

Seagrass Restoration Technology Development Initiative

4th Technology Advisory Council Meeting

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Vice President of Sponsored Research & Coastal Policy Programs

October 1, 2025



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Meeting Agenda

- Welcome to Reefhouse Resort and Mote's Key Largo Coral Nursery
- Logistics and Meeting Overview
- TAC Roll Call
- Co-Chair opening comments
- Florida Sunshine and Public Records Laws and FAR Notice
- Seagrass Initiative Overview
- Initiative Partners - DEP, UF, Mote
- Seagrass Initiative Progress Overview – Eve Iavarone
- Facility Updates – Liz Longstreet
- Genetic Management Plan update – Dr. Dom Gallery
- DEP Grant Agreement and Reporting Requirements
- 10-Year Seagrass Restoration Plan – Becky Prado, Moffatt & Nichol
- Funded Partner's Project Overview – Year 1 Projects Final Update
- Year 2 Project Announcements
- RFP Update/Year 3 Projects
- TAC Discussion
- Public Comments – 3 minutes each or via card/email



Technical Advisory Council

Dr. Michael P. Crosby – Mote, Co-Chair

Dr. Laura Reynolds – UF, Co-Chair

Beau Williams – Governor Appt

Carter Henne – House Speaker Appt

Dr. James Douglass – Senate President Appt

Dr. Bradley Furman – FWC Appt

Scott Eastman – DEP Appt



TAC Opening Comments



Florida's Sunshine Law

(Review from previous meetings)



Florida Sunshine Law

- The **Florida Sunshine Law applies** to the Seagrass Restoration Technology Development Initiative, Technical Advisory Council.
- Florida's Sunshine Law was created to protect **every Floridian's right to public access of meetings and records** concerning government programs, which provides transparency.
- **This applies to any meeting** where official acts are to be taken or **public business will be discussed.**



Reasonable Notice of Meetings

- The **public must be given reasonable notice of meetings** that are to occur.
- DEP generally recommends notice for public advisory group meetings to be published in the **Florida Administrative Register** no less than 7 days before the meeting and ensure that it is posted on the **Initiative website**.
- Posted on September 15, 2025



Minutes of Meetings

- **Minutes of meetings must be taken** and documented, but do not have to be verbatim.
- This meeting's minutes will be posted on the Mote Seagrass Ecosystem Research & Restoration website with previous meetings' minutes, agenda, and presentation.
- Advisory Boards are not required to have audio recordings of their meetings; but if a meeting is recorded by a member or staff then it is a public record.



Restrictions on Outside Discussions

- Any discussion between two or more members of the Technical Advisory Council discussing a topic which may foreseeably come before their board **must occur in the sunshine**.
- You are not restricted from socializing with other members of the Council, **but you may not discuss anything that may foreseeably come before the board**.
- Discussion of official matters outside of a public meeting is a violation of the Sunshine Law.



Public Records

- **This Technical Advisory Council is subject to Florida's Public Records Law** (even if you yourself are not a government employee), because records relating to the Seagrass Restoration Technology Development Initiative are made or received in connection with the transaction of the official business of the State.
- Public Records are **ALL** documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, etc. regardless of the physical form...or means of transmission made or received in connection with official action of an agency. Sec. 119.011(12), F.S.
- **Public records must be open and available for the public to inspect and copy.**
- **This includes emails, text messages, and social media.**



Seagrass Restoration Technology Development Initiative Overview



Seagrass Initiative Overview

- Signed into law by Florida Governor DeSantis in July 2023
 - 403.93344 Florida Statutes
 - Partnership with DEP and UF
- \$10 million over 5 years contracted by DEP to Mote
 - Grant Agreement Executed February 2024
- Legislative intent:
 - establish a collaborative and coordinated effort among **public and private research entities to develop restoration technologies** and approaches to address the loss of seagrass and the cascading ecological and economic impacts of that loss to communities in this state
 - department shall award funds specifically appropriated by the Legislature for the initiative to **Mote Marine Laboratory, which shall function as the lead administrative component** to achieve the goals of the initiative
 - initiative shall **leverage state-appropriated funds with additional funds from private and federal sources**
 - Mote Marine Laboratory and the University of Florida shall **create a 10-year Florida Seagrass Restoration Plan** to implement tools and technologies developed under the initiative



Initiative Partner: University of Florida

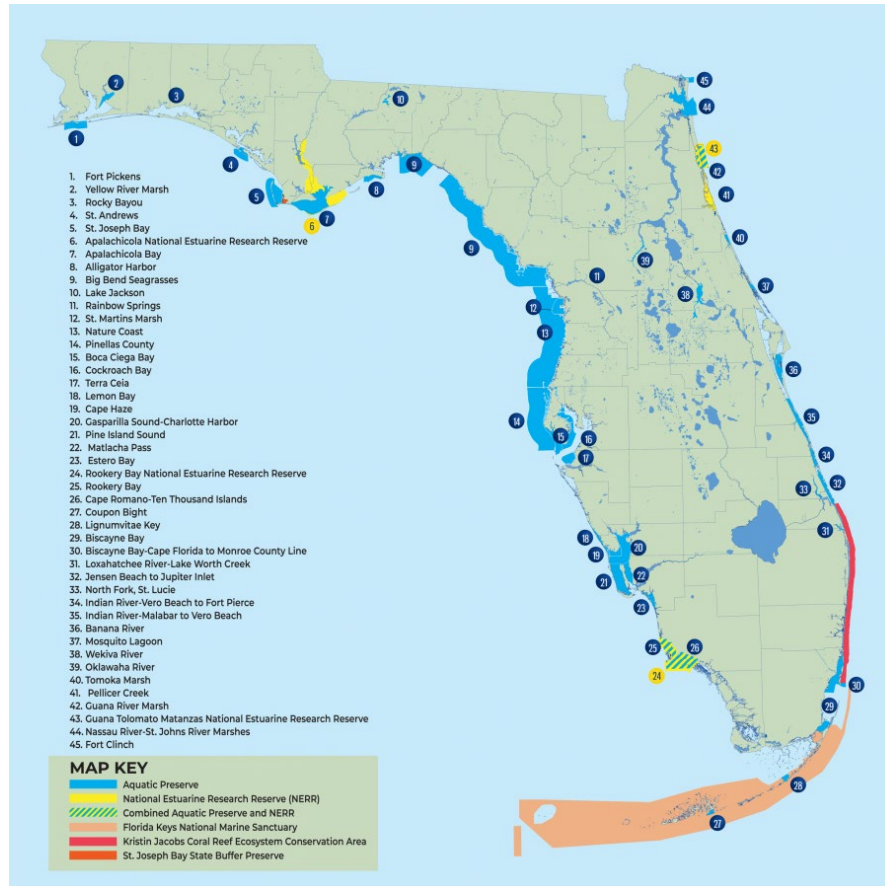
- Department of Soil, Water, and Ecosystem Sciences
- Coastal and Marine Ecology Laboratory
- Dr. Laura Reynolds, Assistant Professor Coastal Ecology
- Genetics Lab for Seagrass Initiative





Initiative Partner:

DEP Aquatic Preserve Program



- Aquatic Preserve Act
 - 258.35-258.46 F.S
 - “Ensure continuation of natural conditions of aesthetic, biological and scientific value”
- 43 Statewide Preserves
- 2.6 Million Acres
- Place-Based Experts on:
 - Natural resources, ecological trends, stressors, research conducted/underway, recreational uses, partners, stakeholders, etc.



Seagrass Initiative Progress



- ✓ Mote Administrative Structure
- ✓ 1st and 2nd Accomplishments and Priorities Report
- ✓ Leveraged Funding
 - ✓ NOAA
 - ✓ Philanthropic
 - ✓ Publix Seagrass Genetics Research Hub
 - ✓ Wolf Foundation Biogeochemical Carbon Sequestration Building
- ✓ Initiative Technical and Financial Reports submitted
- ✓ Released competitive 1st RFP
 - ✓ Funded 8 projects
 - ✓ Projects wrapping up
 - ✓ Receiving Final Reports
- ✓ Released 2nd competitive RFP
 - ✓ Funded 7 projects
 - ✓ Subcontracts sent and executed
 - ✓ Projects underway
 - ✓ Updates on these at next TAC Meeting
 - ✓ Will be funding 6 more utilizing Year 3 funds
- ✓ Continued work with consulting firm, Moffatt & Nichol, on the 10 Year Seagrass Restoration Plan
 - ✓ 122 management documents reviewed
 - ✓ Florida Seagrass Restoration Sites website completed
 - ✓ Draft Plan Framework
- ✓ Greenhouse structure completed
 - ✓ Projects in progress and completed
- ✓ Outfitting “house” for visiting researcher lodging



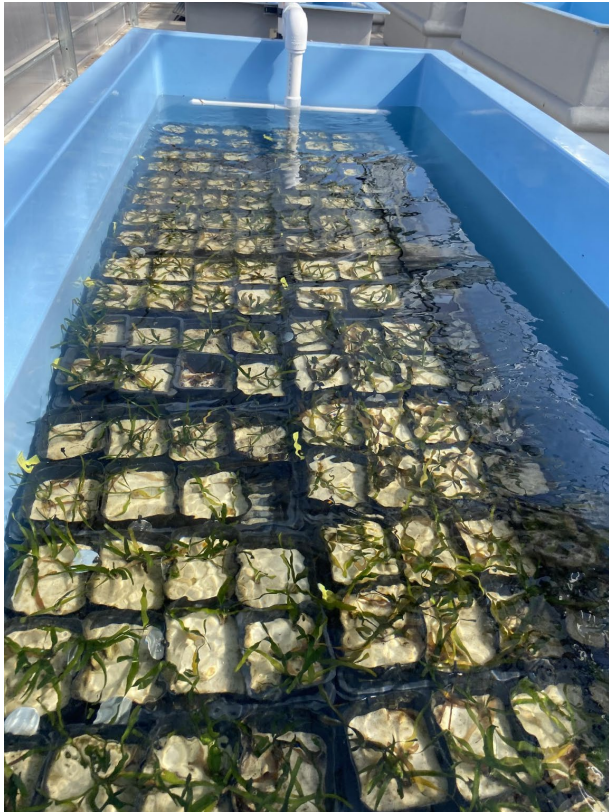
Initiative Research Infrastructure

- Greenhouse open for research February 2025
- Ribbon cutting on August 25th
- Greenhouse expansion in development
- Additional raceway locations planned for Florida Keys

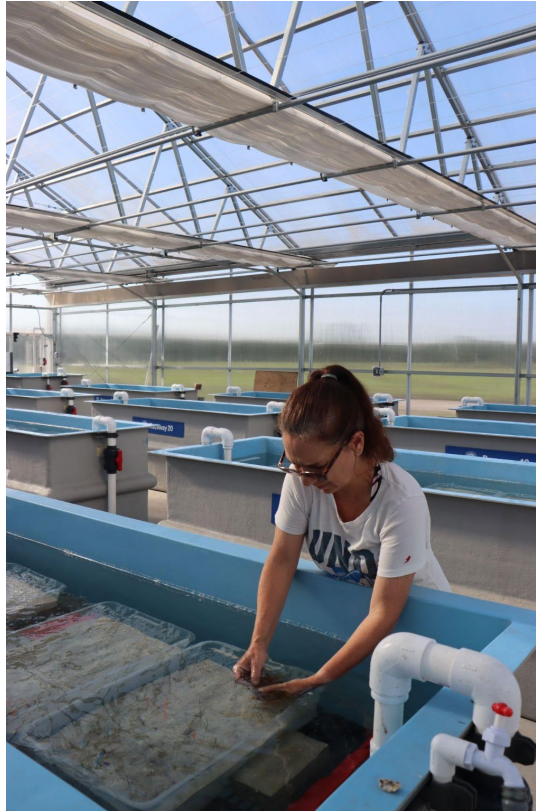


Greenhouse Projects

UGA/TAMUCC



UNO



UCF



BOOKED UNTIL AUG 2026!

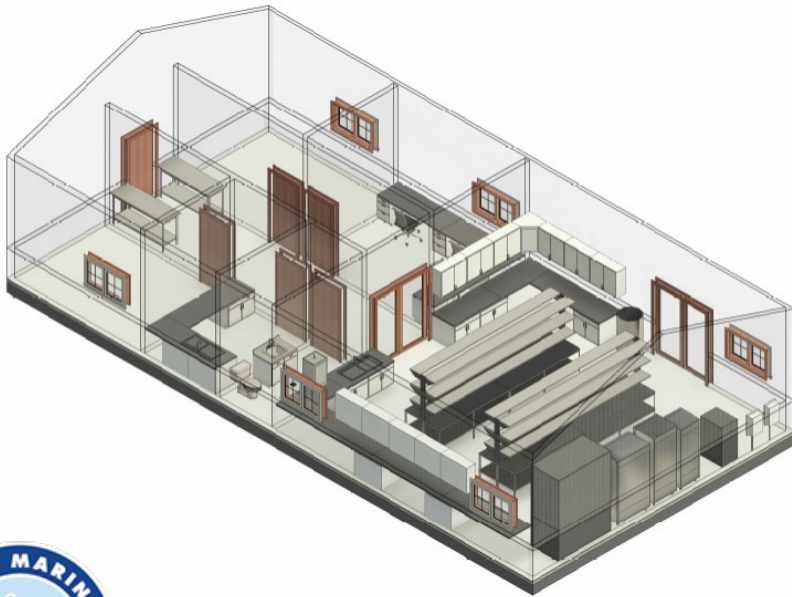


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Coming soon: Publix Seagrass Genetics Research Laboratory Hub

- Planned completion late 2025
- Equipment and training available for genetics experiments at MAP



Genetic Management Plan Update

- We have received samples from 6 projects so far!
- SOP was sent to Years 1 and 2 funded projects
 - Approximately 8-12 cm of tissue sample should be collected per individual
 - Place samples into a teabag, place teabags into ziplock bags with blue-indicator silica gel
 - Mail samples at ambient temperature overnight to Mote



Genetic Management Plan Update

- SOP was sent to Years 1 and 2 funded projects
 - Please email me the associated metadata –

Welcome to the Mote Seagrass Genetic Sampling Intake

Please provide..... [BRIEF PARAGRAPH OF INSTRUCTIONS AND EXPECTATIONS PROVIDED HERE]

Please contact Dom Gallery (dgallery@moteorgdev.wpengine.com) with any questions.

PI NAME (REQUIRED)

First

Last

CONTACT EMAIL (REQUIRED)

SEAGRASS SPECIES (REQUIRED)

NUMBER OF SAMPLES (REQUIRED)

FILE UPLOAD (REQUIRED)

No file chosen

Max. file size: 50 MB.

Please upload the .CSV file



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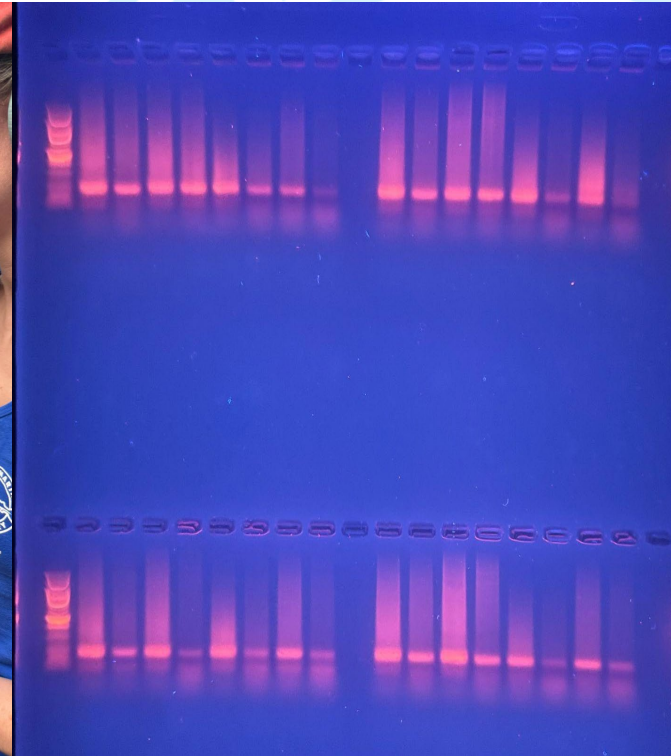
Genetic Management Plan Update

- We have contracted BreedBase at the Boyce Thompson Institute located at Cornell University to track genotypes and associated metadata
 - Built the initial accession for individuals we have received so far
 - Working with Breedbase and Big Sea to integrate the two platforms together



Genetic Management Plan Update

- Extracted over 400 samples of 4 species of seagrass for the genetic library
- Optimized the seagrass extraction protocol
- Library preparations for 200 samples are ready for sequencing (including those with previous microsatellite sequencing)



Initiative Reporting Requirements

- Beginning **January 15, 2024**, and each January 15 thereafter until its expiration, **the initiative shall 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 the Fish and Wildlife Conservation Commission.
- DEP Contract Technical and Financial Reports
- Public Website
- TAC Meetings – FAR, Presentations, Public Comments and Minutes
- Public Records



10-Year Florida Seagrass Restoration Plan

- 403.93344(3)(d) F.S.:
 - “In collaboration with the program, Mote Marine Laboratory and the University of Florida shall create a 10-year Florida Seagrass Restoration Plan to implement tools and technologies developed under the initiative.”
- DEP Grant Work Plan:
 - This work may, in part, be subcontracted by Mote to an external entity selected by Mote.
 - The Department, Mote, and University of Florida will oversee the development of the plan over the five years of the Initiative, may publish/release drafts and updates with the legislatively required Annual Report, may conduct workshops with seagrass research/restoration partners to facilitate practitioner/public input, and shall submit a Final Plan to the Department for implementation by June 30, 2028.
- Moffatt & Nichol, Coastal Resilience Lead, Becky Prado presentation of the 10-Year Plan Framework and TAC Discussion



Initiative Research Engagement

- 403.93344(3)(C)(1): Mote Marine Laboratory may, with the concurrence of the department, use a portion of the awarded funds to facilitate additional engagement with other pertinent marine science and technology development organizations in this state and around the world to pursue applied research and technology for the successful restoration of seagrass ecosystems.



Year 1 Funded Partner Presentations



Year 2 Request For Research Proposals

- Opened December 13th, 2024 through January 31st, 2025
- Use of Mote facilities/infrastructure is free of charge
- Collaboration with Mote, UF, and DEP encouraged but not required
- 8 projects funded in Year 2 (including continued research from University of Florida)
 - Contracts executed and projects underway



Year 2 Funded Projects

- Continued work from Dr. Laura K. Reynolds, University of Florida
- *Comprehensive assessment of the genomic variability in Syrangodium filiforme populations in relation to environmental and stressor heterogeneity across Florida* – Dr. Iris Segura Garcia, Florida Atlantic University Harbor Branch
- *The Resiliency of Halodule wrightii to Increased Temperature, Freshwater Discharge, and Light Limitation Florida* — Dr. Megan Conkling, Florida Atlantic University Harbor Branch
- *Assisting the role of interspecific competition and sediment quality stressors on shoal grass restoration* – Dr. Jennifer Hansen, Brevard Zoo
- *Differential gene expression and productivity in response to ocean warming for two Halodule wrightii populations across a latitudinal cline* –Dr. Erin Cox, University of New Orleans
- *Seagrass Strikes Back: A new hope for fighting Marine heatwaves (MHWs) with Thermo-Priming* – Dr. Linda Walters, University of Central Florida
- *Influence of biochar on seagrass growth, health, and ecological interactions* – Dr. Toufiq Reza, Florida Institute of Technology
- *Investigating the Influence of Ocean Acidification on Seagrass Resilience to Nutrient Loading* – Dr. Robert Johnson, University of Wisconsin-Madison



Next RFP Update

- Due to increased proposals and positive reviews, we split funding from Year 2 RFP to fund some projects in Year 2 and some in Year 3
- Year 3 Award Letters have been sent out and Subcontracts are being sent out



Year 3 Funded Projects

- *Genetic Diversity and Gene Expression Responses to Stresses of Targeted SAV* - Ecosphere Restoration Institute, University of South Florida
- *Testing variation in stress tolerance and restoration potential of Florida seagrass subpopulations* - University of Georgia (Skidaway)/Texas A&M Corpus Christi, University of North Florida, Florida International University
- *Developing Technology for Kilometer Scale Seagrass Restoration in Florida* - Ulysses Ecosystem Engineering, Florida International University
- *Continued exploration of the potential for seed-based restoration using Manatee Grass* - Florida International University
- *Assisting seagrass recovery in Southwest Florida: Examination of transcriptome-wide gene expression variation to identify low-light resilient *Halodule wrightii* genotypes* Gulf Shellfish Institute, Mote Marine Laboratory
- *Using Long-Term Passive Acoustics to Evaluate Seagrass Restoration Efforts* - Mote Marine Laboratory



TAC Comments and Recommendations

Potential Discussion Topics:

Late YR 3 RFP for YR4 funds

Codifying 10-Year Restoration Plan

Leveraging Opportunities

Agency/Company/Institution Seagrass
Update

Next TAC Meeting Location



Public Comments:
Please limit to 3 minutes or less
or via Comment Card or Email



FREE TIME

CORAL NURSERY
TOUR BEGINS AT
2:00 PM

MEET AT NURSERY
GATES
UNDERNEATH THE
CONFERENCE
CENTER

