APALACHICOLA BAY SYSTEM INITIATIVE

COMMUNITY ADVISORY BOARD

OYSTERMEN'S WORKSHOP — 18 OCTOBER 2022

FACILITATOR'S SUMMARY REPORT

APPROVED UNANIMOUSLY 30 NOVEMBER 2022

APALACHICOLA NATIONAL ESTUARINE RESEARCH RESERVE
EASTPOINT, FLORIDA

MEETINGS FACILITATED AND SUMMARIZED BY JEFF A. BLAIR

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OVERVIEW OF OYSTERMEN'S WORKSHOP

TUESDAY, OCTOBER 18, 2022

I. WORKSHOP SUMMARY AND OVERVIEW

At the 18 October 2022 Oystermen's Workshop the Apalachicola Bay System Initiative (ABSI) Community Advisory Board (CAB) conducted the first in a series of Community Workshops planned for Phases IV and V of the ABSI project. The Oystermen's Workshops was convened for the purpose of seeking their feedback on restoration experiments and projects, and on a variety of possible management scenarios for modeling using the Fisheries (Socioecological) Model developed by Ed Camp of the University of Florida. The Workshop was conducted at the Apalachicola National Estuarine Research Reserve for invited oystermen, and virtually for all other participants.

During the Workshop the oystermen: were provided an overview of the Project Workplan and Schedule; received an update and provided feedback on ABSI restoration experiments; received an update and provided feedback on the FWC NFWF funded restoration project; and received an overview and provided feedback and input on a suite of possible management scenarios for modeling.

II. Welcome and Introductions

Jeff Blair, ABSI CAB Facilitator, opened the Workshop at 6:00 PM and welcomed all participants. Each oysterman was invited to provide their names and their role in the oyster fishery.

III. Workshop Participation

The following Apalachicola Bay oystermen participated in the Tuesday, October 18, 2022 workshop conducted in-person at the Apalachicola National Estuarine Research Reserve in Eastpoint, Florida:

Jonny Chambers, Ronnie Gilbert, Abe Hartsfield, Shannon Hartsfield, Brett Lolley, Matt Polous, and Wayne Williams.

Project Team Members Participating

Jeff Blair, Sandra Brooke, Ross Ellington, Jared Fuqua, *Madelein Mahood virtually*, and Joel Trexler.

(Attachment 1 — Workshop Participation)

Meeting Facilitation

Meetings and workshops are facilitated and reported on by Jeff Blair of Facilitated Solutions, LLC. Information at: http://facilitatedsolutions.org.

Project Webpage

Information on the Apalachicola Bay System Initiative project and the Community Advisory Board, including agenda packets, meeting reports, draft Plan frameworks, and related documents may be found at the ABSI CAB Webpage. Located at the following URL:
https://marinelab.fsu.edu/the-apalachicola-bay-system-initiative/

IV. Workshop Objectives

Jeff Blair reviewed the Workshop objectives as follows:

- To receive an update on the Project Workplan and Schedule.
- To provide update and receive oystermen's feedback on ABSI restoration experiments.
- To provide update and receive oystermen's feedback on FWC restoration project.
- To provide an overview and receive oystermen's feedback on potential management scenarios for modeling.
- To review next steps.

(Attachment 2—Workshop Agenda)

Oystermen's Workshop 18 October 2022 – ANERR

V. REVIEW OF UPDATED PROJECT WORKPLAN AND SCHEDULE

Jeff Blair provided the Workshop's participants with a review of the updated Project Workplan and Schedule and answered members' questions. The 18 October 2022 CAB meeting represented the CAB's fifth meeting of Phase IV which focused on the evaluation of the Draft Adaptive Management and Restoration Plan Framework's prioritized restoration and management strategies, restoration projects selection and implementation, and funding planning.

The CAB will work with 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 Apalachicola Bay System Initiative's overarching goal of restoring the health of the Apalachicola Bay System.

In addition, Phase IV includes a significant public engagement initiative. The next CAB meeting is scheduled for 30 November 2022. Jeff reported as follows:

- At the October meeting the CAB evaluated an initial set of modeled scenarios (strategies) towards the goal of determining the best combination to achieve restoration and management objectives for the Bay using decision support tools including predictive models generally, and the Fisheries (Socioecological) Model specifically, coupled with available and emerging data and research. The CAB will vet their draft recommendations with restoration and management agencies, evaluate the priority and efficacy of

strategies and actions, and identify specific recommended restoration projects and management approaches.

- The CAB's Community Outreach Subcommittee has initiated a community feedback initiative by soliciting and reviewing community input on the Plan Framework. The Community Outreach Committee will continue to communicate and meet with community stakeholders providing them with information and updates regarding the purpose and progress of the Apalachicola Bay System Initiative. The CAB's prioritized strategies are being vetted with the larger ABS community through multiple formats including a questionnaire administered through a variety of methods including Facebook, online via the ABSI website, and direct mailings. In addition, public workshops are being scheduled and will be held in-person.
- The CAB is planning for transitioning to a Successor Group whose role will be to organize a group of key stakeholders committed to working collaboratively for the long-term once the CAB process is complete. The CAB Successor Group will ensure that the Plan is implemented, monitored, and adaptively managed over time with the support of the Community. The CAB is scheduled to finalize their recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan at the 29 November 2023 meeting, and the CAB Successor Group is anticipated to formally convene in early 2024.
- In addition, the FSU ABSI Project Team continues to work with the Restoration Funding Working Group to seek resources and political, governmental, and organizational support for the CAB's priority recommendations.

Jeff reported that Phase V (2023) will consist of six meeting and conclude with the final CAB meeting on 29 November 2023 when the CAB will adopt their final package of recommendations for inclusion in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan. The CAB Successor Group is expected to initiate in early 2024 to ensure that the Plan is implemented, monitored, and adaptively managed over time with the support of the Community.

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

**The Draft Plan Framework is available at the following URL: https://marinelab.fsu.edu/absi/cab/*

(Attachment 3 — Workplan, Schedule, and Project Flowchart)

VI. Update and Oystermen's Feedback on ABSI Restoration Experiments

Sandra Brooke, FSUCML Faculty and ABSI Principal Investigator, provided the participants with an update on ABSI restoration experiments.

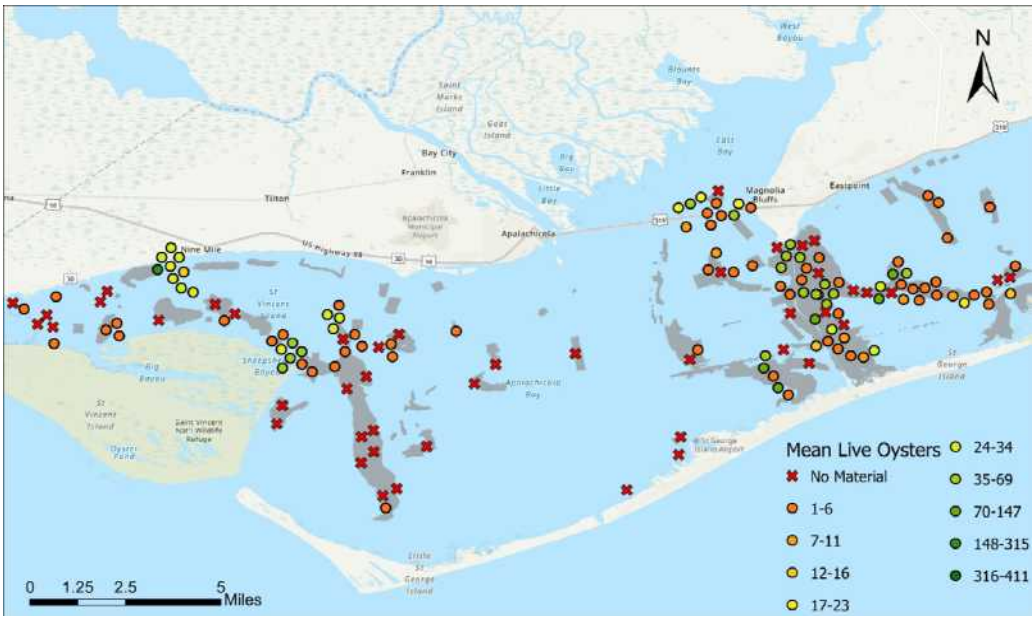
Presentations are available on the project webpage: https://marinelab.fsu.edu/absi/cab/.

Summary and Overview of Presentation

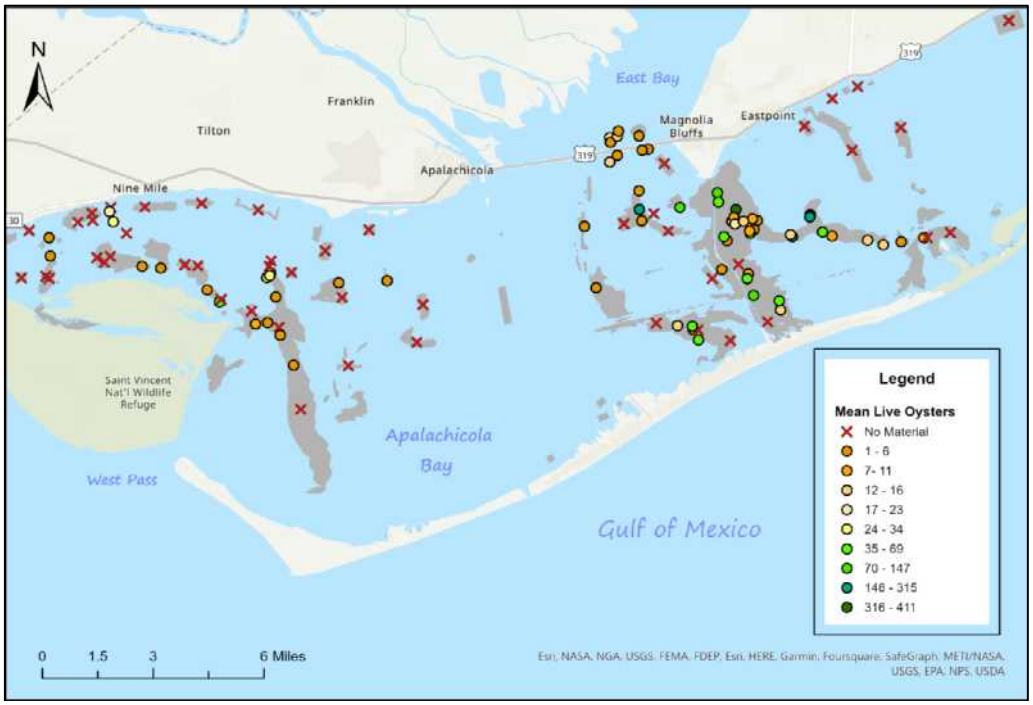
The Oystermen's Workshop presentation focused on updates on the status of oyster populations in the Bay. Data presented included ABSI tonging surveys from 2020-2021 and 2021-2022, plus tabulated summaries from the latest FDEP and FWC restoration projects. These data show that only 3 of the 55 restored sites have reached the threshold of 300 bags/acre, which can support limited fishing activity. The past ABSI restoration experiment was described and the recent tong sampling of the restoration sites was shown. These

data indicated that the large limerock was performing better than the other materials in terms of stability and oyster growth. Peanut Ridge sites are doing better than Dry Bar. Options for the next restoration experiment were presented to solicit feedback from the oystermen.

Subtidal Tonging Survey 2020-2021



Subtidal Tonging Survey 2021-2022



Summary of Florida DEP and FWC Restoration Data

Only 3 sites of 55 reached the 300 bags/acre threshold

FWC monitoring 2022

Parcel Name	2022 (Number of Bags Per Acre) Jan	Feb	Mar	May	Sep
Bulkhead			0		0
North		29		14	
South		14		34	
Cabbage Top			58		29
Cat Point			0		0
Restoration	10			5	
Shallow	0			0	
Dry Bar North			0		0
East Lumps			0		0
Restoration	0			0	
Easthole #7			0		0
Green Point			5		48
6		14		96	
Halfmoon			5		0
East		0		0	
Hotel			0		0
West		0		0	
Lighthouse			5		0
Restoration		0		5	
8		0		0	
Normans			0		0
Paradise Flats			10		38
Platform			0		0
Porters			0		0

FLDEP RESTORE project
Deployed 317 acres in 2017
Sampling 12/2020-6/2021

Site	Round 3
8-Mile	175.07
9-Mile B	4.80
Cabbage Top	33.58
Cat Point	97.53
	441.27
East Hole #1	31.18
East Hole #2	2.40
Hotel Bar #1	4.80
Hotel Bar #2	28.78
King 9-Mile	81.54
	285.39
North Spur #2	0.00
	402.90
	652.32

FLDEP NRDA project
Deployed 124 acres in 2015
Sampling 7-12/2021

Site	Bags/acre
Bayou Flats	23.98
Cabbage Lumps	14.39
Cabbage Top	0
Cat Point	4.8
Dry Bar	0
Eleven Mile North	4.8
Eleven Mile South	19.19
Green Point	0
Hotel Bar	0
Lighthouse	16.79
Little Gully	0
Norman's Bar Middle	9.59
Norman's Bar North	21.58
North Spur	0
Redfish Creek 1	4.8
Redfish Creek 2	4.8

ABSI Restoration Experiment May – June 2021

ABSI Experimental Design and Location -1

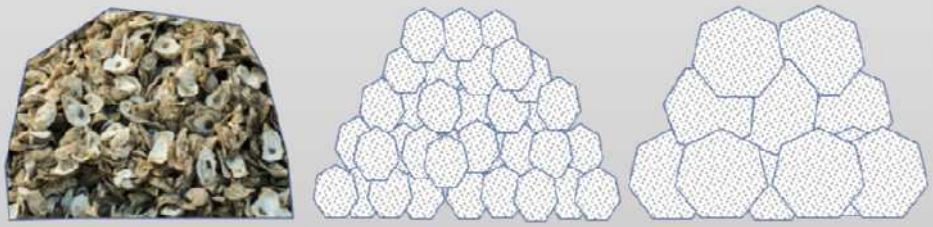
Restoration experiment May –June 2021

Reef size and height

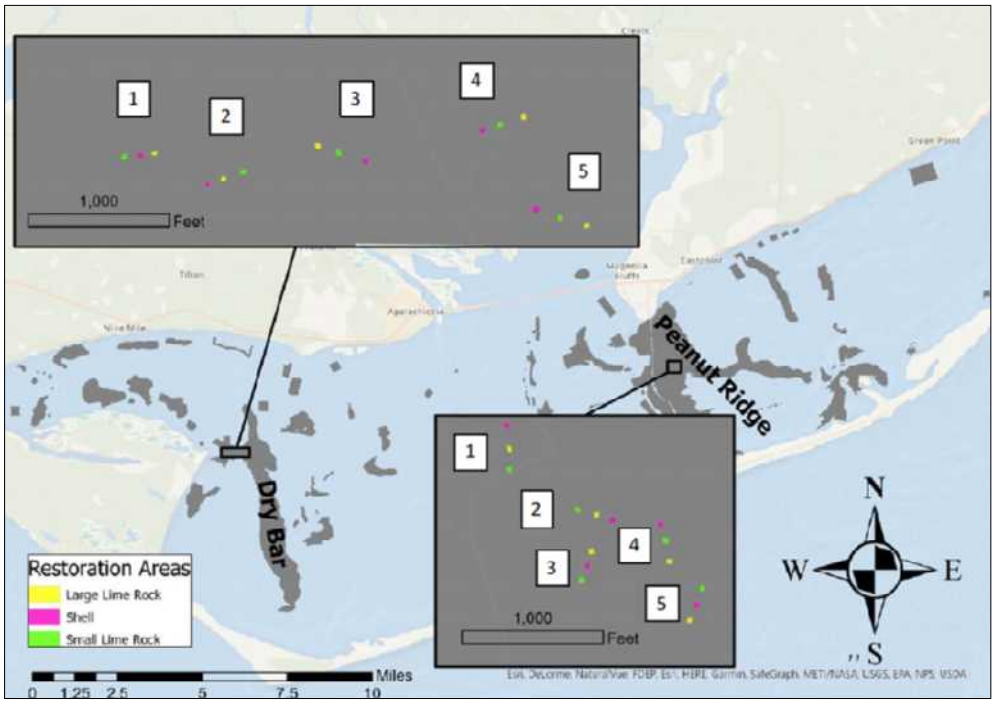
30 ft x 30 ft x 1 ft = 50 Cubic Yds of material

Materials

- Natural oyster shell – good for spat settlement, can be harvested with tongs
- Small Limerock (2") creates mound, small spaces, many layers, can be harvested with tongs
- Large Limerock (6-8") – creates stable structure, medium spaces, few layers, good for habitat development, can be harvested with tongs.



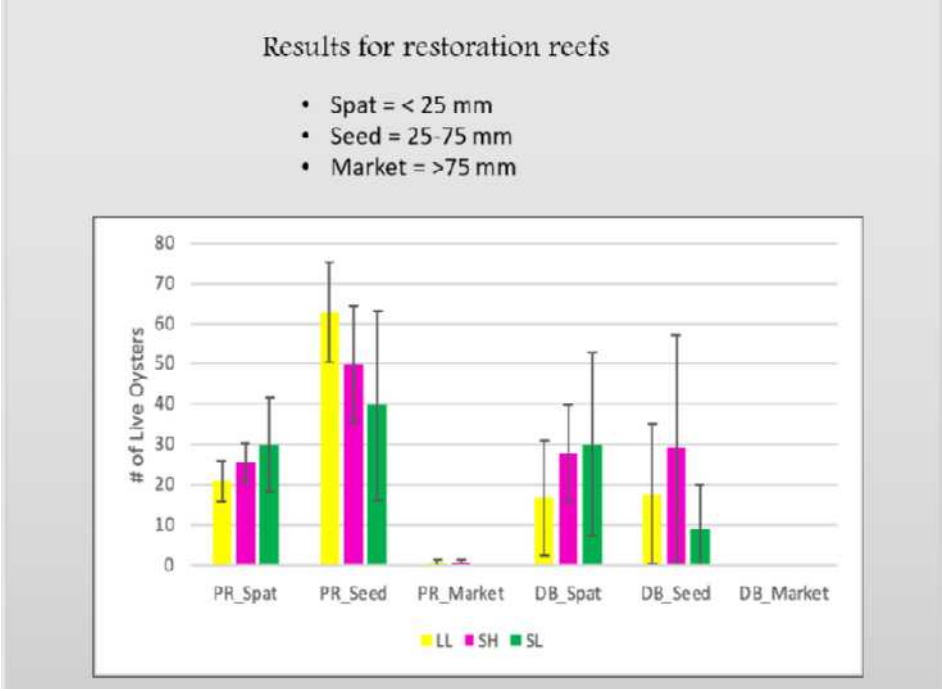
ABSI Experimental Design and Location -2



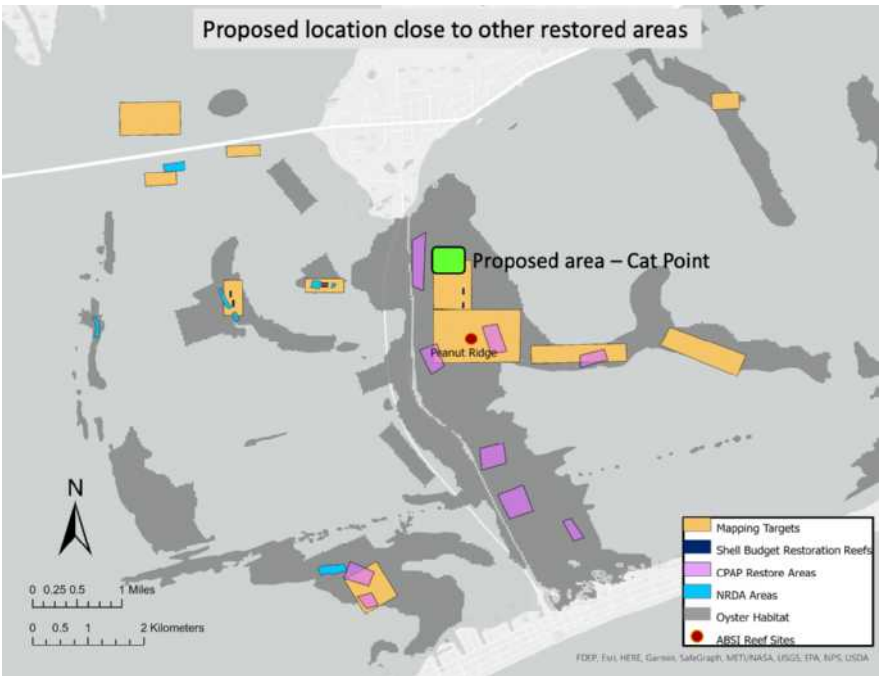
Results of Tonging Surveys from April 2022

This graph shows that spat set is similar on Peanut Ridge and Dry Bar and no significant differences between materials, but the large limerock has high seed counts on Peanut Ridge, and the large limerock is more stable than shell. A few market sized oysters were found on Peanut Ridge large limerock and shell. Small limerock performed well for spat but not seed.

Results for Restoration Reefs



Proposed Location for Next ABSI Restoration Experiment – Cat Point



Proposed ABSI Restoration Experiment Fall 2022 or Spring 2023

- **Option 1: Examine reef height.**
  - **Location:** NE Cat Point: 4 treatments, 5 replicates = 20 reefs (15 x 15 m)
  - **Reef Height:** 25 cm (10 inches), 50 cm (20 inches).
  - **Material Size:** 15-20 cm (6-8 inches) = Medium.
  - **Material Type:** Limerock = occurs naturally in NW Florida, relatively stable.
- **Option 2: Examine different materials**
  - **Location:** NE Cat Point: 4 treatments, 5 replicates = 20 reefs (15 x 15 m).
  - **Reef Height:** 25 cm (10 inches).
  - **Material Size:** 15-20 cm (6-8 inches) = Medium.
  - **Material Type**
    - Limerock = occurs naturally in NW Florida, relatively stable.
    - Concrete = not natural, readily available, less expensive.

Summary of Questions, Responses, and Comments:

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

- Put #57 rock on Cat Point with poor results. SB: Small rocks compact while big rocks create gaps where small oysters are sheltered from predators.
- Big rocks can't wash away. There is little growth on fossilized rock.
- SB: Should we use concrete? Answer: Yes, you should try it.
- Does lime rock dissolve? SB: Yes, especially if rocks get buried due to anoxic sediments.
- Something in the Bay is killing the oyster.
- Concrete is worth considering for the experiments.
- How big are the concrete chunks? SB: 4"- 6."

- Why did they use Corexit (dispersant) when it is illegal in other countries? SB: I do not know, and the maps indicate it was not used in Apalachicola Bay.
- Should contact the railroad companies about reusing the granite use for the track bed? JB: This is worth checking out, thank you.

VII. UPDATE AND OYSTERMEN'S FEEDBACK ON FWC RESTORATION PROJECT

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

Summary and Overview of Update

- Workshop to discuss FWC restoration activities was held in Tallahassee on Sept. 7th, which included NFWF, FWC scientists and management, FSU, UF, and other state management agencies.
- NFWF expressed preference to FWC testing multiple treatments during pilot study à 1) reef height and 2) material size
  - NFWF understands that testing multiple treatments will increase the pilot study's budget significantly.
- Pilot study's general framework is to test two rock sizes (6-8 in. & 12-14 in.) and two reef heights (1-1.5 ft. & 2-2.5 ft.) with each treatment being a 1-acre reef. Each replicate will consist of 4 1-acre reefs. Number of replicates will be dependent on budget, but we'd like to get 5-7 total.
- There was a consensus on testing multiple reef heights. Only issue is to avoid navigational hazard risks. FWRI will begin scoping out potential reef locations soon.
- Issues were brought up regarding the larger rock size.
  - Oystermen discussed issue with using non-tongable rock. FWC discussed the general need to build the oyster reefs back up off the bottom. If no difference is seen between rock sizes, FWC would of course utilize tongable sizes for larger-scale restoration, by "covering" larger, non-tongable rock with the smaller rock.
  - FWRI discussed potential issues with sampling large rock. Divers would be unable to extract such large material off the reef and onto the vessel for analyses. UF and FWC HSC (habitat and species conservation division) staff suggested different sampling techniques for large rock. FWRI is discussing methodology for large rock sampling, and will updated FWC this month.

NFWF Gulf Environmental Benefit Fund – $20,057,000

- National Fish and Wildlife Foundation funded.
- Apalachicola Bay and Suwannee Sound
- Oyster restoration
- Develop oyster management plans
- Multiple partnerships
- Important to stress collaboration with management agencies, universities, and local, public stakeholders

Stage 1 – $3,277,029
Approach

- Data collection
- Harvest management system
- Compile information
- Data workshop

- Habitat restoration decision

Data Collection

- Mapping of hard substrate important to determine current reef heights: Informs restoration efforts.
- Apalachicola Bay: 3-D mapping, Bottom profiling, Ground truth tonging,
- Suwannee Sound: 3-D mapping
- Baseline oyster community sampling
- Apalachicola Bay
  - Oyster densities
  - Oyster spat densities
  - Sedimentation rates
  - Predatory snail densities
- Suwannee Sound
  - Oyster population survey

Harvest Management System

- Develop regionally specific oyster fishery management plans.
- Stakeholder-informed
- Apalachicola Bay
- Suwannee Sound
- Statewide Strategic Oyster Fishery Management Plan.
- Will continue to progress through later stages of program.

Compile Information and Data Workshop

- Meet with state management agencies, university researchers
- Discuss previous restoration and research
  - What's worked? What hasn't worked?
  - How to be better informed moving forward.
- Habitat restoration decision
  - Where?
  - What materials?
  - Densities - how high?
  - How much (acres)?
- Meet with public to discuss preliminary plans

Stage 2 – Oyster Restoration in Apalachicola Bay

- Restoration
  - Where?
  - What materials?
  - Densities-how high?
  - How much (acres)?
- Monitoring
  - Inform management

Data and Restoration Workshops

- Data collection
  - ANERR

- ABSI
- FWRI

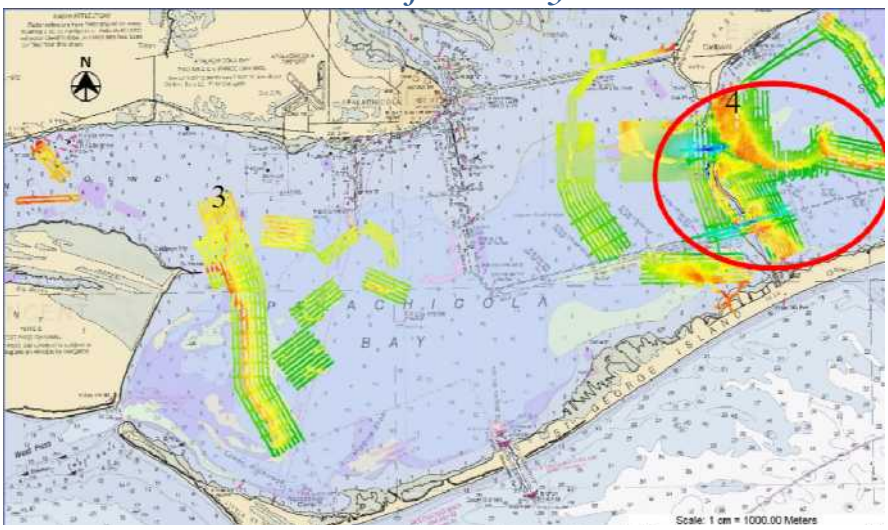
- Data workshop – June '22
- Restoration workshop – Sept. '22
  - Where?
  - What materials?
  - Densities - how high?
  - How much (acres)?

- NFWF has expressed concerns over approving the remaining $16M for restoration activities.
  - Past restoration operations in the Bay did not perform as well as expected.
  - *"The definition of insanity is doing the same thing over and over again and expecting different results."*
- Large number of unknowns still present.
- Perform a large-scale pilot study.
  - FSU will conduct complementary study.
- FWRI will conduct sampling and monitoring oversight.
- Utilizing these studies, FWC will have more data to construct and perform larger restoration activity.

Pilot Study Details

- Reef height treatments: 1 ft (low) and 2 ft (high).
- Material size: 6" (small) & 12" (large) FL limestone.
- Location: East side of Apalachicola Bay.
- Reef size: 1.0 acre.
- Replicates: 5-7.
- Monitoring criteria: 1) density of live oysters/m^2, 2) size classes, and 3) cultch weight and/or volume.
- Monitoring effort: *Before, After, Control* design for shell budget, diver-excavated sampling, environmental monitoring equipment.
- Cost: $6.97 M for scientifically-sound study that produces ~24 acres of treated oyster habitat.

Location of Pilot Study



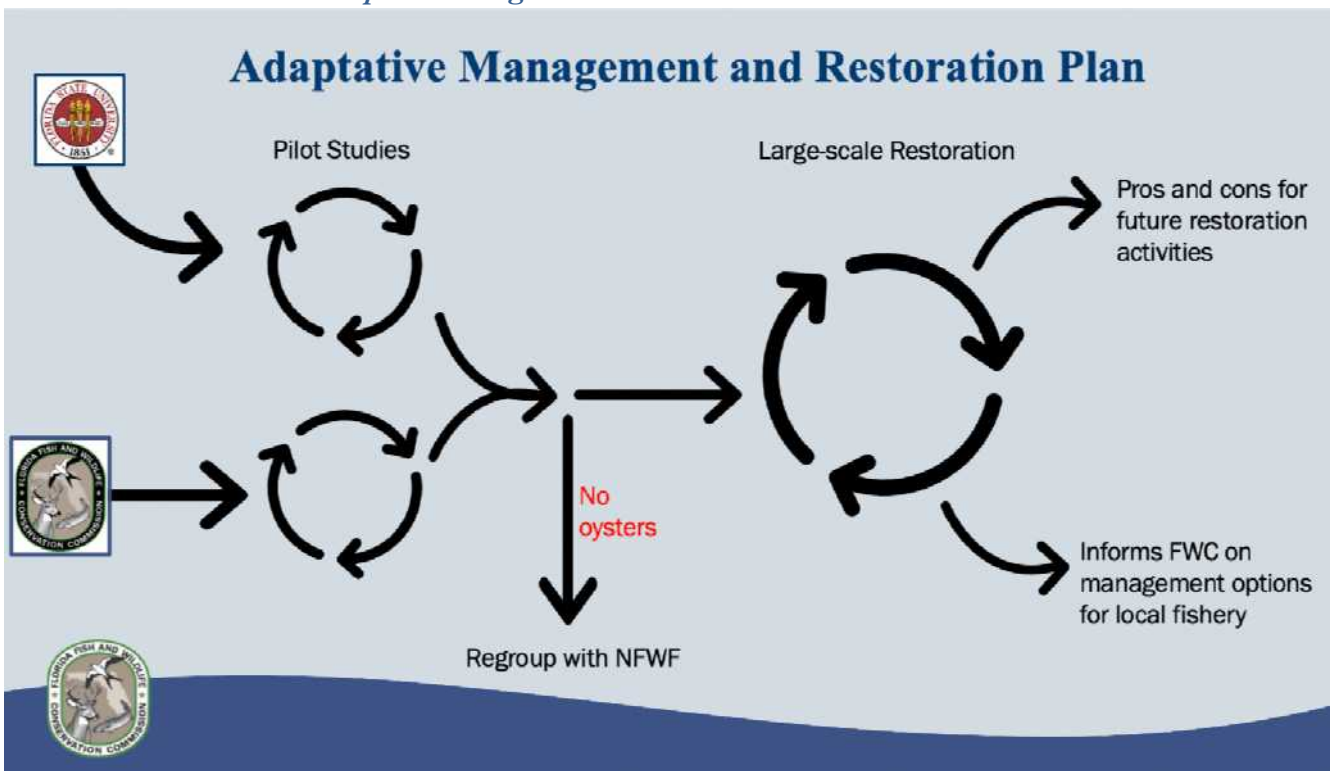
Material Size

- Material size: 6" (small) & 12" (large) FL limestone.
- Major concern is overall degradation of the Bay's reefs.
  - *"Flattened out and looks like a parking lot."*
- Utilizing large-sized material if an effective strategy to rebuild reefs off bottom.
- Testing two sizes is scientifically important, strongly encouraged by funding partner.
- If no significant difference is observed between sizes, tongable material would be used for harvestable reefs during future large-scale restoration.
- Proposal to layer smaller, tongable size rock over the 12" foundation.
  - May benefit local stakeholders.
- Use 12" pilot study reefs as sanctuary reefs, closed permanently to oystering.

Reef Locations

- Location: East side of Apalachicola Bay, near current oyster populations.
  - Replicates: 5-7.
- 6 → Approximately 24 acres for restoration.
- Important to control for ecological conditions.
- Main steps in choosing sites for pilot study:
  - Map all recent restoration work, mapping data from University of New Hampshire.
  - FWRI will select potential locations to ground truth.
  - Listen to recommendations from local stakeholders on historically productive areas.

Adaptive Management and Restoration Plan Flowchart



Next Steps

- Oystermen, Community workshops this week.
  - Potentially additional FWC outreach events in near future.
- Continued internal, external coordination in drafting pilot study design.
- Design, methodology, spend plan will be publicly available for review.
- FWC will submit to NFWF for approval.
- Goal is to have contractor, material in water summer 2023.

Conclusion

- $20 M+ for preliminary data gathering and analyses, restoration efforts, stakeholder-informed, regionally-specific oyster management plans.
- Although past restoration efforts did not meet biological objectives, still helpful takeaways, roadmap to springboard off.
- Pilot study testing multiple reef heights, material sizes beginning summer 2023.
  - Inform FWC for large-scale restoration.
- Successful Apalachicola Bay oyster restoration through the culmination of work from management entities, university researchers, and local stakeholders.

Current Oyster Conditions in Apalachicola Bay

- Recent mapping suggests approximately 2,000 acres of potential oyster habitat remain in Apalachicola Bay.
- The oyster habitat over most of this 2,000-acre area is degraded to a point where the cultch (shell hash) does not support oyster spat settlement.
- Currently, the east and central east sides of the Bay, where recent restoration has been focused, are the main areas supporting oysters and likely represents the core of the oyster population in the Bay.
- Since 2015, $5.8 million in Deepwater Horizon oil spill funds have been spent in attempts to restore approximately 400 acres of oyster reef.
- To date, only 56 acres from one project (FDEP-RESTORE) have densities of oysters that meet a traditional threshold (300 bags/acre) used to identify areas suitable for harvest.
- Considerations regarding opening commercial harvest:
  - If harvest were to reopen, it might delay the implementation or reduce the potential success of the upcoming NFWF restoration. Commercial tonging on restored areas could undo recent gains from restoration.
  - Removal of oysters in the harvest and habitat degradation from commercial activities will likely increase the time needed to restore oyster populations in the Bay.

Summary of Questions, Responses, and Comments:

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

- 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.
- The last five years have been bad seasons for black drum, they moved south, but may come back.
- DR: Where should we put the restoration. Off Cat Point, anywhere there are no oysters.

- Try to move beds closer to the Apalachicola River.
- Focus on Cat Point and Peanut Ridge.
- Oyster abundance is cyclic, but Cat Point is generally dependable.
- Take a look at Paradise Reef, and over at the areas where the farms are located (The Miles).
- There are a lot of oysters on Cat Point, we want to open the Bay to harvest.
- 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.
- I flounder 2-3 times a week, there are areas of the Bay that are dead.
- 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 the number of days adjusted to the price/bag. This could provide a stable income.
- How long do you (FWC) plan on keeping the Bay closed? DR: The current rule states 12/31/2025. Could it stay closed longer? DR: The commissioners are data informed and will decide based on the data. It's premature to discuss extending the closure.
- 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.

Note: It is illegal to use tongs or remove oysters when closed to harvest. This will require an FWC Special Activity License.

VIII. Overview and Oystermen's Feedback on Potential Management Scenarios 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.
- 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.).
- Limited entry commercial oyster fishery.
- A combination of limited entry and active management.

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.*

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 4 — Management Scenario and Assumptions for Modeling)

OYSTERMEN'S FEEDBACK ON SCENARIOS FOR MODELING

The Community Advisory Board unanimously agreed by consensus to approve initial scenarios (combinations of strategies) for evaluation by the Fisheries (Socioecological) Model. The CAB is only evaluating whether specific scenarios are likely to be effective in achieving the goals of establishing a wild harvest oyster fishery along with sustainable oyster reef habitat sufficient to provide needed ecosystem and ecological services. The scenarios under evaluation are **NOT** recommendations at this point in the process.

Note: there are additional comments related to management scenarios provided under the Summary of Questions, Responses, and Comments section of Agenda Item VII. (Update and Feedback on FWC Restoration Project) above.

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

- 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.
Comments/Recommendations:

- There was general support for this approach.

C) A put-and-take sustainable wild oyster harvest fishery.
Comments/Recommendations:

- 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.).
Comments/Recommendations:

- There was generally support for this option.

E) Limited entry commercial oyster fishery.
Comments/Recommendations:

- 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.
Comments/Recommendations:

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

(Attachment 5 — Oystermen's Feedback on Scenarios for Modeling Worksheet)

IX. NEXT STEPS

Jeff Blair noted that a Community Workshop is scheduled for 19 October 2022 at the Eastpoint Firehouse. The Workshop will run from 6:00 – 8:00pm and will provide an opportunity for the public to provide feedback on a suite of possible restoration and management scenarios that the CAB is evaluating using a Fisheries (Socioecological) Model. The Workshop agenda and summary report will be posted to the project webpage as follows:
https://marinelab.fsu.edu/absi/cab/.

The next CAB meeting is scheduled for 30 November 2022 and will focus on:

- ABSI science and data collection 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.

The meeting will be conducted on site at ANERR starting at 8:30am.

ADJOURNMENT

The Facilitator thanked the oystermen, participants, and ABSI Project Team members for their participation, and adjourned the Workshop at 8:00 PM on Tuesday, October 18, 2022.

ATTACHMENT 1
WORKSHOP PARTICIPANTS

OYSTERMEN PARTICIPATING IN WORKSHOP	
Jonny Chambers	Oysterman
Ronnie Gilbert	Oysterman
Abe Hartsfield	Oysterman
Shannon Hartsfield	Franklin County Seafood Workers Association, Oysterman, and CAB Member
Brett Lolley	Seafood Worker, Oysterman
Matt Polous	Oysterman
Wayne Williams	Oysterman

MEMBERS OF THE PUBLIC	
1. Georgia Ackerman	ABSI CAB Member, Apalachicola Riverkeeper
2. Duncan Blair	Concerned Citizen
3. Susan Blair	Concerned Citizen
4. Fabio Caltabellotta	Florida State University (FSU)
5. Ed Camp	University of Florida (UF)
6. Cheryl Carr	Seafood Worker and Watermen Representative
7. Will Caselo	UF
8. Jon Creamer	FWC
9. Jared Fuqua	FSU ABSI Outreach and Education
10. Anita Grove	ABSI CAB Member, City of Apalachicola Commissioner
11. Kennedy Hanson	ANERR
12. Jenna Harper	ABSI CAB Member, ANERR
13. Garrett Leonard	FWC
14. Betsy Mansfield	FSU
15. Lt. Randy McDonald	FWC LE
16. Pastor Homer (Mac) McMillan	Fellowship Baptist Church Apalachicola
17. Mike O'Connell	ABSI CAB Member, SGI Civic Club/SGI 2025 Vision
18. Carolyn Parrish	FWC LE
19. Devin Resko	FWC
20. Capt. Charlie Wood	FWC LE

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

ATTACHMENT 2
WORKSHOP AGENDA

WORKSHOP OBJECTIVES		
✓ To Provide Update and Receive Oystermen's Feedback on ABSI Restoration Experiments ✓ To Provide Update and Receive Oystermen's Feedback on FWC Restoration Project ✓ To Provide Overview and Receive Oystermen's Feedback on Potential Management Scenarios for Modeling		
ABSI OYSTERMEN'S COMMUNITY WORKSHOP 1 — OCTOBER 18, 2022		
All Agenda Times—Including Public Comment and Adjournment—Are Approximate and Subject to Change		
1.)	**6:00 PM**	**WELCOME AND REVIEW OF WORKSHOP PARTICIPATION GUIDELINES**
2.)		**REVIEW OF WORKSHOP OBJECTIVES AND INTRODUCTIONS**
3.)		**REVIEW OF UPDATED PROJECT MEETING SCHEDULE AND WORKPLAN**
4.)		**UPDATE AND OYSTERMEN'S FEEDBACK ON ABSI RESTORATION EXPERIMENT**
5.)		**UPDATE AND OYSTERMEN'S FEEDBACK ON FWC RESTORATION PROJECT**
6.)		**OVERVIEW AND OYSTERMEN'S FEEDBACK ON POTENTIAL MANAGEMENT SCENARIOS FOR MODELING**
7.)	**7:55**	**NEXT STEPS** • Public Workshop and CAB Meeting
~8:00 PM		***ADJOURN***

ATTACHMENT 3
ABSI CAB PROJECT SCHEDULE, WORKPLAN, AND FLOWCHART

UPDATED AS OF THE 18 OCTOBER 2022 CAB MEETING

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

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

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

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

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

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

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

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

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

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

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

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

1. **COMMUNITY OUTREACH SUBCOMMITTEE - PUBLIC ENGAGEMENT IN 2022.** The CAB working through the Community Outreach Subcommittee initiated a community feedback initiative by providing information and seeking community input on the Plan Framework. The CAB will vet the results of their prioritized strategies with the larger ABS community through multiple forums including questionnaires administered through a variety of methods including Facebook, online via the ABSI website, and direct mailings. In addition, public workshops will be conducted in various locations to provide the Community with information on ABSI and solicit community feedback. ***Status Initiated***

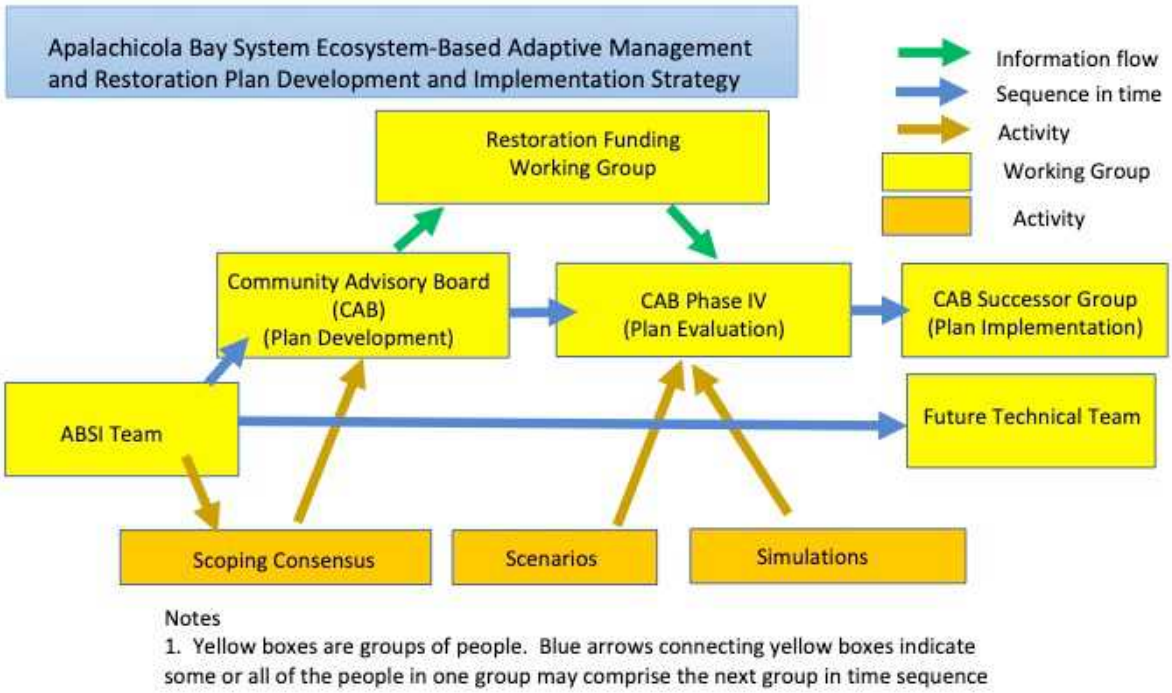
2. **RESTORATION FUNDING WORKING GROUP (RFWG).** Initiated in late 2021 the Restoration Funding Working Group's role is to seek resources and political, governmental, and organizational support for the CAB's priority recommendations. ***Status Initiated***

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

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

Meeting VI. ANERR	**Nov. 30, 2022** • 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.
PHASE V CAB MEETINGS — 2023		
Meeting I. ANERR	**Feb. 1, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	Initiation of Phase V of ABSI. ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Meeting II. ANERR	**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	**April 12, 2023 Tentative**	Community Feedback on ABSI Restoration Experiments, FWC Restoration Project, and Potential Management Scenarios for Modeling.
Meeting III. ANERR	**May 31, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Meeting IV. ANERR	**July 26, 2023** • Fisheries model simulation results & scenarios refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Oystermen's Workshop	**TBD ~ Sept. 2023**	Oystermen's Feedback on the CAB's recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
Meeting V. ANERR	**Sept. 27, 2023** • Fisheries Model Simulation Results & Scenarios Refinements	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Review and discussion of Fisheries Model simulation results for revised priority Habitat Restoration (Goal A) and Fisheries Management (Goal B) scenarios. Agreement on next suite of scenarios for model simulations. Public comment.
Community Workshop	**TBD ~ October 2023**	Community Feedback on the CAB's recommendations for the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan.
Meeting VI. ANERR	**Nov. 29, 2023** • **Adopt Final CAB Recommendations for ABS Plan**	ABSI science and data collection and restoration project updates. Sub-committee reports and public engagement initiative update. Finalize and adopt recommendations for strategies and actions (components) for inclusion in the Apalachicola Bay System Ecosystem-Based Adaptive Management and Restoration Plan (Plan) and submit to FSUCML. Public comment.

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 4
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.
- 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.).
- Limited entry commercial oyster fishery.
- A combination of limited entry and active management.

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.*

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
OYSTERMEN'S FEEDBACK WORKSHEET

SCENARIOS FOR MODELING

SCENARIOS. The Community Advisory Board unanimously agreed by consensus to approve initial scenarios (combinations of strategies) for evaluation by the Fisheries (Socioecological) Model. The CAB is only evaluating whether specific scenarios are likely to be effective in achieving the goals of establishing a wild harvest oyster fishery along with sustainable oyster reef habitat sufficient to provide needed ecosystem and ecological services. The scenarios under evaluation are **NOT** recommendations at this point in the process.

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

B) Different management strategies under a range of different assumptions to see what works best.
Comments/Recommendations: •

C) A put-and-take sustainable wild oyster harvest fishery.
Comments/Recommendations: •

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.).
Comments/Recommendations: •

E) Limited entry commercial oyster fishery.
Comments/Recommendations: •

F) A combination of limited entry and active management.
Comments/Recommendations: •

WHEN THE MODEL CAN BE EXTENDED TO A SPATIALLY EXPLICIT PLATFORM, EVALUATE:

A) 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).
Comments/Recommendations: •

B) Different scenarios with the Bay wide-open and various areas of the Bay closed.
Comments/Recommendations: •

C) 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.
Comments/Recommendations: •

D) 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.**
Comments/Recommendations: •

E) Other Options.
Suggested Options for Evaluation: •