

APALACHICOLA BAY SYSTEM INITIATIVE (ABSI)

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

ABSI COMMUNITY ADVISORY BOARD (CAB)

MEETING #4

WEDNESDAY, MARCH 11, 2020

APALACHICOLA NATIONAL ESTUARINE RESEARCH RESERVE

108 ISLAND DRIVE (STATE ROAD 300) AT CAT POINT IN EASTPOINT, FLORIDA

ABSI COMMUNITY ADVISORY BOARD MEETING IV OBJECTIVES

- ✓ To Approve Regular Procedural Topics (Meeting IV Agenda and Meeting III Summary Report)
- ✓ To Receive Project Briefings and Community Advisory Board Requested Presentations
- ✓ To Identify Preliminary Draft Options/Strategies to Achieve Goals and Information Needs
- ✓ To Identify and Discuss Draft Performance Measures
- ✓ To Identify Next Steps and Information Needed, and Agenda Items for Next Meeting

ABSI COMMUNITY ADVISORY BOARD MEETING IV AGENDA—MARCH 11, 2020

All Agenda Times—including Public Comment and Adjournment—are Approximate and Subject to Change

1.)	8:30 AM	WELCOME AND INTRODUCTIONS
2.)	8:40	AGENDA REVIEW AND MEETING OBJECTIVES
3.)	8:45	APPROVAL OF FACILITATORS' SUMMARY REPORT (JANUARY 8, 2020)
4.)	8:50	<p>PROJECT BRIEFINGS</p> <ul style="list-style-type: none"> • Status Quo Conditions and Data Describing the ABS, and Conditions for a Healthy Oyster Fishery & Reef Ecosystem (Sandra Brooke 25 min.) <p>COMMUNITY ADVISORY BOARD REQUESTED PRESENTATIONS</p> <ul style="list-style-type: none"> • Aquaculture Industry Regulatory Framework and Overview (Portia Sapp 15 min.) • Briefing on ABS Restoration Efforts Since 1980s – (Jon Brucker 15 min.) • OysterFutures Stakeholder Process Overview (Jeff Blair/Bob Jones 15 min.)
	~10:15	BREAK
5.)	10:30	<p>A.) A HEALTHY AND PRODUCTIVE BAY ECOSYSTEM</p> <ul style="list-style-type: none"> • Consider Any Member Proposed Revisions to Vision, Goal, Outcome, Objectives • Review and Refinement of Key Issues • Identification of Initial Draft Options/Strategies to Achieve Goal • Consideration of Relevant Performance Measures • Identification of Information Needs



<i>12:00 PM</i>		<i>LUNCH—ON SITE</i>
6.)	12:30	B.) SUSTAINABLE MANAGEMENT OF OYSTER RESOURCES <ul style="list-style-type: none"> • Consider Any Member Proposed Revisions to Vision, Goal, Outcome, Objectives • Review and Refinement of Key Issues • Identification of Initial Draft Options/Strategies to Achieve Goal • Consideration of Relevant Performance Measures • Identification of Information Needs
7.)	1:45	OVERVIEW OF REMAINING GOALS B.) A THRIVING ECONOMY CONNECTED TO A RESTORED APALACHICOLA BAY SYSTEM C.) AN ENGAGED STAKEHOLDER COMMUNITY AND INFORMED PUBLIC D.) AN ECOSYSTEM-BASED MANAGEMENT AND RESTORATION PLAN SUPPORTED BY APALACHICOLA BAY SYSTEM STAKEHOLDERS THAT IS FULLY FUNDED AND SCIENCE BASED
8.)	2:00	IDENTIFICATION AND DISCUSSION OF DRAFT PERFORMANCE MEASURES
9.)	~2:30	PUBLIC COMMENT
10.)	2:45	NEXT STEPS AND AGENDA ITEMS FOR THE NEXT MEETING <ul style="list-style-type: none"> • Review of the CAB Schedule of Meetings • Review of action items and assignments • Identify agenda items and any needed information for the April CAB meeting • Meeting evaluation
<i>~3:00 PM</i>		<i>ADJOURN</i>

MEETING FACILITATION

The ABSI CAB meetings are facilitated by Jeff Blair and Robert Jones from the FCRC Consensus Center at Florida State University. Information at: <http://consensus.fsu.edu/>



COMMUNITY ADVISORY BOARD MEMBERSHIP AND REPRESENTATION

MEMBER	AFFILIATION
Agriculture/ACF Stakeholders/Riparian Counties	
1. Chad Taylor	Riparian Counties Stakeholder Group/ACF Stakeholders/Agriculture
Business/Real Estate/Economic Development/Tourism	
2. Chuck Marks	Acentria Insurance
3. Mike O’Connell	SGI Civic Club/SGI 2025 Vision
4. John Solomon	Apalachicola Chamber of Commerce
Environmental/Citizen	
5. Georgia Ackerman	Apalachicola Riverkeeper
6. Lee Edmiston	Retired DEP/ANERR
7. Chad Hanson	Pew Charitable Trusts
Local Government	
8. Anita Grove	Apalachicola City Commissioner
9. Smokey Parrish	Franklin County Commissioner
Recreational Fishing	
10. Chip Bailey	Peregrine Charters
11. Frank Gidus	CCA Florida
Seafood Industry	
12. Shannon Hartsfield	Franklin County Seafood Workers Association
13. Lynn Martina	Lynn’s Quality Oysters
14. Vance Millender	Millender & Sons Seafood
15. Steve Rash	Water Street Seafood
16. TJ Ward	Buddy Ward & Sons Seafood
17. Cary Williams	Apalachicola Oyster Company, Aquaculture
State Government	
18. Jim Estes	FWC Division of Marine Fisheries Management
19. Jenna Harper	ANERR/DEP
20. Alex Reed	FDEP Office of Resilience & Coastal Protection
21. Portia Sapp	FDACS Division of Aquaculture
22. Paul Thurman	NWFWMD
University/Researchers	
23. Tom Frazer	UF/DEP Governor’s Science Advisor
24. Erik Lovstrand	UF/IFAS/Florida Sea Grant Franklin County

PROJECT TEAM AND FACILITATORS

FLORIDA STATE UNIVERSITY	
Sandra Brooke	Marine Biologist
Felicia Coleman	Marine Biologist
Gary Ostrander	Vice-President for Research
FCRC CONSENSUS CENTER, FLORIDA STATE UNIVERSITY	
Jeff Blair	Community Advisory Board Facilitator
Robert Jones	Community Advisory Board Facilitator



PROJECT SCHEDULE

ABSI CAB UPDATED MEETING SCHEDULE AND WORKPLAN		
PHASE I—STANDING UP AND ORGANIZATION OF THE ABSI CAB		
Meeting I.	Oct. 30, 2019	Scoping and organizational meeting, review and refinement of overall project purpose, vision and goal framework.
Meeting II.	Dec. 18, 2019	Member requested presentations. Review and refinement of vision themes and goal framework. Identification of key topical issues.
Meeting III.	Jan. 8, 2020	Introduction to decision-support tools and member requested presentations. Review and refinement of vision themes and goal framework. Identification of issues and draft performance measures.
PHASE II—SCOPING OF ABSI ISSUES, IDENTIFICATION OF PERFORMANCE MEASURES & OPTIONS		
Meeting IV.	Mar. 11, 2020	Member requested presentations. Review of performance measures and identification of policy issues, review of Apalachicola Bay System Ecosystem-Based Management and Restoration Plan draft goals, desired outcomes, and objectives.
Meeting V.	May 6, 2020 May 13, 2020	Member requested presentations. Decision support tools update & demonstration. Identification of preliminary options/strategies.
Meeting VI.	July 8, 2020 July 16, 2020	Review of decision-support tools scenarios and consensus rating of possible options and policy issues to be evaluated using decision-support tools relative to performance measure goals. Review and agreement on draft Apalachicola Bay System Ecosystem-Based Management and Restoration Plan framework. Public Workshop Draft.
Workshop 1	~August 2020 Tentative Date	Review and public comments on Vision, Goal Framework, Plan outline, key issues & options.
PHASE III—BUILDING CONSENSUS ON DRAFT ABS ECOSYSTEM-BASED MANAGEMENT AND RESTORATION PLAN OPTIONS AND RECOMMENDATIONS—TO BE EVALUATED USING DECISION-SUPPORT TOOLS RELATIVE TO PERFORMANCE MEASURE GOALS IN PHASE IV		
Meeting VII.	Sept. 9, 2020	Review of public comments on Draft Plan Framework and Goals, review of decision-support tools scenario results and consensus rating of options, draft performance measures, and identification of policy issues.
Meeting VIII.	Nov. 4, 2020 Nov. 12, 2020	Review of Draft Plan Options and Recommendations, decision-support tools scenario results, and consensus rating of draft options.
Meeting IX.	Jan. 13, 2021	Review and consensus testing of Draft Plan Options and Recommendations.
Meeting X.	TBD	Review and consensus testing of Draft ABS Ecosystem-Based Management and Implementation Plan Options and agreement on Workshop Draft for public comment.
Workshop 2	TBD	Review and public comments on Revised Draft ABS Ecosystem-Based Management Plan and Implementation Plan Options.
Meeting XI.	TBD	Review of public comment, refinement and further refinement of the ABS Draft Ecosystem-Based Management and Restoration Plan Options.
PHASE IV—EVALUATION OF DRAFT OPTIONS RECOMMENDATIONS USING DECISION-SUPPORT TOOLS		

PROJECT WEBPAGE (URL): <https://marinelab.fsu.edu/the-apalachicola-bay-system-initiative/>

PROJECT EMAIL: fsucml-absi@fsu.edu

PROJECT FACILITATION: Jeff Blair and Bob Jones from the FCRC Consensus Center at Florida State University. Information at: <http://consensus.fsu.edu/>



APALACHICOLA BAY SYSTEM INITIATIVE MISSION

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.

COMMUNITY ADVISORY BOARD GOAL STATEMENT (ADOPTED AS REVISED JANUARY 8, 2020)

The overarching goal of the Apalachicola Bay System Initiative (ABSI) Community Advisory Board (CAB) 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 (ABS), and to ensure there is a reliable mechanism and process for the monitoring, funding, and implementation of the Apalachicola Bay System Ecosystem-Based Management and Restoration Plan.

A primary focus is on 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 will be 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 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.



TERMS AND DEFINITIONS

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

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

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

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

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

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

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

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

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



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

HEALTHY APALACHICOLA BAY SYSTEM:

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

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



VISION OF SUCCESS THEMES—GOAL STATEMENTS AND OBJECTIVES
ADOPTED AS REVISED JANUARY 8, 2020

VISION THEMES

- A. A Healthy and Productive Bay Ecosystem**
- B. Sustainable Management of Oyster Resources**
- C. A Thriving Economy Connected to a Restored Apalachicola Bay System**
- D. An Engaged Stakeholder Community and Informed Public**
- E. An Ecosystem-Based Management and Restoration Plan Supported by Apalachicola Bay System Stakeholders that is Fully Funded and Science Based**

A.) A Healthy and Productive Bay Ecosystem

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

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

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

Objectives:

A1) Restoration and management plans for the ABS consider changes in management and future environmental conditions, such as freshwater flow (quantity, timing, hydrodynamics), water quality (e.g., salinity and temperature), sea level, and habitat change.

A2) Impacts and activities from activities and future climate scenarios affecting the health and restoration of the ABS ecosystem are considered and addressed to minimize negative effects to the ABS ecosystem.

A3) Ecosystem services and ecological health indicators derived from Apalachicola Bay System recovery are defined and measurable, with identified target and threshold levels.

A4) Measurements of oyster reef and population conditions are defined and quantifiable, with target and threshold levels identified.

A5) Observations, experiments and modeling efforts conducted through ABSI and related efforts will identify viable strategies for restoration.



A6) Policies and programs are established and implemented that provide the means to return a significant portion of the harvested oyster shell back to the ABS for substrate needed for larval recruitment to enhance population productivity.

Key Topical Issues: At the December 18, 2019 meeting members brainstormed key topical issues including: Measuring ecosystem services. Criteria for opening and closing the oyster fishery; Spatial extent of oyster reefs; Oyster population demographics; Monitoring fishery output; Water quality; Future projected conditions and water flows; Socioeconomic objectives linked to ecosystem services; Oyster habitat use by fish; Drying of the Apalachicola Bay flood plain; Septic systems impact on the Bay; Nutrients and chlorophyll; Define/measure “healthy” in the ABSI goal; and Address climate change.

List Additional Key Topical Issues you think need to be addressed:

Note below any Strategies/Options to address the Key Topical Issues:

Related Draft Performance Measures to Evaluate Strategies/Options

- Abundance of oysters in the population across all habitat types (sub-tidal and inter-tidal)
- Density of oysters (number per m³)
- Size/age of oysters by location/region (different reefs, fished vs. closed areas, inter-tidal vs. sub-tidal)
- Number of large oysters (>5”) by location/region (different reefs, fished vs. closed areas, inter-tidal vs. sub-tidal)
- Biomass of oysters across all habitat types (sub-tidal and inter-tidal)
- Amount of brood stock (spawning stock biomass) across all habitat types
- Spat production [need to discuss/define/clarify]
- Oyster recruitment spatial patterns—recruitment defined as the survival beyond a density-dependent mortality stage—roughly to 30-40mm long.
- Small/market ratio across habitats and locations
- Amount of exposed shell on each reef [need to discuss/define/clarify]
- Area of reef structure (suitable for settlement, fish production, shoreline protection)
- Habitat quality – area suitable for settlement and changes over time [need to discuss/define/clarify]
- Change in oyster habitat/year (area, volume, height)
- Oyster reef height
- Oyster reef shell density [need to discuss/define/clarify]
- Diversity and biomass of reef-associated species
- Levels of pollutants (PCB, Heavy metals etc.)
- Incidence of oyster diseases, parasites and predators across different habitat type and locations
- Soft sediment community structure
- Sedimentation rates
- Salinity regimes across the ABSI region under different climate and management scenarios.
- Organic carbon dynamics (food availability) under different climate and management scenarios.



- Abundance of fishery species (e.g., blue crabs, stone crabs, finfish)
- Volume of water filtered/day
- Days to filter estuary volume
- Changes in water clarity (visibility) over time
- Area of seagrass in the bay
- Changes in nutrient (nitrogen) loads over time
- Relative proportion of nitrogen removed compared to nitrogen input
- Coastal vulnerability indices
- Salt marsh, mangrove, and/or seagrass indices
- Shoreline erosion protection

B.) Sustainable Management of Oyster Resources

Vision Theme: A restored Apalachicola Bay System has resulted in a sustainably managed wild harvested oyster fishery while also providing opportunity for other economically viable and complementary industries, including aquaculture. This is accomplished by working collaboratively with stakeholders to create, monitor and fund a plan that ensures that protection of the fishery and habitat, is implemented in a manner that is supported by science, data, and field and industry experience and observation, and provides fair and equitable access to the resource.

Goal: A productive, sustainably, and adaptively managed Apalachicola Bay System supports sustainable oyster resources.

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

Objectives:

B1) A comprehensive monitoring plan for oyster resources is established, implemented, ~~and~~ evaluated for the ABS with strong coordination among the various entities conducting work in the Bay.

B2) By year four (2022), a science-based oyster management plan is developed with broad stakeholder and community support and implemented by the State of Florida (e.g., FWC, FDACS, State Legislature) for the ABS that considers, at a minimum: rotational harvest, open and closed areas (both permanent and seasonal), harvesting methods, limited entry, surcharge fees, the recreational fishery component, shell recycling, and a shell budget.

B3) Regulations for oyster management are well-enforced with sufficient penalties that deter violations and harm to the resource.

B4) The oyster aquaculture industry is regulated using best management practices that enable economic opportunities while preventing negative effects to the ABS ecosystem and its users.



Key Topical Issues: At the December 18, 2019 meeting members brainstormed key topical issues including: Historical context; Improve the current ABS regulatory management system; Limited entry to the ABS; Criteria for opening and closing the oyster fishery for Apalachicola Bay; Recreational fishing component; Compliance, enforcement and penalties; Aquaculture; Research and monitoring long term on regulation; Funding mechanisms; Water quality monitoring; Stewardship Outreach and Education; Managing the shell stock; and Legislative action.

List Additional Key Topical Issues you think need to be addressed:

Note below any Strategies/Options to address the Key Topical Issues:

Related Draft Performance Measures to Evaluate Strategies/Options

- Total harvest in bags the oyster population can support
- Sustainable allowable catch in annual total biomass (kg) removed, under different management regimes.
- How close to a complete fishery (fraction harvested of allowable catch)
- Harvest (annual total biomass) by fishery type (recreational/commercial)
- Number of full-time harvesters that the fishery can support [need to define full-time]
- Harvest (annual total biomass) by size category
- Harvest (annual total biomass) by location
- Harvest (annual total biomass) by gear type
- Timing of harvest during the fishing season [need to define]
- Catch per unit effort (catch per trip)
- Number of poaching violations and amount of captured illegal harvest (including illegal sale)
- Amount of harvest from rotation areas
- Fraction of total oyster population that is being harvested
- Shell budget model. How many oysters removed through harvest activities without a net loss of oysters.
- Creation of a harvest management plan that is ecologically sustainable and acceptable to stakeholders and includes plans for actions in case of unpredictable but inevitable environmental disturbances.
- An updated oyster fishery and aquaculture enforcement plan that is approved by fishers, farmers, and distributors (fish houses), as well as FWC Law Enforcement.
- Sanctuaries [moved from A]
- Closed areas [moved from A]



C.) A Thriving Economy Connected to a Restored Apalachicola Bay System

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

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

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

Objectives:

C1) Economic indicators of the commercial oyster fishery and associated industries in the ABS demonstrate increasing viability and growth over the course of the ABSI project by *year X*.

C2) Industries, and businesses within the ABS are supportive and compatible with a healthy and well-managed ABS ecosystem.

C3) Growth management policies, plans and regulations affecting the ABS are compatible with a healthy and well-managed ABS ecosystem while maintaining a thriving economy and supporting cultural heritage.

C4) The oyster aquaculture industry provides economic opportunities and is complementary to the wild harvest fishery.

Key Topical Issues: At the December 18, 2019 meeting members brainstormed key topical issues including: Compatible development; Socio-economic conditions and a seafood community; Tourism impacts on the ABS; and Education on the ABS.

List Additional Key Topical Issues you think need to be addressed:

Note below any Strategies/Options to address the Key Topical Issues:

Related Draft Performance Measures to Evaluate Strategies/Options

- Value frequency of harvest that meets an economic minimum for sustainability for waterman
- Cost/value per bags
- Number of fishermen participating in the fishery
- Revenue per harvester (and perhaps its distribution)
- Travel time costs, and distance travelled



- Cost of management measures (e.g., restoration efforts)
- Revenue raised in fees/bag taxes
- Social benefits (value of ecosystem services)
- Value of harvest per day (bags per day)
- Performance metric for economic sustainability of the community
- Total economic investment versus economic benefit
- Socio-economic benefits – Improved/enhanced recreational fishing on oyster reefs including restored reefs.
- Total market activity (revenue) associated with commercial sale of oysters (including aquaculture, wild harvest, and any partial-ownership methods that fall in between the two).

D.) An Engaged Stakeholder Community and Informed Public

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

Alternative Vision Theme (Anita Grove): Stakeholder group ~~of the Apalachicola Bay System~~ is committed to working together beyond the Apalachicola Bay System Initiative project to create a permanent steering committee to sustain initiative vision and goals and implement the bay management plan. The permanent steering committee will ~~advocate~~ ensure a sustainably managed oyster-based ecosystem well into the future by facilitating innovative research, the development and implementation of best management practices by all agencies and users, and provide education on the importance of maintaining the health and productivity of the Apalachicola Bay System.

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

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

Alternative Outcome (Anita Grove): By 2030, stakeholders, private and nonprofit civic leaders, and the public are informed of the ecological and socio-economic importance of sustaining the health of the Apalachicola Bay System. Stakeholders are engaged and working actively together with elected and appointed leaders and managers to implement the management plan.

Objectives:

D1) A coordinated outreach and education plan is established and implemented to increase public awareness and support for a healthy and well-managed ABS ecosystem.



D2) Businesses, industries, non-profits, and local governments are supportive and included in outreach and education efforts to generate and increase public awareness and support for a healthy and well-managed ABS ecosystem.

D3) During the Project and following funding resources are identified and utilized to generate awareness, education, and support for a healthy oyster and ABS ecosystem.

D4) Public understanding of the issues important to health and restoration of the Bay are improved and increasing as measured by public and stakeholder surveys, and socio-economic indicators.

Key Topical Issues: At the December 18, 2019 meeting members brainstormed key topical issues including: Public support for ABS funding sources; Coordinated messaging to tourists and residents; Role of TDC and Chamber of Commerce; and Local schools.

List Additional Key Topical Issues you think need to be addressed:

Note below any Strategies/Options to address the Key Topical Issues:

Related Draft Performance Measures to Evaluate Strategies/Options

- Creation of a harvest management plan that is ecologically sustainable and acceptable to stakeholders and includes plans for actions in case of unpredictable but inevitable environmental disturbances.
- An updated oyster fishery and aquaculture enforcement plan that is approved by fishers, farmers, and distributors (fish houses), as well as FWC Law Enforcement.

E.) An Ecosystem-Based Management and Restoration Plan Supported by Apalachicola Bay System Stakeholders that is Fully Funded and Science Based

Vision Theme: The Apalachicola Bay System Ecosystem-Based Management and Restoration Plan is science-based and developed with engagement and support from the Apalachicola Bay System stakeholders and fully funded and informed by the best available science and other relevant socio-economic information.

Goal: The Apalachicola Bay System Ecosystem-Based Management and Restoration Plan is informed by the best available science, supported by the Apalachicola Bay System stakeholders, and is fully funded.

Outcome: By 2030, the Apalachicola Bay System is a productive and sustainably managed ecosystem. A fully funded and well-executed science-based Ecosystem-Based Management and Restoration Plan that incorporates the monitoring necessary for evaluation and adaptation is broadly supported



by Apalachicola Bay System stakeholders with guidance from a permanent stakeholder advisory board.

Objectives:

E1) The ABSI Community Advisory Board approves a stakeholder driven and science-informed Ecosystem-Based Management and Restoration Plan for the Apalachicola Bay System with broad community support by 2022 that is implemented.

E2) The ABS Management and Restoration Plan has clearly defined performance measures used to monitor the health of the oyster resource and ABS ecosystem, including indicators of social and economic welfare of the area’s coastal and surrounding communities.

E3) The State of Florida accepts, approves and adopts and implements the ABS Management and Restoration Plan.

E4) Agencies and other entities responsible for implementing the ABS Management and Restoration Plan work in close coordination.

E5) Funding sources and mechanisms are identified and utilized for full implementation of the ABS Management and Restoration Plan.

E6) A fully funded permanent, representative stakeholder process is established to monitor the long-term implementation of the ABS Management and Restoration Plan.

Alternative Objective E6. (Anita Grove): Stakeholder group evolves into a permanent steering committee ensuring long-term the advancement of Apalachicola Bay System Initiative vision and goals, the implementation of Apalachicola Bay System Management and Restoration Plan and continuous community engagement.

Key Topical Issues: At the December 18, 2019 meeting members brainstormed key topical issues including: Social and economic impacts on welfare of the community; Performance measures; Plan implementation and lead; Connect with the broader river system; Define fully funded; Define fully supported by stakeholders; and Sharing science and the Plan.

List Additional Key Topical Issues you think need to be addressed:

Note below any Strategies/Options to address the Key Topical Issues:

Related Draft Performance Measures to Evaluate Strategies/Options

These are covered by the Objectives for Goal E. and the performance measures in Goals A.-D. that make up the Plan.



DRAFT PERFORMANCE MEASURES BY CATEGORY USED TO EVALUATE MANAGEMENT AND RESTORATION STRATEGIES/OPTIONS

DRAFT PERFORMANCE MEASURES

HARVEST/MANAGEMENT

- Total harvest in bags the oyster population can support
- Sustainable allowable catch in annual total biomass (kg) removed, under different management regimes.
- Harvest (annual total biomass) by fishery type (recreational/commercial)
- Number of full-time harvesters that the fishery can support
- Harvest (annual total biomass) by size category
- Harvest (annual total biomass) by location
- Harvest (annual total biomass) by gear type
- Timing of harvest during the fishing season
- Catch per unit effort (catch per trip)
- Number of poaching violations and amount of captured illegal harvest (including illegal sale).
- Amount of harvest from rotation areas
- Fraction of total oyster population that is being harvested
- Sanctuaries
- Closed areas
- Shell budget model. How many oysters removed through harvest activities without a net loss of oysters.
- Creation of a harvest management plan that is ecologically sustainable and acceptable to stakeholders and includes plans for actions in case of unpredictable but inevitable environmental disturbances.
- An updated oyster fishery and aquaculture enforcement plan that is approved by fishers, farmers, and distributors (fish houses), as well as FWC Law Enforcement.

ECONOMICS

- Value Frequency of harvest that meets an economic minimum for sustainability for waterman
- Cost/value per bags bushel
- Number of fishermen participating in the fishery
- Revenue per harvester (and perhaps its distribution)
- Travel time costs, and distance travelled
- Cost of management measures (e.g., restoration efforts)
- Revenue raised in fees/ bags bushel taxes
- Social benefits (value of ecosystem services)
- Value of harvest rate (bags per day)
- Performance metric for economic sustainability of the community
- Total economic investment versus economic benefit
- How close to a complete fishery (fraction harvested of allowable catch)
- Improved/enhanced recreational fishing opportunities on oyster reefs.
- Socio-economic benefits – Improved/enhanced recreational fishing on restored reefs.
- Total market activity associated with commercial sale of oysters (including aquaculture, wild harvest, and any partial-ownership methods that fall in between the two).



- Total (amount or proportion, up for discussion) of jobs in Franklin (surrounding?) counties associated with working waterfront (fishing, aquaculture, tourism).

POPULATION

- Abundance of oysters in the population across all habitat types (sub-tidal and inter-tidal)
- Density of oysters (number per m²)
- Size/age of oysters by location/region (different reefs, fished vs. closed areas, inter-tidal vs. sub-tidal)
- Number of large oysters (>5") by location/region (different reefs, fished vs. closed areas, inter-tidal vs. sub-tidal)
- Biomass of oysters across all habitat types (sub-tidal and inter-tidal)
- Amount of brood stock (spawning stock biomass) across all habitat types
- Spat production [*need to discuss/define/clarify*]
- Oyster recruitment spatial patterns—recruitment defined as the survival beyond a density-dependent mortality stage—roughly to 30-40mm long.
- Small/market ratio across habitats and locations

HABITAT

- Amount of exposed shell on each reef [*need to discuss/define/clarify*]
- Area of reef structure (suitable for settlement, fish production, shoreline protection) [*need to discuss/define/clarify*]
- Habitat quality – area suitable for settlement and changes over time
- Change in oyster habitat/year (area, volume, height)
- How many oysters removed through harvest activities without a net loss of oysters
- Oyster reef height
- Oyster reef shell density [*need to discuss/define/clarify*]
- Diversity and biomass of reef-associated species
- Levels of pollutants (PCB, Heavy metals etc.)
- Incidence of oyster diseases, parasites and predators across different habitat type and locations
- Soft sediment community structure
- Sedimentation rates
- Salinity regimes across the ABSI region under different climate and management scenarios
- Organic carbon dynamics (food availability) under different climate and management scenarios

ECOSYSTEM SERVICES

- Abundance of fishery species (e.g., blue crabs, stone crabs, finfish)
- Volume of water filtered/day
- Days to filter estuary volume
- Changes in water clarity (visibility) over time
- Area of seagrass in the bay
- Changes in nutrient (nitrogen) loads over time
- Relative proportion of nitrogen removed compared to nitrogen input
- Coastal vulnerability indices
- Salt marsh, mangrove, and/or seagrass indices
- Shoreline erosion protection



APALACHICOLA BAY SYSTEM INITIATIVE PROJECT SUMMARY

PROJECT SUMMARY. In response to the rapidly declining health of the Apalachicola Bay System 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 will investigate what precipitated the dramatic decline of the Apalachicola Bay System, and working with the ABSI Community Advisory Board and Science Advisory Board determine a viable course of action for improving its condition.

COMMUNITY ADVISORY BOARD GUIDING PRINCIPLES (ADOPTED OCTOBER 30, 2019)

ABSI COMMUNITY ADVISORY BOARD APPROVED GUIDING PRINCIPLES

- 1.) Community Advisory Board members will strive to work together collaboratively, and seek to understand and respect differing perspectives.
- 2.) The Community Advisory Board will strive to achieve consensus on the evaluation and development of recommendations submitted to the FSU project team and appropriate management and regulatory agencies.
- 3.) The Community Advisory Board will operate under policies and procedures that are clear, concise, and consistently and equitably applied.
- 4.) Community Advisory Board members will serve as accessible liaisons between the stakeholder groups they have been appointed to represent and the ABSI Community Advisory Board, and should strive to both inform and seek input on issues the Community Advisory Board is addressing from those they represent.



**COMMUNITY ADVISORY BOARD OPERATING ASSUMPTIONS AND PRINCIPLES,
AND PARTICIPATION GUIDELINES
(ADOPTED OCTOBER 31, 2019)**

WE WILL BE SUCCESSFUL AND HAVE GOOD CONVERSATION WHEN:

- ✓ All voices are invited, respected and heard.
- ✓ All experiences are treated as valid.
- ✓ Notes are captured in writing, on flip charts or on computers.
- ✓ We listen to each other.
- ✓ We observe time frames.
- ✓ We seek common ground and action.
- ✓ Differences and problems are honored—not “worked”.
- ✓ There is full and active attendance.
- ✓ We make the time and space to connect with each other.

THE FACILITATORS WILL SEEK TO:

- ✓ Structure and facilitate a process that will enable us to discover and build on our best moments and practices as stakeholders in the ABS.
- ✓ Keep us informed of established parameters for time and tasks.
- ✓ Support and facilitate Community Advisory Board discussions.
- ✓ Create the environment that helps people to be at their best.
- ✓ Keep purpose front and center.
- ✓ Suggest and encourage new ways of thinking and doing.
- ✓ Keep us focused and on track.
- ✓ Start and stop on time.

COMMUNITY ADVISORY BOARD MEMBERS WILL:

- ✓ Participate actively and share opinions in the conversation—engage fully in this process.
- ✓ Tell stories, provide information—make meaning.
- ✓ Experiment & take risks to share, while engaging in conversation with others.
- ✓ Actively contribute to the creation of a shared vision, and management and restoration strategies for a healthy and sustainable Oyster Fishery and ABS Ecosystem.
- ✓ Listen actively, attentively, respectfully.
- ✓ Demonstrate caring . . . about the ABS and our dialogue.
- ✓ Take responsibility . . . for the conversation and the ideas developed here.
- ✓ Be here for the entire CAB process, be on time, and be *here* while you’re here.
- ✓ Refrain from using electronic devices during the Community Advisory Board meetings—keep all electronic devices turned off or in a silent mode; your participation is valued.
- ✓ Be willing to reach consensus.

Four Personal Guiding Principles:

1. Be impeccable with your word.
2. Don't take things personally.
3. Don't make assumptions.
4. Always participate fully.



COMMUNITY ADVISORY BOARD MEMBERS' ROLE

- ✓ The Community Advisory Board 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.
- ✓ Look to the Facilitator to be recognized. Please raise your name tent or hand 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"*.
- ✓ To the extent possible, offer options to address other's concerns, as well as your own.
- ✓ Participate fully in discussions, and complete meeting assignments as requested.

ABSI PROJECT RESEARCH TEAM'S ROLE

- ✓ Provide science-based research and information as requested by Community Advisory Board members and facilitators.
- ✓ Consult with stakeholders and provide guidance in using tools and objective science to analyze proposed options.
- ✓ Use best available tools and science to analyze options in response to stakeholder input.
- ✓ Organize meeting logistics and provide relevant documents for use during meetings.
- ✓ Attend all CAB meetings.
- ✓ The ABSIs Project Team will deliver a project report that will include the results and products of the Community Advisory Board to managers, regulators, and other agencies as appropriate for consideration in its planning for management and restoration of the oyster fishery and ABS ecosystem.

FACILITATOR'S ROLE

- ✓ Design, facilitate and report on a collaborative Community Advisory Board process.
- ✓ Assist the Community Advisory Board members to build understanding and consensus on action recommendations.
- ✓ Provide process design and procedural guidance to members.
- ✓ Assist members to stay focused and on task.
- ✓ Assure that participants follow *Community Advisory Board Participation Guidelines*.
- ✓ Accurately and fairly capture summary of key discussion points during the Community Advisory Board meetings.

GUIDELINES FOR BRAINSTORMING

- ✓ Offer one idea per person without explanation.
- ✓ No comments, criticism, or discussion of other's ideas.
- ✓ Listen respectfully to other's ideas and opinions.
- ✓ Seek understanding and not agreement during this phase of identifying issues or options.

THE NAME STACKING PROCESS

- ✓ Determines the speaking order.
- ✓ Participant raises hand to speak during CAB meetings. Facilitator will call on participants in turn.
- ✓ Facilitator may interrupt the stack (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.



COMMUNITY ADVISORY BOARD CONSENSUS-BUILDING PROCEDURES (ADOPTED OCTOBER 30, 2019)

COMMUNITY ADVISORY BOARD CONSENSUS-BUILDING PROCEDURES

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 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 facilitators. Techniques such as brainstorming, ranking and prioritizing approaches will be utilized. The Community Advisory Board's consensus process will be conducted as a facilitated consensus-building process. Community Advisory Board members, project staff, and facilitators 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 facilitators, or a Community Advisory Board member through the facilitators, 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 on the public comment forms provided will be included in the facilitators' summary reports.

Facilitators will work with the ABSI project team and Community Advisory Board members to design agendas that will be both efficient and effective. The ABSI project team will help the Community Advisory Board with information and meeting logistics.

To enhance the possibility of constructive discussions as members educate themselves on the issues and engage in consensus-building, members agree to refrain from public statements that may prejudice the outcome of the Community Advisory Board's consensus process. In discussing the Community Advisory Board process with the media, members agree to be careful to present only their own views and not the views or statements of other participants. In addition, in order to



provide balance to the Community Advisory Board process, members agree to represent and consult with their stakeholder interest groups.

ACCEPTABILITY RATING SCALE FOR OPTIONS AND RECOMMENDATIONS

During an early meeting Community Advisory Board members will be asked to propose an initial suite of options to address each of the Key Topical Issues in turn. During subsequent meeting(s) Community Advisory Board members will be asked to review existing proposed options and will be invited to propose any additional options for Community Advisory Board consideration, and subsequently to rate the options for acceptability. In addition, following discussion and refinement of options, members may be asked to do additional ratings of proposed options if requested by a Community Advisory Board member or project team member. Members should be prepared to offer specific refinements to address their reservations.

Once rated for acceptability, options(s) with a 75% or greater number of 4s and 3s in proportion to 2s and 1s will be considered preliminary consensus recommendations for inclusion in the final package of recommendations.

At any point during the process, any option may be re-evaluated and rated at the request of any Community Advisory Board member. The status of a rated option will not be final until the final Community Advisory Board meeting, when a vote will be taken on the entire package of consensus ranked recommendations.

The following scale will be utilized for acceptability rating exercises:

Acceptability Rating Scale	4 = <i>Acceptable, I agree</i>	3 = <i>Acceptable, I agree with minor reservations</i>	2 = <i>Not Acceptable, I don't agree unless major reservations addressed</i>	1 = <i>Not Acceptable</i>
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