bay as potential restoration sites.

## **Effect of the Bill**

The bill creates the Seagrass Restoration Technology Development Initiative (Initiative) within DEP's RCP as a partnership between DEP, Mote Marine, and the University of Florida (UF). The goal of the Initiative is to develop, test, and implement cost-efficient innovative, effective, and environmentally sustainable technologies and approaches to restoring coastal seagrass ecosystems.

The bill directs DEP to award funds appropriated by the Legislature for the Initiative to Mote Marine, which will function as the administrative lead of the Initiative. The bill authorizes Mote Marine to use a portion of these funds, with DEP's approval, to facilitate engagement with other marine science and technology development organizations in the state and internationally and directs Mote Marine to leverage state-appropriated funds in addition to funds from private and federal sources. The bill prohibits Mote Marine from using more than five percent of the appropriated funds for direct annual Initiative administration and coordination costs.

The bill directs Mote Marine and UF, in collaboration with the Aquatic Preserve Program within RCP, to create a 10-year Florida Seagrass Restoration Plan to implement the tools and technologies developed under the Initiative.

The bill directs the Initiative to submit a report that contains an overview of its accomplishments to date and priorities for subsequent years to the Governor, the President of the Senate, the Speaker of the House of Representatives; the Secretary of Environmental Protection, and the executive director of FWC. The first report is due by January 15, 2024, and each subsequent report is due annually on January 15 until the Initiative's expiration.

The bill establishes the Initiative Technology Advisory Council (Council), which must include marine science, technology development, and natural resource management representatives from the state's aquatic preserves, private organizations, and public or private research institutions. The Council must be composed of the following members:

- The president and chief executive officer of Mote Marine, who must serve as co-chair;
- A representative from UF, who must serve as co-chair;
- One member from a private commercial enterprise, appointed by the Governor;

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<sup>47</sup> *Id.*

<sup>48</sup> *Id.*; The Endangered Species Act (ESA) defines an endangered species as any species which is in danger of extinction throughout all or a significant portion of its range. Endangered species are automatically protected by prohibitions of several types of "take" including harming, harassing, collecting, or killing, under Section 9 of the ESA. National Oceanic and Atmospheric Association (NOAA), *What is the difference between a threatened and endangered species?*, <https://oceanservice.noaa.gov/facts/endangered.html> (last visited March 15, 2023).

- One member from a public or private university in the state, appointed by the President of the Senate;
- One member from a non-university public or private marine environmental organization, appointed by the Speaker of the House of Representatives;
- One member from the Aquatic Preserve Program who has expertise in seagrass ecosystems, appointed by the Secretary of Environmental Protection; and
- One member from FWRI who has expertise in seagrass, appointed by the executive director of FWC.

The Council must meet at least twice a year, and Council members must serve staggered two-year terms and may be reappointed. Members must serve without compensation, and each organization represented must cover all expenses of its respective representative.

Pending the completion of the research and any recommendations of the Council, the bill requires DEP, subject to legislative appropriation, to implement seagrass restoration projects that are procured on a payment-for-performance basis to protect the investment made by the state in seagrass restoration.

The Initiative expires on June 30, 2028.

Beginning with fiscal year 2023-2024, and continuing through fiscal year 2027-2028, the bill appropriates \$2 million per year from the General Revenue Fund to DEP for the purpose of implementing the Initiative.

## **II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT**

### **A. FISCAL IMPACT ON STATE GOVERNMENT:**

#### 1. Revenues:

None.

#### 2. Expenditures:

The bill provides for an annual appropriation of \$2 million beginning with fiscal year 2023-2024 through fiscal year 2027-2028 to DEP from the General Revenue Fund for the purpose of implementing the Initiative.

### **B. FISCAL IMPACT ON LOCAL GOVERNMENTS:**

#### 1. Revenues:

None.

#### 2. Expenditures:

None.

### **C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:**

The bill may have a positive fiscal impact on Mote Marine as a result of receiving funding as the lead entity for the Initiative.

### **D. FISCAL COMMENTS:**

The bill may have an insignificant negative fiscal impact on organizations that must cover the expenses of its represented council members.



