APALACHICOLA BAY SYSTEM INITIATIVE

COMMUNITY ADVISORY BOARD
MEETING XVI — 16 NOVEMBER 2021 SUMMARY REPORT

VIRTUAL MEETING VIA WEBINAR AND TELECONFERENCE

FCRC CONSENSUS CENTER

FLORIDA STATE UNIVERSITY 1851

MEETINGS FACILITATED AND SUMMARIZED BY JEFF A. BLAIR

Apalachicola Bay System Initiative Community Advisory Board
16 November 2021 Facilitator's Meeting Summary Report

Table of Contents

APALACHICOLA BAY SYSTEM INITIATIVE COMMUNITY ADVISORY BOARD
16 NOVEMBER 2021 FACILITATOR'S MEETING SUMMARY REPORT

OVERVIEW OF APALACHICOLA BAY SYSTEM INITIATIVE COMMUNITY ADVISORY BOARD'S KEY ACTIONS

TUESDAY, NOVEMBER 16, 2021

I. MEETING SUMMARY AND OVERVIEW

At the 16 November 2021 virtual meeting the Apalachicola Bay System Initiative (ABSI), Community Advisory Board (CAB): conducted a social science survey administered by the University of Florida; received an overview of the updated Project Workplan and schedule; received an update on ABSI science and data collection; received reports and updates from the Restoration Funding Working Group, Community Outreach Subcommittee, and CAB Successor Group Subcommittee; reviewed Strategies Prioritization Ranking Exercise results; and, discussed restoration and management alternatives and issues. In addition, the CAB reviewed and updated commitments to providing resources and collaborating with stakeholders to implement strategies; and received a briefing on and discussed Phase IV membership. Specific actions included: reviewing and voting unanimously to adopt the Final Draft Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan Framework (Comprised of Five Goals and associated Visions, Outcomes, Objectives, Prioritized Strategies, Actions, Roles, and Performance Measures and Estuarine Metrics) for Phase IV evaluation. Of note, the November meeting represented the conclusion of Phase III of the ABSI CAB process—Building Consensus on CAB

Recommendations for the ABS Ecosystem-Based Adaptive Management and Restoration Plan. Phase IV of the ABSI CAB process—Evaluation of the Draft Adaptive Management and Restoration Plan Strategies, Restoration Projects Selection and Implementation, and Funding Planning—will be initiated in early 2022.

II. Welcome and Introductions

Jeff Blair, ABSI CAB Facilitator, opened the meeting at 8:30 AM and welcomed all participants.

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.

III. ABSI CAB Meeting Participation

The following CAB members participated in the Tuesday, November 16, 2021 meeting conducted virtually via webinar and teleconference:

Georgia Ackerman, Frank Gidus, Anita Grove, Chad Hanson, Jenna Harper, Shannon Hartsfield, BJ Jamison, Erik Lovestrand, Chuck Marks, Roger Mathis, Mike O'Connell, Steve Rash, Portia Sapp, Chad Taylor, Paul Thurman, and TJ Ward.

(16 of 23 members participated—70%).

Absent CAB Members:

Chip Bailey, Bert Boldt, Lee Edmiston, Tom Frazer, Alex Reed, Denita Sassor, and John Solomon.

Project Team Members Participating

Jeff Blair, Sandra Brooke, Ross Ellington, Madelein Mahood, and Joel Trexler.

(Attachment 2 — Meeting Participation)

Meeting Facilitation

Meetings are facilitated, and meeting reports drafted by Jeff Blair from the FCRC Consensus Center at Florida State University. Information at: http://consensus.fsu.edu/

FCRC CONSENSUS CENTER

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 16 November 2021 meeting as presented. Following are the key agenda items approved for consideration:

- ✓ To Approve Regular Procedural Topics (Meeting Agenda and, Summary Report)
- ✓ To Receive Project Briefings
- ✓ To Receive Updates from RFWG, Community Outreach, and CAB Successor Group
- ✓ To Review Strategies Prioritization Ranking Exercise Results
- ✓ To Adopt Final Draft ABS Management and Restoration Plan Framework for Phase IV Evaluation
- ✓ To Review and Update Resources Available and Collaboration Efforts for Plan Implementation
- ✓ To Receive Briefing on and Discuss CAB Membership for Phase IV
- ✓ To Identify Needed Next Steps, Information and Presentations, and Agenda Items for Next Meeting

Amendments to the Posted Agenda:

None.

(Attachment 3 — 16 November 2021 ABSI CAB Agenda)

V. APPROVAL OF THE 19 OCTOBER 2021 CAB MEETING FACILITATOR'S SUMMARY REPORTS

The ABSI CAB voted unanimously to approve the 19 October 2021 CAB Meeting Facilitator Summary Report 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. Jeff noted that the ABSI CAB conducted 3 oystermen's workshops during 2021 and noted a community feedback initiative is planned for early 2022. Jeff reported that the next CAB meeting and the initiation of Phase IV—Evaluation of the Draft Adaptive Management and Restoration Plan Strategies, Restoration Projects Selection and Implementation, and Funding Planning—is scheduled for early 2022.

- Jeff reminded the CAB that the ABSI process calls for the CAB to deliver their consensus recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan) Framework in the form of Visions, Goals, Outcomes, Objectives, Prioritized Strategies, Actions, Performance Measures, and Estuarine Metrics during today's meeting (November 16, 2021) and for this to complete Phase III of the project—Building Consensus on CAB Recommendations for the ABS Ecosystem-Based Adaptive Management and Restoration Plan Framework.
- The next phase (Phase IV) of the project—Evaluation of the Draft Adaptive Management and Restoration Plan Strategies, Restoration Projects Selection and Implementation, and Funding Planning—will be initiated in early 2022 and during this Phase the CAB will use project decision support tools including modeling to evaluate the CAB's recommendations relative to specific

performance measures and expected outcomes for enhancing the health of the Apalachicola Bay System. In addition, the CAB will conduct 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, to ensure that the Plan is implemented, monitored, and adaptively managed over time with the support of the Community. 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 ABSI. In addition, during Phase IV, FSU will convene a small Restoration Funding Working Group to seek resources and political, governmental, and organizational support for the CAB's priority recommendations.

- In early 2022 the CAB will initiate a public engagement initiative and vet the results of their prioritized strategies with the larger Apalachicola Bay System community through a questionnaire administered through a variety of methods including Facebook, online via the ABSI website, and direct mailings. In addition, public workshops will be held either in-person or virtually depending on the status of the COVID-19 pandemic. Subsequently, the CAB will review the results compiled from the public feedback and determine whether to make revisions based on the results.

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

(Attachment 6 — Workplan, Schedule, and Project Flowchart)

VII. PROJECT BRIEFINGS AND REQUESTED PRESENTATIONS

ABSI SCIENCE AND DATA COLLECTION UPDATE

Sandra Brooke, FSUCML Faculty and ABSI Principal Investigator, provided the CAB with an update on ABSI science and data collection. A science and data update is provided at all CAB meetings.

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

Summary and Overview of Presentation
The 16 November 2021 report was focused on updates of the ABSI experimental oyster restoration experiments, bio-physical modeling, trophic analysis with stable isotopes, levels of heavy metals and organochlorine pesticides in Apalachicola Bay, and the genetic structure of oyster populations in the Florida Panhandle.

ABSI Experimental Oyster Restoration Experiments Update:

- Map was presented showing ABSI experimental oyster restoration sites indicating 5 locations each for Peanut Ridge and Dry Bar.
- Data provided on a graph of spat abundance from experimental reefs comparing Peanut Ridge and Dry Bar.
- Data provided on a graph of spat size from experimental reefs comparing Peanut Ridge and Dry Bar.

Meeting Notes:

- Dive surveys on experiments were performed over the past month.
- Peanut Ridge did better than Dry Bar in both abundance and size of live oysters, but stability of materials is a problem at Peanut Ridge because of currents.

- ABSI team is moving away from intensive intertidal oyster habitat sampling, but will still monitor with drones. Will focus on subtidal habitat for future studies.

Bio-Physical Modeling for ABSI Update:

Modeling being conducted by Dr. Steve Morey and Dr. Xu Chen from Florida A&M University.

Modeling Objectives:

1. Configure a high-resolution hydrodynamic model for the lower Apalachicola, Carrabelle, Ochlocknee and St Marks rivers, Apalachicola Bay and the surrounding coastal and inner shelf regions based on the latest bathymetric and topographic data.
2. Run hindcast and future climate and water management scenario simulations.
3. Perform analyses of the simulations to characterize the variability of hydrographic properties throughout Apalachicola Bay.
4. Using a numerical particle tracking approach to simulate oyster larvae, conduct and analyze larvae transport simulations to quantify factors such as larval recruitment, retention and inter-estuarine exchange, as well as contribution of sub-tidal populations to intertidal habitats and vice versa.

Update and Summary of Results:

- The hydrodynamic model has been configured for the Bay and surrounding region. The model simulates:
  - Water level and tides;
  - Flooding and drying of intertidal areas;
  - Effects of varying river flows (Apalachicola, Carrabelle, Ochlockonee, and St. Marks);
  - Response to atmospheric forcing;
  - Flow over and along high-resolution bathymetry and coastline geometry.
- The model has been run for one-year scenarios, including:
  - 2019 – Climatologically "normal" year;
  - 2012 – Dry Year;
  - 2012 under future climate (linked to Steve Leitman's Watershed/River model).
- Results presented on graphs comparing salinity results with temperatures at Cat Point.
- Salinity and temperature comparisons at ANERR stations are used to assess modifications to the model. In the case illustrated, a better simulation of salinity is achieved by modifying the weather model winds forcing the Apalachicola Bay model by superimposing larger high-frequency wind variability (sea breeze) from observations.

Next Steps for Modeling:

- Continue refinement of model methodology to improve accuracy of simulations.
- Run additional climate and management scenarios.
- Conduct analysis of model output.
- Implement and run individual-based larval model.

Meeting Notes:

- First simulations of the Bio-Physical modeling shows that from St. Marks to West Pass most of the water flow goes through West Pass and East Pass, and a small amount goes through Sikes Cut.
- Model has been run for a normal year (2019) and dry year (2012).
- Plan to meet with Steve Leitman early December to discuss coupling models and running scenarios to present outputs for next meeting in early 2022.
- Will start on larval dispersal model early next year.

Trophic Analysis with Stable Isotopes:

- **Objectives:** Compare 2020-2021 stable isotopic trophic indicators with data collected for 1992-1994 to test the hypothesis that the primary production supporting secondary production in Apalachicola Bay has shifted towards a proportion of organic matter of marine origin as opposed to river origin over 30 years.
- **Approach**: measured ^{13}C, $d^{15}N$ and $d^{34}S$ on organic matter from sediments, oysters, fish and plankton in 2020-2021 to compare with historical data, 1992-1994.
- **Preliminary Results:** not all samples have been analyzed, but results are due soon.
  - Preliminary results to date do not support the hypothesis that trophic inputs have shifted over time.
  - Sediments, fish and plankton do not indicate increased marine influence on the food web.
- **Next Step:** Obtain complete data set, thorough statistical analysis.

Meeting Notes:

- Preliminary evidence suggests that there has been no change in food source (still riverine).

Levels of Heavy Metals and Organochlorine Pesticides in Apalachicola Bay

Objectives:

- To determine the distribution and bioavailability of heavy metals and their possible temporal and spatial distributions.
- To determine the distribution of organochlorine pesticides and their possible temporal and spatial distributions.
- Also, to use benthic foraminifers for pollution bioindicator for both heavy metals and organochlorine pesticides through time (<100 years) and across the Bay.

Results:

- Samples analyzed: 11 surface samples, 1 Bay Core (27 slices) sample and River Core sample (13 slices). Total 51 samples.
- Analyses completed: Heavy metals, grain size, and Total Organic Carbon.

Next Step:

- Organochlorine pesticide analysis.

Meeting Notes:

- Testing level of heavy metals and organochlorine pesticides from upriver agricultural runoff for potential animal and human impacts.
- Data show a big peak early in the 20th Century but varied over time.

Genetic Structure of Oyster Populations in the Florida Panhandle

- **Objectives:** Determine connectivity of oyster populations in the Florida Panhandle**.**
- **Results:** Appears to be separation between western-most bays and central bays.
- **Next Steps:** Additional loci are being sequenced to increase analytical power for microsatellites.

Sampling Sites for Oyster Genetic Study:

From south to north/east to west:

- Yankee Town
- Oyster Bay
- Alligator Harbor
- Eastern Apalachicola Bay
- Western Apalachicola Bay
- St. Andrews Bay

- Choctawhatchee Bay
- Pensacola Bay

Meeting Notes:
- Oyster genetic analyses research goal is to determine connectivity among oyster populations.
- More extractions are needed to increase resolution of data. Existing samples can be used.
- Pensacola Bay, Choctawhatchee Bay, and Yankeetown pops fairly uniform genetically.
- Other locations' populations are well mixed except for East Bay (which might be a source of unique genotypes locally adapted to the habitat).

Summary of Other Ongoing Projects:
- Manuscript: Analysis of historical finfish communities in Apalachicola Bay, Florida, related to seasonality and river flow. In late stages of preparation, will be submitted by end of this year.
- Manuscript: An analysis of intertidal oyster population dynamics in the Apalachicola Bay area.
- Sub-tidal oyster spat traps – started last month.
- Sub-tidal oyster tong sampling – this winter.
- Sampling FLDEP Restore sites to continue data collection.
- Collecting water quality data from instruments.

Questions, Responses, and Comments:
- Larval transport and hydrodynamic modeling will cover the entire Bay with intertidal connectivity.
- Question: larval transport modeling; will models cover intertidal reefs?
- Response SB): Yes, model mesh has resolution to show whether larvae connectivity exists between sub and intertidal reefs, but it is not clear that intertidal height can be worked in.
- Connectivity between intertidal and subtidal habitats is very important and should be tracked.

VIII. SUBCOMMITTEE UPDATES AND REPORTS

A. 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 the TRIUMPH Board. The Restoration Funding Working Group (RPWG) 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 reported as follows for the 16 November 2021 CAB update on the RFWG:
- Invitations to join the RFWG were sent out.
- The first meeting is planned for the week of December 16, 2021.
- The new Federal infrastructure bill creates funding opportunities for restoration and potentially funding for the CAB Successor Group.

B. CAB SUCCESSOR GROUP SUBCOMMITTEE

Anita Grove and Shannon Hartsfield reported that the Subcommittee is in a holding pattern and there was nothing new to report. It was reported at a previous meeting that the Subcommittee has discussed the type of members needed (stakeholder representation) 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.

C. COMMUNITY OUTREACH SUBCOMMITTEE

Chad Hanson reported that the subcommittee has been active and they are working on a variety of initiatives. Chad reported as follows for the 16 November 2021 CAB update on community outreach initiatives:

- The Outreach Committee met during the week of November 8, 2021.
- The newsletter came out during the same week.
- Sandra made ABSI presentations to the Franklin County Commission, (11/2) Apalachicola City Commission (11/2), and the Eastpoint Civic Association Club (11/8).
- ABSI had a presence at the Franklin County Seafood Festival on November 5-6, 2021 with a booth next to ANERR. There was good public interest in the ABSI project and it will be worth doing again.
- The Committee is planning to provide updates to the commissions every 6 months.
- The Committee plans to meet individually with Smokey Parrish to keep him in the loop and thank him for his support of the ABSI.
- The Committee plans to meet with community leaders individually to keep them updated.
- The Committee wants to continue operating for Phase IV, the members all want to continue serving, and would appreciate any new members.

Summary of Questions and Comments:

- How did the three groups Sandra presented to react?
- Response: The City and County commissions asked some tough questions, but overall the County meeting was constructive. The City was much less intense and also constructive. The Eastpoint Civic Association Club was a bit more intense but not hostile, and sentiment was that the Bay died in 2010 from the use of dispersants. However, they seem willing to let the science take its course.
- Sandra reported that the fishery collapse may have been due to an extended period of elevated salinity causing a boring sponge infestation that degraded the oyster shells around the same timeframe as the oil spill. This deduction is based on reports from the Civic Club members that shells were breaking when they tried to shuck them, which is a common symptom of boring sponge infestation.
- The County Commission paid rapt attention to Sandra's presentation; Smokey needs to be further invested in the effort.
- Anita suggested that the commissions should be updated three times per year instead of two.

IX. STRATEGIES PRIORITIZATION EXERCISE RESULTS

Jeff Blair reviewed the results of the CAB's 19 October 2021 strategies prioritization exercise. During the meeting CAB members were asked to consider seven criteria to assist them in evaluating the priority of each strategy. Then when asked, to rank each strategy in turn with a number from 10 - 1 and based on whether from their stakeholder perspective the strategy was considered from a highest (10) to a lowest (1)

level of a priority. In addition, members were asked to rank each strategy independently and on its own relative merit, and not in comparison with the other strategies. The complete results were distributed to the CAB after the meeting, posted to the ABSI CAB project website, included in the Plan Framework Worksheet, and as Section IV of *Attachment 7* to this Report.

Summary of Questions and Comments:

- It would be helpful to note strategies that tied for prioritization.
- We will need to go into more depth in evaluating priorities and strategies during Phase IV.
- The order of priorities will likely change when they are evaluated using decision support tools during Phase IV.

(Attachment 7 — Adopted ABSI Plan Framework Including Prioritized Strategies, Resources, and Performance and Estuarine Metrics)

X. FINAL DRAFT MANAGEMENT AND RESTORATION PLAN FRAMEWORK FOR PHASE IV EVALUATION ADOPTION

Jeff Blair led the CAB through a review of the proposed revisions to the Final Draft Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan Framework (Visions, Goals, Outcomes, Objectives, Prioritized Strategies, Actions, Roles, Performance Measures, and Estuarine Metrics). The revisions were highlighted in the Plan Framework Worksheet posted to the project webpage and distributed to CAB members prior to the meeting. After reviewing and agreeing to the proposed changes the CAB adopted the proposed package with several additional revisions made during the meeting. In addition, the CAB reviewed, provided comments, and approved the proposed revisions to the Performance Measures and Estuarine Metrics. At the conclusion of the discussion the CAB was asked to vote for the consensus package of recommendations for evaluation during Phase IV of the Project.

Following the opportunity provided for questions and answers, public comment, and Community Advisory Board discussion, the ABSI CAB took the following actions on a motion and second by Chad Taylor and Anita Grove respectively:

Community Advisory Board Action:

***MOTION*—**The Community Advisory Board voted unanimously, 16 – 0 in favor, to adopt the Final Draft Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan Framework* for Phase IV evaluation.

*** Comprised of Five Goals and associated Visions, Outcomes, Objectives, Prioritized Strategies, Actions, Roles, and Performance Measures and Estuarine Metrics*

The ABS Plan Framework Worksheet was used to guide discussions during Apalachicola Bay System Initiative (ABSI) Community Advisory Board (CAB) meetings. All strategies (42) and actions (86) proposed by CAB members and/or suggested by the ABSI Project Team (scientists and facilitator) were evaluated by the Team and organized into the following categories:

SECTION I: CAB ABSI FINAL DRAFT PLAN PRIORITIZED STRATEGIES

- Goal A: A Healthy and Productive Bay Ecosystem [4 Objectives, 8 Strategies, and 19 Actions]
- Goal B: Sustainable Management of Oyster Resources [2 Objectives, 12 Strategies, and 44 Actions]

- Goal C: Ecosystem-Based Adaptive Management and Restoration Plan Supported by Apalachicola Bay System Stakeholders [2 Objectives, 4 Strategies, and 15 Actions]
- Goal D: An Engaged Stakeholder Community and Informed Public [2 Objectives, 3 Strategies, and 6 Actions]

SECTION II: STRATEGIES OUTSIDE THE SPECIFIC SCOPE OF ABSI AND TO BE REFERRED TO OTHER PROGRAMS OR ENTITIES

- Goal E (Outside of ABSI Scope): A Thriving Economy Connected to a Restored Apalachicola Bay System [4 Objectives, 10 Strategies, and 1 Action] (Lead: CAB Successor Group)
- Additional Strategies Outside of the ABSI Scope [5 Strategies and 1 Action] (Lead: CAB Successor Group)

SECTION III: STRATEGIES EVALUATED AND NOT ACHIEVING CONSENSUS

SECTION IV: PRIORITIZED STRATEGIES, LEADS, PARTNERS, AND RESOURCES

SECTION V: PERFORMANCE MEASURES AND ESTUARINE METRICS

SECTION VI: TERMS AND DEFINITIONS AND ABSI BOUNDARY MAP

SECTION VII: KEY TO COMMON ABBREVIATIONS

The strategies and actions associated with Goals A – E in Section I and II were evaluated by the CAB and serve as key components of the CAB's package of consensus recommendations included in the Final Draft Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan Framework for Phase IV evaluation that was voted on and unanimously adopted at the conclusion of Phase III during the 16 November 2021 meeting.

The CAB will initiate Phase IV of the ABSI project in early 2022 with the primary focus of using available research and data, which will be incorporated into and evaluated by decision support tools including predictive models. These tools will be used to evaluate recommendations for the best combination of management and restoration approaches, and priority restoration projects, for achieving the goals of the Apalachicola Bay System Initiative. In addition, the CAB will initiate a community engagement initiative to seek and evaluate community feedback on the Adopted Plan Framework.

Summary of Comments:

- Recommend striking out the priority [P#] next to each strategy since they are organized by priority levels now in the Plan Framework.
- JB indicated that he would do so.
- Thanks to JB and the ABSI Team for hard work.
- CH requested that a clean version of the Adopted Plan Framework be posted with a link on the ABSI website.
- JB stated that this is the plan and will be done by early next week.
- CT recommended that readers could be reminded that some questions regarding the Adopted Plan Framework could be answered by reviewing summary reports from previous CAB meetings.
- JB indicated that this is a good idea and a link will be added to the Plan Framework.

(Attachment 7 — Adopted ABSI Plan Framework Including Prioritized Strategies, Resources, and Performance and Estuarine Metrics)

XI. CAB Member Updates on Resources Available and Collaboration Efforts for ABS Plan Implementation

Jeff Blair requested that CAB members provide an update of any changes and/or additions to the list of resources available and collaboration efforts initiated for ABS Plan implementation. The updated results are included as a component of *Attachment 7* to this Report.

(Attachment 7 — Adopted ABSI Plan Framework Including Resources and Collaboration Initiatives)

XII. Briefing on Phase IV and Discussion of Phase IV CAB Membership

Phase IV Briefing. The facilitator reviewed the plan for Phase IV of the ABSI CAB Project—Evaluation of the Draft Adaptive Management and Restoration Plan Strategies, Restoration Projects Selection and Implementation, and Funding Planning. Following is a summary:

The Community Advisory Board (CAB) will initiate Phase IV of the ABSI project in early 2022 with the primary focus of using available and emerging research and data, which will be incorporated into and evaluated by decision support tools including predictive models. These tools will be used to evaluate the CAB's recommendations relative to specific performance measures and expected outcomes by forecasting the effects of policy actions on the likelihood of achieving oyster management and restoration objectives with the goal of implementing the best combination of management and restoration approaches, and priority restoration projects, for achieving the overarching goal of the Apalachicola Bay System Initiative of restoring the health of the Apalachicola Bay System.

The CAB will evaluate and revise as needed the priority of strategies and associated actions and identify specific recommended restoration projects using the best data-based combinations of strategies and actions to achieve management and restoration goals for enhancing the health of the Apalachicola Bay System.

In addition, the CAB will begin a Public Engagement Initiative in 2022 by soliciting and evaluating the larger ABS community's feedback on the results of their prioritized strategies. The CAB will vet the results of their prioritized strategies with the community through a questionnaire administered through a variety of methods including Facebook, online via the ABSI website, and direct mailings. In addition, public workshops will be held either in-person or virtually depending on the COVID-19 pandemic status. 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 ABSI.

The CAB offered their initial ideas for an ABSI Overarching Message during the 19 October 2021 meeting, and during Phase IV the CAB will be asked to refine their ideas for crafting an overarching message with aspirational goals that would resonate with the ABS Community toward fostering support and action toward implementation of the Plan. The message's purpose is to be a rallying call to energize people around implementation of the ABSI Plan.

During Phase IV the CAB will continue to refine the list of stakeholder resources and collaboration initiatives offered in support of the ABSI, and create a comprehensive Table of Strategies, Actions, Proposed Leads, Partners, and Resources for the implementation of ABSI project's goals. Following is an example of the Table for illustrative purposes, and discussion and completion of this table is planned for Phase IV of the CAB process.

STRATEGIES AND ACTIONS WITH PROPOSED LEADS, PARTNERS, AND RESOURCES		
GOAL A: ECOLOGICAL/RESTORATION PRIORITY 1 STRATEGIES/ACTIONS	**LEAD/PARTNERS**	**RESOURCES**
Strategy 1.) Restore and create reef structures suitable for sustained oyster settlement that enhance ecosystem services in designated restoration areas.	Lead: FWC/FWRI Partners: FSU, UF, local Gov., FDOT, NGOs, coastal property owners, CAB Successor Group	Student help from universities (FSU/UF), citizen scientists
Action 1-A.): Design and implement projects to achieve multiple ecosystem service targets (e.g., commercial and recreational fishing, shoreline protection).	Same as above and oystermen	Same as above

In addition, the CAB will conduct 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, to ensure that the Plan is implemented, monitored, and adaptively managed over time with the support of the Community.

Finally, during Phase IV FSU will convene a small Restoration Funding Working Group to seek resources and political, governmental, and organizational support for the CAB's priority recommendations.

PHASE IV CAB MEMBERSHIP. The facilitator asked CAB members to indicate whether they wanted to commit to Phase IV participation as a member of the CAB, and/or whether there were any additional members they thought should be invited to participate.

The Project Team thanked all of the CAB members for their participation and commitment to the ABSI thorough Phase III, and also thanked members who agreed to remain involved through Phase IV of the Project.

The ABSI Project Team will contact CAB members who did not participate in the 16 November 2021 meeting to determine whether they wish to remain on the CAB. In addition, the Project Team will contact the three additional members recommended for serving on the CAB for Phase IV. The four tables that follow represent: CAB members wishing to continue serving on the CAB, CAB members that will report back whether they will continue to serve, CAB members who will be contacted regarding their interest in continuing to serve, and potential new members to serve on the CAB for Phase IV of the Project.

The following CAB members agreed to remain on the CAB:

NAME	AFFILIATION
1. Georgia Ackerman^*#	Environmental Organization: Apalachicola Riverkeeper
2. Frank Gidus	Recreational Fishing: Coastal Conservation Association Florida (CCA)
3. Anita Grove^*#	Local Government: Apalachicola City Commissioner
4. Chad Hanson^*#	Environmental/NGO: The Pew Charitable Trusts
5. Jenna Harper#	State/Federal Government: ANERR/DEP (RFWG)
6. Shannon Hartsfield^	Seafood Management Assistance, Resource Recovery Team/Oysterman
7. BJ Jamison^#	State Government: FWC Division of Marine Fisheries Management
8. Erik Lovestrand#	Scientist: UF/IFAS/Florida Sea Grant/Franklin County Extension

9. Chuck Marks	Business: Retired Insurance Industry
10. Roger Mathis^	Seafood Industry: Oysterman and Seafood Dealer (R.D.'s Seafood)
11. Mike O'Connell*	Tourism: SGI Civic Club/SGI 2025 Vision
12. Steve Rash^	Seafood Industry: Water Street Seafood
13. Portia Sapp#	State Government: FDACS Division of Aquaculture
14. Chad Taylor^	Agriculture/Basin: Riparian County Stakeholder Coalition/ACFS
15. TJ Ward	Seafood Industry: Buddy Ward & Sons Seafood

The following CAB member will report back regarding whether they will remain on the CAB:

NAME	AFFILIATION
1. Paul Thurman#	State Government: Northwest Florida Water Management District

The following CAB members who were not in attendance for the 16 November 2021 meeting will be contacted to determine whether they wish to remain on the CAB:

NAME	AFFILIATION
1. Chip Bailey	Charter Recreational Fishing: Peregrine Charters
2. Bert Boldt^	Local Government: Franklin County Commissioner
3. Lee Edmiston	Citizen: Retired DEP/ANERR
4. Tom Frazer	Scientist: USF Dean of the College of Marine Science
5. Alex Reed#	State Government: FDEP Office of Resilience & Coastal Protection
6. Denita Sassor	Aquaculture: Outlaw Oyster Company
7. John Solomon	Economic Development: Apalachicola Bay Chamber of Commerce

The following individuals will be asked to join the CAB:

NAME	AFFILIATION
1. Mike Allen	Scientist: Director of UF/IFAS Nature Coast Biological Station
2. Gayle Johnson	Aquaculture: Apalachicola Oyster Company
3. Kent Smith or Katie Konchar	State Gov: FWC Division of Habitat and Species Conservation

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

Summary of Questions and Comments

- TJ: There needs to be more public awareness of ABSI. The Apalachicola Times seems to be unaware of the project's status.
- Response: The Outreach Committee through Anita has made efforts to get them to publish editorials and updates but the editor seems resistant. They also receive the ABSI newsletter and it was hoped they would publish updates provided in the newsletter.
- JB suggested that perhaps TJ could speak to the Editor at the Apalachicola Times about getting updates in the paper.
- TJ indicated that yes he will do so.

- SH indicated that if the Summer Bars are not open in winter this would not be supported by the oystermen. There should be a window when they are open (1 month). Oystermen won't go for a permanent closure with the agreement to close the fishery for 3 months in the Summer.
- Need to knit together the CAB Successor Group and the RFWG so work in tandem and not in silos.
- Response: Joel, Shannon, and Anita will discuss coordinating and communicating between the committees offline.
- GA noted that today's action is a newsworthy outcome and it should be publicized.
- It was suggested that the Subcommittee should come out with a press release ASAP (Maddie will follow through with this).
- Maddie will organize a meeting this week of the Outreach Subcommittee.
- CH noted that we've adopted a "Final Draft Framework" for public discussion and further refinement and this must be communicated precisely to avoid misunderstanding that the Plan is not final at this stage in the process.

CAB and Committee Membership Comments

- Gayle Johnson from the Apalachicola Oyster Company should be invited.
- Kent Smith from FWC should be invited.
- Need to reach out to existing members that were not in attendance during the 16 November 2021 meeting.
- A scientist member should be added to the CAB if Tom Frazer can't participate. Consider appointing Mike Allen, Director of the UF/IFAS Nature Coast Biological Station.
- Day of week for meetings: Wednesday and bi-monthly
- SL noted that meetings may need to be closer together to provide modeling results in a timely manner.
- Consider holding side modeling meetings, a subgroup for those wanting more detail.
- The model could be run during meeting, using different levels of metrics.
- The SAB will want to be involved.
- Consider Thursday meetings so folks could stay the weekend in the area. This could be a form of outreach and education.
- Need to schedule first meeting ASAP and let CAB know.
- CH indicated that it should made clearer that the Community Outreach Subcommittee, CAB Successor Group, and RFWG will be on-going groups.
- Maddie was appreciated and the team will all miss her. Thank you, and great job!

XIII. PUBLIC COMMENT

The facilitator invited members of the public to provide comments.

Public Comments:

- None were offered.

(Attachment 5 — Meeting Chat Summary)

XIV. NEXT MEETING OVERVIEW AND ISSUES

Phase IV will be initiated in early 2022 and the Schedule and Workplan will be posted and distributed in advance of the first meeting. The initial Phase IV meeting will focus on scoping, membership, schedule, and workplan for the Phase.

NEXT STEPS:

- Facilitator's Summary Report for the 16 November 2021 meeting.
- Final Draft Plan Framework for Phase IV Evaluation (Attachment to Summary Report).
- Summary Report and Adopted Plan Framework will be posted to the website and distributed to CAB members.
- Project Team to Refine Scope of Work, CAB Membership, and Meeting Schedule and Workplan for Phase IV.
- Project Team to Notify CAB of Membership, Schedule, and Workplan in Advance of Initial Phase IV Meeting planned for early 2022.

ADJOURNMENT

The Facilitator thanked CAB members, ABSI Project Team members, and the public for their participation, and adjourned the meeting at 11:00 AM on Tuesday, November 16, 2021.

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
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
SAV	Submerged Aquatic Vegetation
TNC	The Nature Conservancy
UF	University of Florida
UWF	University of West Florida

ATTACHMENT 2
MEETING PARTICIPATION LIST

MEMBER*	AFFILIATION
Agriculture/ACF Stakeholders/Riparian Counties	
1. **Chad Taylor**	Riparian County Stakeholder Coalition/ACFS/Agriculture
Business/Real Estate/Economic Development/Tourism	
2. **Chuck Marks**	Acentria Insurance
3. **Mike O'Connell**	SGI Civic Club/SGI 2025 Vision
4. John Solomon	Apalachicola Chamber of Commerce
Environmental/Citizen	
5. **Georgia Ackerman**	Apalachicola Riverkeeper
6. Lee Edmiston	Retired DEP/ANERR
7. **Chad Hanson**	Pew Charitable Trusts
Local Government	
8. Bert Boldt	Franklin County Commissioner
9. **Anita Grove**	Apalachicola City Commissioner
Recreational Fishing	
10. Chip Bailey	Peregrine Charters
11. **Frank Gidus**	CCA Florida
Seafood Industry	
12. **Shannon Hartsfield**	Franklin County Seafood Workers Association and Oysterman
13. **Roger Mathis**	Oysterman and R.D.'s Seafood
14. **Steve Rash**	Water Street Seafood
15. Denita Sassor	Outlaw Oyster Company, Aquaculture
16. **TJ Ward**	Buddy Ward & Sons Seafood
State Government	
17. **Jenna Harper**	ANERR/DEP
18. **BJ Jamison**	FWC Division of Marine Fisheries Management
19. Alex Reed	FDEP Office of Resilience & Coastal Protection
20. **Portia Sapp**	FDACS Division of Aquaculture
21. **Paul Thurman**	NWFWMD
University/Researchers	
22. Tom Frazer	UF/DEP Governor's Science Advisor
23. **Erik Lovestrand**	UF/IFAS/Florida Sea Grant Franklin County
**The names of CAB members participating in the meeting are indicated in bold font.*	

PROJECT TEAM AND FACILITATORS	
FLORIDA STATE UNIVERSITY	
Sandra Brooke	Marine Biologist
Ross Ellington	Professor Emeritus of Biological Science
Madelein Mahood	Outreach and Education
Joel Trexler	FSUCML Director
FCRC CONSENSUS CENTER, FLORIDA STATE UNIVERSITY	
Jeff Blair	Community Advisory Board Facilitator
The names of Project Team members participating in the meeting are indicated in bold font.	

ALTERNATES FOR CAB MEMBERS	
None	
The names of CAB member's alternates participating in the meeting are indicated in bold font.	

MEMBERS OF THE PUBLIC	
1. Gina Alvarez	FWC
2. Ed Camp	University of Florida (UF)
3. Ryan Gandy	FWC-FWRI
4. Laura Geselbracht	TNC, ABSI Science Advisory Board (SAB)
5. Elizabeth Hughes	Representative Jason Shoaf's Office
6. Carrie Jones	FDACS
7. Steve Leitman	Florida State University (FSU)
8. Stasia Pietraszum	Florida State University (FSU)
9. Representative Jason Shoaf	Florida House of Representative

ATTACHMENT 3
16 NOVEMBER 2021 MEETING AGENDA

ABSI COMMUNITY ADVISORY BOARD MEETING XVI OBJECTIVES
✓ To Approve Regular Procedural Topics (Meeting Agenda and, Summary Report) ✓ To Receive Project Briefings ✓ To Receive Updates from RFWG, Community Outreach, and CAB Successor Group ✓ To Review Strategies Prioritization Ranking Exercise Results ✓ To Adopt Final Draft ABS Management and Restoration Plan Framework for Phase IV Evaluation ✓ To Review and Update Resources Available and Collaboration Efforts for Plan Implementation ✓ To Receive Briefing on and Discuss CAB Membership for Phase IV ✓ To Identify Needed Next Steps, Information and Presentations, and Agenda Items for Next Meeting

ABSI COMMUNITY ADVISORY BOARD MEETING XVI AGENDA — NOVEMBER 16, 2021		
All Agenda Times—Including Public Comment and Adjournment—Are Approximate and Subject to Change		
1.)	**8:30 AM**	**WELCOME, REVIEW OF VIRTUAL PARTICIPATION GUIDELINES, 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 (OCT. 19, 2021 MEETING)**
5.)	**8:50**	**REVIEW OF UPDATED PROJECT MEETING SCHEDULE AND WORK PLAN**
6.)	**9:00**	**PROJECT BRIEFING** • *ABSI Science and Data Collection Update.* Sandra Brooke, FSUCML (15)
7.)	**9:30**	**WORKING GROUP AND SUBCOMMITTEE UPDATES** • Restoration Funding Working Group Update. Joel Trexler (5) • Community Outreach Subcommittee Update. Chad Hanson (5) • CAB Successor Group Subcommittee Update. Anita/Shannon (5)
8.)	**9:45**	**STRATEGIES PRIORITIZATION RANKING EXERCISE RESULTS REVIEW**
~10:00		***BREAK***
9.)	**10:15**	**ADOPT FINAL DRAFT MANAGEMENT AND RESTORATION PLAN FRAMEWORK FOR PHASE IV EVALUATION**
10.)	**11:00**	**REVIEW AND UPDATES ON RESOURCES AVAILABLE AND COLLABORATION EFFORTS FOR ABS PLAN IMPLEMENTATION**
11.)	**11:20**	**BRIEFING ON PHASE IV AND DISCUSSION OF PHASE IV CAB MEMBERSHIP**
12.)	**~11:45**	**PUBLIC COMMENT**
13.)	**~11:55**	**NEXT STEPS AND AGENDA ITEMS FOR THE NEXT MEETING** • Review of action items and assignments • Meeting evaluation
~12:00 PM		***ADJOURN***

ATTACHMENT 4
MEETING EVALUATION RESULTS (ZOOM POLL)

CAB Members used a 5-point polling scale where a 1 meant "Strongly Disagree" and a 5 meant "Strongly Agree." The evaluation summary reflects average rating scores and comments from 9 CAB members.

1.) The meeting objectives were clearly communicated at the beginning

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
5 of 5	**10**	**0**	**0**	**0**	**0**

2.) The meeting objectives were met.

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
4.9 of 5	**9**	**1**	**0**	**0**	**0**

3.) The presentations were effective and informative.

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
4.9 of 5	**9**	**1**	**0**	**0**	**0**

4.) The facilitation of the meeting was effective for achieving the stated objectives

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
4.9 of 5	**9**	**1**	**0**	**0**	**0**

5.) Follow-up actions were clearly summarized at the end of the meeting

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
4.7 of 5	**7**	**3**	**0**	**0**	**0**

6.) The facilitator accurately documented the Working Group Member input

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
4.9 of 5	**8**	**1**	**1**	**0**	**0**

7.) The meeting was the appropriate length of time.

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
4.7 of 5	**7**	**3**	**0**	**0**	**0**

8.) Working Group Members had the opportunity to participate and be heard.

Average Rating	*5. Strongly Agree*	*4. Agree*	*3. Not Sure*	*2. Disagree*	*1. Strongly Disagree*
5 of 5	**10**	**0**	**0**	**0**	**0**

9.) What do you think worked well using the virtual Zoom platform for the meeting?

- Zoom seems to be working well! Thanks for all that you do!

ATTACHMENT 5
MEETING CHAT SUMMARY (ZOOM)

MEETING CHAT

- 08:39:45 **Maddie Mahood**: https://ufl.qualtrics.com/jfe/form/SV_88EGKMys7SDXZPM
- 08:41:40 **Jenna, Shannon, Roger, Anita:** could you make it a little larger? Thanks!
- 09:41:21 **Sandra Brooke:** Feels like we have accomplished something good – Great job everyone and thank you
- 09:42:02 **Maddie Mahood:** Great idea, Chad!
- 09:43:16 **Mike O'Connell:** Thanks for all your hard work Sandra
- 09:49:28 **Maddie Mahood:** Awesome note, Chad, thank you!
- 09:54:25 **C. Chadwick Taylor:** I've got to step off of call a few minutes. Great work!
- 10:25:58 **C. Chadwick Taylor:** In my case, RCSC is a compact agreement between the six riparian county Board of County Commissions; ACFS is Governing Board Member of Apalachicola Chattahoochee, Flint Stakeholders, Inc.; and agriculture is as a landowner of a center pivot irrigated row crop farm and forestland management in Jackson County; and member of University of Florida North Florida Research and Education Center Advisory Committee, Quincy and Marianna, Florida.
- 10:52:54 **C. Chadwick Taylor:** Good meeting, happy holidays!
- 10:53:42 **Maddie Mahood:** Thank you everyone for your hard work, attention, patience, and passion to close out CAB Phase III! :) Please answer the following questions, feel free to DM me directly. Thanks!

OPEN ENDED SURVEY QUESTION RESPONSES

- 0:56:37 **Portia Sapp:** Zoom seems to be working well! Thanks for all that you do!

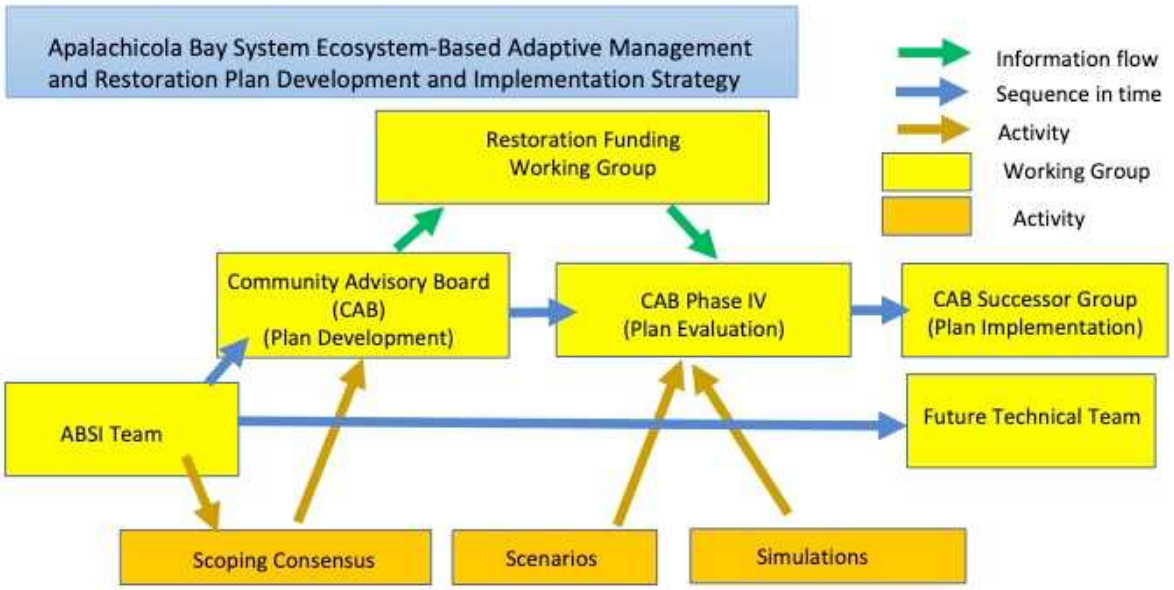
ATTACHMENT 6
WORKPLAN AND SCHEDULE

UPDATED AS OF THE 16 NOVEMBER 2021 CAB MEETING		
PHASE I (2019) — STANDING UP AND ORGANIZATION OF THE ABSI CAB *May 2019 – December 2019 (Assessment Process, Questionnaire, and 2 CAB Meetings)*		
ABSI Assessment Process	May- Aug. 2019 Report Sept. 2019	Assessment report based on interviews of over 60 stakeholders and agency personnel (May – August 2019) summarized key challenges and issues that should be addressed in the Apalachicola Bay System Initiative (ABSI) and by its Community Advisory Board (CAB); facilitators recommend members for the CAB.
ABSI CAB Questionnaire	Sept. 2019	Questionnaire report on the CAB members' views on successful short and long-term outcomes and on critical ABSI challenges and issues.
Meeting I. Eastpointe FL	Oct. 30, 2019	Scoping and organizational meeting, review and refinement of overall project purpose, vision and goal framework. Presentation on the ABSI project's four main components: research, management, community engagement, and oyster reef and bay restoration. Public comment.
Meeting II. Eastpointe FL	Dec. 18, 2019	Member-requested presentations on Apalachicola River Slough Restoration project, Oyster Fishery and Harvest Statistics, ABSI Research Update, and FWC Apalachicola Bay Oyster Restoration, Phase II. Review and refinement of vision themes and goal framework, and identification of key topical issues to inform the drafting of objectives. Public comment
PHASE II (2020) — SCOPING OF ISSUES, AND IDENTIFICATION OF PERFORMANCE MEASURES AND STRATEGIES ***Jan. 2020 – Dec. 2020 (7 CAB Meeting and 1 Oystermen's Workshop)***		
Meeting III. Eastpointe FL	Jan. 8, 2020	Member-requested presentations on Oyster Ecology, Hydrologic modeling and Oyster Population Models. Review, refinement and adoption of five vision themes, goals, outcomes and objectives, and initial review of draft performance measures. Public comment.
Meeting IV. Eastpointe FL	Mar. 11, 2020	Member-requested presentations on current status of Apalachicola Bay, FDACS Aquaculture Leasing Program, Oyster Reef Management in Apalachicola Bay, and the Chesapeake Bay Oyster Futures Consensus Process. Review of Apalachicola Bay System Ecosystem-Based Management and Restoration Plan goals, outcomes, and objectives. Identification of initial draft strategies and related performance measures. Public comment.
Meeting V. Virtual Meeting	May 22, 2020	Member-requested presentations on FWC Overview of Oyster Management, FWRI Oyster Monitoring and Restoration Effects in Apalachicola Bay, MK Ranch Hydrologic Restoration, and TNC Lake Wimico project. Identification and evaluation of preliminary strategies and performance measures to achieve each of the five goals and objectives. Public comment.

CAB Strategies	June 2020	CAB Worksheet to identify potential strategies for each of the five goals.
Meeting VI. Virtual Meeting	July 16, 2020	Member-requested presentations. Decision support tools update & demonstration. Review and evaluation of the preliminary strategies by CAB member for Plan Goal. Public Comment.
Meeting VII. Virtual Meeting	Sept. 9, 2020	Member-requested presentations. Identification, evaluation and refinement of objectives, strategies and performance measures for Goals A-E. Public Comment.
Meeting VIII. Virtual Meeting	Oct. 15, 2020	Member-requested presentations. Review of strategies and identification, and evaluation of actions steps to achieve strategies. Evaluation of Performance Measures and categories. Public Comment.
Meeting IX. Virtual Meeting	Nov. 12, 2020	Member-requested presentations. Agreement on Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan) framework. Public engagement on the Plan strategy discussion. Discussion of strategies and action steps to achieve Goals. Discussion of ecological and management goals. Public comment.
Oystermen's Workshop #1	Dec. 2, 2020 Eastpointe FL	Overview of Project Scope, Purpose, and Status, and Oystermen's input on restoration experiment, suitable habitat for restoration, and management and restoration alternatives.
PHASE III (2021) — BUILDING CONSENSUS ON CAB RECOMMENDATIONS FOR THE ABS ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN ***Jan. 2021 – Dec. 2021 (7 CAB Meeting and 2 Oystermen's Workshops)***		
Meeting X. Virtual Meeting	Jan. 13, 2021	Member-requested presentations. Sub-committee reports. Discussion of estuarine metrics and restoration goals. Public comment.
Meeting XI. Virtual Meeting	Feb. 24, 2021	Member-requested presentations. Sub-committee reports. Review and approval of revised Draft Plan Framework. Discussion of management goals. Public comment.
Oystermen's Workshop #2	April 15, 2021 Eastpointe FL	Oystermen's review and comments on draft Management approaches and Plan Framework (Strategies and Actions for Goals and Objectives)
Meeting XII. Virtual Meeting	April 21, 2021	Member-requested presentations. Sub-committee reports. Discussion of estuarine metrics. Discussion and approval of revised Plan Framework and Performance Measures. Discussion of management approaches. Public comment.
Meeting XIII. Virtual Meeting	June 16, 2021	Member-requested presentations. Sub-committee reports. Community Outreach Plan approval. Discussion and agreement on revised Draft Plan Framework and inclusion of management approaches. Law enforcement discussion. Public comment.
Oystermen's Workshop #3	July 14, 2021 Eastpointe FL	ABSI restoration experiment update and feedback. FWC restoration project update and feedback. Management and Restoration Plan feedback.
Meeting XIV. Virtual Meeting	Aug. 18, 2021	Continue review and consensus testing of Draft Plan and implementation strategies and actions, and agreement on Draft

		Plan. Sub-committee reports. Presentation on Oyster Fisheries and Habitat Management Plan for Pensacola Bay System. Prioritization of Strategies. Public comment.
Meeting XV. Virtual	Oct. 19, 2021	Sub-committee reports. Review and approve package of draft recommendations (strategies and actions) for inclusion in the ABS Plan. Strategies prioritization ranking exercise. Discussion of stakeholder resources and collaboration for implementation of ABS Plan. Public comment.
Meeting XVI. Virtual	Nov. 16, 2021	Adoption of Final Draft Management and Restoration Plan Framework for Phase IV evaluation. Review of strategies prioritization ranking exercise results. Updates to resources and collaboration for Plan implementation. Briefing on Phase IV of ABSI CAB process. Discussion of CAB Membership for Phase IV. Public Comment. Conclude Phase III of project.
PHASE IV (2022) — EVALUATION OF THE DRAFT ADAPTIVE MANAGEMENT AND RESTORATION PLAN PRIORITIZED STRATEGIES, RESTORATION PROJECTS SELECTION AND IMPLEMENTATION, AND FUNDING PLANNING *(CAB Meetings and Public Workshops – TBD)*		
Commences Early 2022		1. **COMMUNITY ADVISORY BOARD (CAB).** CAB initiates Phase IV and works on evaluating the best combination of strategies that will achieve management and restoration objectives for the Bay using decision support tools and available data. The CAB evaluates the priority of strategies and actions and identifies specific recommended restoration projects. **Public Engagement in 2022.** The CAB will initiate a community feedback initiative by soliciting and reviewing community input on the Plan Framework. The CAB will vet the results of their prioritized strategies with the larger ABS community through a questionnaire administered through a variety of methods including Facebook, online via the ABSI website, and direct mailings. In addition, public workshops will be held either in-person or virtually depending on the COVID-19 pandemic status. 2. **RESTORATION FUNDING WORKING GROUP (RFWG).** The Restoration Funding Working Group's role is to seek funding to implement the CAB's priority recommendations. The RFWG will be in place in early 2022. 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, and once the CAB process is complete (~June 2024), to ensure that the Plan is implemented, monitored, and adaptively managed over time and has the support of the Community.

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 7
ADOPTED ABSI PLAN FRAMEWORK — 16 NOVEMBER 2021

FINAL DRAFT APALACHICOLA BAY SYSTEM ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN FRAMEWORK
ADOPTED UNANIMOUSLY 16 NOVEMBER 2021

OVERVIEW. The strategies and actions associated with Goals A – E in Section I and II were evaluated by the Community Advisory Board (CAB), and serve as the key components of the CAB's package of consensus recommendations included as the Final Draft Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan Framework* for Phase IV** evaluation that was voted on and unanimously adopted at the conclusion of Phase III during the 16 November 2021 meeting.

The Community Advisory Board (CAB) will initiate Phase IV of the ABSI project in early 2022 with the primary focus of using available and emerging research and data, which will be incorporated into and evaluated by decision support tools including predictive models. These tools will be used to evaluate the CAB's recommendations relative to specific performance measures and expected outcomes by forecasting the effects of policy actions on the likelihood of achieving oyster management and restoration objectives with the goal of implementing the best combination of management and restoration approaches, and priority restoration projects, for achieving the overarching goal of the Apalachicola Bay System Initiative of restoring the health of the Apalachicola Bay System.

In addition, the CAB will begin a Community Engagement Initiative to seek and evaluate community feedback on the Adopted Final Draft Plan Framework.

** Comprised of Five Goals and associated Visions, Outcomes, Objectives, Prioritized Strategies, Actions, Roles, and Performance Measures and Estuarine Metrics*

*** Phase IV: Evaluation of the Draft Adaptive Management and Restoration Plan Strategies, Restoration Projects Selection and Implementation, and Funding Planning*

FINAL DRAFT PLAN ORGANIZATION

SECTION I: CAB ABSI PLAN PRIORITIZED STRATEGIES

- Goal A: A Healthy and Productive Bay Ecosystem [4 Objectives, 8 Strategies, and 19 Actions]
- Goal B: Sustainable Management of Oyster Resources [2 Objectives, 12 Strategies, and 44 Actions]
- Goal C: Ecosystem-Based Adaptive Management and Restoration Plan Supported by Apalachicola Bay System Stakeholders [2 Objectives, 4 Strategies, and 15 Actions]
- Goal D: An Engaged Stakeholder Community and Informed Public [2 Objectives, 3 Strategies, and 6 Actions]

SECTION II: STRATEGIES TO BE REFERRED TO OTHER PROGRAMS OR ENTITIES

- Goal E (Outside of ABSI Scope): A Thriving Economy Connected to a Restored Apalachicola Bay System [4 Objectives, 10 Strategies, and 1 Action] (Lead: CAB Successor Group)
- Additional Strategies Outside of the ABSI Scope [5 Strategies and 1 Action] (Lead: CAB Successor Group)

SECTION III: STRATEGIES EVALUATED AND NOT ACHIEVING CONSENSUS

SECTION IV: PRIORITIZED STRATEGIES, LEADS, PARTNERS, AND RESOURCES

SECTION V: PERFORMANCE MEASURES AND ESTUARINE METRICS

SECTION VI: TERMS AND DEFINITIONS AND ABSI BOUNDARY MAP

SECTION VII: KEY TO COMMON ABBREVIATIONS

SECTION I
COMMUNITY ADVISORY BOARD ABSI FINAL DRAFT PLAN STRATEGIES

OVERARCHING APPROACHES

1. Use the following ABSI-approved name for developing the management and restoration plan: The Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan).

2. Include commercial fishermen in discussions of and to help work on restoration design and implementation (locations, size, total coverage, cultching, etc.), establishment of permanent closed areas, shell recycling, shelling, mentoring, and workforce entry development.

3. Incorporate scientifically-derived and coordinated long-term monitoring guidelines and metrics for assessing the overall health of the ABS system with a focus on oyster resources.

4. Use only the best available science (including information derived from scientists, agency personnel and stakeholders) for all components of ongoing research, modeling exercises, and development of the Plan, including relevant information on adaptation to climate change impacts.

5. Identify local partners to coordinate and collaborate with the lead entities on the implementation of strategies (stakeholders: e.g., watermen, citizen scientists, advocacy groups, NGOs, universities, counties and other local governments, etc.).

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 OBJECTIVES

A1) To use observations, monitoring, experiments and modeling conducted through ABSI and related efforts to create decision support tools that can inform how a range of natural and human influenced factors will affect the ABS ecosystem.

A2) To help establish a comprehensive monitoring plan to evaluate the health of the ABS oyster resource and its measurable ecosystem services with clearly defined performance measures and strong coordination among the various entities conducting research in the region.

A3) To use existing and new research, and decision support tools to identify viable strategies for restoration and management of the ABS oyster resources and the function of the ABS ecosystem.

A4) To define measurable ecosystem services that can be used to determine the level of change in ecological health (e.g., oyster fishery harvest, habitat for other fishery species, abundance and condition indices for oyster reef and population health) and societal benefit derived from Apalachicola Bay System management and restoration efforts, with target and threshold levels identified.

GOAL A PRIORITIZED STRATEGIES

PRIORITY 1 STRATEGIES

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 STRATEGIES

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 STRATEGIES

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

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 OBJECTIVES

B1) To develop through a transparent and inclusive process a science-based ABS oyster recovery and adaptive management plan for both commercial and recreational industries that includes: broad stakeholder and community support; a long-term, comprehensive monitoring plan that will be carried out by state agencies and their contractors; a regulatory framework that allows for rapid modifications when needed to address changing environmental conditions; and enforceable regulations that contain penalties sufficient to deter violations and harm to the resource. This Plan must be constructed with the direct involvement of entities within the State of Florida (e.g., FWC, FDACS, State Legislature) in cooperation with other relevant agencies to enhance the likelihood of its implementation.

B2) To make recommendations to FDACS for oyster aquaculture best-management practices that allow for the unimpeded recovery of oyster's reefs, the oyster fishery, and the ecological and societal health of the ABS ecosystem while providing economic opportunities to the aquaculture industry.

GOAL B RECOMMENDATION

Closing the Apalachicola Bay to Wild Oyster Harvest. At the March 11, 2020 ABSI CAB meeting, the CAB's FWC representative requested that the CAB recommend whether to close Apalachicola Bay to all wild harvest of oysters (commercial and recreational). The CAB discussed the issue and unanimously recommended to FWC that they immediately close Apalachicola Bay to all wild harvest of oysters. This recommendation was reviewed and accepted by FWC, and the closure of the Bay to recreational and commercial wild oyster harvest proactively went into effect on August 1, 2020 via Executive Order pending approval of final rules. **The oyster fishery closed area has well-defined boundaries (set by FWC in consultation with FDACS) and contained within the Apalachicola Bay System as defined in FWC's Rule 68B-27, F.A.C.**[1] **At the December 16, 2020 meeting the FWC approved the final rules to temporarily suspend all wild oyster harvest and to prohibit on-the-water possession of wild oyster harvesting equipment (tongs) from Apalachicola Bay through December 31, 2025.**

The CAB agreed that in subsequent meetings, it would make science-based recommendations for the criteria and performance metrics that should be met before reopening the Bay to wild oyster harvest. Under consideration are the following strategies related to closing the wild oyster fishery.

GOAL B PRIORITIZED STRATEGIES

PRIORITY 1 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.

[1] FWC's Rule 68B-27.013, F.A.C. (as modified in the proposed draft rule language presented at the July 22, 2020, commission hearing): "Apalachicola Bay" or "Bay" means all waters within St. George Sound, East Bay in Franklin County, Apalachicola Bay, St. Vincent Sound in Franklin County, and Indian Lagoon in Gulf County, including canals, channels, rivers and creeks.

- *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 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)

GOAL C

A FULLY FUNDED ECOSYSTEM-BASED ADAPTIVE MANAGEMENT AND RESTORATION PLAN SUPPORTED BY APALACHICOLA BAY SYSTEM STAKEHOLDERS

STRATEGIES TO ENSURE THE IMPLEMENTATION, MONITORING, AND ADAPTABILITY OF THE PLAN

VISION THEME C: The Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan is science-based, developed with engagement and support from the Apalachicola Bay System stakeholders, and is fully funded.

GOAL C: The Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan is supported by the Apalachicola Bay System stakeholders and is fully funded.

OUTCOME: By 2030, the Apalachicola Bay System is a productive and sustainably managed ecosystem. A fully funded and well-executed science-based Ecosystem-Based Adaptive Management and Restoration Plan that incorporates the monitoring necessary for evaluation and adaptation is broadly supported by Apalachicola Bay System stakeholders with guidance from a permanent stakeholder advisory board.

GOAL C OBJECTIVES

C1) To establish a fully funded permanent, representative stakeholder process to monitor the long-term implementation of the Plan.

C2) To support efforts to identify funding sources and define mechanisms for full implementation of the Plan.

GOAL C PRIORITIZED STRATEGIES

PRIORITY 1 STRATEGIES

CAB Proposed Strategies During the ABSI Process

1) The ABSI Team and the CAB will continue to have an open and transparent process for the development of the Plan with many opportunities for stakeholder engagement and input in a variety of forums (e.g., workshops, online, public/ government meetings) for generating awareness and support while incorporating any changes the CAB deems appropriate and necessary to fulfill the goals and objectives. *[Status: Initiated]*
   - *Action 1-A.)*: Continue CAB meetings and public workshops as outlined in the FCRC proposal for 2021.

2) A successor group to the CAB will be developed and in place by the time the Plan is completed. *[Status: Initiated]*
   - *Action 2-A.):* The successor group actively engages with state programs to encourage their adoption of ABSI's long-term monitoring guidelines and metrics for assessing water quality, oyster abundance, and demographics and to regularly review and update these guidelines and metrics to maintain a healthy and sustainable oyster harvest and ecosystem.
   - *Action 2-B.):* The successor group will monitor the Plan's implementation and make recommendations for revisions required to adaptively respond to changing conditions.
   - *Action 2-C.):* The successor group encourages agencies to prioritize the Plan's recommendations for investing more funding in the management and restoration of oyster resources.
   - *Action 2-D):* The successor group should evaluate whether to initiate the development of an Apalachicola Bay Estuary Program (ABEP) to coordinate and lead in the implementation and monitoring of the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan. The successor group should explore whether it's a better model to be a part of EPA's National Estuary Program or to model the ABEP after the EPA program with funding provided from other entities as was done with the St. Andrew and St. Joe Bays Estuary Program.

Lead: FSU	***Partners:*** CAB, CAB sub-committee, other stakeholders

3) During 2021, the ABSI Team will form a sub-committee within the CAB to evaluate the efficacy of forming a CAB successor group. The intent of a successor group would be to ensure continuity between the CAB members and the agencies responsible for oyster management. *[Status: Initiated]*
   - *Action 3-A.)*: The subcommittee will define a plausible scope of work for the successor group, including evaluating regulatory processes and engaging with and being accountable to decision-makers and the public for the actions laid out in the Plan and the implementation thereof.
   - *Action 3-B.):* The subcommittee will evaluate the best organizational structure for ensuring longevity of the successor group, including working under the auspices of a state agency, an estuary program, or private/public partnerships.

4) Create a comprehensive funding approach for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan implementation including a comprehensive analysis for future grant funding for strategies, including support for sustainable monitoring deriving from the Plan. *[Status: Initiated]*
   - *Action 4-A.):* Evaluate and seek funding sources for implementation of management and restoration strategies included in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (e.g., state agencies, region-wide Gulf trustee implementation group for NRDA funding.)
   - *Action 4-B.):* Evaluate and seek grant opportunities from recommendations included in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
   - *Action 4-C.):* Allocate sufficient funding for habitat restoration based on oyster habitat suitability mapping and modeling and restoration and management targets (e.g., Develop funding source for cultch used in oyster reef restoration.)
   - *Action 4-D.):* Allocate sufficient funding for restoration of harvested reefs and aquaculture farms based on oyster habitat suitability mapping and modeling.
   - *Action 4-E.):* Evaluate and seek funding sources to generate awareness, education, and support for a healthy oyster and ABS ecosystem.
   - *Action 4-F.):* Develop and seek long-term funding for a comprehensive monitoring program that is used across programs and projects with a dashboard on metrics and indicators to leverage resources, standardize the metrics and indicators measured, and to share data.
   - *Action 4-G.):* Work across estuary programs to fund and leverage large scale monitoring for the Panhandle Region – Perdido to Suwanee.
   - *Action 4-H.*): Develop and seek a funding source to provide cultch for habitat restoration.

Lead: FSU-ABSI	***Partners:*** Restoration Partners Working Group; Successor Group

GOAL D
AN ENGAGED STAKEHOLDER COMMUNITY AND INFORMED PUBLIC
STRATEGIES TO SUPPORT EDUCATION, OUTREACH, AND COMMUNITY SUPPORT FOR THE PLAN

VISION THEME D: Stakeholders of the Apalachicola Bay System are committed to working together to disseminate relevant information and advocate for a sustainably managed oyster-based ecosystem. In so doing, the group will facilitate innovative research, development and implementation of best management practices and serve as a hub for information exchange as well as new innovation, education and communication opportunities.

GOAL D: A productive and well-managed Apalachicola Bay System is supported by an actively engaged and informed stakeholder community and public.

OUTCOME*:* By 2030, stakeholders, private and nonprofit civic leaders, and the public are informed of the importance of sustaining the health of the Apalachicola Bay System, and are engaged and working actively together along with elected and appointed leaders and managers to invest in and implement the Plan.

GOAL D OBJECTIVES

D1) To coordinate community engagement efforts to increase public awareness of and support for a healthy and well-managed ABS ecosystem; and to ensure that businesses, industries, non-profits, and local governments are supportive and included in these efforts.

D2) To measure public and stakeholder understanding of the issues important to the health and restoration of the Bay and socio-economic indicators.

GOAL D DRAFT PRIORITIZED STRATEGIES

PRIORITY 1 STRATEGIES

1) Develop a Community Advisory Board (CAB) for the ABS Initiative that provides critical information and perspective to the ABSI leadership and whose members recognize the importance of their role as ambassadors for the initiative. *[Status: Initiated]*

PRIORITY 2 STRATEGIES

2) Build, with the help of the CAB, community support and stewardship by educating stakeholders on the importance of maintaining healthy oyster reefs and by engaging them in the Bay restoration through a variety of hands-on programs.
   - *Action 2-A.):* Form a sub-committee within the CAB that can spearhead an outreach and community engagement effort and develop a community outreach strategy intended to inform and educate stakeholders and the public about the research, the Plan developing through ABSI, and focusing on a healthy ABS ecosystem. The intended audience includes local city, county, and state government officials, businesses and organizations, citizens of every age, and other interested stakeholder groups.
   - *Action 2-B.):* Define what makes a successful shell recycling program, and work with local groups, businesses and other stakeholders to help initiate its development.
   - *Action 2-C.):* Develop a "Bay Stewards" program to honor, reward, and provide incentives for businesses and individuals that demonstrate their stewardship of the resource.

3) Support and participate in providing educational opportunities for students at all levels (primary & secondary school through college) to understand the value of their coastal ecosystems, importance of stewardship and the role oysters play in ecosystem health and fisheries.
   Action 3-A.): Work with existing entities (e.g., WeatherStem, Scientist in Every Florida School program of the Florida Museum) to expose more K-12 students to the research being conducted by ABSI.
   Action: 3-B.): Provide training and financial support for new workforce entrants in the Franklin County Community through an aquaculture internship program.
   Action 3-C.): Provide research opportunities for undergraduate and graduate students in science that supports the ABSI mission.

Lead: CAB outreach subcommittee	***Partners:*** FSU, CAB, CAB Successor Group, ABS stakeholders

SECTION II
STRATEGIES OUTSIDE THE SPECIFIC SCOPE OF ABSI AND TO BE REFERRED TO OTHER PROGRAMS OF ENTITIES

The strategies that are not a part of the Ecological (Goal A), Sustainable Management of Oyster Resources (Goal B), The Management and Restoration Plan (Goal C), and An Engaged Stakeholder Community and Informed Public (Goal D) components of the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan including: training, marketing, education, communication, economic development, and funding are being moved to this category. They will be included as recommendations in an appendix, and the CAB should identify a responsible entity to refer the recommendations to for their development, implementation, monitoring, and maintenance.

GOAL E
A THRIVING ECONOMY CONNECTED TO A RESTORED APALACHICOLA BAY SYSTEM
STRATEGIES TO MONITOR, ASSESS, AND REPORT ON THE ECONOMIC VIABILITY OF THE PLAN

VISION THEME E: A restored Apalachicola Bay System sustains a vibrant commercial oyster fishery, a thriving aquaculture industry and recreational and tourism-related activities and development opportunities that underpin a strong local economy and resilient coastal community.

GOAL E: The broader Apalachicola Bay Region is thriving economically as a result of a fully-restored Apalachicola Bay System.

OUTCOME*:* By 2030, the broader Apalachicola Bay Region is thriving economically as a result of a restored Apalachicola Bay System that reflects a unique coastal cultural heritage, based on a vibrant oyster fishery, while simultaneously providing new opportunities for sustainable and responsible development, business, recreation and tourism.

GOAL E OBJECTIVES

E1) To ensure that economic indicators of the commercial oyster fishery and associated industries in the ABS demonstrate increasing viability and growth.

E2) To ensure that industries and businesses within the ABS are compatible with a healthy and well-managed ABS ecosystem.

E3) To develop growth management policies, plans and regulations affecting the ABS that are compatible with a healthy and well-managed ABS ecosystem while maintaining a thriving economy and supporting cultural heritage.

E4) To develop an oyster aquaculture industry that provides economic opportunities and is complementary to the wild harvest fishery.

GOAL E PRIORITIZED STRATEGIES

PRIORITY 1 STRATEGIES

1) Engage commercial fishermen in the restoration of the bay and encourage future participation in restoration such as monitoring, shell recycling, shelling, and relaying.

2) Recommend monitoring[2] and enforcement programs continue with appropriate metrics to measure output from and impact of harvest on oyster reefs.

PRIORITY 2 STRATEGIES

3) Coordinate with the local business community and governing bodies (i.e., city and county commissions) to ensure that growth management plans, land use and development regulations meet strong standards that are compatible with and minimize the environmental impact of industry and business activities within the ABS and are conducive to a healthy ecosystem.

4) Coordinate with and encourage recreational businesses and activities that recognize the importance of and support a sustainable commercial oyster fishery and the importance of the seafood industry to the Region's cultural heritage.
   - *Action 4-A):* Coordinate and work with initiatives such as the Regional Recreation Economy Alliance to leverage resources to support the local economy.

5) Work with existing partners (e.g., the Chamber of Commerce, Apalachee Regional Planning Council, and city and county staff) to monitor and report on the economic benefits of a restored ABS, including key economic indicators relevant to the commercial oyster fishery and associated industries in the region. This can be displayed as a dashboard that includes key economic indicators over time based on restoration efforts in the Apalachicola Bay System (ABS).

6) Support planning tied to economic indicators that consider future conditions (climate, SLR, reduced river flow) and their effects on the ABS.

7) Review land development regulations to provide flexibility while supporting and enhancing efforts to maintain and revitalize working waterfronts in Apalachicola and Eastpoint to ensure preservation of Franklin County's cultural heritage and a viable seafood industry.

8) Work with oystermen and other community stakeholders to promote post-recovery Apalachicola oysters.

9) Develop complementary industries in wild oyster harvest and oyster aquaculture that provide new economic opportunities by building a network of experts that can help Franklin County citizens

[2] Ongoing fisheries-dependent and fisheries-independent monitoring by FWRI, coupled with ABSI complementary data based on request of watermen. Both entities are sharing data with one another which is critical for ABSI model development. (We remain unable to get FWRI data)

build successful programs through business training, identifying sources of funding for equipment, and developing products that will enhance and diversify local industries.

PRIORITY 3 STRATEGIES

10) Develop new markets for selling oysters to areas within and outside of Florida in part by investing in location (Apalachicola Bay) branding.

Lead: ABSI CAB Successor Group	***Partners:*** Stakeholder groups, Chamber of Commerce, local government

ADDITIONAL PRIORITIZED STRATEGIES OUTSIDE OF ABSI SCOPE STRATEGIES TO SUPPORT THE LONG-TERM VIABILITY OF THE PLAN TO BE REFERRED TO OTHER PROGRAMS OR ENTITIES

PRIORITY 2 STRATEGIES

1) Work with State legislators and state agencies to develop funding strategies, and incentives for involving local watermen, seafood dealers, restaurants, aquaculture operations, and private citizens in oyster reef restoration efforts that will increase the viability of oyster resources.

- *Action 1-A.):* Identify source of shell, or other restoration material.

2) Provide training and financial support for new workforce entrants (particularly young entrants) interested in being employed in existing industries as well as and developing industries in new fisheries, aquaculture, and restoration science.

3) Develop surveys or other tools that can be used to measure and track changes in stakeholder and public understanding of the issues important to the health and restoration of the Bay.

4) Build Gulf-wide mechanism for communities interested in the restoration and revitalization of fisheries to exchange best practices and lessons learned. *[Status: this is developed through FWC]*

5) Engage the public (students, residents and tourists) in learning about the history and the ecological and economic importance of the Apalachicola Bay region, including the natural resources, and lumber, cotton shipping, and fishing industries.

Lead: ABSI CAB Successor Group	***Partners:*** Stakeholder groups, Chamber of Commerce, local government

SECTION III
STRATEGIES EVALUATED NOT ACHIEVING CONSENSUS

MANAGEMENT APPROACHES EVALUATED BY THE CAB NOT ACHIEVING A CONSENSUS LEVEL OF SUPPORT

- **Rotational Closures (e.g., summer bars vs. winter bars, partial bar closures)**
  Not supported by the CAB or the oystermen, due to support for other approaches that accomplish the goal of this approach.

- **Permanent Refuge Non-Harvest Areas (No Fishing)**
  The CAB and the oystermen noted that there are already closed areas and any additional areas, if needed for the Bay's health, should be designated in close consultation with the oystermen.

- **Reduced Bag Limits**
  There was not consensus for this approach by the oystermen or the CAB; however, there is receptivity to considering this approach if it was done correctly and the limit allowed an oystermen to make a living. This should be evaluated in relation to a limited entry approach.

- **Bag Tags**
  There was not consensus for this approach by the oystermen or the CAB; however, there was receptivity to this approach if it was done correctly and the limit allowed an oystermen to make a living.

SECTION IV
PRIORITIZED STRATEGIES, LEADS, PARTNERS, AND RESOURCES

PRIORITIZATION RANKING EXERCISE RESULTS CONDUCTED 19 OCTOBER 2021

TABLE 1 — CRITERIA CONSIDERED FOR PRIORITIZING STRATEGIES

EFFECTIVE STRATEGIES ARE URGENT TO IMPLEMENT, HAVE SUPPORT, AND ARE SMART

CRITERIA		EXPLANATION
	URGENT	Is it essential to address the issue to achieve the goals and objectives? Will things move in the wrong direction if the issue is not addressed?
	SUPPORT	There is commitment and support from key stakeholders and regulators for implementation of the *Strategy*.
S	SPECIFIC	It is detailed enough so that anyone reviewing the *Strategy* will know what is intended to be accomplished.
M	MEASURABLE	The end result can be identified in terms of quantity, quality, acceptable standards, etc. You know you have a measurable *Strategy* when it states in objective terms the end result or product.
A	ATTAINABLE	The *Strategy* is likely to be implemented, and there are resources available, or likely to become available for implementing the *Strategy*.
R	RELEVANT	The *Strategy* is relevant, and if implemented it is likely to be successful in achieving the relevant goals and objectives of the ABSI.
T	TIME-FRAMED	There are milestones with a specific date attached for completion.

TABLE 2 — PRIORITIZATION RANKING SCALE USED FOR STRATEGIES

SCALE RANGE 10 – 1 (10 HIGHEST RATING TO 1 LOWEST RATING)

RATING	EXPLANATION	RATING	EXPLANATION
10	Highest Level of Priority—Urgent/Critical	5	Medium Level of Priority
9	Very High Level of Priority	4	Medium Low Level of Priority
8	High Level of Priority	3	Low Level of Priority
7	Medium High Level of Priority	2	Very Low Level of Priority
6	Moderately High Level of Priority	1	Lowest Possible Priority—Don't Pursue

TABLE 3 — PRIORITY 1, 2, AND 3 STRATEGIES RESULTING FROM RANKING RESULTS

THE PRIORITY OF EACH STRATEGY IS DETERMINED BY THE AVERAGE RANKING SCORE FOR THE STRATEGY

RANK RANGE	EXPLANATION
10 – 8 Ranking	Strategies that achieve an average ranking of from 10 - 8 will be classified as: **Priority 1 Strategies = Important To Do Now**
7 – 5 Ranking	Strategies that achieve an average ranking of from 7 - 5 will be classified as: **Priority 2 Strategies = Important But Less Time Sensitive**
4 – 1 Ranking	Strategies that achieve an average ranking of from 4 - 1 will be classified as: **Priority 3 Strategies = As Time and Resources Allow**

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 (10, 9, 8) = Important To Do Now	
GOAL A	**GOAL B**
1.) Restore and create reef structures suitable for sustained oyster settlement that enhance ecosystem services in designated restoration areas. (#1 – 9.6) *(#1 overall rank for Goal A – 9.6 mean/average)*	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) *(#1 overall rank for Goal B – 9.3 mean/average)*
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 (7, 6, 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)
Priority 3 Strategies (4, 3, 2, 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)	

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 (10, 9, 8) = Important To Do Now	
GOAL C	**GOAL D**
1.)^ The ABSI Team and the CAB will continue to have an open and transparent process for the development of the Plan with many opportunities for stakeholder engagement and input in a variety of forums (e.g., workshops, online, public/ government meetings) for generating awareness and support while incorporating any changes the CAB deems appropriate and necessary to fulfill the goals and objectives. (#1 – 9.1) *(#1 overall rank for Goal C – 9.1 mean/ average)*	1.) Develop a Community Advisory Board (CAB) for the ABSI that provides critical information and perspective to the ABSI leadership and whose members recognize the importance of their role as ambassadors for the initiative*. (#1 – 8.9) * *Status: Initiated.* *(#1 overall rank for Goal D – 8.9 mean/ average)*
2.)^ A successor group to the CAB will be developed and in place by the time the Plan is completed*. (#1 – 9.1) * *Status: under development*	
3.) During 2021, the ABSI Team will form a sub-committee within the CAB to evaluate the efficacy of forming a CAB successor group. The intent of a successor group would be to ensure continuity between the CAB members and the agencies responsible for oyster management. (#3 – 8.8)	
4.) Create a comprehensive funding approach for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan implementation including a comprehensive analysis for future grant funding for strategies, including support for sustainable monitoring deriving from the Plan. (#4 – 8.5)	
^*Priority #1 and #2 above received the same ranking.*	
Priority 2 Strategies (7, 6, 5) = Important But Less Time Sensitive	
GOAL C	**GOAL D**
	2.) Build, with the help of the CAB, community support and stewardship by educating stakeholders on the importance of maintaining healthy oyster reefs and by engaging them in the Bay restoration through a variety of hands-on programs. (#2 – 7.7)
	3.) Support and participate in providing educational opportunities for students at all levels (primary & secondary school through college) to understand the value of their coastal ecosystems, importance of

	stewardship and the role oysters play in ecosystem health and fisheries. (#3 – 6.7)
Priority 3 Strategies (4, 3, 2, 1) = As Time and Resources Allow	
GOAL C	**GOAL D**

PRIORITY OF STRATEGIES BY GOAL AREA STRATEGIES OUTSIDE OF ABSI SCOPE	
Priority 1 Strategies (10, 9, 8) = Important To Do Now	
GOAL E STRATEGIES TO BE REFERRED	**ADDITIONAL STRATEGIES TO BE REFERRED**
1.) Engage commercial fishermen in the restoration of the bay and encourage future participation in restoration such as monitoring, shell recycling, shelling, and relaying. (#1 – 8.5) *(#1 overall rank for Goal E – 8.5 mean/average)*	
2.) Recommend monitoring and enforcement programs continue with appropriate metrics to measure output from and impact of harvest on oyster reefs. (#2 – 8.3)	
Priority 2 Strategies (7, 6, 5) = Important But Less Time Sensitive	
GOAL E STRATEGIES TO BE REFERRED	**ADDITIONAL STRATEGIES TO BE REFERRED**
3.) Coordinate with the local business community and governing bodies (i.e., city and county commissions) to ensure that growth management plans, land use and development regulations meet strong standards that are compatible with and minimize the environmental impact of industry and business activities within the ABS and are conducive to a healthy ecosystem. (#3 – 7.2)	1.) Work with State legislators and state agencies to develop funding strategies, and incentives for involving local watermen, seafood dealers, restaurants, aquaculture operations, and private citizens in oyster reef restoration efforts that will increase the viability of oyster resources. (#1 – 7.7) *(#1 overall rank for Referred Strategies – 7.7 mean/average)*
4.) Coordinate with and encourage recreational businesses and activities that recognize the importance of and support a sustainable commercial oyster fishery and the importance of the seafood industry to the Region's cultural heritage. (#4 – 6.9)	2.) Provide training and financial support for new workforce entrants (particularly young entrants) interested in being employed in existing industries as well as and developing industries in new fisheries, aquaculture, and restoration science. (#2 – 6.4)
5.) Work with existing partners (e.g., the Chamber of Commerce, Apalachee Regional Planning Council, and city and county staff) to monitor and report on the economic benefits of a restored ABS, including key economic indicators relevant to the commercial oyster fishery and associated industries in the region. This can be displayed as a dashboard that includes key economic indicators over time based on	3.) Develop surveys or other tools that can be used to measure and track changes in stakeholder and public understanding of the issues important to the health and restoration of the Bay. (#3 – 6.3)

restoration efforts in the Apalachicola Bay System (ABS). (#5 – 6.8)	
6.) Support planning tied to economic indicators that consider future conditions (climate, SLR, reduced river flow) and their effects on the ABS. (#6 – 6.6)	4.) Build Gulf-wide mechanism for communities interested in the restoration and revitalization of fisheries to exchange best practices and lessons learned. (#4 – 6.0)
7.) Review land development regulations to provide flexibility while supporting and enhancing efforts to maintain and revitalize working waterfronts in Apalachicola and Eastpoint to ensure preservation of Franklin County's cultural heritage and a viable seafood industry. (#7 - 6.5)	5.) Engage the public (students, residents and tourists) in learning about the history and the ecological and economic importance of the Apalachicola Bay region, including the natural resources, and lumber, cotton shipping, and fishing industries. (#5 - 5.3)
8.) Work with oystermen and other community stakeholders to promote post-recovery Apalachicola oysters. (#8 – 6.2)	
9.) Develop complementary industries in wild oyster harvest and oyster aquaculture that provide new economic opportunities by building a network of experts that can help Franklin County citizens build successful programs through business training, identifying sources of funding for equipment, and developing products that will enhance and diversify local industries. (#9 – 6.0)	
Priority 3 Strategies (4, 3, 2, 1) = As Time and Resources Allow	
GOAL E STRATEGIES TO BE REFERRED	**ADDITIONAL STRATEGIES TO BE REFERRED**
10.) Develop new markets for selling oysters to areas within and outside of Florida in part by investing in location (Apalachicola Bay) branding. (#10 – 4.5)	

STAKEHOLDER RESOURCES AVAILABLE AND COLLABORATION INITIATIVES IN SUPPORT OF ABSI
UPDATED 16 NOVEMBER 2021

ORGANIZATION	RESOURCES AVAILABLE AND COLLABORATION INITIATIVES
Riparian County Stakeholder Coalition (RCSC)	• Staff assistance (Ken Jones, coordinator and engineer). • Request funds from the 6 RCSC counties for funding specific stipulated projects. • Established working stakeholder relationships including working with the Apalachicola-Chattahoochee-Flint Stakeholders (ACFS) group on a Sustainable Water Management Plan for the equitable distribution of water to the Basin. • Collaborating with the ABSI on water flow metrics development in the Basin. • Working with stakeholders including Tri-Rivers Commission on navigation issues for the tri-rivers region (ACF).
Florida Fish and Wildlife Conservation Commission (FWC)	• Implementing Bay oyster restoration project funded by NFWF. • Potential funding for future smaller restoration projects. • Restoration design and monitoring assistance. • Collaborating with the ABSI on water flow metrics development in the Basin. • Science, data, and research support.
City of Apalachicola	• Committed to serving on the ABSI CAB for at least 4 more years to help guide the development of the Bay Management Plan. • Help with convening the CAB Successor Group that will help oversee the implementation of the Bay Management Plan. • Agree to uphold current local regulations that help ensure Apalachicola Bay is free of pollution and allows commercial fishermen to use city boat ramps to access the water.
Apalachicola Riverkeeper	• Nimble and can move fast to take action as needed. • Assist with public outreach initiatives including meeting with and educating stakeholders on issues. • Provide field trips to take stakeholders and decision-makers to see locations and issues in the field. • Social media support and communications. • Assist with collaborative initiatives such as working and coordinating with existing partners including Apalachicola-Chattahoochee-Flint Stakeholders (ACFS) and the Riparian County Stakeholder Coalition (RCSC). • Working on watershed restoration initiatives including the current Apalachicola River Slough Restoration project that also includes collaborating with ANERR and other stakeholders. • Share science and data with stakeholders.

Florida Department of Agriculture and Consumer Services (FDACS)	• Assist with collaboration and communication between stakeholders. Staff assistance. • Field office and laboratory support. • Provide data and research including water quality sampling data and monitoring.
The Pew Charitable Trusts	• Working on various management plans across the Region. • Working with National Estuarine Research Reserves (NERR) across the Country • Resources including staffing, funding, research, and data. • Committed to funding the facilitation of ABSI for initial part of Phase IV. • Committed to the development of a broader state-wide oyster management plan. • Committed to staying involved in the development and implementation of the ABS Plan. • Staff to assist with communication, analysis of data and issues, social media and blogs. • Committed to working and communicating with other stakeholders including The Nature Conservancy (TNC). • Pew has an extensive network of stakeholder partners and a national presence. • Assist with funding for projects and in identifying other funding sources. • Funding of economic assistance initiatives such as purchasing farm-raised oysters for restoration projects.
Water Street Seafood	• Operational oyster processing house. • Water-side facilities and dock to assist with the project. • Can provide oyster shells at market price or donate on a limited basis. Have experienced staff that could assist.
Apalachicola National Estuarine Research Reserve (ANERR)	• Research and monitoring support. • Education, outreach, and training support. • Education to local schools. • Opportunities working with the Conservation Corps of the Forgotten Coast. • Aquaculture education grants. • Relationships and working with agencies. • Working with partner agencies to receive NOAA funding. • Mapping support from existing coastal mapping program, and that could be potentially developed into a single state-wide GIS layer.

STRATEGIES AND ACTIONS WITH PROPOSED LEADS, PARTNERS, AND RESOURCES

The following table is for illustrative purposes, and discussion and completion of this table is planned for Phase IV of the CAB process.

GOAL A: ECOLOGICAL/RESTORATION PRIORITY 1 STRATEGIES/ACTIONS	LEAD/PARTNERS	RESOURCES
Strategy 1.) Restore and create reef structures suitable for sustained oyster settlement that enhance ecosystem services in designated restoration areas.	**Lead:** FWC/FWRI **Partners:** FSU, UF, local Gov., FDOT, NGOs, coastal property owners, CAB Successor Group	Student help from universities (FSU/UF)
Action 1-A.): Design and implement projects to achieve multiple ecosystem service targets (e.g., commercial and recreational fishing, shoreline protection).	Same as above and oystermen	Same as above
GOAL B: SUSTAINABLE MANAGEMENT PRIORITY 1 STRATEGIES/ACTIONS	**LEAD/PARTNERS**	**RESOURCES**
Strategy 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.	**Lead:** FSU/UF **Partners:** FWC, stakeholders	Student help from universities (FSU/UF)
GOAL C: MANAGEMENT & RESTORATION PLAN PRIORITY 1 STRATEGIES/ACTIONS	**LEAD/PARTNERS**	**RESOURCES**
Strategy 1.) The ABSI Team and the CAB will continue to have an open and transparent process for the development of the Plan with many opportunities for stakeholder engagement and input in a variety of forums (e.g., workshops, online, public/ government meetings) for generating awareness and support while incorporating any changes the CAB deems appropriate and necessary to fulfill the goals and objectives.	**Lead:** FSU **Partners:** CAB, CAB sub-committee, other stakeholders	Initiated
GOAL D: ENGAGED STAKEHOLDER COMMUNITY PRIORITY 1 STRATEGIES/ACTIONS	**LEAD/PARTNERS**	**RESOURCES**
Strategy 1.) Develop a Community Advisory Board (CAB) for the ABS Initiative that provides critical information and perspective to the ABSI leadership and whose members recognize the importance of their role as ambassadors for the initiative.	**Lead:** CAB Community Outreach Subcommittee **Partners:** FSU, CAB, CAB Successor Group, ABS stakeholders	Initiated
GOAL E: THRIVING ECONOMY PRIORITY 1 STRATEGIES/ACTIONS	**LEAD/PARTNERS**	**RESOURCES**
Strategy 1.) Engage commercial fishermen in the restoration of the bay and encourage future participation in restoration such as monitoring, shell recycling, shelling, and relaying.	**Lead:** CAB Successor Group **Partners:** Stakeholder groups, Chamber of Commerce, local government	TBD

SECTION V
PERFORMANCE MEASURES
METRICS ASSOCIATED WITH OBJECTIVES (TO MEASURED ANNUALLY) AND ESTUARINE METRICS

PERFORMANCE MEASURES: The regular measurement of outcomes and results, which generates reliable data on the effectiveness, efficiency, and sustainability of programs and plans. The decision support tools will be used when available to forecast results that will help weigh the potential outcomes of different strategies.

PERFORMANCE MEASURES	
GOAL A—A HEALTHY AND PRODUCTIVE BAY ECOSYSTEM	
OBJECTIVES	**RECOMMENDED METRICS**
A1) To use observations, monitoring, experiments and modeling conducted through ABSI and related efforts to create decision support tools that can inform how a range of natural and human influenced factors will affect the ABS ecosystem. **Goal for Objective A1: User-friendly informative decision support tools available to ABS resource managers.**	• Oyster population dynamics (recruitment, growth, mortality, shell budgets). • River flows under climate and management scenarios (River flow model). • Current speed and direction and particle trajectories (proxy for larval dispersal), under different river flow, tidal and wind-forced scenarios (hydrodynamic model). • Temperature, salinity, oxygen, pH, nutrients and organic carbon dynamics under different climate and management scenarios (combined river flow and hydrodynamic models). • Reef area and height (total area of patches of living and nonliving oyster shell or substrate with and without live oysters). • Area and distribution of suitable oyster habitat (from predictive habitat models) for current and future conditions.
A2) To help establish a comprehensive monitoring plan to evaluate the health of the ABS oyster resource and its measurable ecosystem services with clearly defined performance measures and strong coordination among the various entities conducting research in the region.	• Regularly updated maps of intertidal and subtidal reefs • Oyster recruitment rates • Density (#/m^2) of live and dead oyster juveniles (<25mm), sub-adults

Goal for Objective A2: A monitoring plan approved by stakeholders and resource management.	(26-75 mm) and market size (> 76 mm) adults. • Oyster size-frequency distribution (using shell height) (mm) • Reproductive status • Condition index • Pest and predator prevalence • Disease prevalence • Environmental variables (temperature, salinity, oxygen, turbidity, pH, nutrients)
A3) To use existing and new research, and decision support tools to identify viable strategies for restoration and management of the ABS oyster resources and the function of the ABS ecosystem. **Goal for Objective A3: Management and restoration plan that increases ecological function of oyster reefs in the ABS.**	• Understanding of optimal restored reef, placement, dimensions and materials. • Identification of optimal locations for broodstock reefs (areas closed to harvest). • Increase density of legal oyster populations on both restored and non-restored reefs (#/m^2).to at least 100 m^3 (levels observed in 2000). • Statistically significant increase (over current conditions) in diversity and abundance of ecologically- and economically-important species (resident and transient). • Maintenance of sufficient live oysters and dead shell to sustain a healthy oyster reef ecosystem.
A4) To define measurable ecosystem services that can be used to determine the level of change in ecological health (e.g., oyster fishery harvest, habitat for other fishery species, abundance and condition indices for oyster reef and population health) and societal benefit derived from Apalachicola Bay System management and restoration efforts, with target and threshold levels identified. **Goal for Objective A4: Improved oyster reef ecosystem services for the ABS.**	• Change in the amount of shoreline habitat that is protected (Goal: increase in shoreline extent, elevation, marsh cover). • Change in the amount of sustainable wild oyster harvest that is supported by restored oyster populations. • Improved recreational and commercial fisheries of oyster-reef related species (stone crab, sheepshead, drum). • Improved water clarity in the vicinity of restored oyster reefs.

GOAL B—SUSTAINABLE MANAGEMENT OF OYSTER RESOURCES	
B1) To develop through a transparent and inclusive process a science-based ABS oyster recovery and adaptive management plan for both commercial and recreational industries that includes: broad stakeholder and community support; a long-term, comprehensive monitoring plan that will be carried out by state agencies and their contractors; a regulatory framework that allows for rapid modifications when needed to address changing environmental conditions; and enforceable regulations that contain penalties sufficient to deter violations and harm to the resource. It is imperative that this Plan be constructed with the direct involvement of entities within the State of Florida (e.g., FWC, FDACS, State Legislature) in cooperation with other relevant agencies to enhance the likelihood of its implementation. **Goal for Objective B1: A stakeholder supported adaptive management plan for the ABS.**	• Establish sustainable allowable catch in total biomass (kg), including harvest rate and shell budgets. • Incorporate commercial and recreational harvest in oyster stock assessment model for ABS. • Model different adaptive management approaches, to promote sustainability of the fishery, and long-term planning and investment by harvesters and dealers. • Assign some existing reefs as broodstock reefs that are closed to harvest • FWC law enforcement increases presence during oyster open season, and develops appropriate penalties for regulation violations • FWC establishes a long-term state-wide oyster monitoring program
B2) To make recommendations to FDACS for oyster aquaculture best management practices that allow for the unimpeded recovery of oyster reefs, the oyster fishery, and the ecological and societal health of the ABS ecosystem while providing economic opportunities to the aquaculture industry. **Goal for Objective B1: Identify positive and negative interactions between oyster aquaculture and wild oyster restoration and fisheries.**	• FDACS, FWC or other entity supports studies to identify aquaculture practices that affect oyster restoration and fisheries, and other habitats within the ecosystem.
GOAL C—A FULLY FUNDED AND SUPPORTED MANAGEMENT & RESTORATION PLAN	
C1) To establish a fully funded permanent, representative stakeholder process to monitor the long-term implementation of the Plan. **Goal for Objective C1: Establish a stakeholder group to ensure community support for the management and restoration plans.**	• Creation of an ABSI CAB successor group to continue stakeholder engagement in the management and restoration process
C2) To support efforts to identify funding sources and define mechanisms for full implementation of the Plan.	• Form a small stakeholder group that will identify and obtain funding for large scale continued restoration of the ABS oyster reefs.

Goal for Objective C2: Obtain sufficient funding to implement restoration and management plans.	
GOAL D—AN ENGAGED STAKEHOLDER COMMUNITY AND INFORMED PUBLIC	
D1) To coordinate community engagement efforts to increase public awareness of and support for a healthy and well-managed ABS ecosystem; and to ensure that businesses, industries, non-profits, and local governments are supportive and included in these efforts. **Goal for Objective D1: An engaged and informed community, including K-12 and adults in the local area and beyond.**	• Number of people with improved understanding of the ecosystem services provided by oysters • Number of businesses, schools, industries, non-profits, and local governments participating in outreach efforts. • Number of volunteers participating in oyster reef restoration efforts. • Number of internship program "graduates" that enter the oyster aquaculture workforce in the ABS or other estuary in Florida. • Number of K-12 students reached by ABSI.
D2) To measure public and stakeholder understanding of the issues important to the health and restoration of the Bay and socio-economic indicators. **Goal for Objective D2: Understand stakeholder commitment to a healthy ABS ecosystem.**	• Survey of stakeholders to assess level of understanding of the ecosystem services provided by oysters, and commitment to adopting measures that improve ABS health.
GOAL E—A THRIVING ECONOMY CONNECTED TO A RESTORED ABS	
E1) To ensure that economic indicators of the commercial oyster fishery and associated industries in the ABS demonstrate increasing viability and growth. **Goal for Objective E1: Increased viability and growth of oyster fishery and associated industries.**	• Monitor economic indicators of a successful wild oyster industry, and assess causes of positive and negative trends.
E2) To ensure that industries and businesses within the ABS are compatible with a healthy and well-managed ABS ecosystem. **Goal for Objective E2: Create a decision support tool to assess the effect of ABS industries on ecosystem health.**	• Monitor metrics associated with Goal A and with objective E1 (above) to determine whether they have positive, neutral or negative interactions

E3) To develop growth management policies, plans and regulations affecting the ABS that are compatible with a healthy and well-managed ABS ecosystem while maintaining a thriving economy and supporting cultural heritage. **Goal for Objective E3: A healthy, well-managed ABS and thriving working waterfront industries.**	• Assess effect of growth management plans on ABS ecosystem health and economic growth
E4) To develop an oyster aquaculture industry that provides economic opportunities and is complementary to the wild harvest fishery. **Goal for Objective E4: Establish complementary oyster aquaculture and wild oyster harvest industries.**	• Assess economic indicators associated with aquaculture and wild oyster harvest • Assess social and economic compatibility between the two industries using stakeholder survey tools.

ESTUARINE METRICS

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.

ESTUARINE METRICS	
CATEGORY	**ASSOCIATED METRICS**
Environmental	For eastern oysters, the optimal range of salinities is 15-25 ppt and temperatures are 20-30°C. Use hydrodynamic models to estimate: • Spatial and temporal footprint of optimal salinity conditions under different flow regimes (and temperatures if possible). • Spatial and temporal footprint of unfavorable conditions (< 10 ppt, > 25 ppt) under different flow regimes. • Assess spatial and temporal footprint of potential oyster food sources (nutrients, chlorophyll, phytoplankton and particulate organic material). • Use *in situ* instruments to validate and parameterize models to increase accuracy. • Use ANERR data (current and historical) to hindcast environmental conditions (temp, salinity, oxygen, turbidity, pH, nutrients) relative to historical water flows. • Compare river flows (seasonal means and variances) and 'footprint' of optimal conditions, before and after the cessation of dredging the Apalachicola River for navigation purposes. • Model flows with theoretical no withdrawal scenario to look at just climate projections on flow.
Biological - Oysters	Measurable biological responses may be ***immediate*** (e.g., mortality in response to extreme conditions), ***delayed*** (e.g., high mortality from predation/disease in response to extended high salinities) or ***sub-lethal***

	(e.g., reduced growth in response to long-term suboptimal conditions). The following variables can be measured during monthly monitoring and results interpreted in the context of observed or modeled optimal/sub-optimal environmental conditions. Biological metrics include: • Mortality (boxes) – juveniles, sub-adults, adults. • Recruitment - river outflow can change current regime and environmental conditions, which influence larval survival, and dispersal. • Condition index – decreases under sub-optimal conditions. • Disease (Dermo) prevalence – increases in high salinity warm conditions. Primarily affects adults. • Reproductive status – can be impacted under long-term suboptimal conditions.
Ecological - Oysters	• Oyster population dynamics – number of live, dead and boxes for juvenile, sub-adult and adult oysters can identify size-related mortality events. • Use past observations on reef distribution and predictive habitat models (for climate and management scenarios) to identify optimal locations for oyster restoration. • Compare current and historical reef height and footprint to identify target reef size for restoration.
Ecological - Other Species	• Predator abundance (high salinities facilitate predators such as oyster drills, crown conch, stone crabs). • Occurrence of pests (boring sponge, blister worms) and parasites (flatworms). • Use FWC Fisheries independent monitoring data to assess distribution of fishes (and managed invertebrate species) relative to river flow and modeled/observed environmental data.

SECTION VI
TERMS AND DEFINITIONS AND ABSI BOUNDARY MAP

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.

Descriptions of "Lead" and "Partner" Roles for Implementation of Strategies and Actions
Lead: Lead entities will coordinate and guide the partners in implementing a Strategy or Action and identify other entities interested in participating. The lead will gain support from their organization for their role in implementing or supporting the Strategy or Action.
Partner: Partner entities will engage in meetings called by the Lead and actively participate in implementation of the Strategy or Action. The partners will gain support from their respective organization for their role in implementing or supporting the Strategy or Action.

APALACHICOLA BAY SYSTEM INITIATIVE BOUNDARY MAP

SECTION VII
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
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
RCSC	Riparian County Stakeholder Coalition
RPC	Regional Planning Council
SAV	Submerged Aquatic Vegetation
TNC	The Nature Conservancy
UF	University of Florida
UWF	University of West Florida

STOPLIGHT INDICATORS LEGEND FOR STATUS OF MANAGEMENT AND RESTORATION TARGETS, TRENDS, AND GOALS		
🔴	Red	Substantial deviations from restoration or management targets, creating severe negative condition that merits action.
🟡	Yellow	Current situation does not meet restoration or management targets and merits attention, or indicate improvement in trend.
🟢	Green	Situation is good and restoration or management goals or trends have been reached. Continuation of management and monitoring effort is essential to maintain and assess "green" status.

ATTACHMENT 8
ABSI OVERARCHING MESSAGE INITIAL IDEAS

ABSI OVERARCHING MESSAGE INITIAL IDEAS

Initial ideas for an overarching message that would resonate with the ABS Community and solicit action toward implementation of the Plan.

At the 19 October 2021 meeting CAB was asked to report their ideas for crafting an overarching message with aspirational goals that would resonate with the ABS Community toward fostering support and action toward implementation of the Plan. A rallying call to energize people around implementation of the ABSI Plan. Following are the preliminary comments:

- Keep the message simple and clear: "restoring the Apalachicola Bay oyster fishery." Need to focus message on restoring the oyster fishery with all of the economic benefits and cultural components. Oysters are the lifeblood of Franklin County. "Restore the Bay." Franklin County is known for oysters.
- Money was given to restore the fishery, so it is important to emphasize the central feature of oyster restoration in the effort.
- "Bringing back Apalachicola Bay oysters."
- Broaden focus to include other species such as shrimp and reef fish. Highlight the connection of the abundance of seafood to the health of the Bay. Include the importance of the health of the Bay to recreational activities.
- Broaden the message to make it less oyster-centric. Need to take in (engage) people outside of the Bay.
- Message should resonate with all communities.
- "A healthy Bay = abundant oysters and a thriving community." Broaden the message out.
- "Take care of Bay and it will take care of us." The health of the Bay is good for all of use. Message should convey why it is important to restore the health of the Bay.
- Communicate the habitat and ecosystem services component of the role of oysters and the role in having thriving fisheries and economy.
- Oysters critical to the local Community; the message should not be "diluted" by inclusion of other species and elements.
- Need several messages for different audiences targeted to them.
- The local vs. outside target audiences issue complicates the discussion. Need more discussion.
- This issue needs additional discussion between stakeholders.

The overarching messaging discussion will continue during Phase IV of the ABSI project.