

Apalachicola Bay System Initiative (ABSI)



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ABSI COMMUNITY ADVISORY BOARD QUESTIONNAIRE SUMMARY

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CONSENSUS CENTER



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ABSI COMMUNITY ADVISORY BOARD QUESTIONNAIRE SUMMARY

October 2019

I. INTRODUCTION

The Community Advisory Board (CAB) is being convened to develop consensus on a science-based ecosystem-based oyster management and restoration plan for the Apalachicola Bay System (ABS). To hit the ground running, in advance of the organizational meeting on October 30, 2019, we asked CAB members to respond to this questionnaire. In addition to this summary, we have incorporated CAB member responses into the organizational meeting agenda packet.

II. MOST IMPORTANT ABSI SHORT AND LONG-TERM OUTCOMES

Members were asked to name the single most successful outcome for the Apalachicola Bay System Initiative (ABSI) process to achieve in the short term and the long term?

A. OVER THE SHORT TERM

SUCCESSFUL SHORT-TERM OUTCOMES FOR THE APALACHICOLA BAY SYSTEM INITIATIVE (ABSI) PROCESS <i>Listed In order of frequency from the questionnaire responses</i>
1. A consensus on a vision and plan that is adopted and implemented (9)
2. Open and inclusive process (4)
3. The bay revitalized (2)
4. Determine why oysters have not returned (2)
5. Ongoing monitoring of water quality (1)

Member Responses

A consensus on a vision and a science informed plan that is adopted and implemented (10)

- Long term consensus plan developed and implemented.
- Develop a long-term plan that addresses all aspects of this system.
- A clearly articulated and shared vision of what a successful ABS would look like AND the development of a plan to achieve that vision.
- A vibrant and prosperous coastal community supported by a healthy bay system that boasts clean water, restored oyster reefs and other coastal habitats, and sustainable and productive fishery resources.
- Consensus on the science we need.
- Consensus on best ways to move forward for some immediate positive results but also a long- term game plan for sustainability.
- Quickly develop plan to rebuild oyster reefs.
- An oyster management plan is adopted.
- Completion and implementation of a bay management plan and a restoration plan.

Open and inclusive process (5)

- The process is recognized and accepted as open and inclusive and will be viewed as having the potential to change a long history of not working together and not changing the decline of the river and bay system. Each of us represents a whole lot of other folks that could have been selected for the advisory board and we need to make sure they know they are part of the process.
- A process that includes views from the local oyster harvesters and dealers and results in a useful product that allows us to move forward.
- At the outset an ABSI process that is inclusive, accepting and friendly to the so many people and organizations that have worked so hard over the decades to try and save the Apalachicola River System that includes not only the bay but the Apalachicola River Basin. In my work on this issue I find and sense a level of disorganization within the Apalachicola River and Bay System, not all the different from my experience working the larger ACF basin issues. Facilitation, outreach, education and inclusion will be invaluable at the outset for each of us selected to be a member of this advisory group has a herd of folks with and behind us with a world of emotions and experience in this basin.
- Providing the forum and paving the way for honest, respectful, meaningful communication between stakeholders regarding the Apalachicola Bay System's issues, and potential strategies to address those issues. It's all about communication.
- Community based management plan for sustainable fisheries.

The Bay revitalized (2)

- Revitalization of the bay.
- Bay returns to normal.

Determine why oysters have not returned (2)

- Determine why the oysters have not returned even though river flows have recovered.
- Figure out why the bay has so few oysters.

Monitoring water quality (1)

- Monitor water quality of river and bay.

B. OVER THE LONG TERM

SUCCESSFUL LONG-TERM OUTCOMES FOR THE APALACHICOLA BAY SYSTEM INITIATIVE (ABSI) PROCESS <i>Listed In order of frequency from the questionnaire responses</i>
1. A system of oyster reefs and oyster bars for a sustainable fishery (6) Consensus on a long-term recovery strategy and sustainable management plan (6)
2. The Bay and it’s communities are vibrant, thriving, productive and resilient (3)

Member Responses

Consensus on a long-term recovery strategy and sustainable management plan (6)

- Consensus on long-term strategy.
- Design sustainable management plan.
- A bay management plan and oyster recovery plan born out of a highly transparent process reflective of local stakeholder values to protect the bay and river helps the bay and oysters

recover and has a permanent advisory committee into the future that has representation from harvesters, dealers, local leaders and agencies.

- A recovery and management plan for the bay that is a part of a recovery and management plan for the Apalachicola River Basin that is part of an Apalachicola, Chattahoochee, Flint (ACF) transboundary water management institution that includes the feds, states and all the stakeholders.
- An ACF transboundary water management institution, that includes an Apalachicola River recovery and management plan and process that has all the components like a bay management and recovery plan and process remains my goal. I am in my third decade of advocating for sustainable, now resilient, recovery and management plans and processes, institutions if you will, for the Chipola River watershed where I live, the Apalachicola River and Bay System, and the Apalachicola, Chattahoochee, Flint River basin, including the eastern Gulf of Mexico.
- More on the social science side of things: to foster a sense of trust among the stakeholders that leads to a general consensus on the primary management objectives and strategies to improve the ecosystem functions of the Apalachicola Bay System.

A system of oyster reefs for ecosystem services and oyster bars for a sustainable fishery (6)

- A system of oyster reefs providing ecosystem services and high productive fishery.
- Renew oyster bars.
- Increased natural oyster bar production.
- Sustainable commercial oyster fishery.
- Wild oyster harvesting to resume to a somewhat normal level.
- A sustainable fishery - oyster, shrimp, crab, etc.

The Bay and it's communities are vibrant, thriving, productive and resilient (3)

- A vibrant and prosperous coastal community supported by a healthy bay system that boasts clean water, restored oyster reefs and other coastal habitats, and sustainable and productive fishery resources.
- Make the bay productive again.
- Thriving and resilient ecosystem.

III. LOOKING BACK

Looking back, members listed key milestones/eras and people that have made a difference (for better or for worse) for the Apalachicola Bay System.

A. FOR BETTER

Milestones/Eras

- Given the current state of the ABS, I'm not sure I can point to many (if any) success stories.
- Expansive management plans that have helped protect water flows and health.
- Florida denial of the US Army Corps of Engineers permit to dredge the river.
- Formation of the Apalachicola Riverkeeper in 1998 and ACF Stakeholders, Inc. 2009. (2)
- Check stations.
- Public lands acquisition and conservation efforts.

- Denial of the permit for Corps level dredging of the river.
- Seafood industry prevented over development.
- 2013-2016 - Intensive research on the potential causes of oyster mortality.
- Establishment of the ANERR for local research data, designation as a Biosphere Reserve, Apalachicola Riverkeeper involvement.
- ANERR.
- Public awareness that an issue exists and state support to address issues.
- State shelling program.
- NFWFMD.
- FSU Triumph funded project.

People

- There are a number of dedicated folks who have tried to shed a light on the myriad of issues plaguing the bay, but those messages have not been heard or well received.
- Too many folks to list who have given their careers and volunteer time.
- A too long list of people to list at the federal, state and local levels.
- Helen Leitman, USGS.
- Dan Tonsmeire, Apalachicola Riverkeeper.
- Angus Gholson Chattahoochee Florida botanist.
- Gov. Bob Graham, perhaps it's greatest political advocate, it's not really fair to start naming all the folks.
- Bob Graham.
- Dan Tonsmerie.
- Steve Leitman.
- Steve Rash.
- Woody Miley, the first Research Reserve manager. He respected local fisherman and harvested and incorporated their extensive knowledge of the bay.
- Smokey Parrish understands that we are unique and we have a unique opportunity to preserve the bay and river, what makes Apalachicola special.

B. FOR WORSE

Milestones/Eras

- Historic droughts in SE US.
- Natural disturbance events.
- Lack of historic average river flow rates- Georgia.
- Lack of fresh water.
- Lack of river flow.
- Reduced water quality.
- Water control structures holding back flow during low water periods.
- USACE restricting water flows in 2004(?) to less than 10 cfs. Everyone told them that it would be the death of the bay.
- Lost in the court system for decades and \$100+ million that has stifled scientific work and collaboration among all the stakeholders while the river and bay have suffered the death of a thousand lashes.
- The "Water Wars" legal challenges/obstacles.

- Construction of the dams and reservoirs.
- US Army Corps Engineers.
- Lack of consensus on long-term bay health.
- Oyster management and lack of long-term vision/plan for sustainability.
- Myopic economic policy and loss of biodiversity through habitat destruction.
- Habitat degradation.
- Increasing water usage upstream.
- Increasing agricultural withdrawals in Flint River Basin.
- Extensive agriculture center pivot irrigation consumptive use.
- Rapid unsustainable population growth since the 1970's.
- Landscape level land use for urbanization and agriculture and plantation forest management.
- Poor planning and growth management in the broader region, ill-advised land-use and allocation of water resources.
- Summer of 2012 - oyster resources crashed precipitously.
- Unsustainable harvest of fishery resources.
- Bob Sikes/government cut.
- Opening of Sikes cut.
- BP oil spill aftermath.
- Oil spill, and oystermen themselves.

People

- It's a long list and I'll not blame individuals.
- No comment on people who have made this worse, can't see any benefit to that, though there are many.

IV. LOOKING AROUND

Members responded to questions the current factors, trends and critical issues impacting the system today.

A. TAILWINDS

Members listed factors enhancing the success and health of the Apalachicola Bay System:

TAILWINDS-ENHANCING THE HEALTH OF THE APALACHICOLA BAY SYSTEM	
<i>Listed In order of frequency from the questionnaire responses</i>	
1.	Multiple stakeholders, elected leaders and public interested in improving the Bay's health (3)
2.	ACF and the Supreme Court (3)
3.	Ongoing monitoring for managing the Bay (2) Conservation protected land (2)
4.	Aquaculture (1)
5.	Funding available for projects (1)
6.	The Apalachicola Bay System Initiative (1)
7.	Fresh water continues (1)

8. Little harvesting (1)

Multiple stakeholders, elected leaders and the public interested in improving the Bay's health

- Resilience of people connected to the Bay.
- Multiple stakeholders interested now in improving the overall health of the bay with some of infusion of resources to take action.
- People seem willing to listen to the science.
- Local population and local leadership that has a strong knowledge and desire to preserve the bay and river. The area is an aquatic preserve, and outstanding water and area of critical concern, plus 89% in state and federal wildlands. Not easy to build an economy. However, there is still a very strong desire to preserve what makes this area one of a kind. Seafood harvesting (wild caught oysters) works well with preserving the bay. Also, local populations have a deep knowledge and skills of the maritime environment. Ready to work to save and diversify it.

ACF and the Supreme Court

- Potential basin wide collaborative planning, management and implementation of water and other natural resources, RCSC and ACF Stakeholders.
- A "successful" outcome in the Supreme Court. ABSI.
- ACF Stakeholders, Inc. Sustainable water management plan for the ACF basin, a possible positive outcome of the Supreme Court case.

Conservation protected land

- Continues to be relatively undeveloped - very few nearby land uses/infrastructures that could cause harm to the bay.
- Lower levels of development, Apalachicola NERR data and resources, local economy strongly based on tourism and fisheries.

Ongoing monitoring for managing the Bay

- Monitoring bay and components from multiple agencies, contributing to management and laying the foundation for sustainability.
- On-going monitoring for biological and water quality baseline data, elevation of this issue to the national stage.

Aquaculture

- Oyster farming

Funding available for projects

- Restoration and research funds and projects.

Apalachicola Bay System Initiative (ABSI)

Fresh water continues

- Continued fresh water.

Little harvesting

- Lack of harvesting.

B. HEADWINDS

Members listed factors impeding the success and health of the Apalachicola Bay System.

HEADWINDS-IMPEDING THE HEALTH OF THE APALACHICOLA BAY SYSTEM	
<i>Listed In order of frequency from the questionnaire responses</i>	
1.	Low fresh water delivery - frequency, magnitude, duration (7)
2.	Changing Bay ecosystem (4) Lack of consensus, mistrust and lack of unity (4) Poorly planned growth throughout the basin (4)
3.	“Water wars” (3)
4.	Oyster reef ecosystem under stress (2)
5.	Poor funding decisions regarding restoration of Bay (1) Politics, not science and policy guiding decisions (1) Lack of enforcement (1) Opposition to aquaculture (1) No shelling program (1) Deep Water Horizon (1)

Member Responses

Low freshwater delivery - frequency, magnitude, duration

- Continued issues with regard to freshwater delivery to the system.
- Increases in freshwater flow in the river.
- Further degradation in frequency, magnitude and duration of low flows as well as mid and high flows.
- Continued low flows in the Apalachicola River during drought conditions.
- Lack of river flow.
- Water flow/quantities.
- Gate system on Bob Sikes cut.

Changing Bay ecosystem

- Dynamic changing ecosystem.
- Loss of biodiversity and habitat.
- Sea level rise and climate change.
- Climate change - changing water temperatures, salinity, ph., levels.

Lack of consensus, mistrust and lack of unity

- Failure to work together toward effective recovery and management plans for the ACF system, including the Bay and the eastern Gulf of Mexico.
- Disconnected stakeholders; no comprehensive PLAN by the state for river and bay management Lack of consensus may develop.
- Disagreement/mistrust between local stakeholder groups on some issues and causes - we need to be unified - I hear things said like the state wants the bay to fail; the fossil shell is what is killing the bay, the bay has been researched to death, etc.

- County Commission should be unified in telling the resource managers to do what they need to do and the resource managers should do what they know is best for the resource. Right now, it seems like they are both waiting on each other to make the calls for fear of public reprisal if stakeholders aren't happy; sorry, trying to be honest here.

Poorly planned growth throughout the basin

- Lack of comprehensive management plan.
- Uncontrolled, poorly planned growth and development, M-core as an example.
- Future unplanned and unsustainable economic growth and development.
- Upper uses of water in the basin. Commodity farms increasing. They use more water.

“Water wars”

- "Water wars" in general and focus on needs for oyster health rather than broader ecosystem needs.
- Continuation of litigation.
- Unsuccessful outcome in the Supreme Court.

Oyster reef ecosystem under stress

- Lack of oysters to produce spat, lack of shell stock on bars.
- Reduction in the suitable substrate for spat recruitment. Reduction in the spawning stock.

Poor funding decisions regarding restoration of bay

- Poor decisions regarding the expenditures of dollars that might be used to most effectively restore the bay.

Politics, not science and policy guiding decisions

- Bad political influence of otherwise good public and scientific information and policy.

Lack of enforcement

- Lack of oyster enforcements, closures.

Opposition to aquaculture

- County opposition to mariculture.

No shelling program

- lack of shelling program.

Deepwater Horizon

C. TRENDS

Members listed trends impacting the success and health of the Apalachicola Bay System in the coming years.

TRENDS IMPACTING THE HEALTH OF THE APALACHICOLA BAY SYSTEM <i>Listed In order of frequency from the questionnaire responses</i>	
1. Growth (7)	
2. Upstream agriculture and forest management impacts on water quality and supply (5) Climate change impacts (5)	
3. Bay's and industry's decline and loss of seafood culture (3)	
4. Enforcement (2) Disagreement on how to achieve sustainability (2)	
5. Rise of aquaculture (1) Growing tourism economy (1) Loss of biodiversity (1)	

Growth (7)

- Atlanta metro area growth.
- Myopic economic development politics and policy.
- On the path to be like the rest of Florida.
- Changes in use of the surrounding area, development.
- Population growth.
- Economic troubles.
- Short-sightedness on the part of key decision makers.
- Development pressures.

Climate change impacts (5)

- A failure to adapt to the impacts of changing climate.
- Climate change and lack of faith in science.
- Climate change, rising sea level, more powerful hurricanes.
- Drought frequency, duration and magnitude.
- Lack of fresh water due to SE drought that may come.

Upstream agriculture and forest management impacts on water quality and supply (5)

- Water quality issues from the conversion of forestland to range/pastureland for cattle by Deseret Ranch.
- Large scale cattle operations effecting water and habitat quality.
- Changes in farm, forest and land management, like longleaf pine.
- Sod based irrigated row crop agriculture.
- Growth of cotton, corn and soybeans on the Flint River (higher water use than vegetables).

Bay's and industry's decline and loss of seafood culture (3)

- If this Bay continues to decline the seafood culture will disappear in large part from the area.

- Also, the loss of oyster dealers and harvesters. It used to be a multi-million-dollar economy and relatively well-paying jobs. The industry has collapsed.
- Oyster harvesting is becoming less and less likely to survive as a means to make a living.

Disagreement on how to achieve sustainability (2)

- Disagreement on how to achieve sustainability.
- Setting/meeting expectations on timeframe to achieve.

Enforcement (2)

- Inability of enforcement.
- Lack of ethics among current oyster harvesters.

Rise of Aquaculture (1)

- Aquaculture is growing; however, natural oyster reefs are still needed.

Tourism economy (1)

- I think that there will be a continued shift toward tourism as the primary economic driver of the county. I think that there will be more development and support for businesses supporting tourism.

Loss of biodiversity (1)

- Loss of biological diversity through the destruction of habitat.

D. CRITICAL ABSI CHALLENGES AND ISSUES

Members noted any key strategic issues and challenges that the Community Advisory Board should focus on in the following areas that were identified in the [Stakeholder Assessment report](#).

1. Oyster reefs: suitable locations, heights, substrate, and salinity.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
12	4	0	0	0	3.75 of 4

OYSTER REEFS - ISSUES AND INFORMATION NEEDED <i>Listed In order of frequency from the questionnaire responses</i>	
ISSUES THE CAB SHOULD CONSIDER:	
1.	Substrate and reefs (7)
2.	Oyster farming and relation to oyster reef ecosystem (3) Lake Wimico and connection to the Bay (3) Water chemistry and oyster reef ecosystem (3)
3.	Flows and connection to River system (2) Sikes Cut (2)
4.	Enforcement of rules (1) Dredging (1)

Sea level rise (1)
INFORMATION NEEDED <ul style="list-style-type: none"> • Common agreed upon data, information and modeling and assessment tools (8) • Understanding Historic changes to the river and Bay (6) • Oyster farming in impact on oyster reef system (1) • Data on local enforcement (1)

ISSUES THE CAB SHOULD CONSIDER:

Substrate and reefs

- We need to understand the water chemistry and be sure that reef building efforts are not in vain regarding changing pH values.
- Suitability and availability and public perceptions regarding substrate materials.
- A plan to help the public understand the facts better about substrate suitability.
- Planting of proper shell stock.
- Getting shell on depleted reefs.
- Source material will get more expensive and various options need to be explored thoroughly.
- Substrate placement

Oyster farming and relation to oyster reef ecosystem

- Helping Bay recover by helping the local harvester transition into aquaculture.
- Oyster farming/aquaculture to supplement/help fishery.
- Oyster farming, are they placed in areas where they can spawn and enhance growth on natural bars?

Lake Wimico and connection to the Bay

- St. Joe Canal and Intercoastal Waterway.
- Install control structure in Lake Wimico, study how that changes fresh and saltwater flows to Apalachicola and St. Joe Bay, as an example.
- Lake Wimico, slough restoration.

Water chemistry and oyster reef ecosystem

- Water chemistry trends regarding pH.
- Science driven.
- Restoration strategies and local community buy-in and stewardship.

Sikes Cut

- Sikes Cut.
- Possible infrastructure to manage fresh and saltwater inflows at Sikes Cut.

Flows and connection to River system

- Connection to River system.
- Flows and basin wide management.

Other issues

- Enforcement of rules.
- Dredging.
- Sea level rise.

INFORMATION THE CAB MAY NEED

Common agreed upon data, information and modeling and assessment tools

- Understand how oysters operate.
- Most important is we need to know what is out there.
- Common agreed upon data is an issue has challenged us throughout the basin.
- So many issues needed in the listing and common information and data to work from for decision-making.
- Maps of reefs - historic, current efforts, what are the priority areas to be mapped.
- Oyster larval transport models.
- Hydrodynamic modeling - to identify key places for major restoration work.
- Habitat suitability tools.

Historic changes to the river and bay

- Understanding upstream water use and history of water decline.
- Understanding historical changes to the river and bay.
- Historical changes to the river and bay, dredging, Sikes Cut, St. Joe Canal and Intercoastal Waterway. Install control structure in Lake Wimico, study how that changes fresh and saltwater flows to Apalachicola and St. Joe Bay, as an example.
- What impacts have historical development like the causeways and dredging had on flows, directions, locations, salinity, etc.
- Bay conditions recent, past and ongoing into the future.
- Historical restoration strategies and strategies used in other areas.

Oyster farming in impact on oyster reef system

- Oyster farming - are they placed in areas where they can spawn and enhance growth on natural bars.

Data on local enforcement

- Local enforcement – fines.

2. Water quantity and timing: freshwater flow, quantity, timing, salinity balance, predation and drought.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
13	3	0	0	0	3.8 of 4

WATER QUANTITY AND TIMING IN THE BAY SYSTEM - ISSUES AND INFORMATION NEEDED <i>Listed In order of frequency from the questionnaire responses</i>
ISSUES THE CAB SHOULD CONSIDER: 1. Hydrology, droughts, freshwater flows and salinity (4)

2. What is already accomplished and being done? (2)
3. Historical changes to the river and Bay (1) Upstream water use (1) Oyster farming impact on natural bars (1) Increase resiliency of the system (1)
INFORMATION NEEDED <ul style="list-style-type: none"> • Mapping and identifying system components and interconnectivity • Hydrodynamic modeling • Upstream water management • Local monitoring • ACF water wars • ACF Stakeholders plan and assessment • Research from places with the same issues

ISSUES THE CAB SHOULD CONSIDER:

Hydrology, droughts, freshwater flows and salinity (4)

- How the hydrology of the bay is changing and may change with future droughts.
- How does that information guide restoration and future management of the fishery?
- How to maintain proper freshwater flow.
- Salinity has been improving

What is already accomplished and being done? (2)

- The ACF Stakeholders, Inc. completed a Sustainable Water Management Plan for the ACF basin.
- Developing oyster beds north of the Gorrie Bridge in fresher water.

Historical changes to the river and Bay (1)

- Dredging, Sikes Cut, St. Joe Canal and Intercoastal Waterway. Install control structure in Lake Wimico, study how that changes fresh and saltwater flows to Apalachicola and St. Joe Bay, as an example.

Upstream water use (1)

Oyster farming impact on natural bars (1)

- Oyster farms, are they placed in areas where they can spawn and enhance growth on natural bars?

Increase resiliency of the system (1)

- Increase resiliency of the system so it can survive challenging condition.

INFORMATION THE CAB MAY NEED

Mapping and identifying system components and interconnectivity

- Mapping of oyster resources in the bay.
- Examining historical mapping with water regimes.
- Identifying primary ecosystem components and the interconnectivity data on the geological substrate.

Hydrodynamic modeling

- Hydrodynamic modeling.
- Hydrological modeling and biological needs of the system. Going to need some presentations and links to info.

Upstream water management

- How water is handled/managed upstream.

ACF water wars

- Understanding the water wars.
- Reservoir drought rules.

Monitoring

- Local monitoring data, more local monitoring done re: predation.

ACF Stakeholders plan and assessment

- A link to the ACF Stakeholders Inc. Sustainable Water Management Plan and a recent ACF Stakeholders Bay Assessment.

Research from places with the same issues

- Research from other areas that have had the same issues.

3. Lack of a holistic, sustainable Apalachicola Bay management plan informed by science.

Very Critical	Critical	Less Critical	Not Critical	Don't Know	Rating Avg
4	3	2	1	0	
9	6	1	0	0	3.5 of 4

HOLISTIC, SUSTAINABLE APALACHICOLA BAY MANAGEMENT PLAN	
ISSUES AND INFORMATION NEEDS	
<i>Listed In order of frequency from the questionnaire responses</i>	
ISSUES THE CAB SHOULD CONSIDER:	
1.	Long term plan laying out the basic elements is critical (3) The Bay collapse and the ACF system (3)
2.	Enforcement of harvest rules (2)
3.	Invest in science (1) Healthy productive ecosystem primary consideration (1) Ongoing process conveners (1)
INFORMATION THAT MAY BE NEEDED	
<ul style="list-style-type: none">• Analysis of similar science-based restoration efforts• State management efforts• Summaries of previous significant work done on the ABS• How salinity works in the Bay• Better fisheries data• Historical use of the Bay	

- Seafood harvest rules information

ISSUES THE CAB SHOULD CONSIDER:

Long term plan laying out the basic elements is critical

- Comprehensive long-term plan is critical.
- We must have a comprehensive plan.
- Plan needs to be simple enough in conceptual layout and content so that all stakeholders will be attracted to look at it and able to understand its basic elements, so it will be critical that there be a "short-version" that lays out the basic elements in an easy to understand manner.

Enforcement

- Strict and enforceable rules, maybe limited entry.
- Enforcement by agencies like FWC.

The Bay collapse and the ACF system

- Need to know why this is the case. Is it transboundary issues, the litigation, failure of the state to manage the bay system?
- The ACF is a connected system.
- Indications are that all fisheries are in decline. What are the underlying causes?

Invest in science

- There appears to be little appreciation by funding entities and key decision makers for the need to invest in science to inform successful restoration efforts that are essential to sustained economic benefit. Likewise, there seems to be little appetite for investments in and commitment to monitoring to evaluate restoration efforts and other actions.

Healthy productive ecosystem primary consideration

- Primary consideration should be healthy ecosystem and productivity before exploitation.

Ongoing process conveners

- The Water Management District should be the conveners of such an ongoing process that includes all the stakeholders and that includes the feds, the state(s) and the basin stakeholders. That's not happening.

INFORMATION THE CAB MAY NEED

- **Analysis of similar science-based restoration efforts** from elsewhere (e.g. North Carolina, Chesapeake Bay, etc.).
- **State management efforts.** I'd like to know what the state agency folks on our board explain is the reason for this "lack"?
- **Summaries of previous significant work done on the ABS** - synthesis to an understandable, laymen level of the modeling that has been done regarding salinity in the system.
- **Better fisheries data** - not just trip tickets, but more information about location of catch (i.e. the crab fishery has worked around the mouth of the river; shrimpers do better offshore than in the bay).

- **Historical use** of the bay.
- **How salinity works** and is affected in the bay.
- **Seafood harvest rules information.** Information on all seafood harvest rules (commercial & recreational).
- **Science informed thresholds** when to open and close the bay defined in the management plan.
- **A buy-in on the data and plan** at some level from ALL key stakeholder groups, i.e. consensus thinking.

4. Overharvesting, and consideration for managing a limited effort oyster fishery.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
5	9	2	0	0	3.2 of 4

OVERHARVESTING AND CONSIDERATION OF A LIMITED OYSTER FISHERY	
ISSUES AND INFORMATION NEEDS	
<i>Listed In order of frequency from the questionnaire responses</i>	
ISSUES THE CAB SHOULD CONSIDER:	
1. Address in the management plan (4)	
2. Enforcement of harvesting rules (3)	
3. Modeling scenarios regarding harvest and recovery rates (2) Harvesting information and Bay closure (2)	
4. Extent of historical reefs and expectations for robust fishery (1)	
INFORMATION THAT MAY BE NEEDED	
<ul style="list-style-type: none"> • Status and condition of oyster beds and oyster fishery • Overharvesting data and sustainable harvest level • Enforcement data 	

ISSUES THE CAB SHOULD CONSIDER:

Address in the management plan

- Thresholds when to open and close the bay defined in the management plan.
- Should be part of the bay management plan.
- All management must be reevaluated.
- I think the FWC is capable of properly managing the fishery given adequate resources and access to data.

Enforcement of the harvesting rules

- More nighttime monitoring of oyster poachers.
- Strict and enforced harvesting rules.
- Enforcement.

Modeling scenarios regarding harvest and recovery rates

- Perhaps some modeling that would exhibit various scenarios on how much a Bay recovery will be delayed given continuing harvest and various recovery rates; many just don't seem

to realize the future impacts to potential recovery that continued harvesting during recovery will have.

- The local culture seems to believe that they need to keep purchasing the harvester licenses or they may get locked out with the implementation of a limited fishery; however they don't realize that with current conditions there is already a limited fishery due to a decimated oyster population, partly due to an unlimited fishery regime.

Extent of historical reefs and expectations for robust fishery

- Extent of historical reefs compared to the fishery, relative to current status/conditions.
- Need to set realistic expectations for robust fishery

Harvesting information and Bay closure

- There is misinformation on overharvesting. WHEN and WHERE and WHY? There is little to harvest currently. FWC should close the Bay to harvesting.
- Listen to the seafood industry stakeholders here. Close the Bay.

INFORMATION THE CAB MAY NEED

Status and condition of oyster beds and oyster fishery

- Overview presentation on the issue.
- Status and condition of the oyster beds on an ongoing basis.
- Historical data on oyster fishery and MSY.
- Viability of oyster fishery nearby/elsewhere and farming in the bay.

Overharvesting data and sustainable harvest level

- What it would look like: With XX being a sustainable harvest level, how many fishers could participate in the fishery?
- Data on harvests in open areas and evidence of overharvest after a recently shelled area is opened to unlimited harvesting.

Enforcement data

- Number of citations issued each year from 1998- present.
- Data on oyster poaching in closed areas.
- How willing is the seafood industry to cooperate?
- How to get the Bay going.

5. The emergence of aquaculture, and its relationship to wild harvesting in the ABS.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
3	10	2	1	0	2.9 of 4

<p>THE EMERGENCE OF AQUACULTURE IN THE BAY ISSUES AND INFORMATION NEEDS <i>Listed In order of frequency from the questionnaire responses</i></p>
<p>ISSUES THE CAB SHOULD CONSIDER: 1. Do both- wild harvesting/oyster reefs and aquaculture are needed (3)</p>

Conflict resolution and local government view of aquaculture (3)
2. Aquaculture impact on the Bay and oyster reef system ecology (2) Best site locations for aquaculture (2) Education, Funding/capital for starting aquaculture operations (2)
3. Law Enforcement (1)
INFORMATION THAT MAY BE NEEDED
<ul style="list-style-type: none"> • Economic and marketing data on benefits/costs to using local aquaculture • Carrying capacity for aquaculture in the Bay • Impacts on other users and resources • Best practices • Industry participation

ISSUES THE CAB SHOULD CONSIDER:

Do both- wild harvesting/oyster reefs and aquaculture are needed

- We should be able to do both, AND a commercially viable wild harvest for oysters is a good indicator of the overall system health.
- Allow mariculture in Apalachicola Bay.
- A recognition that natural oyster reefs are needed.

Conflict resolution

- Anticipate a need for conflict resolution.
- Less critical in terms of ecological consequences but fairly important in terms of public/local perception regarding markets and prices.
- Why does the local government oppose and why does the state allow local Gov't to control?

Aquaculture impact on the Bay and oyster reef system ecology

- Agriculture/aquaculture is generally not friendly to the natural environment and we should make sure that is/will not happen in the bay.
- Use of non-sexual reproductive strains versus reproductive strains.

Best site locations for aquaculture

- Best site locations.
- Oyster farm leases.

Education, funding/capital for aquaculture operations

- Local population switching from wild harvest to aquaculture. Need funding to help them get capital and knowledge of running an aquaculture business to start an operation.
- Engagement of oystermen in aquaculture and education/training for wild oystermen on farming practices.

Law Enforcement

- Law Enforcement - how do you protect interests from being sabotaged?

INFORMATION THAT MAY BE NEEDED

Economic and marketing data on benefits/costs to using local aquaculture

- Economic data on the benefits to local restaurants utilizing local, farm-raised product versus bringing in from other locations.
- Actual marketing data from aquaculture operations in general terms, i.e. not the specific customer info but the type of customer info; for both segments of the industry (wild and aquaculture).

Carrying capacity for aquaculture in the Bay

- What is the carrying capacity of an aquaculture industry in the bay?
- What is the potential yield from a restored oyster population?

Impacts on other users and resources

- What impacts might high density aquaculture have on other resources and other user groups?
- Overview of coexistence of aquaculture in other areas in Florida like Cedar Key.

Best practices

- Discussion from oyster aquaculture experts in region/gulf on best practices.
- Look at how others are doing it successfully.

Industry participation

- Will the industry buy in areas where new aquaculture leases can be obtained in Apalachicola Bay?

6. Oysters and Bay in decline: after the perfect storm, status quo is failing.

Very Critical	Critical	Less Critical	Not Critical	Don't Know	Rating Avg
4	3	2	1	0	
4	5	3	0	3	3.1 of 4

OYSTERS AND BAY IN DECLINE	
ISSUES AND INFORMATION NEEDS	
<i>Listed In order of frequency from the Questionnaire responses</i>	
ISSUES THE CAB SHOULD CONSIDER:	
1.	Enforcement, harvesting ethics and limited entry (5)
2.	Learn why the decline from past failures (3) Support for aquaculture in light of decline (3)
4.	Adaptive management and partnerships (2)
5.	Alternative economies for the Bay (1) Lack of spat (1)
INFORMATION THAT MAY BE NEEDED	
•	Research on the decline
•	Recruitment
•	Shell budget
•	Limited entry
•	Aquaculture costs

ISSUES THE CAB SHOULD CONSIDER:

Enforcement and harvesting ethics (7)

- Enforcement.
- Failure to enforce size and limits.
- Rule changes and local enforcement.
- Local harvesting ethics.
- People should see the black and white of the situation in numbers and size class of oysters during routine surveys.
- We have to change the culture.
- Consider closing the bay to harvest.

Learn why the decline from past failures (3)

- What lessons can be learned from past failures? I think we know a lot already.
- Why, need to know in order to get off the path we are on.
- Sort out cause and effect issue-by-issue, and combined.

Support for aquaculture in light of decline (3)

- Local population needs help learning how to manage a farming operation.
- Also need insurance and access to capital \$\$.
- Opportunities (funding) for engagement with the seafood industry.

Adaptive management and partnerships (2)

- We must be proactive and engage adaptive management.
- What is needed to build a partnership to enable the bay to succeed.

Alternative economies for the Bay (1)

- Will be good to know what the alternatives look like, if not a natural resource, seafood/tourist-based economy, what's the alternative/s? Better or worse?

Lack of spat (1)

- Lack of oysters to produce spat

INFORMATION THAT MAY BE NEEDED

Research on the decline

- Research/monitoring data related to the decline.
- More survey data on the actual reefs if it is not being done to a sufficient level for a good picture of the situation.
- What is needed to get the bars producing again.

Recruitment

- What are the unknown factors affecting recruitment such as predator distribution, spawning stock numbers, isolated spawning stock?

Shell budget

- Effects of (not) returning shell to water, shell budget historical vs. future needs.

Limited entry

- Effects of limited entry.

Aquaculture costs

- Costs of starting aquaculture operation.

7. Sustainability as a community: culture, economy, education, and retraining.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
6	9	1	0	0	3.3 of 4

SUSTAINABILITY AS A COMMUNITY ISSUES AND INFORMATION NEEDS <i>Listed In order of frequency from the questionnaire responses</i>	
ISSUES THE CAB SHOULD CONSIDER	
1.	Enforcement, harvesting ethics and limited entry (5)
2.	Learn why the decline from past failures (3) Support for aquaculture in light of decline (3)
3.	Adaptive management and partnerships (2)
4.	Alternative economies and retraining for the industry (1) Lack of spat (1)
INFORMATION THAT MAY BE NEEDED	
•	Modeling scenarios on timelines for economic success in Franklin County.
•	What are the options for retraining? - Need to hear from stakeholders.
•	Funding opportunities for engaging the seafood industry. What are the costs of starting aquaculture operation?
•	What has not worked in the past? What are similar seafood communities that had issues with resource depletion?

ISSUES THE CAB SHOULD CONSIDER

Economic alternatives and seafood culture

- Will be good to know what the alternatives look like, if not a natural resource, seafood/tourist-based economy, what's the alternative/s? Better or worse?
- Local harvesting ethics
- Many of the traditional harvesters are either not interested or not capable of retraining for other skilled jobs to some significant degree. As already mentioned, continued decline in the system also erodes the traditional seafood culture.
- Economic aspects can be offset by aquaculture oysters but it will be a different segment of the community involved with that in large part. In other words, the seafood culture may remain as far as oysters go but it will be composed of different human and market elements.

Defining a “sustainable community”

- What does a sustainable community look like in the future? Does everybody have the same vision? Can all the interested/affected parties come to consensus on a path forward?
- Communication of best approach identified by consensus, with realistic level of expectations.
- Stewardship and local, active engagement in restoration and resiliency of the system.
- Consider Limited entry to sustain culture.

Managing an aquaculture farming operation

- Local population needs help learning how to manage a farming operation. Also need insurance and access to capital \$\$.

Involve industry in research, monitoring and restoration

- Explore opportunities to retain institutional knowledge by having harvesters participate in research, monitoring and restoration.

INFORMATION THAT MAY BE NEEDED

- Modeling scenarios on projected timelines for success.
- What are the options for retraining that fit the population demographics of Franklin County?
- What are the costs of starting aquaculture operation?
- Opportunities (funding) for engagement with the seafood industry.
- What has not worked in the past?
- Historical info from similar seafood communities that had issues with resource depletion.
- Need to hear from stakeholders.

8. Land use, development, and tourism impacts on the fishery and Bay System.

Very Critical	Critical	Less Critical	Not Critical	Don't Know	Rating Avg
4	3	2	1	0	
3	8	4	1	0	2.8 of 4

LAND USE, DEVELOPMENT AND TOURISM IMPACTS ON THE BAY SYSTEM ISSUES AND INFORMATION NEEDS <i>Listed In order of frequency from the questionnaire responses</i>	
ISSUES THE CAB SHOULD CONSIDER	
1.	Development impacts (e.g. stormwater runoff) on the fishery (5)
2.	Stormwater runoff (4)
3.	Planning for resilience (2)
4.	Cattle operations in the Basin (1) Aquaculture as an eyesore (1) Rural fishing lifestyle (1)
INFORMATION THAT MAY BE NEEDED	
•	Development, future land use and population projections
•	Pollution and impacts related to development

ISSUES THE CAB SHOULD CONSIDER

Development impacts (e.g. stormwater runoff) on the fishery

- A review of comprehensive planning and how it has changed in Florida in recent years.
- Land use and development could impact the fishery, so continue thoughtful/purposeful development that will not impact the bay's resources.
- Don't believe local land use issues are a priority at this stage.
- Uncontrolled, poorly planned development is one of the four threats the Riverkeeper identified to the ABS.
- Growth management impacts to fisheries relying on oyster habitat.

Stormwater runoff

- Runoff from SGI.
- Stormwater runoff.
- Development and runoff have impact.
- Pollution current and potential.

Planning for resilience

- Resilience planning.
- Equitable resource allocation.

Cattle operations in the Basin

- It is not just people, there is a very large cattle operation moving into our basin.

Aquaculture as an eyesore

- Aquaculture becoming "an eyesore" to new people moving to the area.

Rural fishing lifestyle

- Maintenance of a rural fishing lifestyle.

INFORMATION THAT MAY BE NEEDED

Development, future land use and population projections

- What are the long-term development plans for this region?
- Future land use and population projections and impacts to fisheries relying on oyster habitat.
- Not sure of the appropriate timeline, but keep the group aware of potential development/land use issues as they come up.
- Setbacks from the shorelines for development.

Pollution and impacts related to development

- Is pollution related to development occurring?
- Development impacts to fisheries relying on oyster habitat.

9. ABSI process and consensus.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
5	8	1	1	1	3.1 of 4

ABSI PROCESS AND CONSENSUS--ISSUES AND INFORMATION NEEDS <i>Listed In order of frequency from the questionnaire responses</i>
ISSUES THE CAB SHOULD CONSIDER
1. Open, transparent, user friendly communication with community (4) How will science inform the management and restoration plan? (4)
3. Equitable representation and respect (3)
4. ABSI Community Advisory Board impact on management decisions (2)
INFORMATION THAT MAY BE NEEDED
<ul style="list-style-type: none"> • History of stakeholder points of contention • Communication and public expectations

ISSUES THE CAB SHOULD CONSIDER

Open, transparent, user-friendly communication with community (4)

- Will need open and frequent communication with community.
- Transparency.
- Too early to answer but where do we direct questions, comments, suggestions?
- Need to be user friendly and not just to our Community Advisory Board members.

How will science inform the management and restoration plan? (4)

- How will science be melded into state and community action and rule changes?
- ABSI is basically the only restoration effort being conducted.
- Take politics out of the equation.
- Condition of the bay.

Equitable representation and respect (3)

- Equitable representation and respect for building a long-term solution to restore the bay.
- Keep group discussions open and transparent.
- This will be hard to do but it is critical.

ABSI Community Advisory Board impact on management decisions (2)

- This may be our last, best shot at bringing our voice together to have a tangible impact on management decisions before it's too late.
- High-level agency involvement.

INFORMATION THAT MAY BE NEEDED

- History of stakeholder points of contention between stakeholder groups regarding issues and solutions.
- Public expectations, communication tactics, and community surveys.
- Willingness of agencies to stay involved at a high level.

WHAT OTHER ISSUES SHOULD THE CAB EXPLORE

10. What other issues do you believe the CAB should explore:

Other critical issues were identified in the ABSI Stakeholder Assessment Report. The members average rating for each critical issue is listed below in order of the most to least critical Issues.

a. Politics and managing the ABS.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
10	5	0	0	0	3.7 of 4

b. Water wars (ACF).

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
8	6	1	0	1	3.4 of 4

Larvae/spat/spawning.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
9	3	1	0	1	3.4 of 4

Ecosystem benefits of oysters.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
7	7	1	0	0	3.4 of 4

c. ABSI: the get something done project.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
5	6	1	0	3	3.3 of 4

Enforcement of regulations.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
6	6	2	0	0	3.3 of 4

d. Shift in Community Perspectives on the health of Apalachicola Bay.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
7	3	2	1	2	3.2 of 4

e. Dams and storage.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
4	8	2	0	1	3.1 of 4

Water quality in the ABS.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
6	5	4	0	0	3.1 of 4

f. Climate change and ABSI.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
6	3	6	0	0	3.0 of 4

g. Hurricane Michael and resiliency in the ABS.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
2	6	6	1	0	2.6 of 4

h. Bob Sikes Cut.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
1	5	7	0	2	2.5 of 4

i. Dredging and flushing the Bay.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
2	5	5	1	1	2.4 of 4

j. Impacts of silviculture (after Hurricane Michael) and upstream agriculture.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
1	3	8	2	0	2.2 of 4

k. Deep Water Horizon Spill.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
2	3	5	5	0	2.1 of 4

Comments

- Modeling for suitable/best locations for restoration of reefs must also tie in effects from climate effect (sea level, temps, salinity) to gauge short, near, long-term restoration/management plan.
- Please stop using acronyms. It alienates the public especially if they are already hesitant to trust.

V. CRITICAL ABSI DATA AND SCIENCE AREAS AND GAPS

Members rated how critical they believed are the following science areas and gaps that were identified in the [Stakeholder Assessment report](#). The areas and gaps are listed in order of most to least critical reflected in the average rating for each.

A. ABSI data gaps and concerns with access to science. Coordination of data.

Insufficient monitoring data. Oyster bar mapping.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
8	5	1	0	1	3.5 of 4

Comment:

- A big problem in our basin has been a failure to agree upon commonly accepted data, methods and models. We need a good database easily accessible and available to all. Perhaps a "dashboard" for our website.

B. Research on rebuilding reefs.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
9	5	1	0	0	3.5 of 4

C. Restoration research.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
8	7	1	0	0	3.4 of 4

D. Research on larval transport and spat survival.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
8	6	0	1	1	3.4 of 4

E. Research to establish thresholds for sustainable harvest.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
8	7	1	0	0	3.4 of 4

F. Research on upstream impacts on the Bay.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
5	10	1	0	0	3.25 of 4

G. Modeling and quantitative tools to analyze management strategies.

Research to establish thresholds for sustainable harvest.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
7	3	4	0	1	3.2 of 4

Comment:

- Should include some actual data collection to inform restoration efforts and other management actions/interventions. Data are needed also for assessment of actions and to guide any necessary adjustments. Actual data are an essential complement to models.

H. Research on oysters and freshwater flow.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
6	7	3	0	0	3.2 of 4

I. Research on the ABS collapse.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
6	7	1	2	0	3.1 of 4

J. Research on climate and rising sea levels.

<i>Very Critical</i>	<i>Critical</i>	<i>Less Critical</i>	<i>Not Critical</i>	<i>Don't Know</i>	<i>Rating Avg</i>
4	3	2	1	0	
2	6	8	0	0	2.6 of 4

Member General Comments:

- There is a sense of urgency to "do something." Research is important. However, the "action" of Florida taking steps for the overall health and recovery of the Apalachicola River and Bay are needed. Less talk more action is
- Need to thoroughly and objectively know how we got here before we can proceed, all the above information is very important for that.
- Move forward. Don't spend a lot of time on research that is not directly related to the situation. Public already believes the bay has been "studied to death" and no one knows what is happening STILL.
- I believe we have the research that backs up Florida's needs regarding the water in the ACF system. This just needs to be brought to light on the larger stage.
- More research needs to be focused on juvenile oyster survival and recruitment and on oyster reef structural stability over time. Let's not spend our time and money duplicating research that has already been done.

VI. LOOKING FORWARD: ENVISIONING A SUCCESSFUL FUTURE FOR THE APALACHICOLA BAY SYSTEM IN 2030

A. A VERY UNDESIRABLE FUTURE FOR ABS IN 2030

Members were asked to describe what a very undesirable future would look like for Apalachicola Bay System.

A VERY UNDESIRABLE PICTURE OF A POSSIBLE FUTURE FOR THE APALACHICOLA BAY SYSTEM <i>Listed In order of frequency from the questionnaire responses</i>
Collapsed fisheries and reef system with no sign of recovery in the bay (11)
Bay decline due to changing conditions not predicted and loss of fishing lifestyle in Apalachicola (6) Unsustainable development due to lack of recovery of oyster harvesting and the reef ecosystem(6)
Bay habitat degraded and fragmented (2)
Poverty and unemployment (1) Commercial dredging resumes (1) Upstream agricultural irrigation continues to expand (1)

Members were asked to describe what a very undesirable future would look like for Apalachicola Bay System.

Collapsed fisheries and reef system with no sign of recovery in the bay

- Collapsed fisheries.
- No signs of recovery in the oyster ecosystem in the Bay.
- Restored reefs not resilient, in the wrong locations.
- Oyster fishery not productive; ecosystem services way down due to lack of sustainable oyster habitat negatively impacting water quality, other fisheries, etc.
- No wild caught oysters, shrimp, or fish. Having to say, "Remember the way it was?"
- No oysters.
- We see a shift in the species that are using the bay. Oysters are few and far between.
- The Bay is dead. More people leave.
- The Bay would continue to have reduced freshwater flows, nutrient loading would become an issue and development would further impact water quality and quantity.
- The Bay is same as now.

Bay decline due to changing conditions not predicted and loss of fishing lifestyle in Apalachicola

- Bay continues to decline.
- Changing conditions in system not modeled or predicted.
- Crash or unrecovered system and loss of the rural fishing lifestyle in Apalachicola.
- An unproductive bay.
- Dead bay.
- Because of rising temperatures and the reduction of numbers of nights below freezing, we see the establishment of more native and non-native species such as mangroves.

Unsustainable development due to lack of recovery of oyster harvesting and the reef ecosystem

- Eastpoint looks like mini Destin. Franklin County becomes "homogenized" and looks like other coastal communities/loses its character which includes our working waterfront.
- Lack of recovery of oyster bars leading to increased development due to land use rules being changed, many are related to oyster harvesting needs.
- Population growth expands land conversion from farm and forest lands.
- Our estuaries and the coast look like much of the rest of Florida with high density and high-rise development.
- Over development like everywhere else in Florida.
- If we stay on the path we are on, we will get to where we are going.

Bay habitat degraded and fragmented

- The natural resources in the basin are degraded and fragmented beyond even today's levels.
- Degraded habitats.

Poverty and unemployment

- Widespread poverty in affected coastal communities.

Commercial dredging resumes

- Commercial dredging for a 9 x 100 foot channel is resumed.

Upstream agricultural irrigation continues to expand

- Agricultural irrigation consumptive use continues to expand.

B. ENVISION A SUCCESSFUL FUTURE FOR THE ABS IN 2030

Members were asked to envision a successful future in 2030 in which everything is going right for a healthy Apalachicola Bay system. A management and restoration plan is being funded, implemented and meeting its targets. They were asked to describe what this ideal future would look like by answering the following questions:

1. *It's 2030. You are drafting a column for the Apalachicola Times on the stellar accomplishments in improving the health of the Apalachicola Bay system and the management and restoration plan that is being funded and implemented. What would be the headline?*

Members were then asked to envision a successful future in 2030 in which everything is going right for a healthy Apalachicola Bay system. A management and restoration plan is being funded, implemented and meeting its targets.

SUCCESS HEADLINES- 2030- APALACHICOLA TIMES
The Bay is coming back!
Our Bay is back to the good old days.
Apalachicola Bay Recovers!
Good times ahead for restoration effort and improved Bay management!

ACF Group meets in Apalachicola to Celebrate 10 years of recovery.
Incremental steps trending in a positive direction regarding Bay recovery in 2030.
Community sees real benefits from long-range science-based sustainability plan.
Healthy and resilient Apalachicola Bay System supports commercial fishing, aquaculture and tourism businesses.
Oysters are Back!
Oysters are again very abundant in the Bay.
The Billion Oyster Project launched as the Apalachicola recovery proceeds.
Oyster harvests reach record levels over \$8 million mark as Bay recovers supplying major markets in the Northeast.

Member responses:

- **Apalachicola Bay Recovers!** The oysters are back. Fish and other species are on the rise. Climate change is pro-actively addressed. We're ALL working together to protect the Bay (akin to the Chesapeake Bay recovery).
- **Oysters are back!** The water flow is back and fisheries are thriving.
- **The Bay is coming back.**
- **Our Bay is back to the good old days.**
- **Good times ahead for Restoration effort and improved Bay management!** After a decade of dedicated restoration effort and improved management, the Apalachicola Bay System is reaping big rewards. The water in the bay is clean and productive, fish and oysters are abundant and waterfront communities are prosperous.
- **Community Sees Real Benefits from long-range science-based Sustainability Plan.** Developed with key stakeholders and regional scientists, an oyster fishery is once again emerging as one of the most productive in the state after a decade of studying and implementing a science-based restoration and management plan. Now there are more healthy oyster reefs in the bay than any time in the recent past few decades with a robust and closely monitored management plan to curtail overfishing and to enhance ecosystem services provided by the reefs.
- **ACF Group meets in Apalachicola to Celebrate 10 years of recovery.** The Apalachicola Bay System Initiative's continuing success in the ongoing recovery bolstered by research on oysters is the headline for the quarterly meeting in Apalachicola of the ACF Transboundary Water Management Institution created by stakeholders, universities and agencies in the ACF system.
The members always look forward to coming to Apalachicola to enjoy some of the world's finest fresh oysters and seafood and to insure these resources are available and shared throughout the ACF basin. The work and collaboration of this institution and these stakeholders has turned around what looked a decade ago as a dim future, and today has saved this American treasure that is the Apalachicola River and Bay.
- **Incremental steps trending in a positive direction regarding bay recovery in 2030.**
- **Oyster harvests reach record levels over \$8 million mark as bay recovers supplying major markets in the Northeast,** along with other seafood and recreation harvests creating a need for stricter water quality rules and land use regulations. Apalachicola Bay Harvests exceed \$8 million dollar mark not seen since 2012. Apalachicola Bay oysters once again supplying major markets in the Northeast.
- **Oysters are again very abundant in the bay.**

- **The Billion Oyster Project** - The recovery of Apalachicola Bay in support of a sustainable fishery. Multiple restoration projects have been funded and implemented synergistically. Adaptive management has addressed changing conditions like future droughts, reduced flows and rising seas. Aquaculture has helped fill the gaps as needed.
 - **Healthy and Resilient Apalachicola Bay System Supports Commercial Fishing, Aquaculture and Tourism Businesses.**
2. *What would those managing, using and enjoying the Apalachicola Bay System be doing in 2030 that is different from what they are doing today?*

2030--WHAT THOSE MANAGING, USING AND ENJOYING THE BAY ARE DOING DIFFERENTLY
Working together implementing the comprehensive recovery and management plan and doing what is needed.
Oyster supply for the region.
Fully funded fisheries research, monitoring and management.
Recognizing the importance of oyster reefs to the Bay's health and recycling shells for reefs.
Tupelo honey is plentiful.

Member responses:

Working together implementing the comprehensive recovery and management plan and doing what is needed.

- We'd be implementing a comprehensive recovery and management plan for the Apalachicola River System, not hoping for one.
- Overseen by a fully functioning Bay Management Committee that is mutually respectful and an industry that is self-policing and understands the value of working together for the long term.
- Paying attention and doing what is needed.
- Working collaboratively and respecting each piece of the management puzzle (regulations, closures, novel restoration).
- Work together with support and resources from the state.

Oyster supply for the region.

- Catching oysters.
- Supplying the region with fresh wild (and farmed) oysters.
- Limited harvest of oysters is resuming in select portions of the Bay that are doing well.
- We'd be eating fresh oysters from Apalachicola Bay and not paying \$100/bag.

Fully funded fisheries research, monitoring and management.

- Related fisheries thriving but also monitored and managed closely.
- Fully funded research and monitoring of sustainability of harvest regulations and rules, with modifications being made as needed.

Recognizing the importance of oyster reefs to the bay's health and recycling shells for reefs.

- Recognizing the importance of oyster reefs for ecosystem needs.
- Returning most of the shell removed to the bay.

Tupelo honey is plentiful.

- Tupelo honey would be \$10/quart, not \$40.

C. ABSI VISION THEMES

Based on the member’s responses for success in 2030, they listed any key vision themes or elements of the desired future for the ABS in 2030.

SUMMARY OF VISION OF SUCCESS THEMES FROM QUESTIONNAIRE
1. Science-based, funded recovery plan of action and program supported by the community.
2. Improved and sustainable fishery management to aid in Bay recovery.
3. Healthy Bay Ecosystem.
4. Community outreach, education, support and engagement.
5. Economic support and jobs to maintain the rural fishing lifestyle through tourism and the seafood/aquaculture industries.
6. Sustainable and resilient coastal development consistent with the rural fishing lifestyle.

Member responses:

Science-based funded recovery plan of action and program.

- Less talk more action. Let's take real steps to recover the Bay.
- Inclusive, collaborative, well supported and funded comprehensive plans and implementation. Adaptive management to change when needed.
- Science-based management and decision making.
- Science based recovery program.
- Consistent source of funds for shell recycling, science and management, monitoring, and enforcement as fisheries are harmonized.
- Addressing change to circumstances out of our control, such as infrastructure to address sea level rise and lower flows.

Improved and sustainable fishery management to aid in bay recovery.

- Improved fishery management.
- Thriving fisheries.
- Sustainable fishery.
- LIMITED harvest resuming (meaning it has been closed for a significant period to determine that the bay is in a significant recovery mode).
- Commercial harvest of over 500,000 bushels per year.

Healthy Bay ecosystem.

- Healthy ecosystem.
- Vast oyster ecosystem, high natural productivity, some reefs permanently purposefully unexploited.
- Improved water quality and freshwater delivery, restored habitats.
- Sustained or improved WQ, more natural FW flows during appropriate seasons, either natural or assisted fisheries recovery.

Community outreach, education, awareness, support and engagement.

- Outreach and education to bring our fellow citizens along and up to speed.
- Community support and engagement in sustainability plan.
- Enhanced community awareness of Bay conditions through monitoring and education/outreach.

Economic support and jobs to maintain the rural fishing lifestyle through tourism and the seafood/aquaculture industries.

- Healthy resilient support for tourism and seafood/aquaculture industries; maintenance of rural fishing lifestyle.

Sustainable and resilient coastal development consistent with the rural fishing lifestyle.

- Sustainable coastal development and resilience planning.

VII. OTHER COMMENTS

- Thanks for the opportunity to participate here.
 - Produce a plan and body to oversee without the funds disappearing into a professor's research never to be understood by the larger public.
 - I could do more here, but this is all the time I have for now, and I'm falling asleep. I don't think we'll save the bay by just trying to save the bay. In the Florida Springs Initiative we promoted the phrase, "to protect the waters you must first protect the land." To paraphrase that, "to protect the Apalachicola Bay you must also protect the Apalachicola and Chipola River System and the Chattahoochee and the Flint, the ACF. I think that's why I'm on this advisory board, to bring that perspective to the table. I'll do what I can and look forward to this work.
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ABS COMMUNITY ADVISORY BOARD MEMBER PRE-MEETING QUESTIONNAIRE SUMMARY

Members responding	Members unable to respond
<ol style="list-style-type: none">1. Georgia Akerman2. Lee Edmiston3. Jim Estes4. Tom Fraser5. Anita Grove6. Chad Hanson7. Jenna Harper8. Erik Lovestrand9. Chuck Marks10. Vance Millender11. Mike O'Connell12. Becky Prado13. Steven Rash14. Portia Sapp15. John Solomon16. Chad Taylor	<ul style="list-style-type: none">• Chip Bailey• Frank Gidus• Shannon Hartsfield• Kevin Landry• Smokey Parrish• Paul Thurman• T.J. Ward