Meeting Summary

SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE
SCG SPONSORED
RECOVER PUBLIC ENGAGEMENT WORKSHOP

DAY 1: NORTHERN ESTUARIES & SOUTHERN COASTAL SYSTEMS
JULY 19, 2023
9:00 AM - 5:00 PM

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406
Building B-1 Auditorium

Participant lists are available at the end of the document.

Welcome and Introductions

Adam Gelber, OERI thanked everyone for participating. This is a SCG sponsored workshop to support RECOVER. This workshop is being held in response to a formal request by RECOVER made to the Task Force, Working Group and Science Coordination Group. The purpose of this workshop is to gather science and monitoring information to support future Monitoring and Assessment Plans. Angela Dunn, SCG Vice Chair is participating virtually and will help facilitate the workshop.

Angela Dunn thanked Adam for leading the workshop in person and welcomed everyone. RECOVER reports to SCG quarterly and MAP is an important piece of CERP.

Adam explained there are several speakers this morning including, Gina Ralph, Fred Sklar, Laura Brandt, Ramon Martin, Stephanie Verhulst, Melody Hunt. If there is time after the individual presentation, we will open it up for a couple of questions, otherwise the first Q&A session directly follows the presentations. Carrie Beeler, OERI will provide an overview of the workshop public engagement process and procedures.

Workshop Procedures (Presentation)

Carrie Beeler, OERI noted that RECOVER and SCG both have a long history supporting restoration science and coordinating. The Plan for Coordinating science outlines the ways that the SCG coordinates science, and this workshop is one of those ways described. This is a two-day workshop. The first day will cover both the Northern Estuaries and Southern Coastal Systems and the second day will cover Lake Okeechobee and Greater Everglades. There are two opportunities for stakeholder engagement each day. The first is after the morning presentations and the second is after the breakout groups briefings. All attendees are automatically muted and are in listen only mode. Attendees online will use the "raise hand feature" and be called on one at a time and unmuted by staff. If time allows, questions and discussion can occur directly following presentations. This meeting is being recorded and available on our website and YouTube channel, along with all the materials provided today.

Introductory Remarks (Presentation)

Gina Ralph, USACE explained the forum to identify current science and monitoring efforts and future science and monitoring needs across south Florida to address outstanding uncertainties and CERP success. The 2 goals are 1) to do a crosswalk of monitoring inventory with hypothesis clusters (HCs) and 2) to identify overlap and gaps in science and monitoring that support HCs. Gina went over how the workshop fits into the process for the Monitoring and Assessment Plan (MAP) update, the days agenda, and then introduced Fred Sklar.

CERP 101 (Presentation)

Fred Sklar, SFWMD provided an overview of the Central Everglades Restoration Project (CERP) enacted by Public Law 106-541 dated December 11, 2000, Title VI – Section 601. The project included language requiring a 50-50 cost-share, protection of water for the natural system, and must maintain an existing level of service for water supply and flood protection.

The Integrated Delivery Schedule (IDS) guides project implementation with goal of maximizing the benefits of all the CERP efforts and is reviewed each year. The IDS is developed through an extensive public process with participation of the South Florida Ecosystem Restoration Task Force and its Working Group. Projects and planning timelines are organized so that the beginning of one element coincides with progress or completion of others. Several CERP component projects were reviewed by region.

RECOVER & AA&M 101(Presentation)

Laura Brandt, USFWS gave an overview of adaptive management relative to RECOVER and the CERP. The CERP is the hydrologic component of restoration and is an integrated program consisting of multiple projects. RECOVER is an interagency, interdisciplinary team of scientists, modelers, planners, and resource specialists. They organize and apply scientific and technical information in ways that are most effective in supporting the objectives of the CERP. RECOVER was codified in the WRDA 2000 and the 2003 Programmatic Regulations. Adaptive Assessment and Monitoring are a key component of RECOVER. A monitoring program should be designed to measure status and trends towards achieving the goals and purposes the CERP. In addition, Interim Goals/Interim Targets are established as part of the assessment to ensure that the CERP is meeting goals along the way. Conceptual Ecological Models (CEMs) are non-quantitative planning tools that identify major anthropogenic drivers and stressors, ecological effects, and biological attributes or indicators. CEMs help show how the natural system has been altered by human stressors and provide information to focus the CERP efforts. Hypothesis Clusters look at CEMs and group sections to provide causal relationships among ecosystem components and describe how these relationships are expected to change with restoration. Monitoring and assessment supports the work above and a single integrated system-wide monitoring and assessment plan (MAP) was developed in 2001 with four broad objectives: to establish base-line variability, determine status and trends, detect unexpected responses, and cause-and-effect scientific investigations. The MAP described the process for determining what should be monitored, presented CEMs, performance measure documentation sheets, and described research

and modeling support for Adaptive Management. The MAP assumed all monitoring would continue to be supported. The MAP has been adapted as supporting funding and monitoring has diminished, and recommendations from independent scientific review has helped refine it. The workshop provides a forum to identify current science and monitoring efforts and future science and monitoring needs across south Florida to address outstanding uncertainties and assess CERP success.

Northern Estuaries Hypothesis Clusters Overview (Presentation)

Phyllis Klarman, SFWMD went over the Northern Estuaries (N.E) HCs for the following:

Oyster Health & Abundance Hypothesis Cluster

Working Hypotheses:

1. Heavy rainfall and large volumes of freshwater entering the estuaries rapidly decrease salinities below optimal levels for oysters, causing physiological stress and widespread mortality.
2. Large inflows of freshwater to the estuaries inhibit larval settlement by physically flushing the pelagic larvae out of the estuary.
3. Reduced freshwater inputs to the estuaries during the dry season or drought periods increase salinities above optimal levels for oysters, causing physiological stress and increased disease and predation rates.
4. Suitable habitat quality and substrate type will increase larval settlement success and encourage sustainable oyster populations.

Monitoring incudes, the number of living oysters counted and compared among reefs, gonadal index, spat recruitment, juvenile oyster growth and survival, juvenile growth/mortality rates, disease monitoring, condition index, and ratio of meat weight to shell weight.

Key uncertainties around substrate availability, larval survival, resiliency, impacts from sea level rise and warming water temperatures, and more.

Submerged Aquatic Vegetation (SAV)Hypothesis Cluster

Working Hypothesis:

1. Increased magnitude and duration of freshwater inflows result in large salinity fluctuations in mid and lower estuarine regions reducing seagrass growth and density, diversity, and productivity.
2. Increased temperatures and reduced freshwater flows, particularly in the dry season, result in stress conditions (e.g., thermal, hypersaline) reducing SAV density, diversity, and productivity in the Caloosahatchee River and Estuary (CRE) and St. Lucie Estuary (SLE).
3. High color (colored dissolved organic matter or CDOM), increased turbidity, and the resuspension of muck due to high volumes and prolonged duration of freshwater inflows increase light attenuation in the water column and reduce SAV density, diversity, and habitat availability.
4. Increased sediment influx from high freshwater inputs elevates rates of deposition and resuspension of fine-grained sediments, reducing sediment quality and seagrass density, diversity, and productivity. Removal of muck should improve sediment quality and seagrass density.
5. High nutrient flux increases phytoplankton abundance, SAV C:N ratio, and sediment sulfide concentrations, reducing seagrass density, diversity, and productivity.
6. Increased benthic algal and epiphyte abundance reduces seagrass density, diversity, and productivity through light reduction, hypoxia, and competition for space.

7. Grazing or predation, impedes SAV recovery through the removal of above and below-ground biomass, disrupting sediment stability, SAV health, density, diversity, and productivity.

Monitoring includes canopy height, water quality parameters, ancillary parameters; and for landscape scale, aerial photos, SAV presence/absence recorded using same methodology as patch scale at specific site locations using methods such as, transects.

Key uncertainties include sediment profiles, wave attenuation effects, sea level rise, reduced seasonality effects and more.

Benthic Infaunal Invertebrates Hypothesis Cluster

Working Hypothesis:

1. Heavy rainfall and large volumes of freshwater entering the estuaries rapidly lowers salinity reducing water quality and infaunal abundance, diversity, and alters community composition.
2. Increased duration and frequency of freshwater inflows create an oligohaline environment reducing water quality and infaunal abundance, diversity, and alters community composition.
3. Freshwater inflows increase the delivery and promote the accumulation of fine-grain sediments and organic material that can create unfavorable benthic habitat and reduce infaunal abundance, diversity, and alters community composition.
4. Removal of muck and reduction the factors driving muck accumulation throughout St. Lucie estuary and southern IRL will increase infaunal abundance and diversity and create healthy benthic habitat.

Monitoring includes infaunal abundance and diversity, SAV species and wet weights, abiotic effects, and sediment studies.

Key uncertainties around substrate availability, larval survival, resiliency, impacts from sea level rise and warming water temperatures, predation impacts and more.

Native Fish Hypothesis Cluster

Working Hypotheses:

1. Maintenance and/or restoration of important nursery and essential fish habitat for juvenile and adult indicator species will promote productive fisheries and the rebuilding of depleted fish stocks.
2. Establishing a sufficient baseflow will aid in maintaining an oligohaline zone necessary for a healthy coastal ecosystem resilient to changes in regional controls (e.g., climate change, rainfall, sea level rise), thus ensuring that a productive native species-dominant oligohaline fish assemblage persists, and that ecologically meaningful isohalines are maintained downstream. Alternatively, rapidly changing salinity can adversely impact these fish assemblages.
3. Conserving the physical and biological processes affecting seagrass, which have been lost in many Florida estuaries, will provide habitat for economically important fishes.
4. Maintaining and restoring productive biogenic habitats (i.e., oyster reefs, mangroves, and emergent vegetative habitats) will benefit fish assemblages and their prey, including indicator species such as Atlantic goliath grouper, common snook, and red drum.
5. Dredging, water releases, and water quality conducive to mercury resuspension and methylation will correlate with high environmental mercury concentration and biomagnification in the food

web and result in fishes with higher-than-normal mercury in their tissues. The same is true for other toxicants like PAHs, PCB, and DDT. High levels of such toxicants are detrimental to fish populations and to human consumers, and result in poor health conditions and abnormalities.

6. A normalized hydrologic condition coupled with habitat restoration will benefit the fish community to promote resilience to future disturbances. Normalized hydrological condition refers to clean water with low levels of nutrients and pollutants, a natural hydrograph rather than rapid unseasonal releases, optimum salinity and dissolved oxygen levels, greater tidal exchange, and floodplain connectivity.
7. Seasonal variation of freshwater inflow and flushing during key times of the year will change ichthyoplankton assemblages.
8. Nutrient enrichment alters water quality and results in red tide and other harmful algal blooms (HABs) causing fish kills, displacement, or a shift in behavior, including movement rates and home ranges, to acquire sufficient resources (i.e., prey distribution changes as well).
9. Restoration of natural coastal habitats and maintaining freshwater/oligohaline zones will promote recovery of native species communities and will restrict many invasive fishes to upper reaches of the system.
10. Natural healthy soft sediments support healthy estuarine fish communities while excessive accumulations of anoxic muck can have a negative influence on the community.
11. Healthy freshwater emergent herbaceous vegetation has a direct relationship to oligohaline fish.

Key uncertainties include habitat loss effects and nutrient pollution, fish kills, effects from acute versus chronic disturbances on fish community, effects from mercury, Invasive fish species, pesticides, and other toxicants, spatial extent of habitat needed for restoring fisheries, ecological linkage between estuaries and the coastal ocean, degree of importance of certain fish habitats, and spatial extent of oligohaline habitat needed to maximize production and survival of low salinity fish indicator species.

Southern Coastal Systems Hypothesis Clusters Overview (Presentation)

Melody Hunt, NPS and Stephanie Verhulst, USACE covered the HCs below in detail.

Salinity Hypothesis Cluster

Working Hypotheses:

- Water Management: Flow redistributions will change salinity in coastal wetlands, mangroves, coastal waters. In areas where freshwater is increased, salinity will be reduced, and in areas where freshwater inflow is decreased, salinity will increase.
- Land Use: This effect of land use is variable across the SCS but in general will have less effect than CERP implementation and CO2-driven climate change and sea-level rise in the long term.
- Sea Level Rise: Over a multi-decadal timescale, nearshore waters will experience greater exchange with oceanic marine waters as shallow banks and mangroves are inundated.
- Climate Change: An increase in temperature will increase evaporation which in turn will increase salinities, the effects will be enhanced in shallow areas and areas

receiving limited freshwater inflow. Tropical storm disturbance may advance saltwater intrusion further inland, especially in areas with low elevations.

MAP Monitoring:

- Measurement of Temporal and Spatial Salinity and Supporting Measures

Key Uncertainty:

- Because of the low gradient and elevation of the coastal areas within the SCS, the overall resiliency of the SCS coastal environments and habitats to withstand sea level rise even with the increase in freshwater inflow is uncertain. The point at which additional freshwater will not be sufficient to overcome sea level rise and saltwater intrusion for the different regions of the SCS is not known.

Water Quality and Phytoplankton

Working Hypotheses:

- Water Management: Increased flow will increase in nutrient loading where nutrient reduction measures are not implemented. Phytoplankton species changes likely.
- Land use: Direct effects highly variable throughout SCS mobilization of nutrients to coastal systems in some areas. Less effect than CERP alterations
- Sea Level Rise: Rising sea level will mobilize nutrients in vadose zone and cause peat collapse and transport to nearshore waters.
- Climate Change: Increase over longer timescales but episodic, more frequent storms can disturb nearshore environments and cause pulses of nutrients. Increase in temperature may produce phytoplankton shifts, increase blooms.

MAP Monitoring:

- None, monitoring performed independently by various agencies.

Key Uncertainties:

- Climate change and sea level rise
- Changes in phytoplankton communities
- Gaps in data and collection efforts

Submerged Aquatic Vegetation

Themes of working hypotheses:

- **Water use**: Restoration of more natural freshwater releases through canals, spreader-canal features, wetland rehydration, and improvement of water delivery should promote beneficial salinity conditions, reduce sediment input, and decrease nutrient load to promote healthy and diverse SAV populations.

- **Climate Patterns:** Climate patterns will result in changes in sea surface temperatures, precipitation patterns, and SLR which in turn influences nutrient delivery (increased algal

growth), frequency and intensity of drought conditions (hypersalinity), and dissolved oxygen levels (hypoxia and hydrogen sulfide).

- **Sea-level Rise:** SLR will eventually limit the restoration ability to deliver estuarine conditions in Florida Bay, outpace mud bank accretion, and increase connectivity between the Gulf of Mexico, Florida Bay, and the Atlantic Ocean.

MAP Monitoring:

- SAV (Patterning, Composition, and Structure)

Key Uncertainties:

- Climate patterns – thermal stress, salinity, and nutrients, and cyanobacterial and macroalgal blooms
- SLR – mud bank accretion, sediment plumes, greater marine connectivity, and sufficient CERP flow
- Water and land management – seascape fragmentation, fluctuating flows, trophic use of seagrass beds, *Sargassum* impacts.

Native Vegetative Mosaic

Oyster

Themes of Working hypotheses:

- **Altered freshwater flow into coastal estuaries from climate change** may result in salinities outside optimal levels for oysters causing physiological stress, widespread mortality, and increased disease and predation rates.
- **Large inflows of freshwater** physically flush larvae out of the estuaries.
- **Suitable habitat quality and substrate type** will increase larval settlement success and encourage sustainable oyster populations.

MAP Monitoring:

- Oyster population
- Oyster reef habitat (Southwest coast)

Key Uncertainties:

- Larval availability and connectivity for sustaining populations.
- Substrate availability and suitability in SCS
- Resilience and ability of oysters to recover after a damaging event.
- Impact of reduced "year classes" on oyster populations (decreased oyster life span, survival)

- Impact of climate change and SLR on distribution and health of oyster populations

Predator/Prey

Themes of Working hypotheses:

- **Hydrological conditions (i.e., hydroperiod and water depth), salinity, and wet season population densities and dry season concentrations** of marsh fishes, crayfishes, and other aquatic organisms influence wading bird foraging success.
- Many aspects of spawning, larval movement and development, juvenile growth and predation have been directly linked to **the magnitude and timing of freshwater inflow inundation of short hydroperiod wetlands, fish biomass production during the preceding wet season, and the incidence of environmental disturbances**.

MAP Monitoring:

- Crocodilians
- Roseate spoonbills
- Coastal wading bird colonies
- Fishes

Key Uncertainties:

- Effects of climate change on marine end members
- Effects of invasive fish species on diversity and trophic structure of native prey fish communities
- Patterns of accumulation and biomagnification of mercury, pesticides, and pharmaceuticals in coastal and estuarine fishes
- The spatial extent of oligohaline habitat needed to maximize production and survival of indicator fish species.

Estuarine Nursery Habitat

Working Hypotheses:

Hypothesis 1. Restoration would increase the length of shoreline receiving freshwater, expand the spatial extent of desirable salinities, and reduce salinity fluctuation to a range and frequency characteristic of natural estuarine conditions, thereby increasing the area of optimum habitat for many species. As a result, these changes will expand local distribution, increase abundance, and allow a richer species assemblage of estuarine species.

Hypothesis 2. Restoration would reduce the intensity, duration, and spatial extent of hypersaline conditions, thereby increasing the area of optimum habitat for nearshore fish and invertebrates.

Hypothesis 3. Anticipated changes in fish community structure in response to increasing the area of optimum habitat include an increase in the utilization of mangrove shorelines by euryhaline species such as gray snapper and snook, while the use by stenohaline marine species would decrease. There should be occasional observations of species associated with both fresh and brackish conditions.

Hypothesis 4. Restoration would increase the area covered by patchy or heterogeneous seagrass habitat, thereby increasing the area of optimum habitat for seagrass-associated fish and invertebrate species.

Hypothesis 5. Restoration would reestablish sheet flow to the coast that would rehydrate coastal marshes and recreate habitat for freshwater fish and other prey for utilization by wading birds and other high trophic level species.

MAP Monitoring:

- Marsh, Macrophyte, and Mangrove Vegetation
- Coastal wetland fish
- Shoreline fish Fish & invertebrate network
- Juvenile spotted seatrout
- Epibenthic fauna
- Oysters

Key Uncertainties:

- **Uncertainty 1.** Ability/validity of extending to restored systems inferences based on impacted systems when they may be fundamentally different.
- **Uncertainty 2.** Present observations may be an artifact of an unknown or unsampled factor.
- **Uncertainty 3.** Oversimplification of current habitat suitability

Public Engagement & Comment

- Q&A Session In-person, and
- Q&A Session Virtual (via Zoom raise hand feature)

Adam Gelber, OERI called on commenters one at a time online and Angela Dunn noted that she is looking for online commenters. Angela noted that the team did a great job of covering the information.

Fred Sklar, SFWMD: asked Stephanie Verhulst how different predator prey was from the Everglades model. What are the differences?

Stephanie Verhulst noted that hypothesis cluster was adapted from the greater Everglades hypothesis cluster and so there are similarities between the greater Everglades in southern coastal systems. Some differences would be monitoring amphibians and invertebrates spatially.

Tasso Cocoves, USACE Greater Everglades Regional Coordinator Everglades: said the trophic HC has been updated from the one shown. The main differences are the inclusion of different invasive species and different hydrologic parameters that influence aquatics in systems and the focus is mainly on Wading birds while the SCS have more like fish i.e., snook. Stephanie agreed and added this is still HC being updated.

Melody Hunt, NPS: said that one more difference with SCS will include effect of Sea Level rise and habitat changes in coastal systems.

Frank Mazzotti, UF: thought the process is good and asked if there a commitment to increase the funding for the MAP. He added that he believed this afternoon's effort would result in the need for more monitoring. Monitoring for more indicator species or more frequency of monitoring or greater spatial extent. We would need to get more funding for the MAP. So that we can have the MAP achieve what it was originally designed to do.

Gina Ralph, USACE: explained that what we are working on today is identifying those overlaps and gaps in areas that can be leveraged. Then we will go through an evaluation of the MAP to put in place where we feel we need to address those uncertainties and to measure success of the CERP restoration and then we will use that to feed into our budget request. I can't tell you today how much money we will have but hope we can do those two things today.

Andrea Atkinson, NPS: if anyone sees something in HC that is lacking or critical to be added please let us know.

Ramon Martin, USACE: We have a lot of bird of prey in that area and we do have a lot of information in that ecotone. We could include the information in the diagram, but it is too complex. We should have the information available in narrative format.

Jessica Spencer, USACE: invasive species management branch. In the last hypothesis, the invasive species, is forecast to decrease. I agree for terrestrial, but aquatic might favor the restored habitat. Are you monitoring for all invasive species or targeting certain species there now? Any monitoring for new arrivals?

Stephanie Verhulst: MAP is not monitoring for invasive but looking at what is existing. Still to be fleshed out during the process. What kind of invasives should we be concerned about. This is a new component; discussions are ongoing, and I will pick your brain.

Fred Sklar, SFWMD: in the SCS one of the working hypotheses is mercury. However, mercury is not in the Northern Estuary HC and asked if it is correct and if it is not a concern in the NE? Phyllis Klarman, SFWMD: The fish HC has environmental toxicants and it's embedded in that cluster. The way NE and SCS HC dealt with it is different, haven't looked at it in the context of CERP. Fred was surprised to see it in the SCS. I guess we will explore it in the breakout groups.

Jessica Fair, USACE: HC predator/prey interactions SCS were not looking at invasive species as a stressor, but uncertainties, only for fish. Will other species such as python and Caiman be added to it? Stephanie Verhulst noted it is still in draft form, and still want to understand how invasive species are influencing CERP. Continuing the conversation in region is important to incorporate. Don't know how it will influence wading birds etc.

Frank Mazzotti, UF: looking to see able to integrate invasive species into HC and CEMs.

Andrea Atkinson, NPS: most CEMS have invasive species incorporated. The HC most focused on things that will derail CERP effects or interpret effects or ability to interpret CERP effects. For example, Asian Swamp Eel changing trophic structures in Marl Prairies might interfere with ability to interpret CERP effects there.

John Kominoski, FIU's Florida Coastal LTER: Fred's point about biomagnification of Mercury. Just note that LTR is finding dolphins had some high blood Mercury levels of any marine mammals in the world and we should pay attention to Mercury.

Gina Ralph thanked all the presenters and gave directions for breakout sessions.

Breakout Groups Briefings

Gina Ralph thanked everyone for their work and noted ways to engage.

Laura Brandt Native Fish NE HC and Predator Prey HC noted the tasks and the work to ID monitoring. Pointed out the map and noted could ID locations of monitoring and it included a legend. You can see where attributes overlap. A lot of information.

- Fish diversity tasks and differences between the methods. Need to follow up on fish monitoring to discuss. Did identify things in HCs related to how to measure connectivity things in ocean.
- SCS Predatory /prey need to have a global trophic hypothesis, where can look at similar things across system and same for SAV monitoring SAV same bits and pieces needs standardization.
- Predator/Prey gap along SW coast elements such as fish, crocodilians, and spoonbills. Big part of SW coast in area where we will see benefits not all the way to Sanibel but linked to Picayune Strand and Western Everglades Restoration Project (WERP).

Jessica Group C: Benthic Infaunal NE and phytoplankton in SCS

- Identify overlap-what specifically are they monitoring.

- Identify additional monitoring available in St. Johns, Broward Count, Palm Beach and more.
- GAPs SCS and NE nutrients, groundwater, hydrogen sulfide, phytoplankton community gradients, salinity tolerance SCS,
- Sediment rates, nutrients GW and Hydrogen sulfide,
- Monitoring data need time and resources to look at it.

Group E Native Vegetation for SCS Sarah Heather USGS

- Indicators that were monitored system reconnaissance flights for native species unable to monitor understory invasives and water salinity, soil elevation data.
- We found no overlaps, many gaps.
- Soil elevation gaps in Model Lands
- Need for ground surveys.
- Invasive Species none that we found for understory.
- Fire Data-have outlines so no data about intensity.
- No baseline of WQ so we can't determine baseline for restoration.
- Large scale in general is missing.

Oyster Health and Abundance and Salinity-Amanda Kahn

- Inventory of Salinity HC network- many different programs. Need locations, maps, and contacts.
- Gaps Oysters need other people for collaboration.
- Identify gaps and what monitoring could be implemented strategically, for example the Mangrove transition Zone.
- Identified need for WG to continue to grow this format.
- Scale e.g., oysters tidal signal variation in amount of tidal signal can make a difference in response on small scale. schedule

SAV Monitoring

- Variety of agencies in both HC should be able to feed models and easy to adjust data to compare.
- Gaps in nutrients, indices such as water quality. Need a definition of?.
- Communication opportunities and continue.

Andrea Atkins, SCS estuary nursery

- Juvenile spotted seatrouts etc., the IBEAM, Fish monitoring Jerry Lorenz. FWC fish community in Fl Bay and SW coast PILOT
- Not overlapping different locations

- Gaps IBEAM had to cut back monitoring in Barnes and Cards Sounds and Jerry Lorenz had to cut his monitoring.
- Seatrout -an inventory in BBAY may be warranted.
- Oysters-do inventory SW coast (not aware of any monitoring in Florida Bay and Biscayne Bay and SW coast)
- Hatchlings to juvenile crocs responsive to oligomesohaline habitat already monitored from Fl all the way to Cape Sable, may be opportunity to do inventory in SW coast of Biscayne Bay
- Stressors Indicator-Oligamesohaline Zone, add salinity sensors and some to hydrology stages as it moves inland.
- Salinity and Hydrology monitoring going on may be able to optimize, a little out of our focus.
- Stephanie Verhulst-all hypothesis had monitoring associated -gaps in where and when only.

Gina Ralph thanked everyone and noted that there is a lot of work on follow up to do.

4:40 PM: Public Engagement & Comment

- Q&A Session In-person, and
- Q&A Virtual (via Zoom raise hand)

Adam asked for comments and there were none.
Gina hoped everyone would come back and encouraged people to plan for lunch.

Closing Comments

Adam Gelber, OERI and Angela Dunn, SCG Vice Chair

5:00 PM: ADJOURN.

Attendees

Adam Brame
Adam Gelber
Aimee Cooper
Alexandra Serna
Alicia Magloire
Allyn Childress

Attended Online:

Alyssa Jordan
Angela Dunn
Anteneh Abiy
Ashley Wilson
Barry Rosen
Benita Whalen
BH Welch

Bob Johnson
Bradley Cornell
Bud Howard
Charlette Roman
Chris Decker
Chris Guth
Chris Madden
Christina Romagosa
Cindy Thomas
Colin Saunders
Craig Grossenbacher
Craig Van der Heiden
Dan Scheidt
Daniel Nelson
Diamond Bergeron
Dong Yoon Lee
E. Ross
Evelyn Gaiser
Fred Sklar
Gareth Lagerwall
Gib Owen
Gustavo Suarez
Harold Peterson
Herve Jobert
Holly Milbrandt
Holly Sweat
Irene Quincey
James Erskine
Joan Browder
John Bratton
John Galvez
John Kominoski
Josh Wilsey
Karen Bohnsack
Kellie Ralston
Kelly Cox
Khandker Ishtiaq
Kira Allen
Lee Killinger
LeRoy Rodgers
Lyanne Mendez
Mailin Sotolongo Lopez
Mark Cook
Marsha Steelman
Meenakshi Chabba
Melissa Nasuti
Michael Duever
Mike Elfenbein
Mike Magley
Miles Meyer
Nicole Niemeyer
Nicole Penkowski

Nyla Pipes
Patricia Burke
Paul Julian
Ramon Martin
Rebecca Elliott
Rhonda ROFF
Rolf Olson
Sandra Bogan
Sara Davis
Sarah Funck
Stephanie Romañach
Steve Davis
Sue Newman
Ted Lange
Theresa Strazisar
Veronica Harrell-James
Vicki Garcia
Victoria Baglin
Wes Brooks

In Person:

Carrie Beeler
Gina Ralph
Adam Gelber
Kevin Burger
Marsha Bansee
Jose Cabaleiro
Elizabeth Kelly
Jessica Fair
Jerry Lorenz
Phyllis Klarman
Rolf Olson
Jennifer Chastan
Amanda Kahn
Laura Brandt
Frank Mazzotti
Jessica Spencer
Danette Goss
Wade Lehman
Karen Bohnsack
Ian Smith
Joshua Goldston
Stephanie Verhulst
John Galvez
Edward Perri
Melody Hunt
Christa Zweig
Mindy Parrott
Angie Huber
Therese East
Kim Vitek
Jay Sah
Jenna May

Michael Simmon

Jeff Kline

Carlos Corenado

Alyssa Jordan

Brad Furman

Meenakshi Chabba

Saira Haider

Andrea Atkinson

Derek Cox

LeRoy Rogers

Victoria Baglin

Holly Sweat

Cassandra Armstray

Mike Ross

Laura Dacunto

Bob Progulske