

**APALACHICOLA BAY SYSTEM INITIATIVE
COMMUNITY ADVISORY BOARD**



PHASE V MEETING 2 — APRIL 12, 2023

FACILITATOR'S SUMMARY REPORT

APPROVED UNANIMOUSLY 31 MAY 2023

**APALACHICOLA NATIONAL ESTUARINE RESEARCH RESERVE
EASTPOINT, FLORIDA**



PROCESS DESIGN, MEETING FACILITATION, AND REPORTING BY JEFF A. BLAIR

**APALACHICOLA BAY SYSTEM INITIATIVE COMMUNITY ADVISORY BOARD
APRIL 12, 2023 FACILITATOR’S MEETING SUMMARY REPORT**

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Florida Peninsula – From Space



APALACHICOLA BAY SYSTEM INITIATIVE COMMUNITY ADVISORY BOARD
APRIL 12, 2023 FACILITATOR'S MEETING SUMMARY REPORT

Oyster Boats – Eastpoint, Florida



OVERVIEW OF THE APALACHICOLA BAY SYSTEM INITIATIVE COMMUNITY ADVISORY BOARD'S WEDNESDAY, APRIL 12, 2023 ACTIONS

I. MEETING SUMMARY AND OVERVIEW

At the April 12, 2023 meeting conducted at the Apalachicola National Estuarine Research Reserve (ANERR) in Eastpoint, Florida the Apalachicola Bay System Initiative (ABSI) Community Advisory Board (CAB): received an overview of the updated Project Workplan-Schedule; received updates on ABSI Science and Data, and FWC's NFWF Phase 2 funded restoration project; received reports and updates from the CAB Successor Group Subcommittee, Restoration Funding Working Group, and Community Outreach Subcommittee. Specific activities included: acceptability ranking Restoration and Management Strategies from the CAB's adopted *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan* Framework; and discussion of next steps for the May 31, 2023 meeting.

(Attachment 7 — Glossary of ABSI Project Terms and Definitions)

II. WELCOME AND INTRODUCTIONS

Jeff Blair, ABSI CAB Facilitator, opened the meeting at 8:30 AM and welcomed all participants. Jeff welcomed Grayson Shepard as the CAB's new charter (recreational) fishing representative.

SOCIAL SCIENCE SURVEY

The ABSI CAB members are participating in a Social Science Survey that is conducted at the beginning of each meeting to gauge participants' perspectives and attitudes regarding science and data, and stakeholder relationships throughout the ABSI CAB process. Ed Camp, University of Florida, is conducting the Survey that was first administered during the October 2020 meeting and will be continued throughout the duration of the ABSI CAB process. An online Social Science Survey was offered for the April 12, 2023 CAB meeting.

III. ABSI CAB MEETING PARTICIPATION

The following CAB members participated in the Wednesday, April 12, 2023 meeting conducted in-person at the Apalachicola National Estuarine Research Reserve in Eastpoint, Florida:

Georgia Ackerman, Ottice Amison, *Mike Allen*, *Frank Gidus*, Anita Grove, Chad Hanson, Shannon Hartsfield, *Becca Hatchell*, Gayle Johnson, *Katie Konchar*, Erik Lovestrand, *Chuck Marks*, Portia Sapp, Steve Rash, Devin Resko, Grayson Shepard, and *Chad Taylor*.

** Members who participated virtually are italicized.*

Although Chad Taylor attended virtually, Ken Jones participated in-person as Chad's designated alternate.

(17 of 21 active members participated — 81%).

Absent CAB Members:

David Barber, Jenna Harper, Alex Reed, Paul Thurman, and T.J. Ward.

PROJECT TEAM MEMBERS PARTICIPATING

Jeff Blair, Ross Ellington, *Madelein Mahood*, and Joel Trexler.

(Attachment 2 — Meeting Participation)

MEETING FACILITATION

Meetings are facilitated and meeting reports prepared by Jeff Blair of Facilitated Solutions, LLC. Information at: <http://facilitatedsolutions.org>.



PROJECT WEBPAGE

Information on the Apalachicola Bay System Initiative project and the Community Advisory Board, including agenda packets, meeting reports, draft Plan frameworks, and related documents may be found at the ABSI CAB Webpage. Located at the following URL:

<https://marinelab.fsu.edu/the-apalachicola-bay-system-initiative/>

IV. AGENDA REVIEW AND APPROVAL

The ABSI CAB voted unanimously to approve the agenda for the April 12, 2023 meeting as amended. Following are the key agenda items approved for consideration:

- ✓ 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 and Acceptability Rank Restoration and Management Plan Framework Strategies
- ✓ To Identify Next Steps: Information, Presentations, Assignments, Agenda Items for Next Meeting

Amendments to the Posted Agenda:

There were no amendments to the posted agenda.

(Attachment 3 — April 12, 2023 ABSI CAB Agenda)

V. APPROVAL OF THE FEBRUARY 1, 2023 CAB MEETING FACILITATOR'S SUMMARY REPORT

The ABSI CAB voted unanimously to approve the February 1, 2023 CAB Meeting Facilitator Summary Reports as presented.

Amendments: None

VI. REVIEW OF UPDATED PROJECT WORKPLAN AND SCHEDULE

Jeff Blair provided the CAB with a review of the updated Project Workplan and Schedule and answered members' questions. The April 12, 2023 meeting represented the CAB's second meeting of the final Phase of the Project, Phase V.

The CAB is currently evaluating the best combination of strategies (scenarios) predicted to achieve restoration and management objectives for the Bay using the results of predictive model simulations coupled with available and emerging data, research, and stakeholder knowledge. The strategies are being evaluated with the overarching goal of restoring oyster reefs to a level that can sustainably provide needed ecosystem services for the Bay, and concurrently provide for a sustainable and economically viable level of commercial oyster harvesting.

During the course of the project, the CAB's agency representatives will vet the strategies under consideration with restoration and management agencies to gauge support and feasibility for implementation. The CAB will evaluate the priority and efficacy of strategies and associated actions and identify conceptual and general in scope restoration and management approaches for inclusion in the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan*.

Phase V focuses on the evaluation and final selection of restoration and management approaches conceptual and broad in scope from the Plan Framework, public engagement, and planning for funding restoration projects and the CAB Successor Group. The CAB is in the process of evaluating potential strategies for restoration and management using the Strategies Acceptability Ranking Worksheet Process. The CAB process will conclude with the 29 November 2023 meeting, when the CAB will adopt their final

package of recommendations proposed for inclusion in the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan*.

Jeff reported as follows:

- At the April 12, 2023 meeting the CAB began the acceptability ranking of strategies from the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan* Framework using the Strategies Evaluation Worksheet Process reviewed in detail during the February 1, 2023 CAB meeting.
- The CAB is ranking strategies using results from decision support tools, including predictive models when available, coupled with available and emerging data and research from ABSI experiments, and stakeholder knowledge.
- The Community Outreach Committee will continue to communicate and meet with community stakeholders providing them with information and updates regarding the purpose and progress of the Apalachicola Bay System Initiative including Op-Eds, rack cards, social media posts/texts, ABSI newsletters, and the ABSI website. The CAB's draft recommendations and results of ABSI experiments will continue to be vetted with the larger ABS community through multiple formats, including online via the ABSI website, and in-person public workshops. In addition, the Community Outreach Committee is in the process of evaluating and enhancing their ABSI outreach and messaging strategies.
- The CAB is conducting planning for transitioning to a Successor Group whose role will be to organize a group of key stakeholders committed to working collaboratively for the long-term once the CAB process is complete. The CAB Successor Group will continue providing input to natural resource management agencies with the goal of ensuring the Apalachicola Bay System is effectively monitored, and adaptively managed with the support of the Community. The CAB is scheduled to finalize their recommendations for the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan* at the November 29, 2023 meeting, and the CAB Successor Group is anticipated to formally convene in early 2024.
- In addition, the FSU ABSI Project Team continues to work with the Restoration Funding Working Group to seek resources and political, governmental, and organizational support for the CAB's priority restoration recommendations.

Jeff noted that the Project Team would keep the CAB updated and share additional information as it becomes available.

**The Draft Restoration and Management Plan Framework is available at the following URL:*

<https://marinelab.fsu.edu/absi/cab/>

(Attachment 4 — Workplan, Schedule, and Project Flowchart)

VII. PROJECT RELEVANT UPDATES AND BRIEFINGS PRESENTATIONS

ABSI SCIENCE AND DATA COLLECTION UPDATE

Fabio Caltabellotta, ABSI Postdoc, provided an update on the ABSI Public Interface Tool for Fisheries Model. An ABSI science and data update is provided at all CAB meetings.

Presentations are available on the project webpage: <https://marinelab.fsu.edu/absi/cab/>.

Interactive Tool Presentation During April CAB Meeting



Summary and Overview of Presentation

The April 12, 2023 Science and Data Collection update was focused on an update of the ABSI Public Interface Tool for Fisheries Model developed by Fabio Caltabellotta. The presentation was titled *Web-Based Tools to Explore the Stakeholder Decision-Making Process*. Fabio reported as follows:

Development of a Public-Facing Interactive Tool

- The Tool focuses on four main components that drive the system:
 - Larval supply
 - Spat settlement
 - Post-settlement growth, survival, and reproduction
 - Ecological and societal impacts of oysters

Summary

- Web-based tools to explore stakeholder decision-making process.
- Shiny App (web-based application) – RS studio S/W package - user interface tool.
- Serves as a translator for model outputs.
- Used the MSERedSnapper Tool already developed as an example of functionality and use.
- The Oyster Tool uses Ed Camp’s Ecological Model data.
- Parameters: habitat, fishing (days closed, threshold, number of bags, reducing effort without closure, reducing effort during restoration, reduce effort after restoration, duration of closure after restoration, and others) and restoration (how much in proportion to initial level) and duration of effort (default is 25 years).
- The web-based tool can be used for outreach and education.
- Fabio indicated he needs input from the CAB and other stakeholders on the parameters used in the Tool.
- The functions of the Tool are currently not active.
- Should be up-and-running soon.

Benefits of the Tool

- Interactive and engaging scientific products with existing skillsets and expertise (no HTML, Javascript).
- Stakeholders, managers, policy makers can explore and engage with scientific products without having to also be technical experts or install/acquire special software.
- Public access to research results.
- Interaction allows better science and better management.

Next Steps

- Implementation of Pre-Survey?
- Update the user interface
- Update the Simulation Model
- Implementation of Pos-Survey?

Summary of Questions, Responses, and Comments:

- Is this a friendly interface for Ed Camp's model?
- FC: Yes, the idea is to start using the decision support tool for subsequent CAB meetings. FC can add parameters as needed.
- Does the model apply to some arbitrary patch of reef?
- FC: Yes, to scale up a spatial component must be added.
- SB: Terms such as "SSB ratio" are not intuitive; landings are a better parameter for public viewing and understanding.
- SB: What does harvest size mean?
- FC: The length of the fish.
- JB: FC is using the MSERedSnapper model to show how the oyster model interface will work.
- Expressed spatial aspect concerns; how can we get more spatially specific to the Bay? How do we get there?
- FC: For now hypothetical is the best route.
- EC: I don't think we know enough about the System to implement a spatial component at this time (lack of understanding of "threshold" substrate levels). We don't know what amount of substrate will provide a given result. Once we know that, it will be possible to implement a spatial component to the models. FWC experiments may help.
- SB: The spatial element is needed for management, which is FWCs responsibility. ABSI's tool is designed to show what the options are and how the fishery would respond (better-worse not absolutes) to inform the CAB ranking of different management strategies. ABSI data will provide insight into which strategies work.

FWC (NFWF PHASE 2) RESTORATION PROJECT UPDATE

Devin Resko, FWC Division of Marine Fisheries Management, provided the CAB with an update on the FWC restoration project funded by the National Fish and Wildlife Foundation (NFWF). Devon reported:

Summary and Overview of Update

Program Overview

- \$20M agreement with National Fish and Wildlife Foundation (NFWF)
- Restoration activities in Apalachicola Bay

- Revised oyster management strategies for Apalachicola Bay & Suwannee Sound
- FWC will perform a restoration pilot study
- Utilizing pilot study, FWC will have more data to construct and perform larger restoration activity

Apalachicola Bay Oyster Restoration Pilot Study

- FWC submitted pilot study “one pager” scope of work to NFWF in early December ’22.
- Met with NFWF in late December, requested additional information, revised submission deadline:
 - Mid-January: Preliminary restoration plan, monitoring/sampling methods, budget for NFWF review. *Status: Completed.*
 - Mid-February: FWC addressed comments from NFWF, final documents for NFWF committee review and approval. *Status: Completed.*
- Early March: NFWF committee approved pilot study.

Pilot Study Update

- Pilot study will test multiple treatments.
- Reef height 1 ft (low) and 2 ft (high).
- Material size 6” (small) & 12” (large) FL dolostone.
- Depth.
- FSU ABSI’s complimentary study
 - Increases scientific scope of work done in Apalachicola Bay.
 - Provides more data to assist in future, larger restoration activities.

Reef Characteristics for Selecting Restoration Sites:

- Hardbottom
- Good waterflow
- Nearby oysters
- Not a navigational hazard
- Navigable for contractor

Possible Restoration Site Locations



Next Steps

- Finish refinement of competitive solicitation for contractor.
- Currently with our Purchasing Division for review.
- Goal is to have contractor, material in water Summer/Fall 2023.
- Dependent on quality of bids received.
- Hire part-time site monitor for restoration activities.
- Work with FWC researchers, university researchers to prepare monitoring and surveying methods.

Summary of Questions, Responses, and Comments:

(Note initials are only used to identify ABSI Team members, presenters, and state agency representatives)

- Why restrict the project to a few sites?
- DR: We wanted to reduce variables by restricting the location of sites; ABSI experiments will complement (different sites, materials, heights) our work.
- How many sites are there?
- DR: By the next CAB meeting we should have a good idea of locations and how many sites. The number will be based on what the contractor says they can do based on a cost basis. We will not know until a contractor is selected. FWC wants to maximize statistical power by increasing sample size.
- On the east side of platform FDACS planted oyster shell for 30 years and oysters never survived. This is not a good location for a restoration experiment.
- DR: First we heard about negative components of some of these sites. DR will discuss with CAB member at the Community Workshop.

VIII. WORKING GROUP AND SUBCOMMITTEE UPDATES AND REPORTS

A. CAB SUCCESSOR GROUP SUBCOMMITTEE

Shannon Hartsfield and Anita Grove reported that to date the Subcommittee has discussed the type of members needed (stakeholder representation), and Committee membership, tasks, and assignments, and the structure, format, and key issues for the Subcommittee. In addition, the Subcommittee is collecting ideas and information for use once they are convened at the conclusion of the ABSI CAB process.

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. Of note, the CAB Successor Group is anticipated to formally convene in early 2024 subsequent to the CAB's adoption of their recommendations in November 2023.

Anita and Shannon reported as follows for the April 12, 2023 CAB meeting update on the ABSI CAB Successor Group:

- We have been working on a grant with Joel.
- We plan to start making appointments to the Successor Group.
- It is getting hard to get locals to participate.
- All stakeholder groups have to be involved for this to work.

- The public thinks the Bay will never be opened back up.
- This creates a very skeptical view of the CAB Successor Group and with participating with the Group.

Summary of Questions, Responses, and Comments:

(Note initials are only used to identify ABSI Team members, presenters, and state agency representatives)

- The focus seems to be on getting a facilitator but not on funding/organization.
- JT: The proposal we are working on seeks to provide funds for the administration on the Group and not for a facilitator.
- AG: Right now we need to fill seats and address the organizational concerns expressed by the CAB.
- AG: The Subcommittee has created suggestions but the Successor Group will need to make decisions.

B. RESTORATION FUNDING WORKING GROUP

Overview. The ABSI proposal contemplates a 15-year commitment from FSU, 10 years beyond the 5 years of funding provided by Triumph Gulf Coast, Inc. The Restoration Funding Working Group (RFGW) will be a team of local, state, private, and NGO stakeholders focused on developing plans for long-term funding of the broader effort; the goal at the end of the 5-year ABSI period is to have a funding pipeline for restoration secured. Joel Trexler, RFGW Lead, previously reported that the RFGW has met several times, has broad representation, has identified the specific strategies and related actions that would require funding, agreed to a charge, are mapping actions with potential funding sources and approximate funding amounts needed, and understand that it is critical to identify gaps in funding and work to fill the gaps before the Plan is final. In addition, there are potential funding sources for some CAB recommended actions.

Joel reported as follows for the April 12, 2023 CAB meeting update on the RFGW:

- They plan to identify sources and drafting proposals for funding the Successor Group.
- ABSI funding ends June 2024.
- Initially the RFGW is seeking administrative funding for the Successor Group.
- The RFGW submitted a proposal for funding from NOAA NERR to support the Successor Group.
- This would be bridge funding primarily to administer the Successor Group until recurring funding is attained.
- The NERR proposal was received reasonably well by the reviewers.
- They provided questions which the RFGW is in the process of responding to with a two-page response required.
- An April 2023 decision is expected which would fund the first year of the Successor Group.
- Sustained funding will require more detail regarding the Group’s organization, operation, purpose, goals, etc.

Summary of Questions, Responses, and Comments:

(Note initials are only used to identify ABSI Team members, presenters, and state agency representatives)

- There were no questions or comments from the CAB.

C. COMMUNITY OUTREACH SUBCOMMITTEE

Subcommittee Charge:

- To work with ABSI leadership to inform the public of who we are and what we are doing.

- To create outreach and community engagement strategies that attract stakeholders and the public to actively inform the public about the Apalachicola Bay System Initiative's goals and actions.
- To measure effectiveness of these strategies through direct participation in achieving actions (as well as web analytics and media stories).

Chad Hanson reported that the Community Outreach Subcommittee (COC) has been active and they are working on a variety of initiatives. For the April 12, 2023 update, Chad reported on the Subcommittee's Outreach and Messaging Strategies as follows:

- Activities recently undertaken or planned include: a booth at the Worm Grunting Festival, a booth at the upcoming Carrabelle River Festival, and for the April 12, 2023 Community Workshop there will be interactive tables on topical issues coupled with demonstrations including oyster larvae, and a restoration site mapping tool.

FSU Communications Department Provided the Subcommittee Feedback on their Outreach Efforts as follows:

- Consider revising meeting structure and length.
 - Shorter meetings but more frequent.
 - Add other slots for public comment, especially in beginning, middle and end, or after each section.
 - Increase CAB member engagement with constituents.
- Untangle complicated web of acronyms (FSU, ABSI, CAB, successor).
- More unifying and catchy group/project name.
 - E.g., Healthy Bay Project, Apalachicola Together, etc.
- Targeted strategy for reaching community and audiences.
 - Tailor messages and means of communicating accordingly.
 - Boost Facebook postings.
 - Strategically located message signs.
- Social media / comms intern to help generate and target content.
- Facebook and radio ads. This can be done cheaply.

Key Outreach Messages

Main Themes

- Status of Oyster Reefs/Current Restoration Experiment Materials.
- Synopsis of CAB Draft Framework Plan (and the subsequent next phase).
- The need for a healthy ecosystem for a viable oyster fishery.
- Collaboration with industry and the community.

Summary of Questions, Responses, and Comments:

(Note initials are only used to identify ABSI Team members and partners, presenters, and state agency representatives)

- Outreach should come up with their own Facebook page separate from FSU ABSI's.

IX. ACCEPTABILITY RANKING OF CAB'S ADOPTED RESTORATION AND MANAGEMENT PLAN FRAMEWORK STRATEGIES USING THE STRATEGIES EVALUATION WORKSHEET

Jeff Blair provided the CAB with a brief summary of the Strategies Evaluation Worksheet Process that was reviewed in detail at the February 1, 2023 CAB meeting and answered members' questions.

Presentations are available on the project webpage: <https://marinelab.fsu.edu/absi/cab/>.

Summary and Overview:

- The CAB will evaluate strategies using a Strategies Evaluation Worksheet consistent with the Consensus Building Procedures unanimously adopted October 30, 2019.
- During the meetings, CAB members will be asked to develop and rank strategies (options) using a 4-Point acceptability ranking scale. Once ranked for acceptability, strategies with a ≥ 3.0 average ranking (75%) will be considered preliminary consensus recommendations for inclusion in the package of recommendations for the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan)*.

The following scale will be utilized for the ranking exercises:

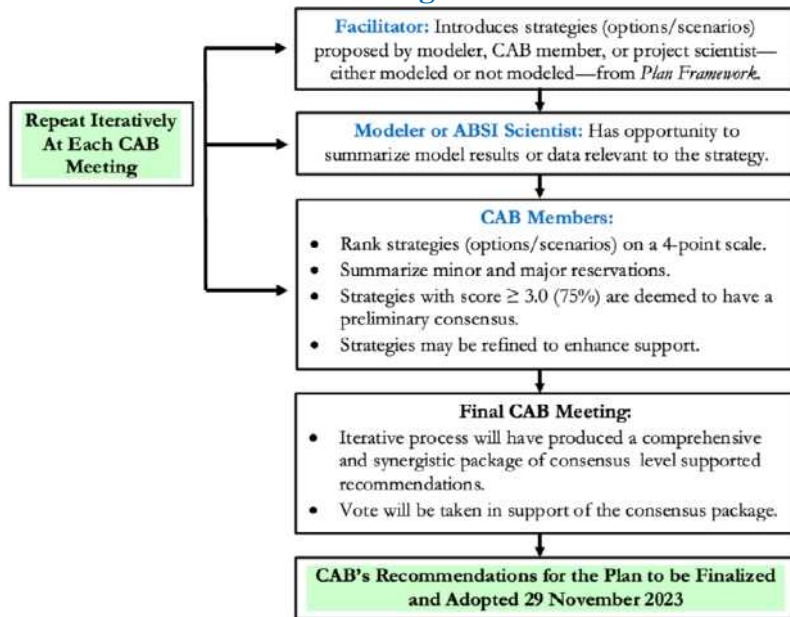
ACCEPTABILITY RANKING SCALE	4 = Acceptable <i>I agree</i>	3 = Acceptable, I agree with minor reservations	2 = Not Acceptable, I don't agree unless major reservations addressed	1 = Not Acceptable
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- CAB members should be prepared to state their minor and major reservations when asked, and to offer proposed refinements to the strategy to address their concerns. If a CAB member is not able to offer refinements to make the strategy acceptable (4) or acceptable with minor reservations (3) they should rate the strategy with a 1 (not acceptable).
- This is an iterative process (the issues/strategies agreed to at each meeting serve as the starting point for the next, and no recommendation is final until the last meeting), and at any point during the process any strategy may be reevaluated and re-ranked at the request of any CAB or ABSI Team member.
- The status of a ranked strategy will not be final until the final CAB meeting, when a vote will be taken on the entire package of consensus ranked recommendations for submittal to the FSUCML. The CAB will finalize their recommendations for the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan* at the 29 November 2023 meeting.

Criteria for Evaluation Strategies

CRITERIA TO CONSIDER FOR PROPOSING AND EVALUATING STRATEGIES AND RECOMMENDATIONS	
CRITERIA	EXPLANATION
IMPORTANCE	Is this proposed strategy critically important to achieving the goals of the Adaptive Management and Restoration Plan?
TIMELY	Will things get worse if the proposed strategy is not implemented?
FEASIBLE/ PRACTICAL	Is it likely that the proposed strategy will be successful in achieving the relevant goals of the Adaptive Management and Restoration Plan?
RESOURCES	Are there resources available, or likely to become available for implementing the proposed strategy? Is implementation of the proposed strategy cost effective?
COMMITMENT	Is there commitment from the stakeholders and regulators regarding implementation of the proposed strategy?

Consensus Solutions Strategies Evaluation Process



Process Summary

The CAB conducted an acceptability ranking exercise ranking each of the strategies and actions from the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan* Framework using the Strategies Evaluation Worksheet Process.

Following are the Consensus Level Strategies as revised and ranked by the CAB, and the resultant Acceptability Ranking Results:

GOAL A STRATEGIES ACHIEVING A CONSENSUS LEVEL OF SUPPORT ≥ 75 SUPPORT

GOAL A — ECOSYSTEM RESTORATION PRIORITIZED STRATEGIES

Strategies are currently numbered from highest to lowest acceptability ranking starting with #1 for each Goal area. The strategies will be appropriately sequenced and reordered accordingly once the final package of strategies and actions are agreed to by the ABSI Community Action Board (CAB).

The CAB’s ABS Restoration and Management Plan Report and Recommendations will provide a narrative on sequencing the strategies and actions. The ABSI Team led by Sandra will propose a draft for the CAB to review.

- 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 using experimental research and modeling results on a scale large enough to jump-start the system.
- *Action 1-C.):* Implement stock enhancement studies to complement clutching for restoration.
- *Action 1-D.):* Set ecosystem service targets.
- *Action 1-E.):* Use habitat suitability analyses for selecting the best locations for restoring, enhancing, and/or developing new reef structures that will increase productivity in the Apalachicola Bay oyster ecosystem.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking for Action 1-D</i>				
4.0	13	0	0	0

2) Continue using experimental evidence in collaboration with stakeholder knowledge/experience to determine the most suitable substrate (e.g., limestone, granite, spat-on-shell, artificial structures) and habitat suitability analyses for selecting the best locations for restoring, enhancing, and/or developing new reef structures that will increase productivity in the Apalachicola Bay oyster ecosystem.

- *Action 2-A.):* Continue conducting restoration experiments to test efficacy of different materials.
- *Action 2-B.):* Continue using knowledge gained from experiments to recommend best practices for broad scale restoration in the ABS.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking</i>				
4.0	13	0	0	0

3) Determine area (acres or km²) 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.):* Continue to update maps of existing oyster reefs using multibeam sonar and backscatter, and ground-truth for accuracy. Much of Bay done
- *Action 3-B.):* Continue using ecological model that uses reproductive output, recruitment (includes reef carrying capacity), natural mortality rates and fishery harvest to assess oyster population dynamics. Ed's ecological model is being used.
- *Action 3-C.):* Determine the percent of oysters that can be harvested and maintain sustainability of oyster reef habitat. Select a reasonable starting target and adjust (adaptability) the allowable harvest based on monitoring results.
- *Action 3-D.):* Need to add spatial component to modeling and reassess strategies based on the results.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking</i>				
4.0	13	0	0	0

4) Identify additional monitoring needs for assessing the health of oyster populations 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.):* Continue and expand sites for collecting long-term in situ environmental data (e.g., conductivity, pH, and temperature.) using available instruments and integrate ANERR environmental and nutrient data (e.g., TC, TN, and TP) as correlates with oyster metrics.
- *Action 5-D):* Generate health indicators using monitoring data, and other ecological factors (e.g., oyster-associated communities and structural complexity).
- *Action 5-E):* Evaluate the impacts of increasing growth and development on nutrient loading and pollutants to the Bay.
- *Action 5-F):* Use data to provide ongoing oyster population and oyster health assessments.
- *Action 5-G):* Integrate ecosystem services metrics into a monitoring program.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking</i>				
3.9	10	1	0	0

5) Use and update recently developed ecosystem models that forecast future environmental conditions and oyster population status for management and restoration strategies and decisions.

- *Action 6-A.):* Ensure data collected are entered, receive QA and QC, and are made available to the public in an accessible online format.
- *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.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking</i>				
3.9	10	1	0	0

6) Conserve and/or restore watershed (landscape) habitat (i.e., Submerged aquatic vegetation (SAV) including seagrass, and wetland and riparian habitat) to work synergistically with oyster habitat restoration to enhance restoration of the ABS.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking</i>				
3.8	8	2	0	0

7) Develop criteria for restoring specific reefs or reef systems that are resilient to adverse environmental conditions or natural disasters and incorporate adaptive management actions into the Restoration and Management Plan, as appropriate.

- *Action 4-A.):* Develop a metric for monitoring and evaluate the 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.
- *Action 4-D.):* Use larval dispersal modeling to assist with locations for restoring new oyster reefs in conjunction with habitat suitability analysis to determine the best locations.
- *Action 4-E.):* Obtain data at a Bay-wide scale regarding reef systems for developing system-wide metrics to drive restoration and management decisions.

AVERAGE	4= Acceptable	3= Minor Reservations	2= Major Reservations	1= Not Acceptable
<i>April 12, 2023 Ranking</i>				
3.7	9	2	1	0

Summary of Questions, Responses, and Comments:

- All of the substantive comments from CAB members for this Agenda item are reflected in the revisions made to the Strategies as reflected in the revised versions above.

X. HYDRODYNAMIC AND LARVAL DISPERSAL MODELING RESULTS SUMMARY

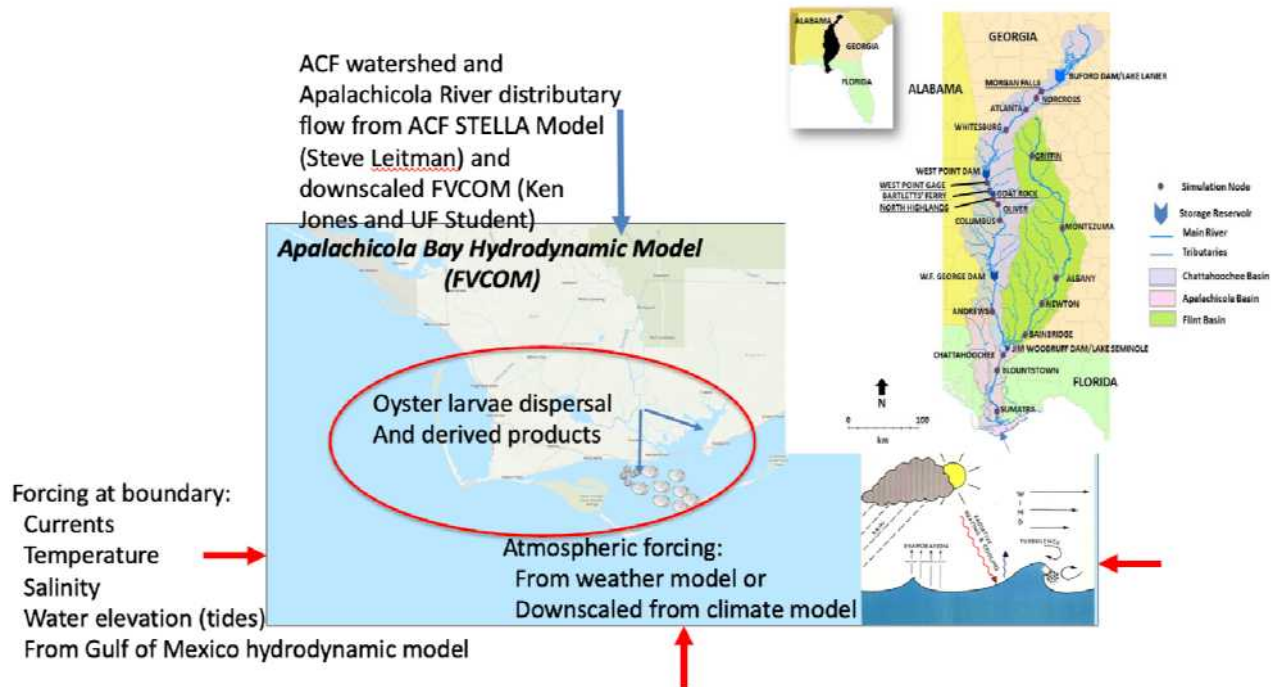
Steve Morey, FAMU, provided an update on Hydrographic Modeling for ABSI.

Presentations are available on the project webpage: <https://marinelab.fsu.edu/absi/cab/>.

Summary and Overview of Presentation

The presentation was focused on the Hydrodynamic and Larval Dispersal Model developed by Steve Morey (FAMU) and Xu Chen (FSU). Steve reported as follows:

ABSI Bio-Physical Model Concept



ABSI Hydrodynamic Model Configuration

- **Finite Volume Coastal Ocean Model (FVCOM)**
- **Mesh Resolution:** 800m - 30m (water and land)
- **Vertical Grid:** 10 layers
- **Surface Forcing:** CFSR (atmospheric model) and Wind Observations
- **River Discharge:** USGS or Leitman's Model
- **River Temperature:** NOAA NOS station
- **Initial Condition (U, V, T, S):** HYCOM Reanalysis
- **Boundary Condition (Tide, T, S):** HYCOM Reanalysis
- **Model Periods run to date:** 1998, 2011-2012, 2019

Data and Results

- Hydrodynamic model- forcing (boundary, atmospheric, river) drives the larval dispersal model.
- Gridwork (30-100 meter resolution).
- Full 3-D.
- Compared data from three periods: a wet year (1998), a normal year (2019), and dry year (2012).
- 1st animation: salinity changes- shows tidal cycles and impact of wind.
- Provided a comparison of salinity profile in above three years.
- No long-term observations available.
- Cat Point has a tight salinity gradient.
- Model vs. observed salinity shows good agreement (2019).
- Model vs. observed salinity shows poor agreement (2012).
- A low salinity bias was discovered in the 2012 (dry year) simulation. This indicated that something else is happening.
- Monitors actually show there is an Apalachicola River diversion with water flowing from east to west from the River Basin to the Intercoastal Waterway via Lake Wimico; this reduces flow into the Bay.
- Even during dry periods, there is water loss from the River to west.

Oyster Larvae Model

Individual-Based Larval Model (FVCOM I-State Configuration Model – FISCM)

- Larvae simulated as Lagrangian particles, each representing a group of larvae that travel together.
- Larvae released from submerged and intertidal reef locations every 6 hours.
- Larvae advected passively in 3-dimensional velocity field for 20 days.
- Larval mortality: The fraction of living larvae represented by each group is calculated during advection based on a mortality rate ranging from 0 in a suitable environment to 0.95/7 days (95% die in one week) for unsuitable environment.
- Larval settlement: Larval particles that pass over reef locations during the last 5 days of their simulation time are considered as successfully settled.

Oyster Larvae Release Locations



- 10504 locations.
- Released every 6 hours.
- There is a shift in larval settlement patterns to the west during fall season.
- Success rates vary with the season.
- Recruiting hot spots are evident.
- Hot spots change with spawning period.

Comparison of 2019 (Normal Flow) to 2012 (Low Flow):

- 2012 was a low recruitment year but the model is showing elevated recruitment.
- Need input from biologists to better parameterize larval mortality to better define impact of low salinity on larval survival.

Summary

- A coupled modeling system was developed to simulate:
 - Apalachicola Bay circulation and hydrography,
 - Response of Apalachicola Bay to altered river flow scenarios, and
 - Oyster larvae transport, settlement, and survival likelihood.
- Results of model experiments highlight that additional factors contribute to high salinity conditions during low flow conditions of the Apalachicola River.
- Increased larval recruitment during spring season compared to fall season.
- Results point to hot spots for larval supply and larval settlement.
- The modeling system will benefit from additional biological information.
- Model results are being used collaboratively by partners, e.g., Habitat Suitability Models.

Summary of Questions, Responses, and Comments:

(Note initials are only used to identify ABSI Team members and partners, presenters, and state agency representatives)

- Do we have ABSI expertise on larval biology?

- SB: Yes. Also, it is clear that the Bay may not be getting as much water as earlier thought based on the river flows at the Sumatra gauge.

XI. PUBLIC COMMENT

The facilitator invited members of the public to provide comments.

Public Comments:

- *There were no public comments offered.*

XII. NEXT MEETING OVERVIEW AND ISSUES

The May 31, 2023 meeting will focus on ABSI science and data collection and decision support tools updates, FWC NFWF Stage 2 restoration update, sub-committee reports, and acceptability ranking of the ABSI CAB's Restoration and Management Plan Framework strategies using the Strategies Evaluation Worksheet.

NEXT STEPS AND AGENDA ITEMS

- ABSI CAB Community Forum Workshop #1 at 6:00pm on April 12, 2023.
- Review of updated Workplan and Meeting Schedule.
- Science and data collection, and Restoration updates.
- Subcommittees and Working Group updates.
- Review and Acceptability Ranking of Restoration and Management Plan Framework Strategies.
- Public Comment.

MEETING CHAT COMMENTS

Meeting participants were able to provide comments during the meeting through the on-line Chat function. The results are compiled and included as *Attachment 5* of this Summary Report.

(Attachment 5 — Meeting Zoom Chat Summary)

ADJOURNMENT

The Facilitator thanked CAB members, ABSI Project Team members, and the public for their participation, and adjourned the meeting at 2:30 PM on Wednesday, April 12, 2023.

ATTACHMENT 1
KEY TO COMMON PROJECT ABBREVIATIONS

ABBREVIATION	DEFINITION
ABS	Apalachicola Bay System
ABSI	Apalachicola Bay System Initiative
ACFS	Apalachicola-Chattahoochee-Flint Stakeholders
ANERR	Apalachicola National Estuarine Research Reserve
CAB	Community Advisory Board (ABSI)
County	Franklin County
DACS or FDACS	Florida Department of Agriculture and Consumer Services
DEP or FDEP	Florida Department of Environmental Protection
DOH or FDOH	Florida Department of Health
EPA	U.S. Environmental Protection Agency
FDOT	Florida Department of Transportation
FSU	Florida State University
FSUCML	Florida State University Coastal and Marine Laboratory
FWC	Florida Fish and Wildlife Conservation Commission
FWRI	FWC Fish and Wildlife Research Institute
NGO	Non-Governmental Organization
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NWFWMD	Northwest Florida Water Management District
Plan	Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan
RESTORE	Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act of 2012
RCSG	Riparian County Stakeholder Coalition
RPC	Regional Planning Council
SAB	Science Advisory Board (ABSI)
SAV	Submerged Aquatic Vegetation
TNC	The Nature Conservancy
TRIUMPH	Triumph Gulf Coast, Inc.
UF	University of Florida
UWF	University of West Florida

**ATTACHMENT 2
MEETING PARTICIPATION LIST**

MEMBER	AFFILIATION
AGRICULTURE/ACF STAKEHOLDERS/RIPARIAN COUNTIES	
1. <i>Chad Taylor</i>	Riparian County Stakeholder Coalition/ACF Stakeholders/Agriculture
BUSINESS/REAL ESTATE/ECONOMIC DEVELOPMENT/TOURISM	
2. <i>Chuck Marks</i>	Business (Insurance Industry)
ENVIRONMENTAL/CITIZEN GROUPS	
3. <i>Georgia Ackerman</i>	Apalachicola Riverkeeper
4. Chad Hanson	The Pew Charitable Trusts
5. <i>Katie Konchar</i>	The Nature Conservancy (TNC)
LOCAL GOVERNMENT	
6. Ottice Amison	Franklin County Commissioner
7. Anita Grove	Apalachicola City Commissioner
RECREATIONAL FISHING	
8. <i>Frank Gidus</i>	CCA Florida
9. Grayson Shepard	Hang on Charters (Charter Fishing)
SEAFOOD INDUSTRY	
10. David Barber	Barber's Seafood
11. Shannon Hartsfield	Seafood Management Assistance, Resource Recovery Team and Oysterman
12. Gayle Johnson	Apalachicola Oyster Company
13. Steve Rash	Water Street Seafood
14. TJ Ward	Buddy Ward & Sons Seafood
STATE GOVERNMENT	
15. Jenna Harper#	ANERR/DEP
16. <i>Becca Hatchell</i>	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
19. Portia Sapp	FDACS Division of Aquaculture
20. Paul Thurman	NWFWMD
UNIVERSITY/RESEARCHERS/SCIENTISTS	
21. <i>Mike Allen</i>	Scientist: Director of UF/IFAS Nature Coast Biological Station (NCBS)
22. Erik Lovstrand	UF/IFAS/Florida Sea Grant/Franklin County Extension
The names of CAB members attending the meeting are indicated in bold font.	
<i>CAB members who participated virtually are indicated in red font and italicized.</i>	
<i>* Members whose designated alternates participated for them.</i>	

PROJECT TEAM AND CAB FACILITATOR	
FLORIDA STATE UNIVERSITY	
Sandra Brooke	Marine Biologist
Ross Ellington	Professor Emeritus of Biological Science
<i>Madelein Mahood</i>	Outreach and Education
Joel Trexler	FSUCML Director
FACILITATED SOLUTIONS, LLC	
Jeff Blair	Community Advisory Board Facilitator
<i>The names of Project Team members participating in the meeting are indicated in bold font.</i>	
<i>*Team members who participated virtually are indicated in red font and italicized.</i>	

ALTERNATES FOR CAB MEMBERS	
Alternate	CAB Member
Ken Jones	Chad Taylor
<i>The names of CAB member's alternates participating in the meeting are indicated in bold font.</i>	

MEMBERS OF THE PUBLIC	
1. Fabio Caltabellota	Florida State University Coastal and Marine Lab (FSU)
2. <i>Ed Camp</i>	University of Florida (UF)
3. <i>Cheryl Carr</i>	Citizen
4. Jon Creamer	FWC
5. <i>Adriane Elliot</i>	City of Apalachicola
6. <i>Laura Geselbracht</i>	TNC, ABSI Science Advisory Board (SAB)
7. Kennedy Hanson	ANERR
8. Ken Jones	Riparian County Stakeholder Coalition
9. <i>Steve Leitman</i>	FSU
10. Betsy Mansfield	Florida State University Coastal and Marine Lab (FSU)
11. <i>Steve Morey</i>	FAMU
12. <i>Wayne Williams</i>	Seafood Work and Watermen's Association
13. <i>Xu Chen</i>	FSU
<i>*The names of members of the public attending virtually are italicized.</i>	

ATTACHMENT 3
APRIL 12, 2023 MEETING AGENDA

ABSİ 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 and Acceptability Rank Restoration and Management Plan Framework Strategies
- ✓ To Identify Next Steps: Information, Presentations, Assignments, Agenda Items for Next Meeting

ABSİ COMMUNITY ADVISORY BOARD AGENDA

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

1)	8:30am	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 CAB SUMMARY REPORT (February 1, 2023)
5)	8:50	REVIEW OF UPDATED PROJECT MEETING SCHEDULE AND WORKPLAN
6)	9:00	SCIENCE AND DATA COLLECTION, AND RESTORATION UPDATES <ul style="list-style-type: none"> • <i>Public Interface Tool for Fisheries Model Update.</i> Fabio Caltabellotta, FSUCML (25) • <i>FWC (NFWF Phase 2) Restoration Project Update.</i> Devin Resko, FWC (10)
7)	9:40	WORKING GROUP AND SUBCOMMITTEE UPDATES <ul style="list-style-type: none"> • <i>Successor Group Subcommittee Update.</i> Anita Grove and Shannon Hartsfield (5) • <i>Restoration Funding Working Group Update.</i> Joel Trexler (5) • <i>Community Outreach Subcommittee Update.</i> Chad Hanson (10)
8)	10:00	ACCEPTABILITY RANKING OF CAB’S ADOPTED RESTORATION AND MANAGEMENT PLAN FRAMEWORK STRATEGIES USING THE STRATEGIES EVALUATION WORKSHEET
<i>~10:25am</i>		BREAK
	10:40	ACCEPTABILITY RANKING OF STRATEGIES — CONTINUED
<i>~12:00pm</i>		LUNCH — ON CAMPUS
9)	12:30	ABSİ MODELING UPDATES <ul style="list-style-type: none"> • <i>Hydrodynamic and Larval Dispersal Modeling Results.</i> Steve Morey, FAMU. (30)
	1:00	ACCEPTABILITY RANKING OF STRATEGIES — CONTINUED
10)	<i>~2:10pm</i>	PUBLIC COMMENT — THREE MINUTES PER PERSON
11)	<i>~2:25</i>	ACTION ITEMS AND AGENDA ITEMS FOR NEXT MEETING (May 31, 2023) <ul style="list-style-type: none"> • Review of Action Items and Assignments from Meeting • Identify Agenda Items, Presentations, and Information Needs for Next Meeting • ABSİ CAB Community Forum Workshop #1 • Complete Meeting Evaluation
<i>~2:30pm</i>		ADJOURN

ATTACHMENT 4
WORKPLAN, SCHEDULE, AND PROJECT FLOWCHART AND MAP

UPDATED AS OF THE APRIL 12, 2023 CAB MEETING

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

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

PHASE II (2020) — SCOPING OF ISSUES, IDENTIFICATION OF PERFORMANCE MEASURES AND STRATEGIES

Jan. 2020 – Dec. 2020 (7 CAB Meeting & 1 Oystermen’s Workshops) — Status Complete

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 and V Evaluation

Jan. 2021 – Nov. 2021 (7 CAB Meeting & 2 Oystermen’s Workshops) — Status Complete

PHASE IV (2022) — EVALUATION OF DRAFT ADAPTIVE MANAGEMENT AND RESTORATION PLAN FRAMEWORK’S RESTORATION AND MANAGEMENT STRATEGIES, RESTORATION AND FUNDING PLANNING

Dec. 2021 – Dec. 2022 (6 CAB Meetings, 1 Oystermen’s Workshops, and 1 Community Workshop) — Status Complete

PHASE V (2023) — EVALUATION AND FINALIZATION OF RECOMMENDATIONS FOR INCLUSION IN THE *APALACHICOLA BAY SYSTEM ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN*, RESTORATION AND FUNDING PLANNING

Jan. 2023 – Dec. 2023 (6 CAB Meetings, 3 Community Workshops) — Status Initiated

COMMUNITY ADVISORY BOARD (CAB). The CAB initiated Phase V in January of 2023 and is currently evaluating the best combination of strategies predicted to achieve restoration and management objectives for the Bay using decision support tools including predictive models coupled with available and emerging data, research, and stakeholder knowledge. The strategies are being evaluated with the overarching goal of restoring oyster reefs 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 strategies and associated actions and identify conceptual and general in scope restoration and management approaches for inclusion in the *Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan* (Plan).

Phase V focuses on the evaluation and finalization of recommendations for inclusion in the Plan, and restoration projects and funding planning. The CAB will vote to approve their package of consensus recommendations during their 29 November 2023 meeting. *Status: Initiated*

1. **COMMUNITY OUTREACH SUBCOMMITTEE - PUBLIC ENGAGEMENT.** 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, community workshops will be conducted at appropriate times to provide the Community with information on ABSI and solicit community input. *Status: Initiated*

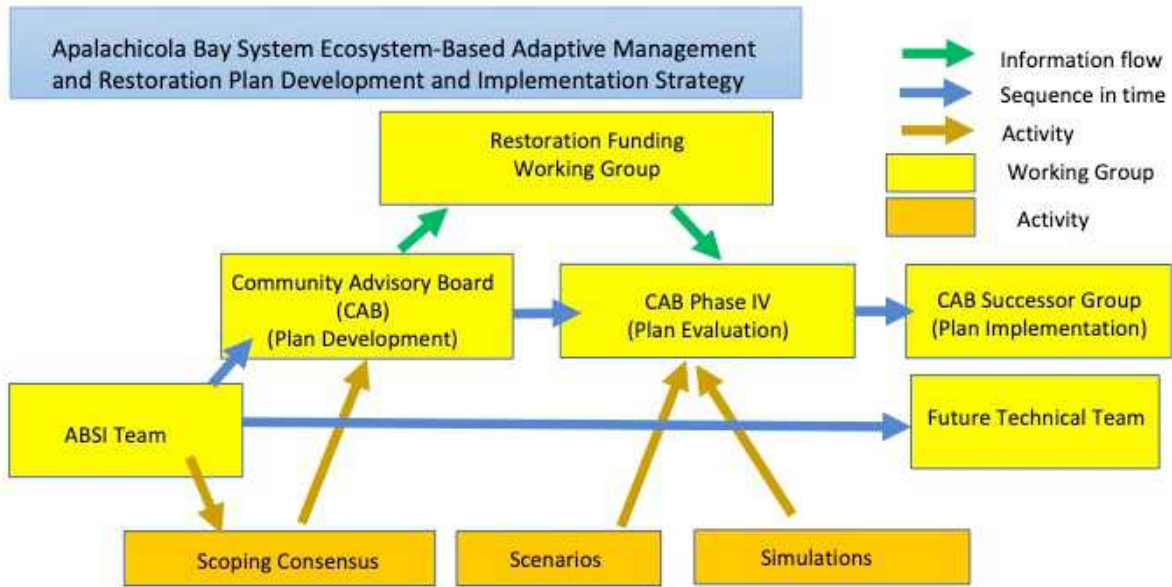
2. **RESTORATION FUNDING WORKING GROUP (RFGW).** Initiated in late 2021 the Restoration Funding Working Group’s role is to seek resources and political, governmental, and organizational support for the CAB’s priority recommendations. *Status: Initiated*
3. **CAB SUCCESSOR GROUP.** The CAB Successor Group 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: Conducting Organizational and Planning Meetings. Formal Convening Pending CAB Approval of Recommendations for Plan on 29 November 2023.*

ABSI CAB PHASE V MEETINGS SCHEDULE AND WORKPLAN — 2023

Meeting #1 ANERR 8:30am	Feb. 1, 2023 • Fisheries Model Simulation Results & Scenarios Refinements • Review of Plan Framework Strategies	Initiation of Phase V of ABSI. ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review of the <i>Apalachicola Bay Restoration and Management Plan Framework</i> and Strategies Evaluation Worksheet process. Summary 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 #2 ANERR 8:30am	April 12, 2023 • Acceptability Ranking of Strategies	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Acceptability ranking of the <i>Apalachicola Bay Restoration and Management Plan Framework</i> strategies using the Strategies Evaluation Worksheet Process. Public comment.
Community Workshop Forum #1	April 12, 2023 ANERR 6:00pm – 8:00pm	Community Input on ABSI Restoration Approaches, Management Strategies, ABSI Science, and Preservation of Franklin County Cultural and Historical Heritage.
Meeting #3 ANERR 8:30am	May 31, 2023 • Acceptability Ranking of Strategies	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Evaluation of Community Workshop Forum input. Acceptability ranking of the <i>Apalachicola Bay Restoration and Management Plan Framework</i> strategies using the Strategies Evaluation Worksheet Process. Public comment.
Meeting #4 ANERR 8:30am	July 26, 2023 • Acceptability Ranking of Strategies	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Acceptability ranking of the <i>Apalachicola Bay Restoration and Management Plan Framework</i> strategies using the Strategies Evaluation Worksheet Process. Public comment.
Community Workshop Forum #2	July 26, 2023 ANERR 6:00pm – 8:00pm	Community Input on ABSI Restoration Approaches, Management Strategies, ABSI Science, and Preservation of Franklin County Cultural and Historical Heritage.
Meeting #5 ANERR	Sept. 27, 2023	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement

8:30am	<ul style="list-style-type: none"> • Acceptability Ranking of Strategies 	initiative update. Evaluation of Community Workshop Forum input. Acceptability ranking of the <i>Apalachicola Bay Restoration and Management Plan Framework</i> strategies using the Strategies Evaluation Worksheet Process. Public comment.
Community Workshop Forum #3	October 24, 2023 ANERR 6:00pm – 8:00pm	Community Input on the CAB’s recommendations for the <i>Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan</i> .
Meeting #6 ANERR 8:30am	Nov. 29, 2023 <ul style="list-style-type: none"> • Adopt Final CAB Recommendations for ABS Plan 	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Evaluation of Community Workshop Forum input. Finalize and adopt recommendations for strategies and actions for inclusion in the <i>Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan</i> (Plan) and submit to FSUCML. Public comment.

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

ATTACHMENT 5

MEETING CHAT SUMMARY (ZOOM)

MEETING CHAT – APRIL 12, 2023

- 08:35:17 **Maddie Mahood:** Hi everyone! Thanks for joining virtually. ☺ Just a heads up – I know the audio can be a bit iffy and ANERR was having some wifi problems this morning, so thank you in advance for your patience and understanding! We will make it through. ☺
- 09:10:11 **Maddie Mahood:** Thanks for hanging in there! Apparently having some projection issues.
- 09:21:59 **Becca Hatchell (FWC):** Can the speakers repeat questions in the room?
- 09:22:34 **Maddie Mahood:** I just sent them a message in the room!
- 09:22:53 **Becca Hatchell (FWC):** Thank you!
- 09:42:15 **Katie Konchar, TNC:** Thanks for that clarification, Ed.
- 10:25:10 **Maddie Mahood:** Welcome back everyone! We are getting started in a few minutes.
- 10:49:04 **Mike Allen:** Stock enhancement and relays are both very different strategies than reef structure/rock restoration strategies. Seems like these should be discussed separately..
- 10:52:33 **Mike Allen:** I have to step out, be back in just a bit.
- 11:14:21 **Georgia Ackerman:** 4 on Priority 1 for me.
- 11:25:03 **Georgia Ackerman:** 4
- 11:25:12 **Katie Konchar, TNC:** 4
- 11:46:19 **Georgia Ackerman:** 4
- 11:46:49 **Katie Konchar, TNC:** 4
- 12:04:11 **Maddie Mahood:** See y'all at 12:30!
- 12:59:01 **Maddie Mahood:** Hi everyone - I have to leave for a prior engagement, but Jared is on if you need anything! Please feel free to message him. Thanks and talk to you all soon! 😊
- 01:10:31 **Katie Konchar, TNC:** Suggested revision: "Develop criteria for restoring specific reefs or reef systems that are resilient to adverse environmental conditions or natural disasters and incorporate adaptive management actions into the restoration plan, as appropriate."
- 01:14:13 **Georgia Ackerman:** 4
- 01:14:27 **Katie Konchar, TNC:** 4
- 01:14:49 **Charles's iPad (Chuck Marks):** 4
- 01:14:53 **Becca Hatchell, FWC:** 4
- 01:24:11 **Becca Hatchell, FWC:** <https://www.bonefishtarpontrust.org/downloads/BTT-Redfish-handout.pdf>
- 01:24:34 **Becca Hatchell, FWC:** Here is a summary of the redfish research for those interested.
- 01:47:40 **Katie Konchar, TNC:** I need to leave for another meeting, All. Thanks for all the science updates and discussion today.
- 01:48:26 **Georgia Ackerman:** 4
- 01:48:30 **Becca Hatchell, FWC:** 4
- 01:48:31 **Charles's iPad:** 4
- 01:57:43 **Georgia Ackerman:** 4
- 01:57:44 **Charles's iPad:** 4
- 01:57:56 **Becca Hatchell, FWC:** 4
- 02:10:21 **Becca Hatchell, FWC:** Could make it a landscape level...featuring all habitats within the watershed.
- 02:14:26 **Becca Hatchell, FWC:** 4
- 02:14:28 **Georgia Ackerman:** 4
- 02:14:29 **Charles's iPad:** 4
- 02:16:28 **Georgia Ackerman:** Stepping away for 2 minutes.
- 02:19:12 **Georgia Ackerman:** I agree
- 02:20:23 **Becca Hatchell, FWC:** Thank you everyone! Have a great day!

ATTACHMENT 6

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 7

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.

ATTACHMENT 8

PRIORITY OF RESTORATION (GOAL A) AND MANAGEMENT STRATEGIES (GOAL B) A COMPONENT OF THE ABSI PLAN FRAMEWORK — ADOPTED 16 NOVEMBER 2021

PRIORITY OF STRATEGIES BY GOAL AREA	
ALL STRATEGIES WITHIN EACH PRIORITY LEVEL (1 – 3) ARE OF EQUAL PRIORITY AND WILL BE IMPLEMENTED BASED ON A LOGICAL SEQUENCING	
Priority 1 Strategies (Prioritization ranking from 10 to 8) = Important To Do Now	
GOAL A (RESTORATION)	GOAL B (MANAGEMENT)
1.) Restore and create reef structures suitable for sustained oyster settlement that enhance ecosystem services in designated restoration areas. (#1 – 9.6) <i>(#1 overall rank for Goal A – 9.6 mean/average)</i>	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. (#1 – 9.3) <i>(#1 overall rank for Goal B – 9.3 mean/average)</i>
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. (#2 - 8.7)	2.) Recommend specific criteria and/or conditions, with related performance measures for the reopening of Apalachicola Bay to limited wild oyster harvesting. (#2 – 9.0)
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. (#3 - 8.6)	3.) Conduct an oyster stock assessment for the ABS with periodic updates. (#3 – 8.8)
4.) [^] Develop criteria for restoring specific reefs or reef systems damaged by environmental conditions or natural disasters. (#4 – 8.2)	4.) Manage the commercial oyster industry and recreational oyster fishing to provide for sustainable spat production and the recovery of oyster populations. (#4 – 8.75)
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. (#4 – 8.2)	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. (#5 – 8.6)
[^] Priority #4 and #5 above received the same ranking.	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. (#6 – 8.5)
	7.) Restore and create reef structures suitable in size, location, and substrate type for healthy and sustainable oyster settlement and production, and harvesting. (#7 – 8.3)
Priority 2 Strategies (Prioritization ranking from 7 to 5) = Important But Less Time Sensitive	
GOAL A	GOAL B

6.) Develop ecosystem models that forecast future environmental conditions and oyster population status. (#6 – 7.2)	8.) Recommend policies and actions that retain and recycle shell for habitat replenishment in the ABS. (#8 – 7.7)
7.) Assess existing ecosystem services metrics used for other oyster studies and develop a list of ABSI specific metrics to assess change over time. (#7 – 6.7)	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. (#9 – 7.6)
	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. (#10 – 7.5)
	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 a wild fisheries and the important cultural role of a working waterfront and seafood industry. (#11 – 6.8)
	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). (#12 – 5.9)
	13)* Assess the effectiveness of an oyster repletion program 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. * <i>This Strategy was not ranked.</i>
Priority 3 Strategies (Prioritization ranking from 4 to 1) = As Time and Resources Allow	
GOAL A	GOAL B
8.) Seagrass and other 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. (#8 – 4.73)	
Strategies Approved for Evaluation But Not Ranked	
GOAL A	GOAL B
	Assess the effectiveness of a shell repletion program (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.