

**Mobile Bay National Estuary Program  
Science Advisory Committee Meeting  
Hybrid Meeting**

**June 14th, 2024**

*The Mobile Bay National Estuary Program Science Advisory Committee was established to bring area experts together to provide advice, guidance, and recommendations to ensure that MBNEP activities will be conducted in a scientifically relevant and rigorous manner.*

In-person attendance: Cassie Bates, Don Blancher, Ronnie Bond, Dottie Byron, Kevin Calci, Pat David, Catheline Froelich, Steve Jones, Todd Lasseigne, Matt Love, John Mareska, Mac McKinney, Missy Partyka, Joel Potter, Steve Sempier

Online attendance: Chris Anderson, John Curry, Patric Harper, Jeremiah Henning, Kathryn Keating, Scott Phipps, Troy Pierce, Christy Swann, LaDon Swann, Tim Thibaut, Will Underwood

MBNEP Staff: Blair Morrison, Vanessa Romero, Bekah Farmer, Roberta Swann, Christian Miller, Regan Smart

*This meeting was held both virtually (via Zoom) and in-person.*

**Blair Morrison, MBENP** called the meeting to order at 10:03 CST.

**Steve Jones, GSA** opened the meeting and gave attendees the opportunity to introduce themselves, as there were several new participants. Blair gave a brief overview of the day's agenda and turned things back to Steve. Steve asked for a motion to approve the minutes from the March 15<sup>th</sup>, 2024 meeting; minutes were shared via email prior to the meeting. A motion to accept the minutes was made by **Ronnie Bond, UC Davis** and seconded by **Missy Partyka, Auburn Extension/MASGC**.

Blair walked through the facilitation process for the day's discussions and **Dottie Byron, DISL/ALCOE** reviewed the meeting products including:

- Reopening the poll to get consensus on the Stressor Matrix Report
- Recommendations to the Executive Committee on membership guidelines for the SAC
- Recommendations for managing the listserv/ committee list
- Tentative plan for formulating the SAC CCMP plan

Blair covered final outcomes and feedback on the 2023 Stressor Matrix Report. Please refer to the attached slide deck for additional information. 18 members of the SAC provided feedback during the 30-day comment period for the document and all comments were considered, incorporated, and archived in Appendix C of the final Stressor Matrix Report. There will be a final 7-day review period to get consensus on the Report (closes 6.21.24).

A fire alarm went off at the International Trade Center, so all in-person attendees had to evacuate. The meeting resumed approximately 20 minutes later.

Missy brought up clarifying points to the committee on terminology for communicating the results of the Stressor Matrix (vulnerable to stress vs. most stressed; evaluated vs. ranked). Blair brought up some

considerations as the committee plans for future iterations of the Stressor Matrix and discussed establishing an SOP for the Stressor Matrix. Discussion on this topic was tabled due to the fire alarm disruption.

Steve shared the main takeaways from the management conference co-chairs meeting held on June 11<sup>th</sup>. He reiterated the importance of being familiar with the bylaws, CCMP, and management conference roles. The SAC currently oversees the CCMP pillar of Ecosystem Status and Trends, but this framework keeps the committees siloed and may not fully reflect the breadth of work that our committees do. To allow for more comprehensive plans, the next CCMP will be composed of action plans from each committee. Each committee's action plans will cover aspects of all 4 pillars (Ecosystem Status and Trends, Ecosystem Restoration and Protection, Technical Assistance and Capacity Building, and Education and Public Involvement).

**Roberta Swann, MBNEP** reiterated that the action plans are a more comprehensive approach and will contain measurements (EST), projects (ERP), advancing knowledge (TAC), and communicating results (EPI) sections for each committee. Developing committee action plans can also contribute to a greater sense of ownership and accountability to the plan over the next 10 years.

Blair shared that the outcomes of the Stressor Report and the Watershed Management Plan Assessment can be grouped into overarching themes of land use change and climate change. Please refer to the attached slide deck for more information.

**Troy Pierce, EPA** asked if MBNEP had applied for BIL funding. Roberta mentioned that we do have BIL appropriations and that our BIL funding strategy covers 3 areas: bacterial monitoring and tracking, nature-based stormwater solutions in Justice 40 areas, and shoreline management. **Christian Miller, MBNEP** mentioned that the funds cannot be used to make traditional infrastructure improvements.

Dottie walked the committee through some potential thoughts on a membership agreement or membership guidelines. The role of the SAC (as codified in the MBNEP bylaws) was reviewed, along with attendance records for the past 5 years, composition of the SAC listserv, and expertise present on the SAC (based on those who responded to the 3.15.24 RSVP survey, n=24). Please refer to the attached slide deck for more information. **Don Blancher, Moffat and Nichol** mentioned that there used to be more representation of wastewater/municipal engineers on the SAC and that the committee may want to re-engage them, as well as have more concerted effort for cross-pollination of committees. Roberta mentioned that the management conference committees used to have cross-committee report-outs at meetings but had fallen off; those reports can be reinstated. Members were interested in having committee updates as a regular agenda item for the SAC.

Attendees had a discussion about membership and expectations of membership:

- What do members expect from participation?
- Do we need subject-based subcommittees for the CCMP action plan?
- How does the SAC put forth recommendations for research priorities and funding for research?

For consensus building – members suggested a tiered approach where participation is a requirement for contributing to consensus. Dottie asked what participation means (how many meetings per year, etc.); several folks mentioned not wanting to exclude or penalize folks who are newer to the committee or unable to attend due to scheduling conflicts.

Roberta and Missy reiterated that it is important for folks to do their homework and review past materials before meetings to reduce the number of recaps that the committee needs to do. The MBNEP

is working to develop orientation packets of material to bring new members up to date on the committee that they are joining.

For consensus building forms, Blair proposed that a question be added asking the respondent if they participated and contributed to the document under review. For folks who are new/ have not actively participated, they can opt to serve as an external reviewer. Attendees agreed that this was a good path forward.

The discussion of membership will likely be ongoing; some members brought up the potential of using attendance records to set a baseline for “consensus privileges”, which will fluctuate with participation as a dynamic threshold. The committee may want to explore topical subcommittee meetings or an attendance approach that considers the attendees areas of expertise and the topic of the meeting (i.e. upland folks not likely to attend if the focus of the meeting is subtidal habitats).

Blair went through an overview of feedback from the State of the Bay and Monitoring Summit meetings. Please refer to the attached slide show for more information.

The meeting concluded with a short discussion of the approach for developing the next CCMP. Potential frameworks were discussed, and meeting attendees engaged in a Mentimeter survey to submit their thoughts on the CCMP development process. Mentimeter results are included in the slide deck.

Dottie asked for a motion to adjourn. **John Mareska, ADCNR MRD** motioned to adjourn the meeting, seconded by Missy. Meeting adjourned at 12:04pm.



# Science Advisory Committee

June 14<sup>th</sup>, 2024

In-person attendees: Please write your name and affiliation on the sign-in sheet

Virtual attendees: Please type your name and affiliation in the chat

# Today's Agenda

- Welcome Back and Introductions
- Review and Approval of Minutes
- Facilitation Notes and Meeting Products
- Old Business
  - Stressor Evaluation: final review – **Blair Morrison**
- Updates and Presentations
  - Report out from Management Conference Co-chairs Meeting –**Steve Jones**
    - Development of committee strategies for the next CCMP
  - Discussion of membership responsibilities, consensus privileges, how to recruit diverse expertise, etc. – **Dottie Byron**
    - Review of attendance records and expertise surveys
    - **Group discussion:** What does the SAC want to see for membership requirements? Consensus policies?
  - Discuss SAC membership recommendations to the Executive Committee
  - Review feedback from State of the Bay and Monitoring Summit workshops – **Blair Morrison**
  - Next Steps: How should we go about developing the SAC strategy for the next CCMP? – **Group Discussion**
    - Review feedback from last SAC meeting
    - Live feedback – Mentimeter and notes
- Announcements
- Adjourn



# Welcome and Introductions

*Steve Jones*






# Review and Approval of Minutes



# Facilitation Notes and Meeting Products

*Blair Morrison and Dottie Byron*





# Zoom Whiteboard for Discussion Notes



Add text boxes

Add post-it notes

A screenshot of a Zoom whiteboard. The title bar at the top reads "MBNEP Science Advisory Committee Mee...". The main area is a light blue grid with the question "What does it mean to be a member of the SAC? What are your expectations of a SAC member?". A blue-bordered text box is positioned in the lower half of the board, containing the following text:

Virtual attendees:  
add notes directly to board; raise hand on Zoom before unmuting to discuss

In-person attendees:  
raise hand to discuss; note will be transcribed and added to the board

The toolbar on the left side of the whiteboard is visible, with the text tool icon highlighted in blue and the post-it notes icon highlighted in yellow. The bottom of the whiteboard shows navigation icons (back, forward, delete) and a search bar with the text "Who can see what you share here".

# Meeting Products



- Reopen poll for consensus on Stressor Report
- A list of recommendations to the MBNEP Executive Committee on membership/consensus guidelines for the SAC
- A list of recommendations for managing the listserv – trimming the list/ recruiting new disciplines/ etc.
- A tentative plan for how the committee would like to work to develop the next CCMP strategy

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# Stressor Evaluation: Final Review and Consensus

*Blair Morrison*

# Stressor Matrix Evaluation: Top Stressed Habitats

1. Intertidal Marshes and Flats
2. Beaches and Dunes
3. Pine Savannas\*
4. Streams and Rivers
5. Freshwater Wetlands
6. Longleaf Pine Habitat\*



# Stressor Matrix Evaluation: Top Stressed Ecosystem Services

1. Biodiversity
2. Fisheries Habitat
3. Sediment and Nutrient Retention
4. Water Quality Enhancement
5. Wildlife Habitat



# Stressor Matrix Evaluation: Top Stressors Across Habitats

## 1. Land Use Change

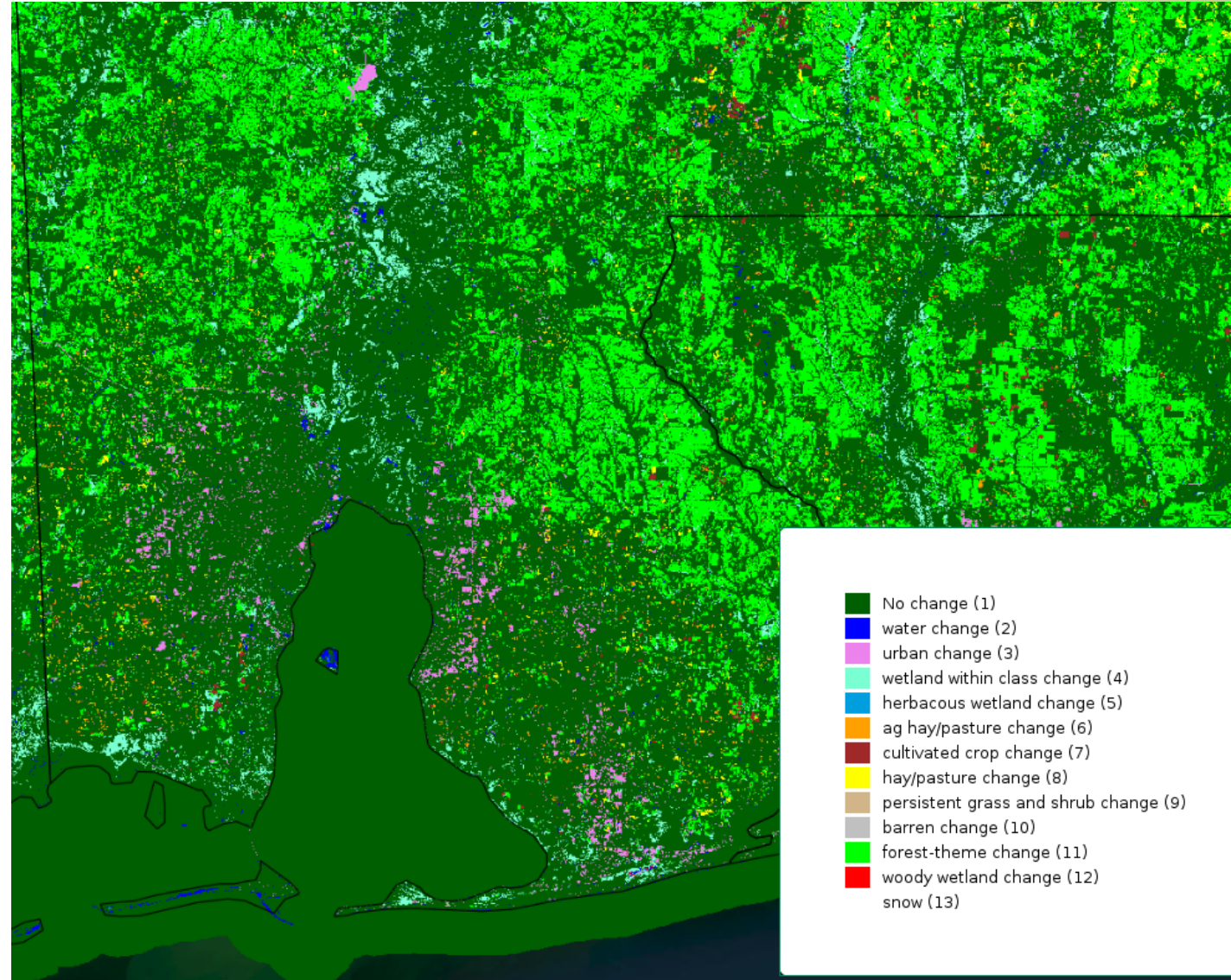
2. Fragmentation

3. Climate Variability

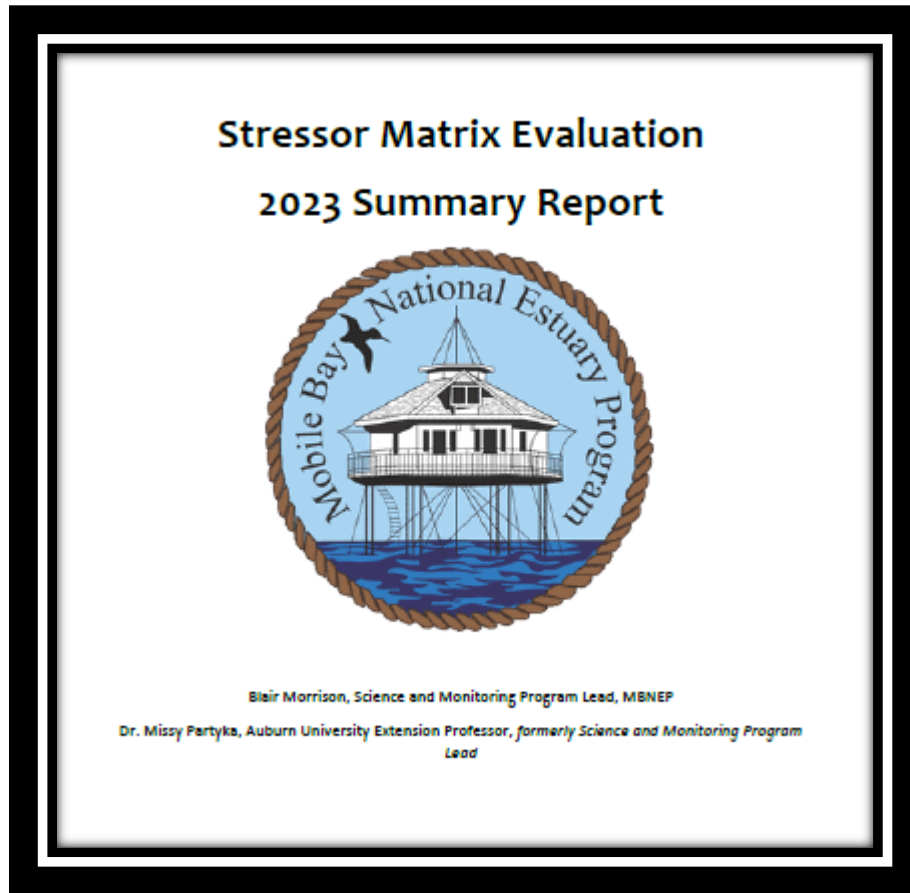
4. Sea Level Rise

5. Sedimentation

6. Dredging/Filling



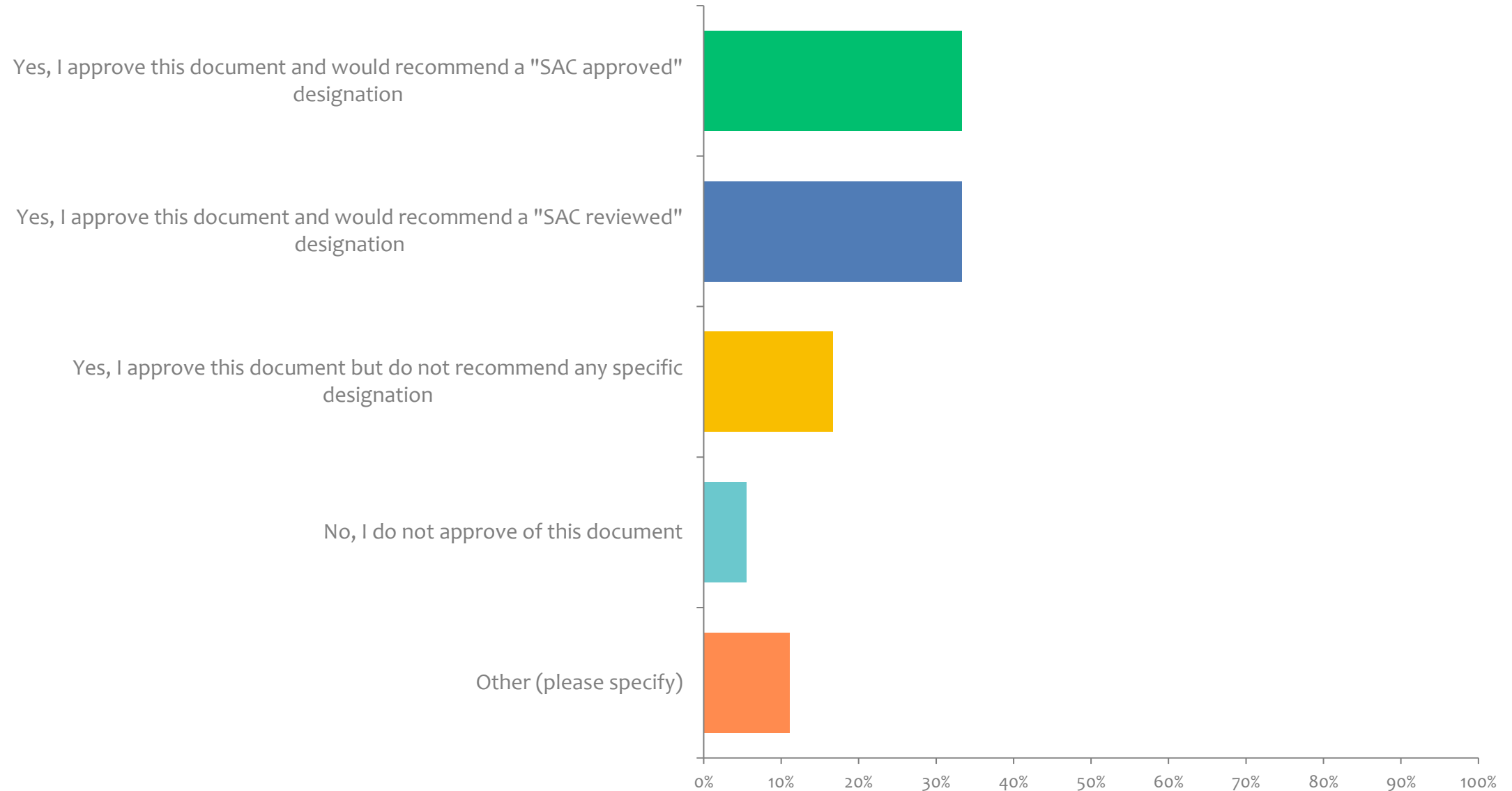
# The Review Process to Date



- 30-day comment period closed on 4.17.24
- Anonymous SurveyMonkey poll
- 2023 Stressor Evaluation was emailed to SAC listserv along with link to the review form
- Comments collated, considered, and incorporated into the document
- All provided comments are archived in Appendix C

### Q3: Please select one of the following review designations for this document:

Answered: 18 Skipped: 0



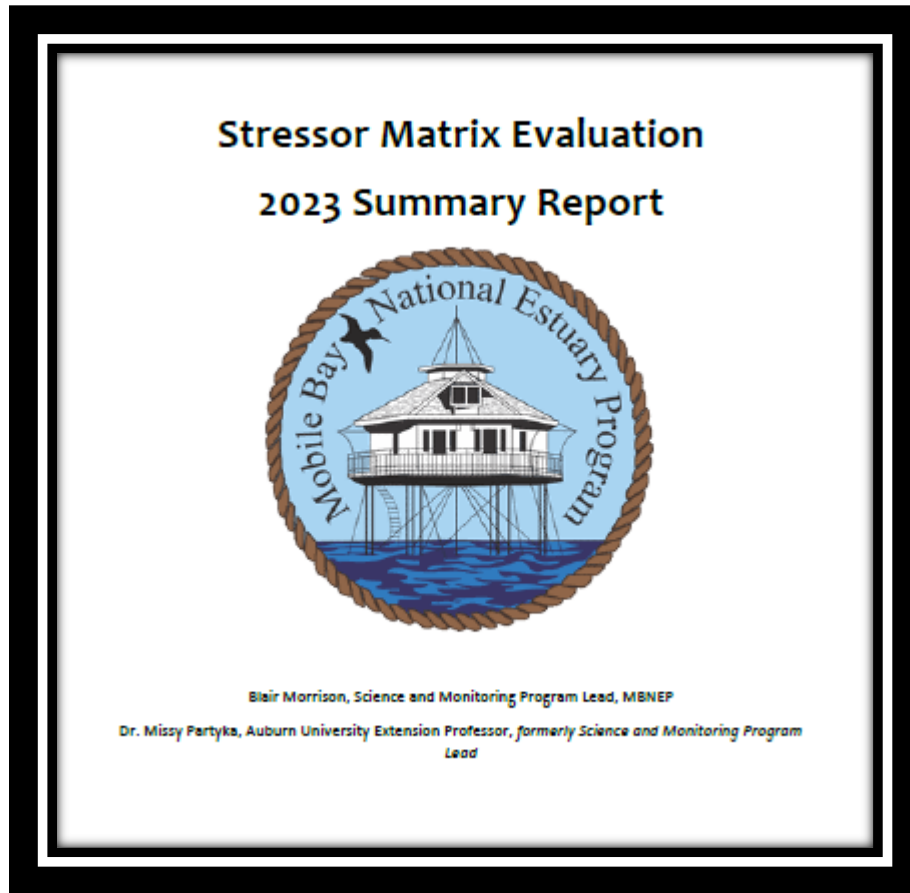


### Q3: Please select one of the following review designations for this document:

Answered: 18 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes, I approve this document and would recommend a "SAC approved" designation	33.33%	6
Yes, I approve this document and would recommend a "SAC reviewed" designation	33.33%	6
Yes, I approve this document but do not recommend any specific designation	16.67%	3
No, I do not approve of this document	5.56%	1
Other (please specify)	11.11%	2
<b>TOTAL</b>		<b>18</b>

# Final Evaluation Process



- 7-day evaluation period
- Anonymous SurveyMonkey poll
- Updated 2023 Stressor Evaluation was emailed to SAC listserv with meeting agenda
- Link to the evaluation form will be sent following the meeting today (closes on 6.21.24)



## Round 2: Review and Evaluation of the Updated 2023 Stressor Matrix Report

### Introduction

Thank you for participating in the Science Advisory Committee formal feedback process. Your input and evaluation is important.

Please review the updated 2023 Stressor Matrix Report and then complete the survey questions. Comments and edits from the last feedback period were compiled, considered, and assimilated into the report; a full list of feedback can be found in Appendix C. This final evaluation period will be open for 7 days following the opening of the form.

Next

Device View



Survey Format ?



Powered by

## Round 2: Review and Evaluation of the Updated 2023 Stressor Matrix Report

\* 1. Please select one of the following review designations for this document:

- Yes, I accept this document
- No, I do not accept this document
- Other (please specify)

Prev

Next

## Round 2: Review and Evaluation of the Updated 2023 Stressor Matrix Report

2. If the document is accepted by the SAC, what review designation language do you recommend? Please select all that apply.

- "SAC approved"
- "SAC reviewed"
- none, other than "SAC accepted"

Prev

Next

## Round 2: Review and Evaluation of the Updated 2023 Stressor Matrix Report

\* 2. If you selected No, please describe why you do not approve this document.

Prev

Next

## Round 2: Review and Evaluation of the Updated 2023 Stressor Matrix Report

3. Do you have any additional comments on the updated 2023 Stressor Matrix report?

A large, empty rectangular box with a thin black border, intended for users to enter their additional comments on the updated 2023 Stressor Matrix report. The box is currently blank.

Prev

Done

# Next Steps: Planning for the Future

- What do future iterations of the Stressor Matrix look like?
- How often should the exercise be completed?
- How do we ensure that we have participants from a diverse set of disciplines/ expertise?
- Subcommittee/working group/workshop to codify the methodology for the Matrix?







# Report from Management Conference Co-Chairs Meeting

*Steve Jones*



# The Four Pillars of the Current CCMP



## 1. Ecosystem Status and Trends (SAC)

- *Research*
- *Assessment and Monitoring*
- *Reporting*

## 2. Ecosystem Restoration and Protection (PIC)

- *Water Quality*
- *Living Resources*
- *Habitats*
- *Healthy Communities*

## 3. Technical Assistance/Capacity Building (GNC, BRC, CAC)

- *Direct Assistance*
- *Tools/Training*
- *Incentives*

## 4. Education and Public Involvement (BRC, CAC)

- *Awareness Campaigns/Materials*
- *Outreach & Public Involvement*
- *Citizen Monitoring*

# The New CCMP: A Compilation of Action Plans



## *CCMP Document Components*

- **Background:** Demographics, Other information to characterize coastal area, Management Conference structure, function
- **Management Conference Vision**
- **Purpose:** To promote the wise stewardship of Alabama's Estuaries and Coast
- **Goals:** Guided by Stressor Evaluation (*more to come*)
- **Management Conference Action Plans to address goals**
- **Projected Costs and Financing Plan**

# The New CCMP: A Compilation of Action Plans



## Committee Action Plan Framework

Estuary Status/Trends —————> Measures

*What are you planning to improve and how will progress be measured? (think objectives here)*

Restoration/Protection —————> Actions/Projects

*What actions or initiatives will committee take to achieve it? Who will lead/participate?*

TA/Capacity Building —————> Advancing knowledge

*How will you advance the knowledge of your committee or sector through your work?*

Ed/Public Involvement —————> Communicating Results

*How will you communicate your committee's work to the public and conference?*



# Two Spheres:

## Changing Landscapes

Land Use Change, Sediments, Nutrients, Pathogens

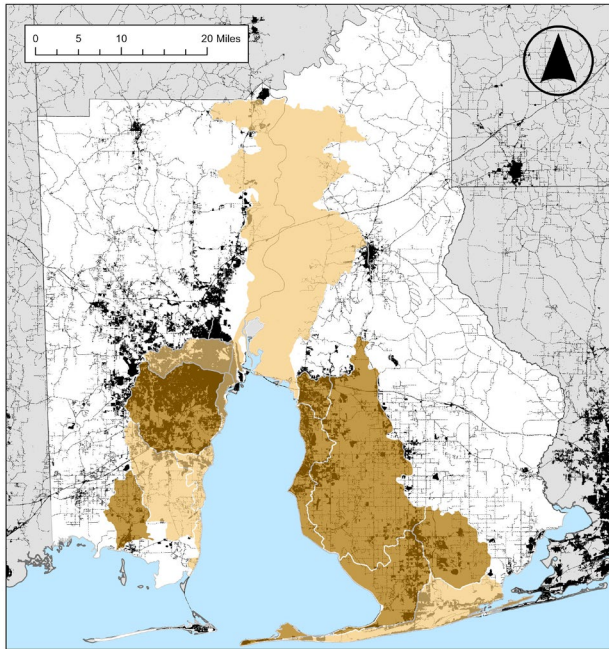
## Changing Climate

Sea Level Rise, Climate Variability, Resilience

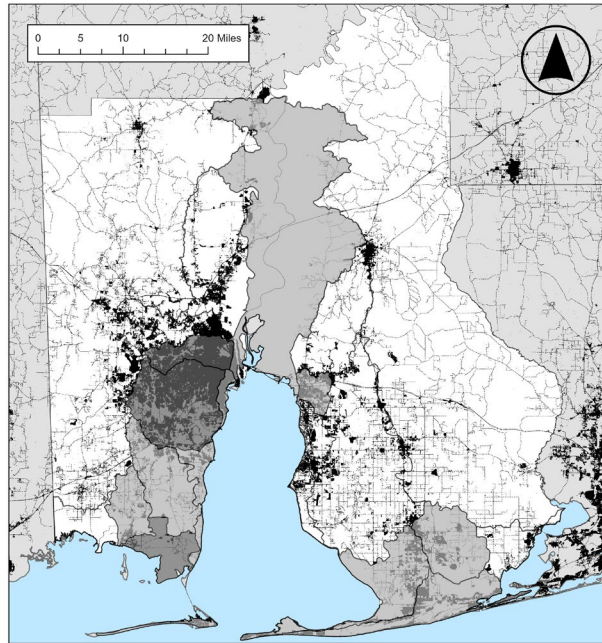


# Changing Landscapes

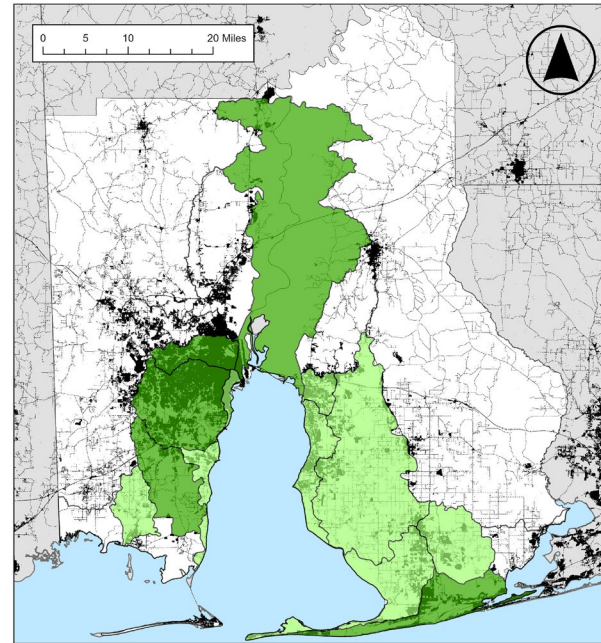
Land Use Change, Sediments, Nutrients, Pathogens



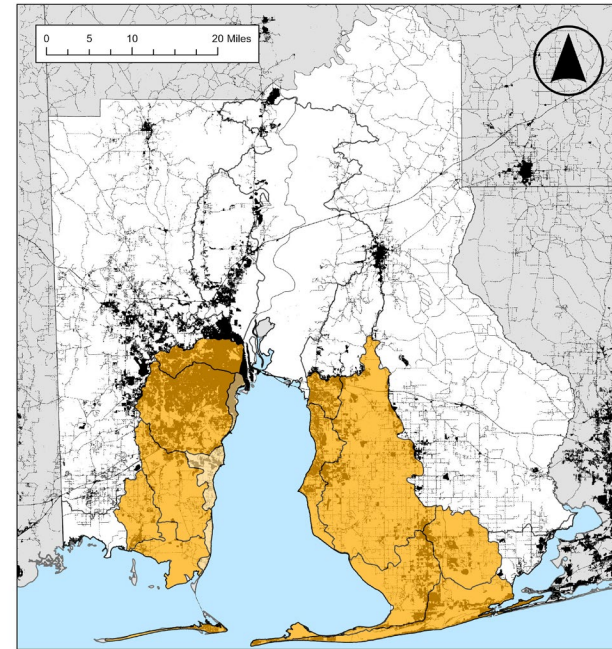
Sediments



Litter



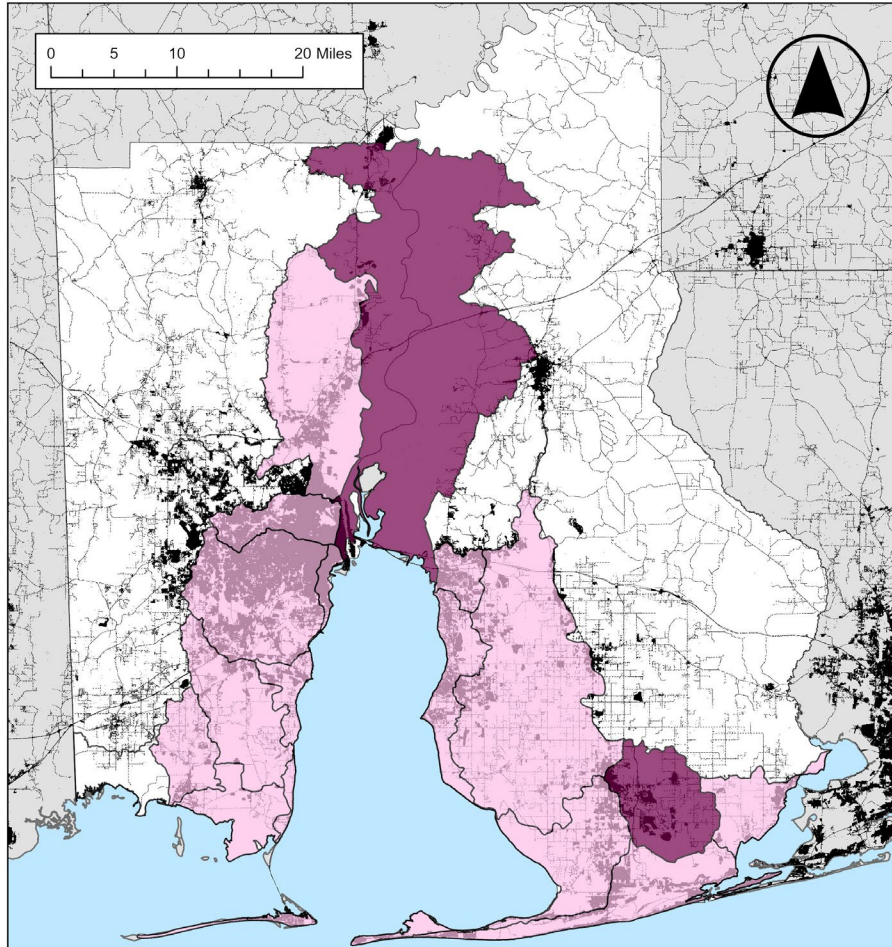
Nutrients



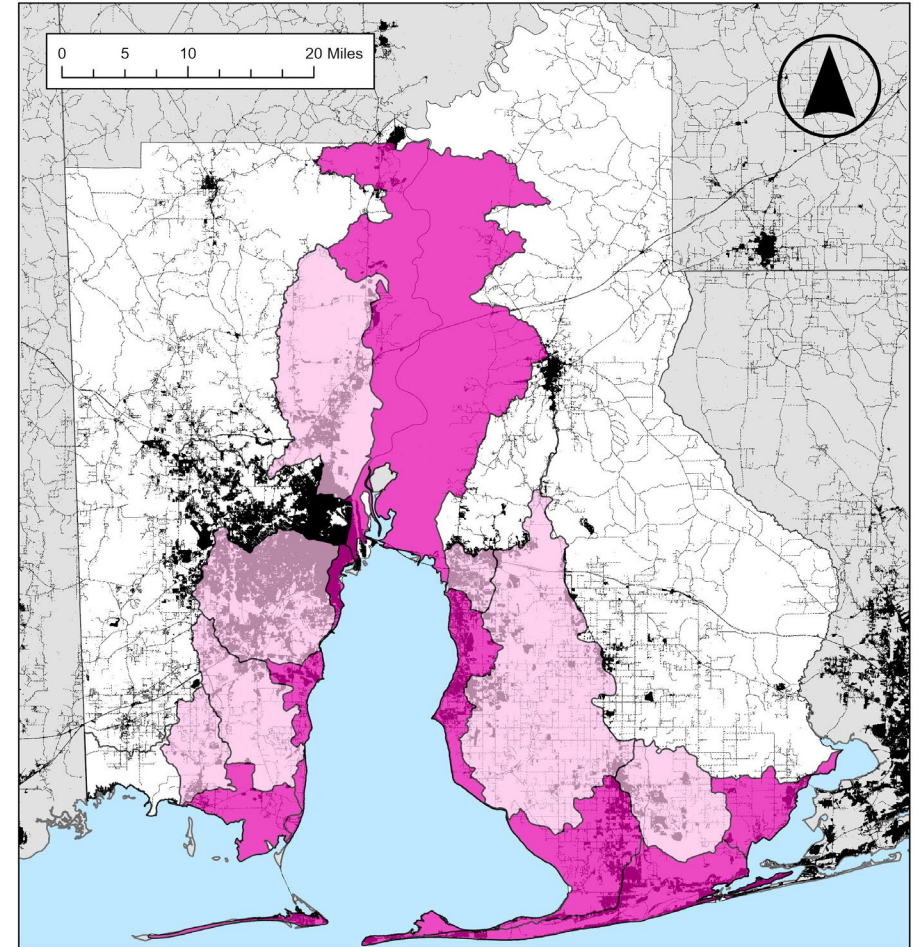
Pathogens

# Changing Climate:

Sea Level Rise, Climate Variability, Resilience



Invasive Species



Shoreline Erosion



## Mobile Bay National Estuary Program Management Conference Member Agreement



Membership in the Mobile Bay National Estuary Program (MBNEP) Management Conference is a duty and honor established by the federal Clean Water Act. It is a volunteer position of local, regional, and national importance. This duty conveys leadership to guide the development and implementation of the Comprehensive Conservation Management Plan (CCMP) for Alabama's estuaries and coast.

As such, your membership requires you to:

- Be familiar with and guided by the current MBNEP Bylaws, especially Article III, Section 4. Duties of Conference Members, Articles IV and V Conference Standing Committees, and Ad Hoc Committees.
- Be familiar with and guided by the current Comprehensive Conservation Management Plan (CCMP).
- Be familiar with and guided by the current Bay purpose, goals, and objectives of the Committee(s) you serve.
- Serve as a representative of an organization- or issue-related interest, contributing knowledge and experience to advancing the work of the MBNEP Management Conference and the CCMP.
- Serve in leadership positions or undertake special assignments to the best of your ability.
- Understand that the development and implementation of the CCMP is your responsibility as a member of the Management Conference, along with that of your Committee(s), with the support of the MBNEP staff.
- Understand your role and the role of each staff member and Conference member, treating all views with respect and dignity.
- Maintain independence and objectivity, driven by a sense of fairness, ethics, and personal integrity. Avoid conflicts of interest that could negatively affect the MBNEP Management Conference and disclose any conflicts promptly.
- Consistently and actively participate in Committee(s) meetings, ensuring - in the rare instance that a proxy becomes necessary - your representative is fully briefed about the agenda and has the full authority to act on any issue. This is essential to ensure that Committee work can advance effectively and efficiently.
- Respond in a timely manner and to the greatest extent possible to requests for information related to tracking CCMP implementation activities by MBNEP staff.

I understand the duty and honor conveyed by membership in the MBNEP Management Conference and agree to meet its high personal and professional standards of conduct found in the Membership Manual at [www.mobilebaynep.com/](http://www.mobilebaynep.com/)





# Membership Guidelines / Listserv Discussion

*Dottie Byron*



# MOBILE BAY NATIONAL ESTUARY PROGRAM

Science Advisory Program (SAC)

## **Purpose (CWA §320):**

**Brings together experts from various scientific disciplines to:**

- assess and communicate the health of the estuary and coastal resources
- identifies areas of stress, data and data gaps, research and research gaps
- support the MBNEP with best available science

## **SAC Tasks:**

1. Assess trends to determine where stresses are most acute
2. Develop frameworks, monitoring protocols, and projects for measuring changes in ecosystem health
3. Provide technical advice and conducting scientific review of issues/activities requested by other committees\*\*
4. Identify opportunities for public participation and project involvement

\*\* SAC may make recommendations to the Executive Committee about the CCMP and associated work plans



# Attendance over the past 5 years

- Out of 19 meetings:
  - 16 people with 50% or greater attendance rate
  - 15 people with 49%-33% attendance rate
  - 36 people with 32% -10% attendance rate
  - 36 people with <10% attendance rate



# Who is on the current listserv?

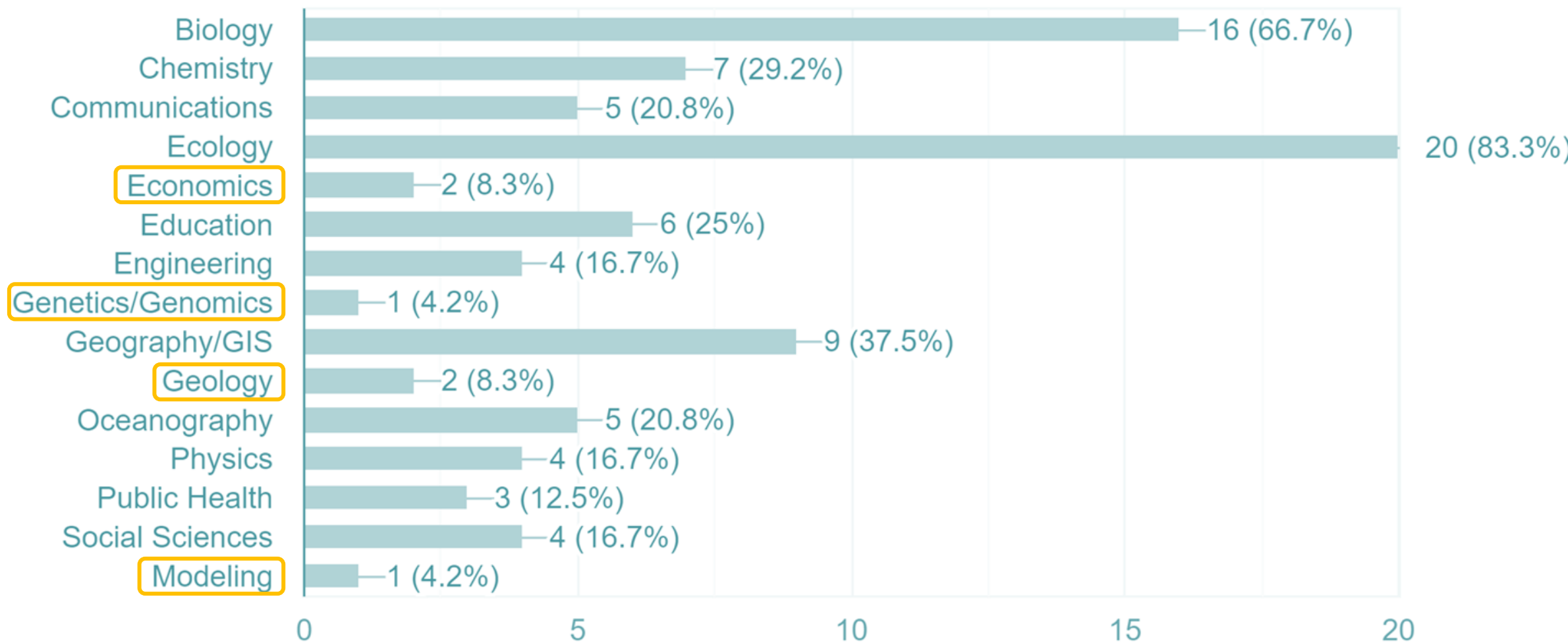
86 people currently on the listserv:

- 57 have attended at least 1 meeting in the past 5 years
- 10 newer names – added in the past year
- 4 have since retired – need new contacts or removing from list
- 15 have not attended a meeting in the past 5 years
  - Plans to re-engage? Or remove from the list?



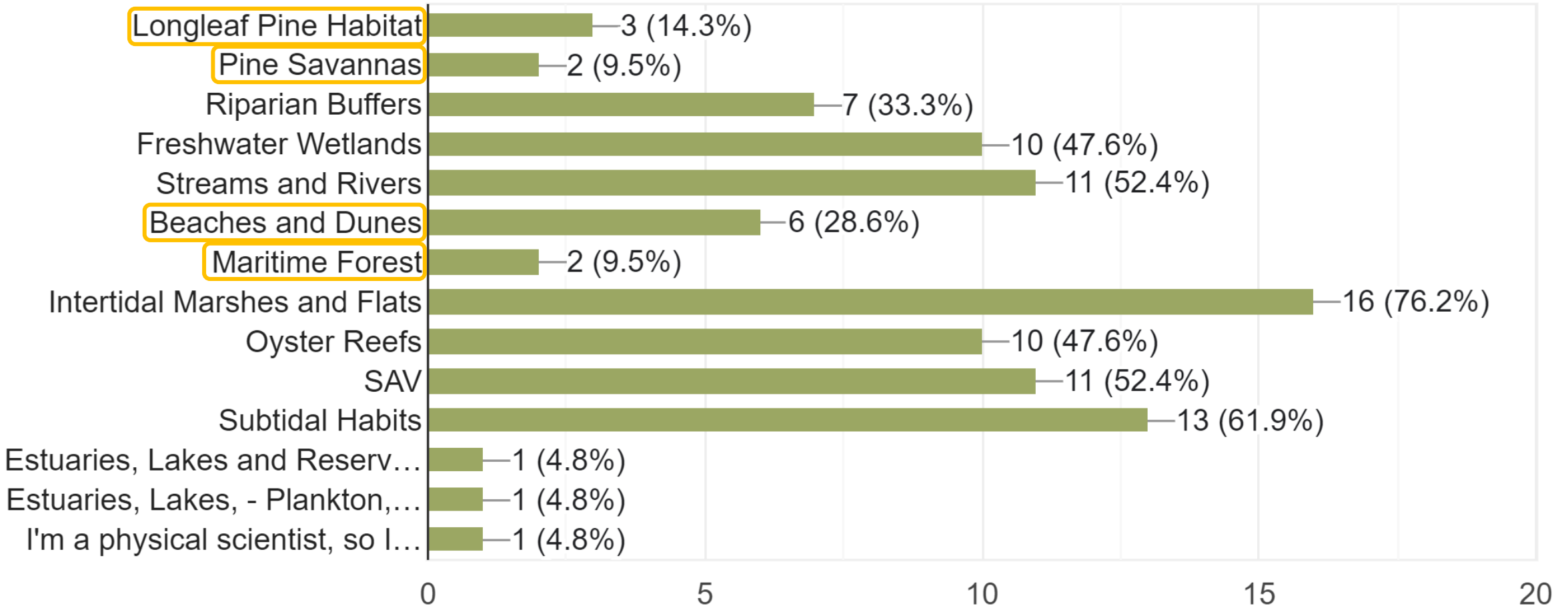
## My work/research/expertise involves the following disciplines:

24 responses



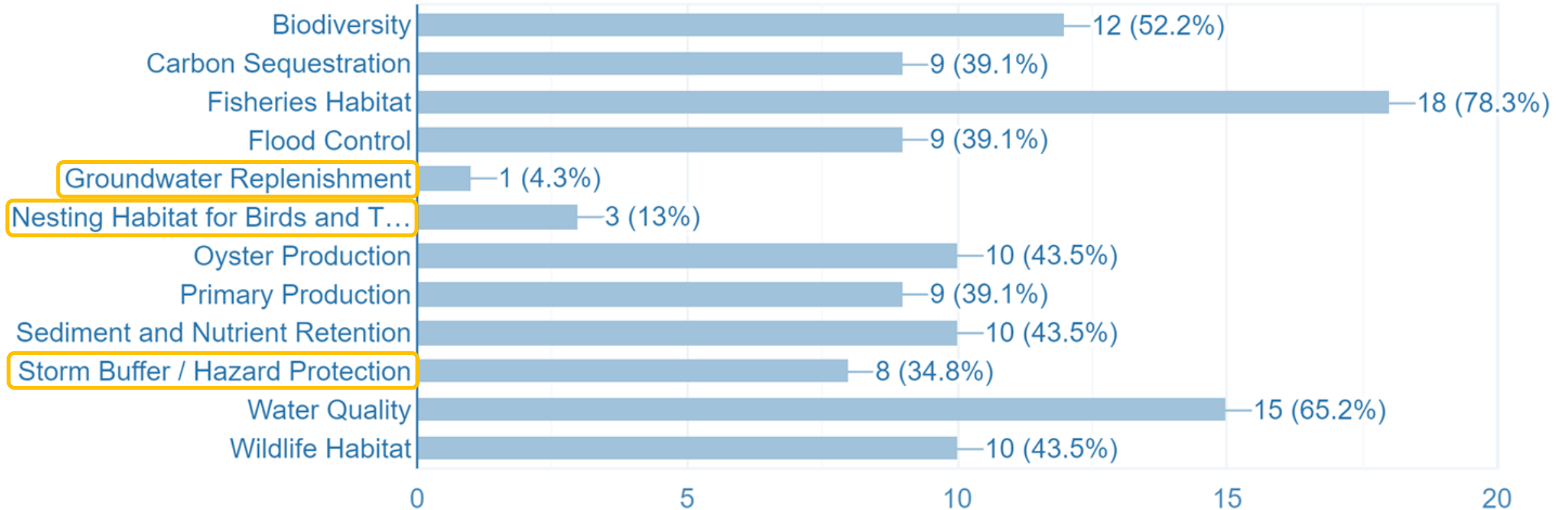
# I have expertise/experience in the following habitats:

21 responses



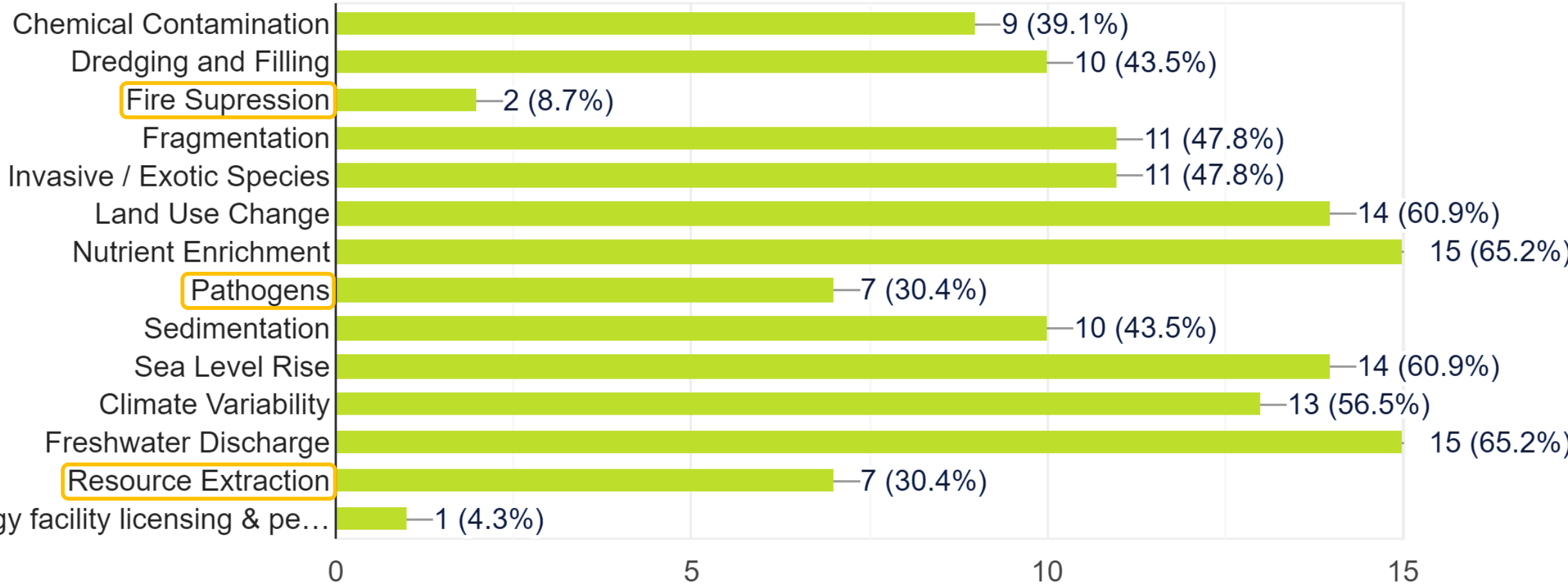
## I have expertise/experience with the following ecosystem services:

23 responses



# I have expertise/experience in the following stressors:

23 responses





# Discussion Session Instructions

- Virtual attendees: add notes directly to board; raise hand on Zoom before unmuting to discuss
- In-person attendees: raise hand to discuss; note will be transcribed and added to the board
- Questions:
  - What does it mean to be a SAC member? What are your expectations of a SAC member?
  - Should there be requirements for SAC membership? If so, what are they?
  - Should there be requirements to have consensus privileges? If so, what are they?
  - How should we recruit diverse expertise to the SAC?

What does it mean to be a member of the SAC? What are your expectations of a SAC member?

Regular  
attendance at  
meetings

active engagement

knowledge and understanding of CCMP and committee actions

understand goals and objectives and help work towards those goals and objectives

Live attendees :

Knowledge transfer.

Knowledge and understanding of CCMP and committee actions.

TECHNICAL COMMITTEE PROVIDES TECHNICAL SUPPORT.

Active Participation (engagement). We don't want to limit people from listening to our discussion but want them to be engaged.

Expectations and conflicts of interest.

Some of the topics/issues are not in the member's area of expertise.



# Should there be requirements for SAC membership? If so, what are they?

Consider developing an intake form/survey for new members to collect information such as area of expertise, affiliation, etc. Could include expectations of membership / orientation information.

Maybe have an external review committee or have folks be considered 'external' reviewers if they aren't participating at an X level

Live attendees

Contribute on a certain level to have a say via voting.

"Voting Class" vs. Tiered approach, nothing stops a member in a tiered approach to engage or participate. If you don't participate you don't get to come in last minute and "drop a bomb."

Meeting attendance (frequency) . Perhaps fresh eyes would bring interesting input.

For reports, add a question: Did you participate?

Members have access to reports and other meeting information (agendas and other documents)

SAC does recaps but could have a new membership materials packet. This would



# SotB and Monitoring Workshop Feedback Overview

*Blair Morrison*



# State of the Bay Workshop Tables and Questions

- Table Topics / CCMP Values:

- Fish and Wildlife
- Water Quality
- Beaches and Shorelines
- Resilience

- For each:

- Do you trust the validity of the science presented, as it aligns with your knowledge and data availability?
- What did we miss? Is there data available that we did not include/ did not previously have accessible?
- What examples or anecdotes could we use as vignettes?
- How should we communicate this data to the public?
- How do we fill in missing data and unknowns of this topic over the next 10 years?



# Fish and Wildlife



- Gaps in habitat specific data/ artifacts of data collection methods
- Additional info to pull in includes: fish advisories, TEK, dune vegetation, more bird data, wildlife species (black bear, amphibians/reptiles), how people interact with fish and wildlife (licenses issued), changes in flow and passage

- Potential vignettes include: sea turtle and bird nest monitoring, feral cats, unique animals that don't get highlighted often, artificial reefs, ecotourism and fishing communities
- For the next 10 years, we need to use high resolution satellite data, consolidate data sets at DISL, maintain a living data dashboard, and synthesize historic and ongoing data collection efforts



# Water Quality

- Trust the data, need to compare local vs. basin-wide trends and consider methodologies
- Additional info to pull in includes: SSOs, ADPH beach and oyster closures, groundwater fluxes
- Potential vignettes include: citizen science efforts, WQ improvements/successes, How's My Waterway, linking WQ trends to climate change



- Communication: videos, links to dashboards, provide suggestions on how citizens can help
- For the next 10 years, we need: increased sampling of organics, heavy metals, emerging contaminants, better information on water residence times, synthesis and QAQC of existing datasets

# Beaches and Shorelines



- Varying degrees of confidence on the data, can enhance local ground-truthing using LIDAR, need to check ambient water level in satellite imagery timestamps
- Additional info to pull in includes: ecological cost of lost shoreline, public perception of loss, living shorelines, subsidence rates, nearshore SAV cover and species composition, USACE data
- Potential vignettes include: historic projects (Gaillard Island), USACE Beneficial Use Program, living shoreline tools/policies, local SLR projections, dune vegetation plantings, beach cleanups
- Communication: compare local shoreline loss with other Gulf states, need to be honest about loss/rate of shoreline loss, highlight shorelines as first line of defense, waterfront property owner's manual, explain compound effects of shoreline loss (SLR, storm events, erosion)
- For the next 10 years, we need: better LIDAR, shoreline habitat migration models, higher resolution dune and living shoreline monitoring, volunteer monitoring of shoreline change, event-driven LIDAR/bathymetry data sets (post-storm)



# Resilience

- High confidence in data, low confidence in where we are on the continuum of ecosystem state, effects of projects
- Additional info to pull in includes: social vulnerability indices, repetitive property loss/sensitive infrastructure, environmental health issues
- Potential vignettes include project and acquisition highlights, aquaculture (+/-), Baldwin Co Recycling Center, resilience toolkits



- Communication via social media tailored to specific audiences, highlighting projects that have been done and are being done
- For the next 10 years, we need to link SotB to action plans, increase in field measurement of climate change parameters, blue carbon storage, determine the cost of proacting vs. reacting vs. inaction, and letting the public know what they can do

# Monitoring Summit Tables and Questions

- **Funding:**
  - What types of RFPs are needed to advance monitoring efforts?
  - How do we show the utility of monitoring for continued funding?
  - Do traditional funding mechanisms place constraints on monitoring activities? If so, what are they?
  - Are there non-traditional avenues of funding that we should pursue?
- **Citizen Science:**
  - How can we incorporate citizen science into our regional monitoring strategy?
  - What kinds of citizen science data are most useful? Easiest to incorporate?
  - How do we recruit a cohort of dedicated citizen scientists?
- **Emerging Issues:**
  - What parameters are not currently covered by our monitoring strategy?
  - What parameters do you see becoming increasingly important to monitor?
  - Will monitoring the new/emerging parameters require additional funding, equipment, or expertise?
- **Remote Sensing/ Autonomous Sampling**
  - What role should remote sensing/ autonomous sampling play in our larger monitoring strategy?
  - What kinds of technologies should we pursue? What are their pros and cons?
  - How should we manage the data generated by remote sensing?
- **Using the Watershed Condition Framework to improve local management**
  - What information do we need to bolster the Watershed Condition Framework for improved environmental management?
  - How can we best communicate monitoring data for it to be used in local and regional management outcomes?
  - What kinds of monitoring data do you think are most valuable to decisionmakers?

# Funding



- Need RFPs that provision for adaptive management, data archival, local training expansion, interdisciplinary/ interagency work, rapid response emergency funds
- Demonstrating value of monitoring data: used as basis for decision-making, restoration design, success/failure criteria, and used by citizens for recreation/grassroots projects
- Funding constraints: TIMELINES, no required percentage allocated to monitoring, narrow parameter requirement, maintenance not covered, need more flexibility to respond to events/ reallocate budget
- Non-traditional avenues to explore: NRDA, local & state funds, GRP, DOE, DOD, public-private partnerships, tax or proceeds program at elections, direct legislative appropriation

# Citizen Science



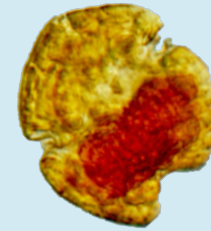
- Apps (Zooniverse, iNaturalist, Nextdoor)
- Bioblitzes
- Meteorological gauges
- Most useful data: range shifts of species, turbidity, bacterial data, coast/game cams
- Gamification/ prizes for participation

- QA/QC of existing data and utilization of the data by partner organizations
- Enhanced training opportunities
- School curriculum/ clubs/ competitions



# Emerging Issues

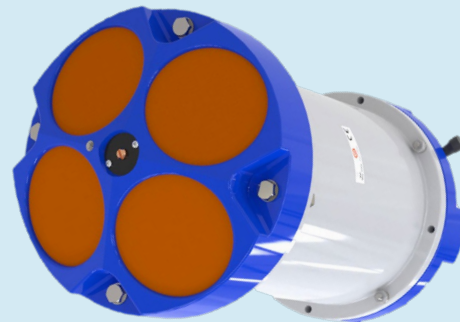
- Marsh migration
- Subsidence
- Contaminants, PFAS, microplastics
- HABs
- Socio-economics/property values
- SLR, salinity intrusion



- Habitat fragmentation and connectivity
- Hydrograph evolution
- Groundwater dynamics
- Legacy and large debris
- Environment and human health
- Access and human use

# Remote Sensing/ Autonomous Sampling

- Recommend transition to autonomous samplers where possible
- High start-up costs, but becomes a cost-savings measure once implemented
- Can be deployed in remote areas
- Machine learning, strategic models, virtual buoys
- Lots of cool tech available now: ADCPs, AUVs, gliders, smartbuoys, SAT imagery, orthoimagery drones, sonar, acoustic arrays and microtags, flux towers, etc.
- DISL data repository –issues DOIs and publicly accessible



# Watershed Condition Framework



- We need: local and updated land use data, more upstream/ headwaters data, species composition /diversity, quantification of natural capital and ecosystem services, habitat thresholds (area needed), risk assessments, context of existing regulatory framework
- Connecting monitoring data to broader topics
- Visual aids / maps
- Predictive modelling, easy to use web tools
- Regular debrief meetings with municipalities/ site visits
- One-pagers
- Education for real estate / developers
- Summaries geared to specific industries or audiences
- Affordability of management vs. cost of doing nothing



Discussion of CCMP  
Strategy  
Development



# The New CCMP: A Compilation of Action Plans



## Committee Action Plan Framework

Estuary Status/Trends —————> Measures

*What are you planning to improve and how will progress be measured? (think objectives here)*

Restoration/Protection —————> Actions/Projects

*What actions or initiatives will committee take to achieve it? Who will lead/participate?*

TA/Capacity Building —————> Advancing knowledge

*How will you advance the knowledge of your committee or sector through your work?*

Ed/Public Involvement —————> Communicating Results

*How will you communicate your committee's work to the public and conference?*



# Two Spheres:

## Changing Landscapes

Land Use Change, Sediments, Nutrients, Pathogens

## Changing Climate

Sea Level Rise, Climate Variability, Resilience



# Science Advisory Committee CCMP Strategy

EST:  
Measure/Monitor

Changing Landscapes

Changing Climate

ERP:  
Actions/Projects

Changing Landscapes

Changing Climate

TAC: Advancing  
Knowledge

Changing Landscapes

Changing Climate

EPI: Communicating  
Results

Changing Landscapes

Changing Climate



# Mentimeter Feedback

menti.com

Code: 7421 4131



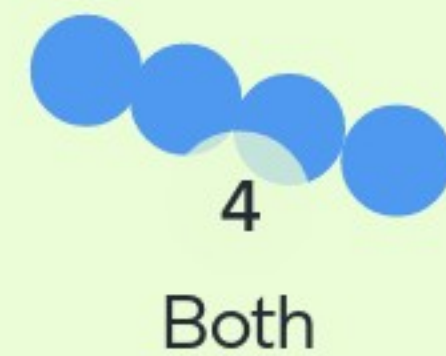


# How would you prefer to create the next CCMP strategy for the SAC?





# If we create subcommittees, would you prefer them to be organized by pillar or theme?





# Should there be a limit on participation in subcommittees? (Ex: members can only participate in 1 subcommittee, only 5 people per subcommittee, etc.)

No

No

No

no- rely on self regulation

No. If people want to be in several committees then they skills have the option to do so

Yes

No

No

2



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# Should there be a limit on participation in subcommittees? (Ex: members can only participate in 1 subcommittee, only 5 people per subcommittee, etc.)

No

Subcommittees should have some letter of commitment

Subcommittees should be balanced (# of members)

No

Maybe not a limit, but perhaps guidelines for agreeing to participate (i.e., if you agree to participate, you are agreeing to active consistent participation)

No

possibly a limit on 'leads' but no in general

No total limit and self select in number of committees to participate in

2



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# Should there be a limit on participation in subcommittees? (Ex: members can only participate in 1 subcommittee, only 5 people per subcommittee, etc.)

Members can only participate in 1 subcommittee

no

Limited by expertise

Yes a limit on numbers of committees but not on number to participate

Maybe it is how much time/frequency of meeting for subcommittee so that they know how many they can reasonably join

Yes

2



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# What topic/project do you want to ensure is addressed in the SAC strategy for the next CCMP?

Terrestrial/estuarine interface and migration with climate change

Land preservation/protection

Protection of most vulnerable habitats and evaluation of their ecosystem services

Habitat monitoring

Changing landscapes in context of changing climate

Improvements in water quality

Sediment quality and dynamics

A method to combine all different pillars in a cohesive assessment





# What topic/project do you want to ensure is addressed in the SAC strategy for the next CCMP?

Resilient communities

Water quality improvement

Managing coastal urban growth

Changing landscapes: How can water quality be protected in the face of increased development pressure.

Natural capital/ecosystem services

Restoration

mitigation monitoring to determine what is actually working and what is not

Trends and rates of landscape and climate change

3



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# What topic/project do you want to ensure is addressed in the SAC strategy for the next CCMP?

Resilient Communities

3



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**Do you have any concerns or questions about the CCMP strategy development process?**





# Announcements



**Thank You For Attending!**