APALACHICOLA BAY SYSTEM INITIATIVE (ABSI)

https://marinelab.fsu.edu/absi/

ABSI COMMUNITY ADVISORY BOARD (CAB)

PHASE IV MEETING V — TUESDAY, OCTOBER 18, 2022 — 8:30 AM

APALACHICOLA NATIONAL ESTUARINE RESEARCH RESERVE
108 ISLAND DRIVE (STATE ROAD 300) AT CAT POINT IN EASTPOINT, FLORIDA

ABSI COMMUNITY ADVISORY BOARD MEETING OBJECTIVES

- ✓ To Approve Regular Procedural Topics (Meeting Agenda and Summary Report)
- ✓ To Review Updated Workplan and Meeting Schedule
- ✓ To Receive Science and Data Collection, and Restoration Updates
- ✓ To Receive Reports from RFWG, Community Outreach, and CAB Successor Group
- ✓ To Review Fisheries Model Scenario Simulation Results and Acceptability Rate Scenarios as Needed
- ✓ To Identify and Agree on the Next Suite of Scenarios, New Scenarios, and Combinations for Modeling
- ✓ To Identify Next Steps: Information, Presentations, Assignments, Agenda Items for Next Meeting

ABSI COMMUNITY ADVISORY BOARD AGENDA

All Agenda Times—Including Public Comment and Adjournment—Are Approximate and Subject to Change

1)	**8:30 AM**	**WELCOME AND ROLL CALL**
2)	**8:35**	**SOCIAL SCIENCE SURVEY**
3)	**8:40**	**AGENDA REVIEW AND MEETING OBJECTIVES**
4)	**8:45**	**APPROVAL OF FACILITATOR'S SUMMARY REPORT (July 27, 2022)**
5)	**8:50**	**REVIEW OF UPDATED PROJECT MEETING SCHEDULE AND WORKPLAN, AND PHASE V (2023) SCHEDULE AND WORKPLAN** *(Attachment 2)*
6)	**9:00**	**SCIENCE AND DATA COLLECTION, AND RESTORATION UPDATES** • *ABSI Science and Data Collection Update.* Sandra Brooke, FSUCML (15) • *FWC (NFWF Phase 2) Restoration Project Update.* Devin Resko, FWC (15)
7)	**9:30**	**WORKING GROUP AND SUBCOMMITTEE UPDATES** • *Successor Group Subcommittee Update.* Anita Grove and Shannon Hartsfield (Pending) • *Restoration Funding Working Group Update.* Joel Trexler (5) • *Community Outreach Subcommittee Update.* Chad Hanson (10)
8)	**9:45**	**OVERVIEW AND DISCUSSION OF THE RESULTS OF SCENARIOS (STRATEGIES) SIMULATED (MODELED) WITH THE FISHERIES MODEL** *(Attachment 3)*
~10:00 AM		***BREAK***
8)	**10:15**	**OVERVIEW AND DISCUSSION OF THE RESULTS OF SCENARIOS (STRATEGIES) SIMULATED (MODELED) WITH THE FISHERIES MODEL — CONTINUED**
~12:00 PM		***LUNCH — ON CAMPUS***
9)	**12:30**	**EVALUATION AND ACCEPTABILITY RATING AS NEEDED OF MODELED SCENARIOS RELATIVE TO PERFORMANCE MEASURES AND PROJECT GOALS**

10)	**1:00**	**IDENTIFICATION OF SCENARIOS FOR NEXT ROUND OF MODELING INCLUDING: COMBINATIONS OF SCENARIOS, NEW SCENARIOS, AND ANY SCENARIOS TO BE REMOVED FROM FURTHER EVALUATION** ***(Attachment 4 & 5)***
11)	**~2:10 PM**	**PUBLIC COMMENT — THREE MINUTES PER PERSON**
12)	**~2:25**	**ACTION ITEMS AND AGENDA ITEMS FOR NEXT MEETING (Nov. 30, 2022)** • Review of Action Items and Assignments from Meeting • Identify Agenda Items, Presentations, and Information Needs for Next Meeting • Complete Meeting Evaluation
~2:30 PM		***ADJOURN***

PROJECT RESOURCES AND CONTACTS

PROJECT WEBPAGE: https://marinelab.fsu.edu/the-apalachicola-bay-system-initiative/

PROJECT EMAIL: fsucml-absi@fsu.edu

PROJECT FACILITATION: Jeff Blair of Facilitated Solutions, LLC.
Information at: http://facilitatedsolutions.org.

ABSI CAB ORGANIZATIONAL AND PROCEDURAL POLICES AND GUIDELINES
Located under the ABSI CAB Procedures and Reports Menu: https://marinelab.fsu.edu/absi/cab/

ABSI CAB RESTORATION AND MANAGEMENT PLAN FRAMEWORK DOCUMENT
Located under the ABSI CAB Framework Adopted 16 November 2022 Menu Tab:
https://marinelab.fsu.edu/absi/cab/

TABLE OF AGENDA PACKET ATTACHMENTS

ATTACHMENT 1
COMMUNITY ADVISORY BOARD MEMBERSHIP AND REPRESENTATION

MEMBER	AFFILIATION
AGRICULTURE/ACF STAKEHOLDERS/RIPARIAN COUNTIES	
1. Chad Taylor^	Riparian County Stakeholder Coalition/ACF Stakeholders/Agriculture
BUSINESS/REAL ESTATE/ECONOMIC DEVELOPMENT/TOURISM	
2. Chuck Marks	Business (Insurance Industry)
3. Mike O'Connell*	SGI Civic Club/SGI 2025 Vision
ENVIRONMENTAL/CITIZEN GROUPS	
4. Georgia Ackerman^*#	Apalachicola Riverkeeper
5. Chad Hanson^*#	The Pew Charitable Trusts
6. Katie Konchar#	The Nature Conservancy (TNC)
LOCAL GOVERNMENT	
7. Anita Grove^*#	Apalachicola City Commissioner
RECREATIONAL FISHING	
8. Frank Gidus	CCA Florida
SEAFOOD INDUSTRY	
9. David Barber	Barber's Seafood
10. Shannon Hartsfield^	Seafood Management Assistance, Resource Recovery Team (SMARRT)-Oysterman
11. Gayle Johnson	Indian Lagoon Oyster Company (Aquaculture)
12. Roger Mathis^	Oysterman and Seafood Dealer (R.D.'s Seafood)
13. Steve Rash^	Water Street Seafood
14. TJ Ward	Buddy Ward & Sons Seafood
STATE GOVERNMENT	
15. Jenna Harper#	ANERR/DEP
16. Becca Hatchell	FWC Division of Habitat and Species Conservation
17. Alex Reed#	FDEP Office of Resilience & Coastal Protection
18. Devin Resko^#*	FWC Division of Marine Fisheries Management (Replacing Jim Estes)
19. Portia Sapp#	FDACS Division of Aquaculture
20. Paul Thurman#	NWFWMD
UNIVERSITY/RESEARCHERS/SCIENTISTS	
21. Mike Allen	Scientist: Director of UF/IFAS Nature Coast Biological Station (NCBS)
22. Erik Lovestrand#	UF/IFAS/Florida Sea Grant/Franklin County Extension

COMMUNITY ADVISORY BOARD SUBCOMMITTEES AND WORKING GROUP	
* Community Outreach Subcommittee	Lead: Chad Hanson
# Restoration Funding Working Group	Lead: Joel Trexler
^ Successor Group Subcommittee	Co-Leads: Anita Grove and Shannon Hartsfield

PROJECT TEAM AND CAB FACILITATOR	
FLORIDA STATE UNIVERSITY	
Sandra Brooke*	Marine Biologist
Ross Ellington	Professor Emeritus of Biological Science
Madelein Mahood*	Outreach and Education
Gary Ostrander	Former Vice-President for Research
Joel Trexler^#	FSUCML Director
FACILITATED SOLUTIONS, LLC	
Jeff Blair	Community Advisory Board Facilitator

ATTACHMENT 2
ABSI CAB PROJECT MEETING SCHEDULE AND WORKPLAN

UPDATED AS OF THE 18 OCTOBER 2022 CAB MEETING

PHASE I (2019) — STANDING UP AND ORGANIZATION OF THE ABSI CAB — *Status Complete*

May 2019 – December 2019 (Assessment Process, Questionnaire, and 2 CAB Meetings)

PHASE II (2020) — SCOPING OF ISSUES, IDENTIFICATION OF PERFORMANCE MEASURES & STRATEGIES — *Status Complete*

Jan. 2020 – Dec. 2020 (7 CAB Meeting & 1 Oystermen's Workshop)

PHASE III (2021) — BUILDING CONSENSUS ON CAB RECOMMENDATIONS FOR THE ABS ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN

Adoption of Final Draft Management and Restoration Plan Framework for Phase IV Evaluation — *Status Complete*

Jan. 2021 – Nov. 2021 (7 CAB Meeting & 2 Oystermen's Workshops)

PHASE IV (2022) — EVALUATION OF DRAFT ADAPTIVE MANAGEMENT AND RESTORATION PLAN FRAMEWORK'S RESTORATION AND MANAGEMENT STRATEGIES, RESTORATION PROJECTS SELECTION AND IMPLEMENTATION, AND FUNDING PLANNING — *Status Initiated*

Dec. 2021 – Dec. 2022 (6 CAB Meetings, Public Workshops)

PHASE V (2023) — EVALUATION AND FINALIZATION OF RECOMMENDATIONS FOR INCLUSION IN THE *ABS ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN*, RESTORATION PROJECTS SELECTION AND IMPLEMENTATION, AND FUNDING PLANNING — *Status Pending*

Jan. 2023 – Dec. 2023 (6 CAB Meetings, Public Workshops)

COMMUNITY ADVISORY BOARD (CAB). The CAB initiated Phase IV in December of 2021 and is currently evaluating the best combination of strategies (scenarios) predicted to achieve restoration and management objectives for the Bay using decision support tools including predictive socio-economic and ecological models coupled with available and emerging data and research. The scenarios are being evaluated with the overarching goal of restoring oyster reef habitat to a level that can sustainably provide needed ecosystem services for the System, and concurrently provide for a sustainable and economically viable level of commercial oyster harvesting. During the course of the project the CAB will vet their recommendations with restoration and management agencies to gauge support and feasibility for implementation. The CAB will evaluate the priority and efficacy of scenarios and associated actions and identify specific recommended restoration projects and management approaches for inclusion in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan). The CAB will vote to approve their package of consensus recommendations during their November 2023 meeting. ***Status Initiated***

1. **COMMUNITY OUTREACH SUBCOMMITTEE - PUBLIC ENGAGEMENT IN 2022.** The CAB working through the Community Outreach Subcommittee initiated a community feedback initiative by providing information and seeking community input on the Plan Framework. The CAB will vet the results of their prioritized strategies with the larger ABS community through multiple forums including questionnaires administered through a variety of methods including Facebook, online via the ABSI website, and direct mailings. In addition, public workshops will be conducted in various locations to provide the Community with information on ABSI and solicit community feedback. ***Status Initiated***
2. **RESTORATION FUNDING WORKING GROUP (RFWG).** Initiated in late 2021 the Restoration Funding Working Group's role is to seek resources and political, governmental, and organizational support for the CAB's priority recommendations. ***Status Initiated***

3. **CAB SUCCESSOR GROUP.** The CAB Successor Group will be ready to convene when the CAB completes their work on the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan. The Successor Group's role will be to organize a group of key stakeholders committed to working collaboratively for the long-term, once the CAB process is complete and to ensure that the Plan is implemented, monitored, and adaptively managed over time and has the support of the Community. The CAB Successor Group process will formally initiate January 2024. ***Status Organizing. Formal Convening Pending CAB Approval of Recommendations for Plan in November 2023.***

Meeting I. Virtual	**Jan. 26, 2022** • Review of Predictive Models	Initiation of Phase IV of ABSI.
Meeting II. ANERR	**Mar. 30, 2022** • Fisheries (Socioecological) Model Guidance • Management Strategies discussion with FWC	ABSI Science and data collection update. Sub-committee reports. Public Engagement Initiative strategy and plan discussion and approval of approach. Guidance regarding restoration and management scenarios and performance measures for development of the Fisheries (Socioecological) Model. Comprehensive review and discussion on draft management strategies with FWC Division of Marine Fisheries Management. Public comment.
Meeting III. ANERR	**May 25, 2022** • Presentations and discussions on restoration approaches • Discussion with FWC/DEP/ANERR on restoration strategies	ABSI science and data collection and decision support tools update. Sub-committee reports and public engagement initiative update. Chesapeake Bay Oyster Management and Habitat Restoration Modeling presentation, and Alabama Management and Restoration Approach presentation. Comprehensive review and discussion on draft restoration approaches (strategies), and CAB discussion and feedback from FWC Division of Habitat and Species Conservation, FWC Division of Marine Fisheries, ANERR, and DEP Office of Resilience & Coastal Protection on proposed ABSI restoration scenarios (strategies). Public comment.
Meeting IV. ANERR	**July 27, 2022** • FWC NFWF restoration project • Oyster abundance index data • Fisheries model simulation results & scenarios refinements	Sub-committee reports and public engagement initiative update. Update on FWC (NFWF funded) restoration project. Discussion on approach for encouraging protection and enforcement of restoration and restoration experiment sites. Overarching Considerations for model simulation results briefing. Apalachicola Bay oyster abundance index data presentations. Review and discussion of Fisheries (Socioecological) Model simulation results for initial priority Fisheries Management (Goal B) scenarios (strategies/options). Agreement on next suite of scenarios for Fisheries Model simulations. Public comment.
Meeting V. ANERR	**October 18, 2022** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Oystermen's Workshop	**October 18, 2022** ANERR	Oystermen's Feedback on ABSI Restoration Experiments, FWC Restoration Project, and Potential Management Scenarios for Modeling.
Community Workshop	**October 19, 2022** Eastpoint Firehouse	Community Feedback on ABSI Restoration Experiments, FWC Restoration Project, and Potential Management Scenarios for Modeling.
Meeting VI. ANERR	**Nov. 30, 2022**	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update.

	• Fisheries Model Simulation Results & Scenarios Refinements	Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
PHASE V CAB MEETINGS — 2023		
Meeting I. ANERR	**Feb. 1, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	Initiation of Phase V of ABSI. ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Meeting II. ANERR	**March 29, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Community Workshop	**TBD ~ April 2023**	Community Feedback on ABSI Restoration Experiments, FWC Restoration Project, and Potential Management Scenarios for Modeling.
Meeting III. ANERR	**May 31, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Meeting IV. ANERR	**July 26, 2023** • Fisheries model simulation results & scenarios refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Oystermen's Workshop	**TBD ~ Sept. 2023**	Oystermen's Feedback on the CAB's recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
Meeting V. ANERR	**Sept. 27, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Community Workshop	**TBD ~ October 2023**	Community Feedback on the CAB's recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
Meeting VI. ANERR	**Nov. 29, 2023** • **Adopt Final CAB Recommendations for ABS Plan**	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Finalize and adopt recommendations for strategies and actions (components) for inclusion in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan) and submit to FSUCML. Public comment.

ATTACHMENT 3
CAB PARTICIPATION PROCEDURES AND GUIDING PRINCIPLES

CAB PARTICIPATION PROCEDURES

- ✓ Look to the Facilitator to be recognized.
- ✓ Please raise your hand and/or place your name card vertically to speak.
- ✓ Speak one person at a time. Please don't interrupt each other.
- ✓ Focus on issues, not personalities. *"Using insult instead of argument is the sign of a small mind."*
- ✓ Avoid stereotyping or personal attacks. *"Mud thrown is ground lost."*
- ✓ Speak only when recognized by the Facilitator.
- ✓ Facilitator will call on participants in turn.
- ✓ Facilitator may change the speaking order in order to promote discussion on a specific issue or, to balance participation and allow those who have not spoken on an issue an opportunity to do so before others on the list who have already spoken on the issue.
- ✓ Offer one idea per person without explanation.
- ✓ No comments, criticism, or discussion of other's ideas.
- ✓ Listen respectively to other's ideas and opinions.
- ✓ The CAB Process is an opportunity to explore possibilities. Offering or exploring an idea does not necessarily imply support for it.
- ✓ Listen to understand. Seek a shared understanding even if you don't agree.
- ✓ Be focused and concise—balance participation & minimize repetition. Share the airtime.
- ✓ To the extent possible, offer options to address other's concerns, as well as your own.
- ✓ Refrain from using electronic devices during the meetings; Keep electronic devices turned off or silent.

CAB GUIDING PRINCIPLES

FOUR PERSONAL GUIDING PRINCIPLES: Be impeccable with your word, don't take things personally, don't make assumptions, and always do your best.

OVERARCHING GUIDING PRINCIPLE: Seek first to understand, and then seek to be understood.

WE WILL BE SUCCESSFUL AND HAVE GOOD CONVERSATION WHEN:

- ✓ All voices are invited, respected and heard.
- ✓ All experiences are treated as valid.
- ✓ We listen to each other actively, attentively, and respectfully.
- ✓ We observe time frames.
- ✓ We seek common ground and action.
- ✓ There is full and active attendance.
- ✓ We make the time and space to connect with each other.
- ✓ We participate actively and share opinions in the conversation—engage fully in this process.

ATTACHMENT 4
AGENDA ITEMS BACKGROUND INFORMATION - 28 SEPTEMBER 2022

AGENDA ITEM #8: MODELED SCENARIOS

Next Suite of Scenarios for Evaluation with the the Fisheries (Socioecological) Model:

Based on Ed Camp's recommendations regarding what is currently feasible to model, the CAB agreed to recommend the following scenarios for simulation by the Fisheries (Socioecological) Model:

- An Active harvest management scenario similar to the AL approach using monitoring and an oyster abundance minimum density threshold.
- Different management strategies under a range of different assumptions to see what works best.

FUTURE SCENARIOS AND ASSUMPTIONS FOR MODELING

Near-Term Suite of Scenarios to Model:

- A put-and-take sustainable wild oyster harvest fishery.
- Restoration approaches using data from the restoration projects and the restoration experiments and pilot projects (specific locations, size, height/spatial configurations, type of cultch material, density of cultch, etc.).
- A combination of limited entry and active management.

When the Model Can Be Extended to a Spatially Explicit Platform, Evaluate:

- Opening and closing specific oyster bars and potentially even parts of specific oyster bars based on the metrics for sustainability of the resource (e.g., oyster density).
- Different scenarios with the Bay wide-open and various areas of the Bay closed.
- Develop and maintain one area of the Bay (e.g., Cat Point) for high intensity commercial oyster harvesting, and the rest of the Bay will be set aside as protected areas (MPA/Sanctuaries) to provide ecosystem services such as water filtration and marine species habitat, and also to provide brood stock/spat source for the system.
- Updated periodic oyster population evaluations are being conducted and used as the metric for how much and when harvesting is allowed.
- Total Allowable Catch (TAC) as a component of a limited entry and/or minimum density active managed scenarios.
- Seasonal closures.
- Consider the size, spatial configuration, amount and location for oyster reef habitat restoration initiatives.

Much of the above will require adding some larval transport and dispersal assumptions to spatially explicit modeling.

ATTACHMENT 5
CURRENT AND FUTURE SCENARIOS AND ASSUMPTIONS FOR MODELING

CURRENT MANAGEMENT SCENARIOS AND ASSUMPTIONS FOR MODELING

OVERVIEW. The Community Advisory Board (CAB) is evaluating a suite of potential scenarios (strategies) proposed to achieve restoration and management goals for the Apalachicola Bay System. The scenarios are being evaluated with the overarching goal of restoring oyster reef habitat to a level that can sustainably provide needed ecosystem services for the System, and concurrently provide for a sustainable and economically viable level of commercial oyster harvesting. The CAB will evaluate a broad suite of strategies predicted to achieve the dual goals of restoration and management of the oyster resource. Decision support tools including predictive socio-economic and ecological models coupled with available and emerging data and research will be used to identify viable management and restoration options. Evaluating scenarios (strategies) does not imply support for any specific scenario.

Final decisions on recommendations for inclusion in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan) will be made once the CAB reaches consensus on the best combination of strategies predicted to achieve restoration and management objectives for the Bay. The CAB's recommendations will be submitted to the FSUCML ABSI Team who will subsequently develop and submit the final Plan to relevant management and restoration agencies. These entities will decide whether to approve and implement all or part of the Plan.

SCENARIOS. The Community Advisory Board unanimously agreed by consensus to approve initial scenarios (combinations of strategies) for evaluation by the Fisheries (Socioecological) Model:

- An Active harvest management scenario similar to the AL approach using monitoring and an oyster abundance minimum density threshold.
- Different management strategies under a range of different assumptions to see what works best.
- Limited entry commercial oyster fishery.
- A combination of limited entry and active management.
- A put-and-take sustainable wild oyster harvest fishery.
- Restoration approaches using data from the restoration projects and the restoration experiments and pilot projects (specific locations, size, height/spatial configurations, type of cultch material, density of cultch, etc.).

Each of these scenarios will initially be evaluated with a spatially implicit model (for simplicity, time, and practicality should only a limited area be opened). This will require making assumptions about the area of submerged land that is open for oyster harvest and specifically that is being considered when making density calculations (for Scenario B). These areal measurements have not been assessed.

Modeled Simulations Include:

- Closed seasons
- Bag limits
- Potential for bioeconomic entry (i.e., based on assumptions about profitability and variables costs, so not capped at number of trips/participants), as is most recent status quo.
- Fixed effort remains an options, as does, allowing for an effort cap with bioeconomic operations below that.
- Discard mortality applied to oysters captured but not harvested.

- Potential for density dependent catchability which there is some evidence may occur.

** The models still include shell budget information.*

ASSUMPTIONS. The CAB agreed to the following assumptions for use in evaluating the scenarios:

1) Oystermen will harvest oysters (fish) whenever the weather and regulation permit.
2) $80,000 is the initial annual gross income level that oyster harvesters identified as requisite for earning a "good" living solely from oysters harvesting, and which would guarantee economic self-sufficiency*. Additional economic work to understand minimum income thresholds (annual and/or revenue per effort) will be empirically assessed in summer/fall 2022 as part of the economic surveys associated with Ed Camp's FWC oyster project.
3) A likely bag limit of 5 – 6 bags/day, and a selling price of $100/bushel of oysters.
4) Oyster harvest allowed 7-days/week during open times.
5) Oyster harvest allowed all months during open times and areas. Note: this is an initial assumption that can be altered or relaxed for future scenarios.
6) Use a range of 5% low to 30% high to account for illegal harvest, potentially related to changes in enforcement.
7) 200 bushels/acre metric as threshold for sustainable harvest/habitat.
8) The spatially implicit scenarios imply assuming the pre-closure amount of closed and thus open areas. However, there was some stakeholder support for considering an even more spatially limited fishery, at least initially.
9) Calculate the maximum number of participants the resource can sustain under different assumptions of income and bag limits. Initial scenario results will use income of $80,000 annual gross and 5 bag/person/day limit, but of course changing these variables will affect maximum number of participants (less income, lower bag limits will generally allow more participants).
10) Run the initial simulations of the scenarios two ways with the overarching assumption that: 1) oyster habitat restoration works and improves the oyster population abundance specifically and the Bay generally to a threshold sufficient to support some level of sustainable commercial oyster harvesting; and 2) restoration of the Bay and oyster reef habitat does not work as predicated and the health of the Bay is not sufficiently improved to support a sustainable oyster reef habitat together with commercial oyster harvesting.
11) Additional assumptions not explicitly addressed include:
    - Assuming constant pathology that is subsumed by past estimates of natural mortality of oysters. That is, we're not modeling changes in oyster disease right now.
    - Assuming natural mortality has not been dramatically altered by some unknown predator or environmental variable.
    - Latent effort (demand to harvest oysters) exists.

**Economic self-sufficiency is a sufficiency of economic resources to meet physical needs. It is the ability of individuals and families to maintain sufficient income to consistently meet their basic needs – including food, housing, utilities, health care, transportation, taxes, dependent care, and clothing – with no or minimal financial assistance or subsidies from private or public organizations.*

ATTACHMENT 6
DRAFT RESTORATION AND MANAGEMENT STRATEGIES AND ACTIONS

APALACHICOLA BAY SYSTEM ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN
GOAL A — A HEALTHY AND PRODUCTIVE BAY ECOSYSTEM
ELEMENTS TO BE CONSIDERED FOR THE PLAN

VISION THEME A: The Apalachicola Bay System, including its oyster reef resources, is sustainably managed. Water resources and affected habitats are afforded adequate protection to ensure that essential ecosystem functions are maintained, and a full suite of economic opportunities are realized.

GOAL A: The Apalachicola Bay System is a healthy and productive ecosystem that supports a vibrant and sustainable oyster fishery and other economically viable activities.

OUTCOME: By 2030, the Apalachicola Bay System is a healthy, productive and sustainably managed ecosystem that supports a viable oyster fishery while providing a broad suite of ecosystem services that, in turn, afford additional opportunities for sustainable economic development.

GOAL A PRIORITIZED STRATEGIES (8)

PRIORITY 1 RESTORATION STRATEGIES (5)

1) Restore and create reef structures suitable for sustained oyster settlement that enhance ecosystem services in designated restoration areas.
   - *Action 1-A.):* Design and implement projects to achieve multiple ecosystem service targets (e.g., commercial and recreational fishing, shoreline protection).
   - *Action 1-B.):* Implement restoration projects simultaneously rather than sequentially.
   - *Action 1-C.):* Relay live oysters to jump start restoration experiments by moving oysters within the same general location and applying them to form a shallow layer of oysters over existing healthy reefs (not recommended as a management approach).

Lead: FWC	***Partners:*** FSU, UF, FDACS, local Gov., FDOT, NGOs, coastal property owners, CAB

2) Use experimental evidence and habitat suitability analyses to determine the most suitable substrate (e.g., limestone, granite, spat-on-shell, artificial structures) for restoring, enhancing, and/or developing new reef structures that will increase productivity in the Apalachicola Bay oyster ecosystem.
   - *Action 2-A.):* Conduct restoration experiments to test efficacy of different materials.
   - *Action 2-B.):* Use knowledge gained from experiments to recommend best practices for broad scale restoration in the ABS.

Lead: FSU	***Partners:*** UF, FWC, FDACS, CAB

3) Determine area (acres or km^2) of oyster reefs that currently support live oysters as well as the area needed to ensure sufficient spat production that will support sustainability of oyster reefs and sustainability of a wild oyster fishery throughout the ABS.

- *Action 3-A.):* Map existing oyster reefs using multibeam sonar and backscatter, and ground-truth for accuracy.
- *Action 3-B.)*: Apply model that uses reproductive output, recruitment, natural mortality rates and fishery harvest to assess oyster population dynamics.

Lead: FWC	***Partners:*** FDACS, FSU, UF

4) Develop criteria for restoring specific reefs or reef systems damaged by environmental conditions or natural disasters.
   - *Action 4-A.):* Evaluate degree of damage and potential for recovery.
   - *Action 4-B.):* Develop an approach for mitigating damage (e.g., physical repair, spat supplements, or some combination of both).
   - *Action 4-C.):* Determine periodicity of hatchery-produced spat addition (e.g., annually or longer) with a specific timeline for continuing the approach. This approach is not intended to create a put-and-take fishery.

Lead: FSU	***Partners:*** UF, FWC, FDACS, CAB

5) Identify monitoring needs for assessing the health of oyster populations (including disease) and detecting changes in environmental conditions and habitat quality (for oysters and other reef-associated species) over time.
   Action 5-A.): Continue monitoring intertidal and begin monitoring sub-tidal reefs/habitat monthly and bi-annually using same protocols as FWC sub-tidal monitoring. Adjust to add metrics as needed. Data will be shared between FWC and ABSI.
   Action 5-B.): Conduct 'spot-checks' at a large number (TBD) of different locations in the Bay to supplement the more intensive monitoring data. Document volume of rock/shell/oysters, number of spat, medium and market sized live oysters and boxes together with environmental data.
   Action 5-C.): Collect long-term in situ environmental data using ABSI instruments and integrate ANERR environmental and nutrient data as correlates with oyster metrics.
   Action 5-D): Generate health indicators for ABSI using monitoring data, and other ecological factors (e.g., oyster-associated communities and structural complexity).

Lead: FSU	***Partners:*** FWC, FDACS, ANERR

PRIORITY 2 RESTORATION STRATEGIES (2)

6) Develop ecosystem models that forecast future environmental conditions and oyster population status.
   - *Action 6-A.):* Collect data needed by the models and follow up with testing the models to refine accuracy of output.
   - *Action 6-B.):* Coordinate with appropriate state and federal agencies, pertinent out of state user groups, and other initiatives working on both geographically constrained and basin-wide water-flow alterations and management strategies that contribute positively to the health of the ABS.

Lead: UF	***Partners:*** FWC, FDACS, FSU

7) Assess existing ecosystem services metrics used for other oyster studies and develop a list of ABSI specific metrics to assess change over time.
   - *Action 7-A.):* Conduct literature review and work with Florida Oyster Recovery Science (FORS) working group to identify measurable indicators of changes in ecosystem services
   - *Action 7-B.):* Integrate ecosystem services metrics into monitoring program.

Lead: FSU	***Partners:*** UF, FWC, FDACS, universities, government agencies

PRIORITY 3 RESTORATION STRATEGIES (1)

8) Seagrass and other submerged aquatic vegetation (SAV), and wetland and riparian habitat should be restored concurrently on appropriate substrate/bottom to work synergistically with oyster habitat restoration to enhance restoration of the ABS.

Lead: DEP	***Partners:*** Franklin Co., FSU, UF, FWC, FDACS

APALACHICOLA BAY SYSTEM ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN
GOAL B — SUSTAINABLE MANAGEMENT OF OYSTER RESOURCES
ELEMENTS TO BE CONSIDERED FOR THE PLAN

VISION THEME B: A restored Apalachicola Bay System has resulted in a sustainably managed and adequately enforced wild harvest oyster fishery while also providing opportunities for other economically viable and complementary industries, including tourism and aquaculture. This is accomplished by working collaboratively with stakeholders to create, monitor and fund a plan that ensures that the protection of the habitat and the fishery it supports is based on science, stakeholder input, and industry experience, and is implemented in a manner that provides both fair and equitable access to and protection of the resource.

GOAL B: productive, sustainably, and adaptively managed Apalachicola Bay System supports sustainable oyster resources.

OUTCOME: By 2030, an engaged and collaborative group of stakeholders will have contributed to and helped spearhead a fully funded science-driven plan to sustainably manage oyster resources in the Apalachicola Bay System.

GOAL B PRIORITIZED STRATEGIES

PRIORITY 1 MANAGEMENT STRATEGIES

1. Evaluate a suite of management approaches that in combination achieve the goal of maintaining a sustainable wild oyster fishery as measured in relation to relevant performance metrics for determining success.
   - *Action 1-A.):* Evaluate and develop standards for a potential limited-entry fishery that would be managed adaptively with the number of entrants in the fishery based on the current sustainable harvest level. Evaluate the potential for establishing a limited-entry oyster fishery program and various management strategies through a transparent representative stakeholder driven consensus-building process that includes vetting the plan with local oystermen and FWC law enforcement.
   - *Action 1-B.):* Implement a Bay-wide summer wild harvest fishery closure.
   - *Action 1-C.):* Provide daily harvest limits in conjunction with a Monday – Friday five-day harvest week.

- *Action 1-D.):* Implement a recreational wild oyster harvest limit of for example, one 5-gallon bucket of oysters, and allow recreational harvest during the same season the fishery is open to commercial harvest using the same gear.
- *Action 1-E.):* Manage harvest areas to prevent the concentration of effort in specific locations by allowing all of the legal and approved (FDACS) harvest areas of the Bay to be open during the harvest season and harvesting hours (Strategy 10-B and 10-C above).
- *Action 1-F.):* Establish the 5% undersize oyster limit for both harvesters and dealers.
- *Action 1-G):* Clarify that it is an allowable practice for oystermen to weigh oyster bags while on the water to ensure the bags meet the weight limit regulations.
- *Action 1-H.):* Implement stock-based temporary wild harvest closures in conjunction with regular stock assessments of the oyster density.
- *Action 1-I.):* Evaluate and determine a metric used to manage oyster reef harvest at a sustainable threshold. Consider a graduated set of thresholds.
- *Action 1-J.):* Implement an annual stock assessment using fisheries dependent and independent data, with data collection methods and site selection done in collaboration with oystermen, for determining a sustainable level of wild oyster harvest for each season.

Lead: FSU/UF	***Partners:*** FWC, stakeholders

2. Recommend specific criteria and/or conditions, with related performance measures for the reopening of Apalachicola Bay to limited wild oyster harvesting.
   - *Action 2-A.):* Use ABSI ecosystem health metrics and FWC/UF models to develop criteria for opening and closing wild oyster harvest and for determining sustainable harvest.
   - *Action 2-B.):* Work with FWC and FDACS to ensure that definitions of oyster population health are not only based on harvest metrics.

3. Conduct an oyster stock assessment for the ABS with periodic updates.

Lead: FWC	***Partners:*** FSU, UF, NGOs, citizen scientists, watermen

4. Manage the commercial oyster industry and recreational oyster fishing to provide for sustainable spat production and the recovery of oyster populations.
   - *Action 4-A.):* Evaluate management scenarios (e.g., seasonal (summer) closure to wild harvesting, rotational closures, 5-day work weeks, non-harvested spawning reefs (permanent closures), limited entry, transferable license program, closures based on stock levels (stock assessment), reduced bag limits, bag tags, relaying oysters to better habitat, additional enforcement presence, manage harvest areas to prevent the concentration of effort in specific locations (open larger areas).
   - *Action 4-B.):* Develop strategies to limit oyster harvest to periods outside of peak spawning season.
   - *Action 4-C):* Evaluate existing allowable and minimally destructive alternative gear type options and harvest methods, including the use of experimental gear for wild oyster harvesting.

Lead: FWC	***Partners:*** oystermen, FSU, UF, Sea Grant

5. Work with FWC Law Enforcement to develop enforcement strategies and appropriate penalties sufficient to deter harvest or sale of undersized oysters as well as violations that harm wild or leased oyster reefs and other natural resources, and that will support restoration efforts in the ABS.

- *Action 5-A.):* Develop strategies to increase FWC enforcement presence and number of checkpoints to provide a deterrent to illegal activities.
  - Provide law enforcement presence during peak harvesting periods, and on the water during harvest season hours.
- *Action 5-B.):* Develop strategies to ensure consistent practices are used for enforcement of regulations regarding the harvestable and marketable size of oysters. (See Actions *5-F* and *5-G*)
- *Action 5-C.):* Revise statutes and/or rules as needed to require FWC to check harvested oysters for size-limit enforcement* before they are washed and processed. Once processed, enforcement of oyster size-limits should be limited to oysters under 2.75" because processing changes shell height.
  ** Sampling and other data collection activities shall not be impacted by this recommendation.*
- *Action 5-D.):* Evaluate and enhance, as needed, the regulations and enforcement practices to ensure dealers accurately identify the source of oysters after processing and packaging.
- *Action 5-E.):* Evaluate and revise, as needed, the statutory and/or regulatory requirements to ensure that FWC has authority to enforce oyster regulations at the dealers' location.
- *Action 5-F.):* Work with FWC and FDACS to implement recommended enforcement changes.
- *Action 5-G.):* Work with oystermen to evaluate current rules and regulations to ensure they are enforced consistently, fairly, and practically with an understanding of real-world on-the-water harvesting practices and constraints.
- *Action 5-H.):* Evaluate and seek authority to implement a tiered system of penalties for purposeful violators (increased fines and license suspensions ranging from increased length of suspension to the permanent loss of license) to keep purposeful violators out of the industry.
- *Action 5-I.):* Encourage community and industry support for consistent judicial imposition of penalties within the exiting penalties framework for oyster harvest violations, including imposing stricter penalties for habitual and willful violators.
- *Action 5-J.*): Prior to the opening of each harvest season FWC should conduct a joint workshop between FWC law enforcement and the oystermen to review the current rule and regulations, identify any changes, discuss enforcement approaches relative to harvest practices and constraints on the water, and to provide mutual two-way education, and enhance communication and collaboration between FWC and oystermen.
- *Action 5-K.):* Work together and with other stakeholders to seek funds to support the recommended increased law enforcement presence in the Bay.

Lead: FWC/FDACS	***Partners:*** FSU-CAB, CAB Successor Group, oystermen, oyster dealers

6. Evaluate the development of a policy that would require setting sustainable harvest goals and placing limitations on or a complete closure to harvesting based on the results of data (e.g., stock assessment) collected and evaluated under a comprehensive monitoring program designed to sustainably manage the resource.
   - *Action 6-A.)*: Convene a co-management advisory committee comprised of state and federal agencies, and other appropriate experts, to assess and make recommendations on oyster habitat needs in conjunction with harvest management strategies.
   - *Action 6-B.):* Convene an Oyster Advisory Board within FWC to review and make recommendations on management and enforcement of the oyster fishery once wild oyster harvesting resumes in Apalachicola Bay.

Lead: FWC	***Partners:*** FDACS, FSU, UF, local governments

7. Restore and create reef structures suitable in size, location, and substrate type for healthy and sustainable oyster settlement, production, and harvesting.
   - *Action 7-A.):* Include oystermen in discussions to evaluate cultching techniques and materials for growing oysters (e.g., historical non-traditional, trees), adding spat on shell or other substrates.
   - *Action 7-B.*): Include oystermen in discussions on spatial configuration of reefs (height, width, contours, etc.), locations (existing reefs and hard bottom), use of larger rock to protect restored reefs from siltation and sedimentation from prevailing currents and storms.

Lead: FWC	***Partners:*** FSU, UF, Sea Grant, watermen and aquaculture organizations, local county programs

   - *Action 7-C.):* Design and implement restoration projects to achieve oyster fishery production targets.
   - *Action 7-D.):* Design restoration projects that include both fished and non-fished reefs.

Lead: FWC	***Partners:*** FSU, UF, NOAA for funding

PRIORITY 2 MANAGEMENT STRATEGIES

8. Recommend policies and actions that retain and recycle shell for habitat replenishment in the ABS.
   - *Action 8-A.):* Develop agency rules and policies that require shell retention and recycling for habitat replenishment through a fee or incentive program.
   - *Action 8-B.):* Obtain legislative support for statutes that support or require shell recycling and oyster habitat replenishment. (e.g., Texas House Bill 51 (2017); North Carolina General Statute §130A-309.10 (2010); Maryland House Bill 184; Chapter 157, F.S. (McClellan 1881).
   - *Action 7-C.):* Establish and/or expand partnerships with local organizations, stakeholder groups, industry, and universities in shell recycling programs.

9. Use decision-support tools to develop a system of potential closed areas that are well defined in terms of size, location, and longevity and include rotational and seasonal harvest areas, as well as long-term closed areas in strategic locations to provide habitat for year-round protection for brood stock and enhanced spawning opportunities.
   - *Action 9-A.):* Engage local stakeholders in determining total coverage (how much to protect), placement (where to protect), and size (how large) of all types of potential closed areas using gridded maps as well as distributions of selected fishery and ecologically important species.

10. Use ecological quantitative modeling and other decision support tools to evaluate strategies and actions and define performance criteria for an oyster population that can sustain a pre-determined level of wild oyster harvest, with a stipulated number of harvesters (limited entry), and protocols to ensure sustainability.
    - *Action 10-A.):* Use model outputs to identify the oyster population abundance that can support sustainable harvest.
    - *Action 10-B.):* Use model outputs to identify percentage of the total reef area that is sufficiently productive to support sustainable harvest.
    - *Action 10-C.):* Use model outputs to identify annual; recruitment required to support sustainable harvest.
    - *Action 10-D.):* Use model outputs to determine amount and frequency of habitat replacement to maintain productive oyster reefs.

Lead: FSU/UF	***Partners:*** FWC, stakeholders

11. Work with FDACS to ensure that oyster aquaculture practices and locations in the Bay are compatible with the goals and strategies for restoration and management of the ecosystem and are compatible with wild fisheries and the important cultural role of a working waterfront and seafood industry.
    - *Action 11-A.):* Develop maps using FDACs data showing all aquaculture activities in the ABS, superimposed on existing maps of essential fish habitat, fishing activities, seagrass beds, and natural existing hard bottom (reefs/bars) to identify potential conflicts.
    - *Action 11-B.):* Utilize habitat and activity maps from *Action 5. A.* to identify potential new oyster restoration areas and areas that could be used as spawning reefs to enhance recruitment and productivity nearby harvested reefs.

Lead: FDACS	***Partners:*** FSU, UF, FWC, oystermen

12. Investigate oyster shell and oyster relay programs to move both cultch and live oysters to more favorable habitat (relay programs are recommended to only be used for restoration experiments).
    - *Action 12-A.):* Use model and mapping information on larval source areas and environmental conditions to inform the potential programs.
    - *Action 12-B.):* Research similar relay programs in other areas for potential models and cautions.

Lead: FDACS/FWC	***Partners:*** FSU, UF, Sea Grant, FDEP, FDOH, stakeholders (oystermen)

ADDITIONAL STRATEGIES FOR EVALUATION — APPROVED 27 JULY 2022

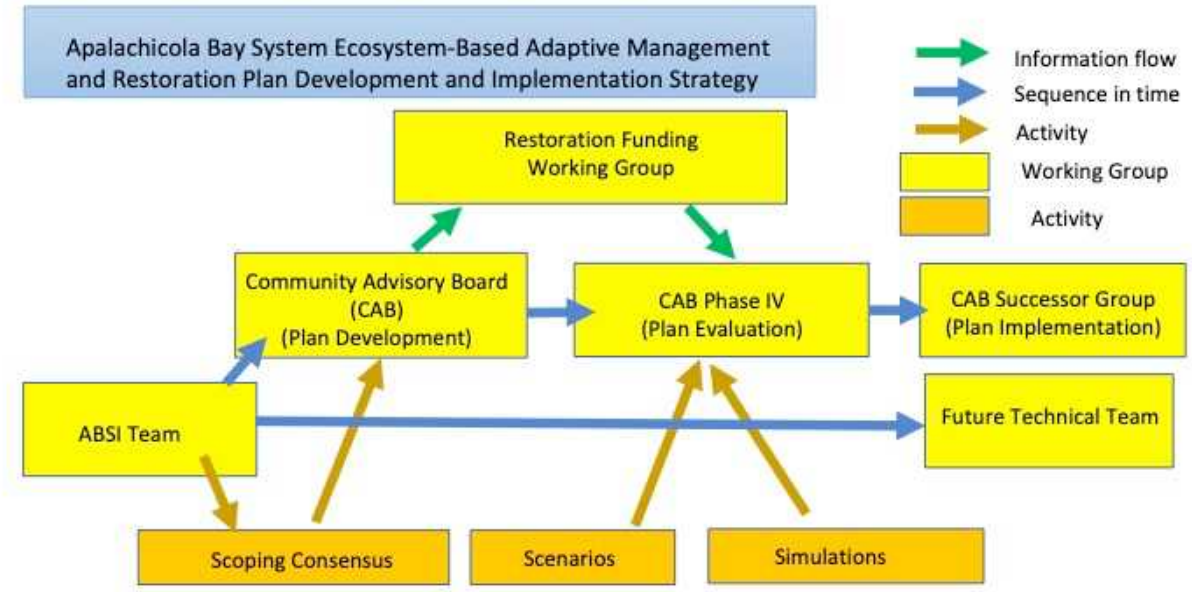
1) Assess the effectiveness of a put-and-take fishery for maintaining a sustainable wild oyster harvest in Apalachicola Bay. Specific areas would receive regular cultching and/or deployment of hatchery spat-on-shell and would be subject to the same fishery management regulations as non-supplemented areas.

- ***Action 1-A.)*** Conduct field study of survival of planted spat-on-shell to harvestable size and time required to attain market size.
- ***Action I-B.)*** Use fishery models to estimate the amount and frequency of cultch and/or spat-on-shell required to maintain the minimum threshold for sustainable harvest (i.e., 400 bags/acre).
- ***Action I-C.)*** Conduct cost-benefit analysis of deploying cultch and/or spat-on-shell in support of wild oyster harvest in Apalachicola Bay. This includes cost of cultch and spat-on-shell production, cost of deployment, survival of hatchery spat and value of harvest and associated industry.
- ***Action I-D.)*** Monitor the stability of oyster populations using the put-and-take approach to wild fishery harvest, to determine whether deploying cultch or spat-on-shell helps reduce natural fluctuations in oyster populations.

Lead: FWC/FDACS	***Partners:*** Hatcheries (FSU, other), FSU, FDEP

ATTACHMENT 7
PROJECT FLOWCHART, MISSION AND GOAL STATEMENT, & PROJECT SUMMARY

ABSI CAB PROCESS FLOWCHART AND PROJECT AREA MAP



Notes
1. Yellow boxes are groups of people. Blue arrows connecting yellow boxes indicate some or all of the people in one group may comprise the next group in time sequence

ABSI Project Area Map

ABSI Mission Statement, Project Summary, and CAB Goal Statement

Apalachicola Bay System Initiative Mission Statement. The Apalachicola Bay System Initiative (ABSI) seeks to gain insight into the root causes of decline of the Bay's ecosystem and the deterioration of oyster reefs. Ultimately, the ABSI will develop a management and restoration plan for the oyster reefs and the health of the Bay.

Project Summary. In response to the rapidly declining health of the Apalachicola Bay System (ABS) and the collapse of the oyster fishery and reefs therein, Florida State University sought and was awarded a grant from Triumph Gulf Coast Inc. to undertake a series of scientific approaches intended to aid in the development of an ecosystem-based oyster management and restoration plan for the Apalachicola Bay System. The plan will be informed by science while involving representative stakeholders and the public in its creation, development and implementation by state and federal management agencies. Developing such a plan will help the state agencies responsible for marine resources improve the overall health and the rich biological diversity of the bay, including that of other ecologically and economically important species. Because oyster populations are declining in estuaries across the Florida panhandle, ABSI project leads will work with scientific, non-profit and governmental entities working on similar issues throughout this region to develop a consistent oyster management framework.

The vitality of Apalachicola Bay is key to the socio-economic prosperity of Franklin County and the surrounding area. Specifically, as the bay's health has declined, so has the area's once-booming oyster industry, resulting in widespread job loss and increased economic insecurity for many Franklin County residents whose livelihoods are tied to the Bay.

Florida State University through its Coastal and Marine Laboratory is investigating what precipitated the dramatic decline of the Apalachicola Bay System and working with the ABSI Community Advisory Board (CAB) and Science Advisory Board determine a viable course of action for improving its condition.

Apalachicola Bay System Initiative Community Advisory Board Goal Statement. The overarching goal of the Apalachicola Bay System Initiative Community Advisory Board is to develop a package of consensus recommendations informed by the best available science, data, and stakeholders' experiences for the management and restoration of the Apalachicola Bay System, and to ensure there is a reliable mechanism and process for the monitoring, funding, and implementation of the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.

A critical component of the management plan is oyster reef restoration with full consideration of factors affecting the biology, ecology and sustainable management of the resource. Restoration related actions, as indicated above, should be informed by the best available science and shared stakeholder values, that in turn, result in an economically viable, healthy, and sustainable Apalachicola Bay System.

The process is designed so that members can explore and evaluate oyster fishery practices and management options, and restoration policies in the Apalachicola Bay System. The Community Advisory Board's consensus recommendations, in the form of an Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan, will be directed to the Apalachicola Bay System Initiative Project Team, natural resource managers and environmental regulators, and other agencies/entities as appropriate.

ATTACHMENT 8
COMMUNITY ADVISORY BOARD CONSENSUS BUILDING PROCESS
(ADOPTED UNANIMOUSLY OCTOBER 30, 2019)

The Apalachicola Bay System Initiative (ABSI) Community Advisory Board (CAB) will seek consensus on its recommendations for options to be evaluated using the best available science and decision-support tools for management and restoration of the Apalachicola Bay System (ABS).

General consensus is a participatory process whereby, on matters of substance, the members strive for agreements which all of the members can accept, support, live with or agree not to oppose. In instances where, after vigorously exploring possible ways to enhance the members' support for the final package of recommendations, and the Community Advisory Board finds that 100% acceptance or support is not achievable, final consensus recommendations will require at least 75% favorable vote of all members present and voting. This super majority decision rule underscores the importance of actively developing consensus throughout the process on substantive issues with the participation of all members and which all can live with.

In instances where the Community Advisory Board finds that even 75% acceptance or support is not achievable, publication of recommendations will include documentation of the differences and the options that were considered for which there is more than 50% support from the Community Advisory Board. The report that will be a product of the Community Advisory Board process will clearly describe the level of agreement between Community Advisory Board members on each specific recommendation as well as on the suite of recommendations as a whole.

The Community Advisory Board will develop its recommendations using consensus-building techniques with the assistance of the facilitator. Techniques such as brainstorming, ranking and prioritizing approaches will be utilized. The Community Advisory Board's consensus process will be conducted as a neutrally facilitated consensus-building process. Community Advisory Board members, project staff, and the facilitator will be the only participants seated at the table. Only Community Advisory Board members may participate in discussions and vote on proposals and recommendations. The facilitator, or a Community Advisory Board member through the facilitator, may request specific clarification from a member of the public in order to assist the Community Advisory Board in understanding an issue. Observers/members of the public are welcome to speak during the public comment period provided at each meeting, and all comments submitted in writing will be included in the next meeting's facilitator's summary report.

ATTACHMENT 9
GLOSSARY OF MODELING TERMS

Assumptions – A description of the world that is accepted as true and is based on common knowledge or theory but not on proof.

Baseline – Model output that is used as a starting point for comparison with other sets of model output.

Calibration – Process of adjusting model inputs or parameters to obtain optimal agreement between model output and observations (data).

Circulation/Hydrodynamic Model – A mathematical tool that calculates water currents and water properties (like salinity and temperature).

Data Gap – The lack of data or information necessary for a given scientific study.

Data Set – A collection of observations or measurements.

Deviation – The difference between a data point and a model prediction.

Fishery-Dependent Data – Data collected directly on a fish or fishery from commercial or sport fishermen and seafood dealers.

Fishery-Independent Data – Characteristic of information (e.g. stock abundance, index) or an activity (e.g. research vessel survey) obtained or undertaken independently of the activity of the fishing sector.

Hypothesis – An idea that can be tested.

Larval Transport – The movement of oyster larvae in the water.

Model – A series of mathematical equations that describes, with great simplification, how a part of the world works.

Model Output/Model Result – A solution or a set of solutions obtained from a model simulation.

Performance Measure/Metric – A number used to indicate the effectiveness of an option for achieving a desired outcome.

Population Dynamics – The growth, death, and reproduction of individuals over time that leads to increase, decrease, persistence or extinction of a population.

Simulations – Repeated runs of a model using different inputs (e.g., different options).

Uncertainty – A way to represent how likely model predictions are given the inherent variability in the environment and the difference between model output and observations.

Validation – Comparison of model output with a set of independent data to determine the degree of confidence in model results.

Water Quality – Describes the physical, chemical, biological, and aesthetic characteristics of water and is a measure used to determine the suitability of water for a specific purpose (e.g., drinking, fishing, swimming, etc.).

ATTACHMENT 10
GLOSSARY OF ABSI PROJECT TERMS AND DEFINITIONS

APALACHICOLA BAY SYSTEM: Consists of six bays: Apalachicola Bay, East Bay, St Vincent Sound, East and West St George Sound, and Alligator Harbor comprising a total of 155,374 acres (62,879 Ha). Confined to Franklin County and ending to the north at river mile zero (0). Important considerations include riverine and offshore inputs to the ABS as well as the reciprocal influences of outputs from the ABS to the Gulf of Mexico.

APALACHICOLA BAY SYSTEM, HEALTHY:
A healthy ecosystem is one in which material and energy flows are balanced through interacting biological, physical, and chemical processes (involving microorganisms, plants, animals, sunlight, air, water) that conserve diversity, support fully functional evolutionary and ecological processes, and sustain a range of ecological and ecosystem services.

ECOSYSTEM SERVICES: The direct and indirect contributions of ecosystems to human wellbeing. These services include **provisioning services** (food, raw materials, fresh water, medicinal resources), **regulating services** (climate, air quality, carbon sequestration & storage, moderation of extreme events, waste water treatment, erosion prevention & maintenance of soil fertility), **habitat or supporting services** (habitat for all species, maintenance of genetic diversity), and **cultural services** (recreation for mental & physical health; tourism; aesthetic appreciation and inspiration for culture, art & design; spiritual experience & sense of place).

ESTUARINE METRICS: These are variables that can be measured and used to assess the benefits or impacts of the different upstream management and climate scenarios that influence freshwater flow into the ABS.

GOAL: A goal is a statement of the project's purpose to move towards the vision expressed in fairly broad language.

GUIDING PRINCIPLES: The Community Advisory Board's Guiding Principles reflect the broad values and philosophy that guides the operation of the Community Advisory Board and the behavior of its members throughout its process and in all circumstances regardless of changes in its goals, strategies or membership.

OBJECTIVE: Objectives describe in concrete terms how to accomplish the goal to achieve the vision within a specific timeframe and with available resources. *(E.g., by 2023, the State of Florida will have approved a stakeholder developed Ecosystem-Based Adaptive Management and Restoration Plan for the Apalachicola Bay System.")*

OUTCOME: Outcomes describe the expected result at the end of the project period – what is hoped to be achieved when the goal is accomplished. (*E.g., an ecologically, and economically viable, healthy and sustainable Apalachicola Bay System oyster fishery and ecosystem*)

OYSTER RESOURCES: Sources of oysters that provide natural and cultural benefits to humans. These sources can come from the wild or from aquaculture (see ecosystem services). The responsible management of oyster resources for present-day needs and future generations requires integrated approaches that are place-based, embrace systems thinking, and incorporate the social, economic, and environmental considerations of sustainability.

PERFORMANCE MEASURES: The regular measurement of outcomes and results, which generates reliable data on the effectiveness, efficiency, and sustainability of programs and plans.

RESTORATION: The process of establishing or re-establishing a habitat that in time can come to closely resemble a natural condition in terms of structure and function.

STAKEHOLDERS: All interest groups whether public, private or non-governmental organizations who have an interest or concern in the success of a project and can affect or be affected by the outcome of any decision or activity of the project**.** For purposes of the Apalachicola Bay System Initiative, stakeholders include but are not limited to agriculture, silviculture, business, real estate, economic development, tourism, environmental, citizen groups, recreational fishing, commercial seafood industry, regional groups (i.e., ACF Stakeholders, and Riparian Counties), local government, state government, federal government, universities, and research interests.

STRATEGY: A method, action, plan of action, or policy that can be tested to determine whether it solves a problem and helps to achieve objectives and goals in the context of bringing about a desired future for the Apalachicola Bay System.

VISION: An idealized view of where or what the stakeholders would like the oyster resource and ecosystem to be in the future.

VISION THEMES: The related key topical issue area strategies that characterize the desirable future for the oyster resource and ecosystem. The Vision Themes establish a framework for goals and objectives. They are not ordered by priority.