APALACHICOLA BAY SYSTEM INITIATIVE (ABSI)

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

ABSI COMMUNITY ADVISORY BOARD (CAB)

MEETING 6 OF PHASE IV — WEDNESDAY, NOVEMBER 30, 2022 — 8:30AM

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

ABSI COMMUNITY ADVISORY BOARD MEETING OBJECTIVES

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

ABSI COMMUNITY ADVISORY BOARD AGENDA

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

1)	**8:30am**	**WELCOME AND ROLL CALL**
2)	**8:35**	**SOCIAL SCIENCE SURVEY**
3)	**8:40**	**AGENDA REVIEW AND MEETING OBJECTIVES**
4)	**8:45**	**APPROVAL OF FACILITATOR'S CAB (October 18, 2022), OYSTERMEN'S WORKSHOP (October 18, 2022), AND COMMUNITY WORKSHOP (October 19, 2022) SUMMARY REPORTS**
5)	**8:50**	**REVIEW OF UPDATED PROJECT MEETING SCHEDULE AND WORKPLAN, AND PHASE V (2023) SCHEDULE AND WORKPLAN *(Attachment 3)***
6)	**9:00**	**SCIENCE AND DATA COLLECTION, AND RESTORATION UPDATES** • *ABSI Science and Data Collection Update.* Sandra Brooke, FSUCML (25) • *FWC (NFWF Phase 2) Restoration Project Update.* Devin Resko, FWC (10)
7)	**9:35**	**WORKING GROUP AND SUBCOMMITTEE UPDATES** • *Successor Group Subcommittee Update.* Anita Grove and Shannon Hartsfield (Pending) • *Restoration Funding Working Group Update.* Joel Trexler (5) • *Community Outreach Subcommittee Update.* Chad Hanson (10)
8)	**9:50**	**DISCUSSION OF OYSTERMEN'S WORKSHOP AND COMMUNITY WORKSHOP INPUT** • Review and Discuss Feedback from Workshops *(Attachment 4)*
~10:10am		***BREAK***
9)	**10:30**	**OVERVIEW, DISCUSSION, AND ACCEPTABILITY RATING OF THE RESULTS OF SCENARIOS (STRATEGIES) SIMULATED (MODELED) WITH THE FISHERIES MODEL *(Attachment 4)***

~12:00pm		***LUNCH — ON CAMPUS***
9)	**12:30**	**OVERVIEW, DISCUSSION, AND ACCEPTABILITY RATING OF THE RESULTS OF SCENARIOS SIMULATED WITH THE FISHERIES MODEL — CONTINUED**
10)	**1:10**	**IDENTIFICATION OF SCENARIOS FOR NEXT ROUND OF MODELING INCLUDING: COMBINATIONS OF SCENARIOS, NEW SCENARIOS, AND ANY SCENARIOS TO BE REMOVED FROM FURTHER EVALUATION *(Attachment 4)***
11)	**~2:10pm**	**PUBLIC COMMENT — THREE MINUTES PER PERSON**
12)	**~2:25**	**ACTION ITEMS AND AGENDA ITEMS FOR NEXT MEETING (Feb. 1, 2023)** • Review of Action Items and Assignments from Meeting • Identify Agenda Items, Presentations, and Information Needs for Next Meeting • Complete Meeting Evaluation
~2:30pm		***ADJOURN***

PROJECT RESOURCES AND CONTACTS

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

PROJECT EMAIL: fsucml-absi@fsu.edu

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

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

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

TABLE OF AGENDA PACKET ATTACHMENTS

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

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

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

ATTACHMENT 2
CAB PARTICIPATION PROCEDURES AND GUIDING PRINCIPLES

CAB PARTICIPATION PROCEDURES

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

CAB GUIDING PRINCIPLES

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

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

WE WILL BE SUCCESSFUL AND HAVE GOOD CONVERSATION WHEN:

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

ATTACHMENT 3
ABSI CAB PROJECT MEETING SCHEDULE AND WORKPLAN

UPDATED AS OF THE 30 NOVEMBER 2022 CAB MEETING

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

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

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

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

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

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

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

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

Dec. 2021 – Dec. 2022 (6 CAB Meetings, 1 Oystermen's Workshops, and 1 Community Workshop)

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

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

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

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

3. **CAB SUCCESSOR GROUP.** The CAB Successor Group will be ready to convene when the CAB completes their work on the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan. The Successor Group's role will be to organize a group of key stakeholders committed to working collaboratively for the long-term, once the CAB process is complete and to ensure that the Plan is implemented, monitored, and adaptively managed over time and has the support of the Community. The CAB Successor Group process will formally initiate January 2024. ***Status Organizing. Formal Convening Pending CAB Approval of Recommendations for Plan on 29 November 2023.***

Meeting 5. ANERR	**October 18, 2022** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Oystermen's Community Workshop 1	**October 18, 2022** ANERR	Oystermen's Feedback on ABSI Restoration Experiments, FWC Restoration Project, and Potential Management Scenarios for Modeling.
Community Workshop 2	**October 19, 2022** Eastpoint Firehouse	Community Feedback on ABSI Restoration Experiments, FWC Restoration Project, and Potential Management Scenarios for Modeling.
Meeting 6. ANERR	**Nov. 30, 2022** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Community Workshops input. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
PHASE V CAB MEETINGS — 2023		
Meeting 1. ANERR	**Feb. 1, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	Initiation of Phase V of ABSI. ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Meeting 2. ANERR	**April 12, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Community Workshop 1	**April 12, 2023** ANERR 6:00pm – 8:00pm	Community Input on ABSI Restoration Experiments, FWC Restoration Project, and Proposed Management Scenarios for Modeling.
Meeting 3. ANERR	**May 31, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Community Workshop input. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.

Meeting 4. ANERR	**July 26, 2023** • Fisheries model simulation results & scenarios refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Community Workshop 2	**July 26, 2023** ANERR 6:00pm – 8:00pm	Community Input on the CAB's recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
Meeting 5. ANERR	**Sept. 27, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Community Workshop input. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Community Workshop 3	**October 24, 2023** ANERR 6:00pm – 8:00pm	Community Input on the CAB's recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
Meeting 6. ANERR	**Nov. 29, 2023** • **Adopt Final CAB Recommendations for ABS Plan**	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Community Workshop input. Finalize and adopt recommendations for strategies and actions (components) for inclusion in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan) and submit to FSUCML. Public comment.

ATTACHMENT 4
AGENDA ITEMS BACKGROUND INFORMATION — 30 NOVEMBER 2022

AGENDA ITEM #8 — OYSTERMEN'S WORKSHOP AND COMMUNITY WORKSHOP INPUT

Review and Evaluate Workshops Input

ABSI Restoration Experiments Input – Oystermen's Workshop

- Put #57 rock on Cat Point with poor results. SB: Small rocks compact while big rocks create gaps where small oysters are sheltered.
- Big rocks can't wash away. There is little growth on fossilized rock.
- SB: Should we use concrete (using 4" – 6")? Answer: Yes you should try it.
- Evaluate whether something in the Bay is killing the oyster.
- Concrete is worth considering for the experiments.
- Should contact the railroad companies about reusing the granite use for the track bed.

ABSI Restoration Experiments Input – Community Workshop

- Does not think lime rock should be used in the Bay. Rocks when thrown back in water after harvest damage reefs. Prefers concrete or other materials. Rocks are too heavy.
- Concrete should be tried.
- What about using spat on shell? SB: ABSI is experimenting with spat on shell and with seed and adults.
- Scatter different types of materials all over the place. There are areas where the natural bottom does not support oyster settlement.
- One tong lick sampling may not be representative of how many oysters there are ? SB: Some areas have dense shell hash. We also dive to verify results.
- We had oyster shell being deposited all the time in the past. When it stopped, oysters went down. JB: This is one of the management strategies recommended by the CAB, continuous restoration. JB: Funding will be needed to restart shelling.
- Have you considered spat and seed predators. SB: We don't see black drum but we do see oyster drills. FWC does look at drills and disease.
- Sampling. Questions about tonging deep enough to bring up the oysters. SB: Describes the tonging procedure so that the tong penetrates into the mud layer underlying the layer of oysters, shell, rocks.
- Black drum are feeding on oysters. They are not here now but they can migrate back. The black drum attack spat. SB: ABSI has tried caging experiments to counter predation.
- We would limit to eliminate the limits on black drum so they are reduced and cause less predation of the oysters.
- I like the experiments, but sediment is killing off the spat. If we were able to work the oyster reefs to break up the burrs this could lead to harvestable oysters. SB: Actually we like to see burrs, they protect the spat so they can grow.
- Small clam shells worked as substrate. SB: Shells do not last.
- What is the reason for the Bay closure? SB: There were insufficient oysters to sustain fisheries.
- The material deployed in the past should have been shells, we have to get the shell back.

- What about a shell buy-back program? SB: We cannot get enough shell to do restoration on the scale we are working on. We could put a foundation down (substrate) and then put shell on top of it.
- We could gradually stockpile shell.
- Will we be able to harvest the restoration sites? DR: This has not been determined, but it is unlikely reefs would be closed. FWC will listen to feedback before making any decisions.

FWC-NFWF Restoration Project Input – Oystermen's Workshop

- Your sampling methods may be missing sites that have oysters. DR: We welcome your input on sites that may have been missed.
- Have the "Miles" been mapped? SB: the "miles" have not been mapped. DR: We will follow up on these sites.
- Do not put large rocks on natural reefs which already have good substrate (foundation).
- Possibly layer tongable rocks on top of the large rocks.
- DR: Where should we put the restoration. Off Cat Point, anywhere there are no oysters.
- Try to move beds closer to the River.
- Focus on Cat Point and Peanut Ridge.
- Take a look at Paradise, and over at the areas where the farms are located.
- There are a lot of oysters on Cat Point, we want to open up the Bay.
- SB: how do you know there are oysters? We'd like the ability to monitor the Bay. We know how to fix it and let us do it. We are willing to accept summer closures.
- The Bay needs to be worked like a garden and not left alone.
- JB: What do think about active management plans? Response: Seems hard to enforce. JB: such as the Alabama model. Response: The old system in the Bay works great, we don't want a grid system.
- JB: What about a put-and-take fishery? I don't think on-going restoration needs to be done.
- Poaching would take place on the sites.
- Historically shells were deployed on a regular basis but this practice ended, why?
- SB: How would you feel about people from out of county coming to harvest in AB? Limited entry would reduce this.
- We could have a low bag limit and work days adjusted to price/bag. This could provide a stable income.
- We would like to be able to monitor the Bay. DR: If you want to collect data, it is possible to obtain a special activity license.
- Some oystermen lack confidence in the data collectors.
- Would like to restrict people from outside the county from oystering in the Bay.
- We are losing are Restricted Species Licenses since we can't oyster and prove income and landings.
- DR: FWC is looking at individuals with restricted species licenses to see how they can keep their licenses with limited oyster landings.
- Restrictions on fishermen have limited options for making a living. We are forced to find other sources of income. Even hardcore fishermen are having trouble keeping their licenses.
- We know the bay is getting better, and we are going to monitor it ourselves.

FWC-NFWF Restoration Project Input – Community Workshop

- For the $20M NFWF funding oystermen could put a lot of shell out into the Bay. DR: NFWF is driving the process. $3M went into obtaining important data needed for restoration success.
- I don't think any rocks should be put out in the Bay. There are plenty of shells out there. SB: We need enormous amounts of shell for restoration. One option is to put rock down and layer shell on top of it. DR: NFWF is asking for data and shell may emerge as a viable option. SB: We need material that will stay around for any long-term success.
- When there was barge traffic there were 4 spat sets per year, but now we have 1-2 sets per year. SB: Discussion of water flow has not been part of the current evaluation. DR: FWC is looking at spat settlement and funding is available to put instruments out.
- Thinks oysters only grow on the shell. Lime rock changes chemistry of Bay.
- I think all shells should be returned to the Bay. The shells should be put back.
- On the south side the bottom is solid so material when deployed will not sink in. DR: We will bring maps to next CAB for oystermen to mark locations.
- Have you checked out north of the bridge? East bay? This is the closest area to the river. SB: There is a little patch NE of bridge and there is a foundation there for oyster settlement. This might be a good site for restoration, north of the bridge.
- What are the timelines for the pilot project? DR: 12-18 months of collecting data. SB: We will conduct continuous monitoring to see what works best to get oysters to market size. The shells got scattered even though mound was 12" tall.
- Why not hire oystermen to help with restoration? SB: We hired oystermen to deploy restoration materials, and we will do so for the next restorations as well.
- Have you determined where to deploy materials? DR: We are working on it and would like input from oystermen before deciding. SB: Are the areas you mentioned part of summer bars? Yes, they get closed periodically due to high river levels.
- Out of a 12 month season we might fish 7-9 months, about 2 ½ weeks per month due to closure for water quality issues.

Management Options Input – Combined from Both Workshops

A) An Active harvest management scenario similar to the AL approach using monitoring and an oyster abundance minimum density threshold.

- Opinions were varied. Some supported this option and others were opposed to using grids to designate open areas and wanted the entire Bay open for all months except a summer closure of from June – August.

B) Different management strategies under a range of different assumptions to see what works best.

- There was general support for this approach.

C) A put-and-take sustainable wild oyster harvest fishery.

- There was generally support for this option.

D) Restoration approaches using data from the restoration projects and the restoration experiments and pilot projects (specific locations, size, height/spatial configurations, type of cultch material, density of cultch, etc.).

- There was generally support for this option.

E) Limited entry commercial oyster fishery.

- There was some support for this option; however, most were strongly opposed to this management approach.

F) A combination of limited entry and active management.

- Most were not in support of this approach; however, some felt this was a good strategy.

AGENDA ITEM #9 — MODELED SCENARIOS

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

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

- Model a summer oyster fishery closure of June-August.
- New Scenario: Ongoing shelling and restoration (Oyster Repletion Program/Put-and-Take).
- Stochasticity—adding randomness (events) to the model.
- Run a Sensitivity Analysis to change the slope of the Depensation Curve (Standard Deviation) to see what happens (shell dynamics oyster simulations - relationships).
- Combination of management strategies with above scenarios (i.e., active management, open fishery, limited entry, seasons).
- Work on improving model scaling.

GOAL B — SCENARIOS APPROVED BY CAB FOR MODELING

- Limited Entry Fishery - Number of entrants would vary with harvest level and process developed in consultation with stakeholders.
- Bay-wide summer harvest closure (June-August).
- All legal and FDACS approved harvest areas would be open during harvest season.
- Monday-Friday harvest week with daily bag limits.
- Recreational harvest limit with same season and gear as commercial harvest.
- Establish/enforce 5% undersize oyster limit for harvesters and dealers.
- Implement stock-based temporary harvest closures, informed by regular stock assessments.
- Implement annual stock assessment in collaboration with fishers to establish sustainable level of harvest for the season.
- Establish permanent closed areas (broodstock reefs).
- Evaluate cost-effectiveness of a put-and-take fishery (i.e. re-shelling program).
- Work with FWC Law Enforcement to develop strategies and penalties for violation of regulations.

FUTURE SCENARIOS AND ASSUMPTIONS FOR MODELING

Near-Term Suite of Scenarios to Model:

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

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

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

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

ATTACHMENT 5
CURRENT AND FUTURE SCENARIOS AND ASSUMPTIONS FOR MODELING

CURRENT MANAGEMENT SCENARIOS AND ASSUMPTIONS FOR MODELING

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

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

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

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

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

Modeled Simulations Include:

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

- Discard mortality applied to oysters captured but not harvested.
- Potential for density dependent catchability which there is some evidence may occur.

** The models still include shell budget information.*

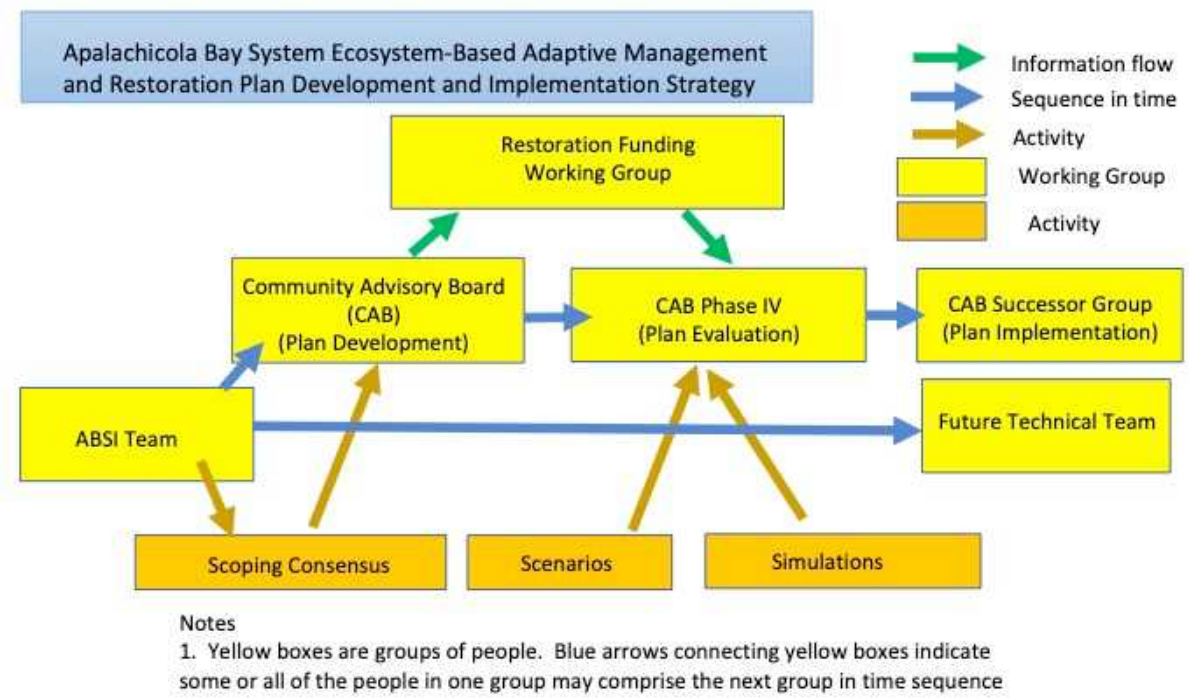
ASSUMPTIONS. The CAB agreed to the following assumptions for use in evaluating the scenarios:

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

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

ATTACHMENT 6
PROJECT FLOWCHART, MISSION AND GOAL STATEMENT, & PROJECT SUMMARY

ABSI CAB PROCESS FLOWCHART AND PROJECT AREA MAP



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

ABSI Project Area Map

ABSI Mission Statement, Project Summary, and CAB Goal Statement

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

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

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

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

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

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

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

ATTACHMENT 7
COMMUNITY ADVISORY BOARD CONSENSUS BUILDING PROCESS
(ADOPTED UNANIMOUSLY OCTOBER 30, 2019)

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

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

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

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