



**CHNEP Technical Advisory Committee Meeting**  
**Thursday December 1<sup>st</sup>, 2022**  
**Charlotte County Centennial Park Recreation Center,**  
**Large Multipurpose Room**  
**11185 Centennial Blvd., Port Charlotte, FL 33953**

**Technical Advisory Committee Meeting (TAC) Draft Minutes**  
December 1, 2022

**Members Present:**

Kevin Kalasz	US Fish and Wildlife Service (USFWS)
Kate Rose	Florida SeaGrant
Mark Sramek	NOAA National Marine Fisheries Service (NMFS)
Melynda Brown	Florida Dept. of Environmental Protection (FDEP)
Dave Blewett	Florida Fish & Wildlife Conservation Commission (FWC)
Jennifer Thera (alt)	Florida Dept. of Agriculture & Consumer Services (FDACS)
Jeff Devine	West Coast Inland Navigation District (WCIND)
Mark Barton	South Florida Water Management District (SFWMD)
Mark Walton	Southwest Florida Water Management District (SWFWMD)
Brandon Moody	Charlotte County
Rick Armstrong	Lee County
Ernesto Lasso de la Vega	Lee County Hyacinth/Mosquito Control District, TAC Co-Chair
Greg Blanchard	Manatee County
Greg Knothe	Polk County
Paul Semenek	Sarasota County
Kraig Hankins	City of Cape Coral
Elizabeth Wong	City of North Port (alternate)
Dana Dettmar	City of Sanibel
Chadd Chustz	Town of Fort Myers Beach
Daniel Roberts	Peace River Manasota Regional Water Supply Authority
Michelle Tickles	Mosaic Company

**Others Present:**

Jennifer Hecker	Coastal & Heartland National Estuary Partnership
Nicole Iadevaia	Coastal & Heartland National Estuary Partnership
Sarina Weiss	Coastal & Heartland National Estuary Partnership
Megan Sosbe	Coastal & Heartland National Estuary Partnership
Chris Anastasiou	Southwest Florida Water Management District (SWFWMD)
Jamie Scudera	Charlotte County Parks and Natural Resources
Lesli Haynes	Florida Gulf Coast University (FGCU)
Matt Kenworthy	Florida Fish and Wildlife Conservation Commission (FWC)
David Hersl	City of Cape Coral
Courtney Saari	Florida Fish and Wildlife Conservation Commission (FWC)
Milton Cochran Senior	U.S. Department of Commerce
Rick Durbrow	U.S. EPA Integrated Recovery Coordination
Eric Weather	Florida Fish and Wildlife Conservation Commission (FWC)
James Douglass	Florida Gulf Coast University (FGCU)
Janet J. Reimer	Southeast Ocean and Coastal Acidification Network (SOCAN)
Jennifer Vreeland-Dawson	Southeast Ocean and Coastal Acidification Network (SOCAN)
Emily Hall	Southeast Ocean and Coastal Acidification Network (SOCAN)
Kim Yates	United States Geological Service (USGS)

Kris Kaufman  
Arielle Manges-Taylor  
Judy Provitch

NOAA Restoration Center  
FDEP Charlotte Harbor Aquatic Preserves (CHAP)  
Federal Emergency Management Agency (FEMA)

**Agenda Item #1 – Call to Order and Introductions — Mark Walton, Co-Chair**

Co-chair Mark Walton called the meeting to order at 9:31 am. Introductions were then made.

**Agenda Item #2 – Agenda Additions or Deletions — Mark Walton, Co-Chair**

There were no additions or deletions to the agenda.

**RICK ARMSTRONG MOVED, SECONDED BY ERNESTO LASSO DE LA VEGA TO ADOPT THE AGENDA AS PRESENTED. THE MOTION WAS CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

**Agenda Item #3 – Public Comments on Agenda Items – Mark Walton, Co-Chair**

No public comments on agenda items were made.

**Agenda Item #4 – Technical Advisory Committee August 11<sup>th</sup>, 2022 Meeting Minutes — Mark Walton, Co-Chair**

No edits were made to the August 11<sup>th</sup>, 2022 Technical Advisory Committee Meeting Minutes.

**RICK ARMSTRONG MOVED, SECONDED BY MARK BARTON TO APPROVE THE MINUTES AS PRESENTED. THE MOTION WAS CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

**Agenda Item #5 – CHNEP Update — Jennifer Hecker, CHNEP**

CHNEP's Executive Director, Ms. Jennifer Hecker, presented on programmatic activity occurring since the last Technical Advisory Committee meeting. Highlights are as follows:

CHNEP transferred to new fiscal host Charlotte County on October 1. Many aspects of the host transition logistics have been affected by Hurricane Ian, as both the previous fiscal host City of Punta Gorda and new host Charlotte County operations were in the landfall direct impact zone. In spite of these difficulties, CHNEP, City and County staff are continuing to push forward host transfer tasks; creating the operational frameworks needed including creating new account and project codes, inputting EPA 320 and BIL grants through County grant approval process and submitting them on Grants.gov, getting all personnel set up as County employees in County systems, etc.

Additionally, CHNEP staff created a 2022 Federal Funding Opportunities Factsheet to distribute to stakeholders and community members, as well as finished gathering partner data for 2022 NEPORT Congressional Reporting Survey to report on their annual conservation, management, and restoration accomplishments. This was uploaded into the EPA portal by CHNEP staff in September and included over 75 habitat entries. Two CHNEP abstracts for the 2022 Florida Resiliency Conference were accepted.

Other finance and administrative highlights include:

- Drafted and submitted FY23 EPA BIL FY22 & FY23 application in grants.gov, as well as FY23 FDEP application package
- Worked with County fiscal staff to input County financial coding (ledger and project strings) into CHNEP's spreadsheet of budget details by account for FY23.
- Received and reviewed 6 Conservation Grant Applications for the FY23 program, presented all 6 to the CAC presentation on 8/24 with a recommendation to grant a total of \$10,200 for 4 of the projects.
- Reviewed final reports and deliverables for Conservation Grants due to be completed on or before September 30, 2022 and submitted requests for payment from the City for a total of \$12,690 in reimbursements.

CHNEP planned and executed both the CHNEP Technical Advisory Committee and Citizen's Advisory Committee meetings in August as well as the Management Committee and Policy Committee meetings in September. At the September meeting, the CHNEP Policy Committee Meeting approved new CHNEP host Charlotte County Memorandum of Understanding (MOU) as well as approved the amended work plan and budget for FY22 and FY23 work plans and budgets.

CHNEP staff recorded a presentation on moving water to restore rivers and wetlands for the Florida Climate Week 2022 virtual conference. Staff also prepared two poster presentations on both the Habitat Restoration Needs Project as well as CHNEP Hydrological Restoration Planning Projects for the upcoming Restore America's Estuary conference. CHNEP also participated in several partnership meetings to provide comments and technical support. These include: ANEP External Affairs Committee Meetings, ANEP Directors Committee Meetings, ANEP Executive Committee Meetings, Blue-Green Algae Task Force Meeting, Charlotte Harbor Flatwoods Hydrological Modeling Project Meetings, Community Water Quality Webinar, Resilient Florida Program Meeting, CHNEP Water Atlas/UF Center for Coastal Solutions Data Analysis Meetings, Coastal Charlotte Harbor Monitoring Network (CCHMN) Annual Meeting and Audits, SFWMD Science Coordination Group / Working Group Peace River Audubon Society Meeting, Paddle the Gulf Monthly Meetings, CHNEP/FSU FCRC Consensus Center Meeting, Florida Climate Week 2022, Post Hurricane Ian Southwest Florida Water Quality Sampling Coordination Meetings, EPA NEP Environmental Justice (EJ) Workgroup/Community of Practice, SWFL Regional Ambient Monitoring Program Meeting Restoration Aquaculture Workshop, SOCAN Stakeholder Working Group Call, SEC Member CEOs Meeting, SFWMD's Water Resources Forum Webinar, and the Florida NEP and Florida Chief Resiliency Officer Resiliency Meeting. These partner meetings and post-hurricane discussions have garnered media which include:

- [10/5 Hurricane Ian Hit Southwest Florida – Business Insider](#)
- [9/30 Researchers Collect Samples Post Hurricane – Sanibel Captiva Insider](#)
- [9/30 Hurricane Ian Leaves Environmental Hazards – Washington Post](#)

Regarding public outreach, CHNEP hosted an educational Microplastics Event for thirty registered participants to educate on what microplastics are, their impact on the environment, and how to reduce them. Additionally, staff attended the Restoration Aquaculture Workshop, hosted by UF/IFAS at Tampa Bay Watch in St. Petersburg, sharing CHNEP shellfish restoration resources, as well as attended 7 Rivers Water Festival in Winter Haven in Polk County to distribute CHNEP publications and provided kids with hands-on marine animal themed art activities.

The CHNEP 2023 Nature Calendar design was completed and sent to the printer, though unfortunately delayed several weeks due to Hurricane Ian affecting print company located in Fort Myers, FL. 26,000 copies will be sent out to all individual subscribers, as well as shipments and deliveries to numerous counties. Staff created four new education outreach banners on Mangroves, Seagrasses, Birds of Florida, and Florida Friendly Landscaping for outreach events. CHNEP has 127 new Facebook followers, 339 new Instagram followers, 5,969 subscribers for CHNEP educational mailings, and 1,706 unique visitors to the CHNEP website.

Ms. Hecker concluded by inviting committee members to join the CHNEP at the 2023 Southwest Florida Climate Summit on March 15<sup>th</sup> and 16<sup>th</sup>, as well as at the 2023 Watershed Summit on June 21<sup>st</sup> and 22<sup>nd</sup>.

A committee member asked if outreach banners created by CHNEP are available for other events or as a brochure, to which Ms. Hecker responded that the signs are in poster/sign form and CHNEP will be happy to let partners borrow them.

#### **Agenda Item #6 – Discussion and Partner Input on Charlotte County Water Quality Management Plan — Brandon Moody, Charlotte County**

Mr. Brandon Moody, Charlotte County Water Quality Manager, led discussion on the development of the Charlotte County Water Quality Management Plan, the “One Charlotte One Water” plan. Highlights are as follows:

Charlotte County staff have been directed to develop a water quality management plan. The goal of this document is to identify measures to be undertaken either by, or in partnership with, the county to ensure the improvement and protection of our waters. The county intends to hire a qualified contractor to develop the plan; however, staff have created an issues and drivers document to help assist in understanding water quality challenges, and to assure that certain concepts are evaluated during plan development. As such, the issues and drivers document also serves as the preliminary topic framework for the plan. The county is bringing this document to TAC members to solicit feedback, assure that our proposed goals and strategies are in alignment with those that maintain their own management plans for Charlotte Harbor/Lemon Bay, and hear from those entities who have embarked on similar projects in the past, in order to learn from their experiences. TAC members and regional partners were invited to provide feedback on the draft plan during this discussion.

A committee member commented that the new EPA Participatory Sites Model may be a good reference for volunteer scientific data collection efforts because it begins with quality control and assurance training. The committee member added that Manatee County is considering a volunteer-based air sampling program that will be a valuable community-based effort. The committee member also suggested defining inter-departmental relationships that will be necessary to implement the proposed projects and beginning the conversation and develop relationships with the other departments, as sometimes it can be difficult to rely on other departments to help with extra work that is not part of their job description. The committee members also suggested to add in language on how to interact with citizens on environmental resource issues. Mr. Moody thanked the committee member for their advice about working with other departments and commented that the One Water Planning efforts continue to keep other departments in the loop on the work.

Staff from other member counties commented that they are happy to assist and have reached out to their water quality staff to let them know. Another committee member commented that, with regards to canal sediment removal, the West Coast Inland Navigation District cannot pay for water quality projects but can pay for navigation projects and may be able to help fund mobilization and partial project dredging.

Lee County staff familiar with Pond Watch citizen volunteer monitoring program also volunteered to provide assistance on the citizen volunteer part of Mr. Moody's program. The committee member added that it is incredible to have a team of citizen volunteers that are passionate about getting the information out to the public. Mr. Moody agreed and commented that the citizen volunteer program will be key as the County continues to grow and expand its population.

Members also suggested adding language about central consistency of methods because there are many different water quality efforts with different methods, some of which can and some of which cannot be used for regulatory purposes, and it may be a good approach to lay out generally what information is needed for this water quality plan. The committee member also commented that Sea Grant is trying to expand Eyes on Seagrass statewide. Mr. Moody responded that he would have conversations about the different sampling processes with FDEP regulatory staff in the future.

A committee member asked what goals, drivers or other metrics Mr. Moody is basing his Water Quality Plan on, to which Mr. Moody responded that he is addressing existing impairments while also taking measures to address future impairments and needs and population growth. Mr. Moody added that stormwater outflows have and will continue to change, and hopes to address what we can do to change the impact of that. Ms. Hecker commented that the State Stormwater Rule and new development are contributing to downstream loading. For example, in the Caloosahatchee, there is already a TMDL and BMAP facilitating millions of dollars of restoration projects there, and yet they are still struggling to hold the line because of all of the inputs. Mr. Moody noted that the County does not have a lot of potential opportunities for new stormwater services, and he would like to explore what can be done in Charlotte County's canal systems as a stormwater management system: can we implement water quality enhancement measures in those canals? Can we enhance the management of the systems or the vegetation in the canals? What can we do with the limited infrastructure and stormwater design that we already have?

During discussion regarding water quality data collected for regulatory purposes, Ms. Hecker added that FDEP is having a meeting in the coming weeks to discuss the proposal for which Florida waterbodies will receive (Total Daily Maximum Load) limits (TMDLs), Southwest Florida estuaries were not included in the proposed list. Committee members agreed on the importance of continuity of data collection for regulatory purposes. They also debated how to best address regional nutrient loading reductions through the establishment of a Basin Management Action Plan (BMAP) following the establishment of a TMDL or alternately a voluntary Reasonable Assurance Plan (RAP), both of which would require all entities in the region to lessen their loading in order to meet appropriate levels and standards. The BMAP is not confined by jurisdictional boundaries and compels all the stakeholders for the entire watershed to reduce loads through regulatory action, whereas a RAP is usually more community driven and voluntary. Ms. Hecker noted that TAC had previously held a workshop to draft a letter of

recommendation that there be TMDLs established in agreed upon CHNEP waterbodies. CHNEP agreed to submit those recommendations to FDEP again for the current review period. Mr. Moody added that Charlotte County would be supportive of any collective efforts moving towards projects that would help reduce basin loading.

Committee members asked if there were examples of similar large estuarine systems that were able to move forward with collective voluntary load reductions actions without the regulatory support. Tampa Bay did have a successful RAP, however all the stakeholders are in that immediate basin, whereas Charlotte Harbor estuarine systems include multiple basins across several counties. Ms. Hecker noted that CHNEP would be willing to bring down to stakeholders involved in the Tampa Bay Nitrogen Management Consortium to a future meeting to discuss the RAP process which may be helpful for discussion even though there are differences in the Tampa Bay and Charlotte Harbor systems.

Members asked Ms. Hecker about her experience in trying to engage upland on load reduction projects that they may not reap the benefits from, to which Ms. Hecker responded that it can be a struggle even though CHNEP already tailors messaging to those inland communities to address their immediate waterways and educate about the effects of loading downstream. Ms. Hecker added that the new Stormwater Rule could push the ball further. A committee member commented that there is a need to do watershed wide projects to address the issues in our region. The committee member also commented that Chesapeake Bay faces pollution control issues from upstate New York, and there are likely models that can be used to spread an estuary message watershed-wide that may be suitable in this case. The committee member noted that the earlier we push the watershed-wide engagement, the better off we will be in the end. Another committee member suggested that updated Pollutant Load Models will be needed identify where the issues are coming from (e.g., 30% inputs from agriculture, peace river contributes 40% of the inputs) to focus efforts towards those areas.

Mr. Moody concluded by suggesting that data collection efforts and modeling will be important measures to help FDEP consider establishing a Charlotte Harbor TMDL in the future and can inform continued voluntary efforts in the meantime.

**Agenda Item #7 – Gulf of Mexico Coastal Acidification Networks’ Stakeholder Feedback Project — Janet J. Reimer, PhD, College of Earth, Ocean, and the Environment, University of Delaware**

Dr. Janet J. Reimer, with the College of Earth, Ocean, and the Environment, University of Delaware, provided committee members with an overview of the Gulf of Mexico Coastal Acidification Network and a platform to give feedback on the project. Highlights are as follows:

Southeast Coastal Acidification Network (SOCAN) and the Gulf of Mexico Acidification Network (GCAN) were funded by the NOAA Ocean Acidification Program to create a stakeholder feedback survey to inform the acidification community on stakeholder monitoring needs. The survey draws from information collected by SOCAN and GCAN in support of the Interagency Working Group on Ocean Acidification’s Nation Coastal Communities Vulnerability Assessment. Acidification is an increase in water acidity that could be harmful to aquatic organisms. Monitoring includes information on the state of acidification, the chemical and environmental causes, and impacts on the environment and economy. This presentation is aimed at non-acidification experts and concerned stakeholders. Dr. Reimer provided a “primer”

on acidification, what causes it, and current knowledge of acidification in the Southeast USA and Gulf of Mexico regions. After the presentation, committee members were asked a series of questions on their understanding of acidification, their perception of the impacts of acidification on the environment, and where they think future research should focus. PDFs of the Executive Summaries of the Nation Coastal Communities Vulnerability Assessment can be found on the project website <https://www.socan.secoora.org/gcan>.

A committee member inquired about the economic models or data used to conduct the social vulnerability assessment and asked if there is a standardized source or treatment that can be used region-wide for that assessment. Dr. Reimer responded to see the executive summaries of the National Vulnerability Report, as well as summaries of GOMCON and SOCAN research and monitoring gaps at the following links: <https://www.socan.secoora.org/gcan>.

Dr. Reimer and her colleague Kim Yates thanked committee members for their participation in the survey.

**Agenda Item #8 – Hurricane Ian Debrief- Preliminary Findings/Recovery/Lessons Learned and Presentation on CHNEP site landing page for Hurricane Ian — Nicole Iadevaia, CHNEP and Mark Walton, Co-Chair**

CHNEP kicked off this agenda item with an overview of Hurricane Ian impacts and provided a short preview of a CHNEP Hurricane Ian webpage that staff hope to grow into a useful communication tool for partners and the public.

TAC members were asked to prepare a few comments that capture overarching themes from their region or area of expertise regarding storm aftermath and response, problems encountered, and lessons learned. Each participant at TAC had time to share some of their comments during the facilitated group discussion. This part of the agenda item was led by TAC Co-Chair, Mark Walton. Highlights are as follows:

Mr. Rick Armstrong from Lee County shared insights and lessons learned post-Ian. He explained that the biggest issue following the storm was traffic and longer travel time due to traffic lights being down or out. Mr. Armstrong also shared that this was the first storm to affect water supply, causing damage throughout the distribution center. Other issues included finding fuel for vehicles, finding working boat ramps, and navigating through unknown dangers on the water due to debris and missing channel markers. Additionally, Lee County experienced non-county and municipal sewer overflows and concerns of public health and safety. Lee County was the epicenter for storm-related illness, for example Vibrio. The Natural Resources and many other departments were redirected to focus on public health and safety. Fortunately, CHNEP reached out to partners from the University of Florida to come down with boats and equipment to help with post-hurricane sampling, though it was still an incredible challenge to find enough manpower for the sampling efforts. A committee member asked which boat ramps were available, to which Mr. Armstrong responded that some ramps were completely down while others were fine, though he had to refocus his efforts on drinking water rather than surface water.

Mr. Devon Moore from the City of Winter Haven shared that their biggest concern after the storm was that water was able to flow downstream unimpeded. Sensors in the Peace Creek were lost or damaged due to excessive flow rates, and access to piezometers and staff gauges was limited due to consistently high-water levels. A blockage was discovered at one of the major outflow structures for the Southern Chain of Lakes. In the coming year, the City is expanding their surface level and rainfall sensor network to have a more accurate spatial and temporal

picture of their resources. The City is fortunately at the top of the watershed and therefore did not experience issues with flooding of riverine systems. However, Winter Haven received 9.5 inches during Ian, which was paired with extreme amounts of rainfall during the months of August (13.3 inches) and September (17.4 inches) and resulted in an intense rise in surface levels. Just after Ian, the elevation of the lakes rose to nearly the highest levels recorded since the hurricane season of 2004.

Mr. David Hersl and Mr. Kraig Hankins provided an overview of the lessons learned post-Ian from the City of Cape Coral. Though the City of Cape Coral had the willingness and means to collect water quality samples after the storm, laboratory availability was a big issue, and they were unable to find a lab to process their samples within the hold time. Post storm, their lab was unable to take in samples due to short staff and an audit. Another issue was the lack of continuous water quality equipment. Mr. Hersl explained that he removed the oyster monitoring structures along the Caloosahatchee River before the storm as a precaution, which inhibited data collection during the storm event but ensured that data would be able to be collected afterwards. Additionally, there was a disconnect with municipalities and partners as to who was monitoring aids to navigation (ATONS) in certain areas and what forms/standards they were monitoring them with. Going forward, it would be helpful to have standardized “blanket” protocols and responsibilities across all partners after a major storm, as opposed to grey areas or duplicated efforts done to different standards. Like many other areas affected by Hurricane Ian, Cape Coral experienced debris, bacteria, fuel, oil, and other pollutants in the water for many weeks to months following the storm. Mr. Hersl expressed that things like low dissolved oxygen, turbidity, algal blooms, seagrass loss and bacteria are harder to explain to the public, as some of these issues do not occur until months later which makes it even harder for people to connect the dots. He concluded that an emphasis on how to convey educational and informative messages without getting too far into the weeds and losing people’s attention is needed in the future.

Mr. Chris Anastasiou from the Southwest Florida Water Management District (SWFWMD) explained that back in 2004, he participated in an effort to look at water quality in the Peace River and Charlotte Harbor following Hurricanes Charlie, Frances, and Jeanne. A similar response was conducted following the passage of Hurricane Ian. Previously hypoxia was prevalent throughout and lasted approximately two months before returning to pre-storm conditions. Three days after Hurricane Ian passed through, a conversation started amongst many stakeholders across the region, and there was a lot of concern over what might happen in terms of hypoxia, bacteria concentrations, and overall nutrient loading into the system given how much rainfall the Peace River system received. Mr. Anastasiou explained that he learned a lot after Hurricane Charlie and Hurricane Irma and that the level of response post-Ian was phenomenal. Though staff were dealing damage on a personal level, they came together after 3 days to come up with a plan and partners including District, Counties, FWC, UF, CHNEP, SBEP, and FDEP crews were mobilized and monitored locations throughout the impacted region. This coordination also included ESA and Benchmark Enviro Analytical, Inc., both under contract by Charlotte County. SWFWMD participated in the weekly, now monthly, calls with regional partners and stakeholders to coordinate field activities, share data, and discuss conclusions. This led to the creation of a dashboard to provide up to date results for scientists and resource managers. Mr. Anastasiou expressed the need to better integrate water quality monitoring and emergency operations, including to educate emergency managers on the impact water quality has to human, ecologic, and economic health after a major storm event and the need to have a coordinate response plan. And vice versa, there is a need to educate environmental managers on EOC processes and procedures. For example, following Hurricane Ian, SWFWMD EOC helped Charlotte County submit a request to the State EOC via “WebEOC” for water quality monitoring



support in the Peace River. That request was then assigned to the SWFWMD where crews were mobilized and began collecting data within five days after Hurricane Ian made landfall. This support would not have been possible had the request not been submitted through the State EOC. The SWFWMD is now considering the establishment of a Water Quality Coordination Unit as part of the SWFWMD Emergency Operations Organization. The SWFWMD submitted a proposal to host a workshop at the 2023 Governor's Hurricane Conference using the Hurricane Ian Water Quality response as a case study to educate emergency managers to the importance of post-storm water quality monitoring. Mr. Anastasiou concluded by sharing that preliminary data suggests that most stations on the Peace River, Myakka River, and Big Slough have returned to normal conditions, suggesting the recovery process takes about 2 months. A committee member asked if the response plan would include a mobile lab, to which Mr. Anastasiou responded that there is a lot of potential for a mobile lab, however it may be difficult for the certification process and producing data that is acceptable, but maybe we can have labs on standby in the event of a storm. The committee member also inquired about how to get the message out and whether to make non-quality-controlled data available to the public with note that its provisional.

Mr. Ernesto Lasso de la Vega from Lee County shared his experience post-Ian. Following the storm, the public was concerned about the large changes in the salinity levels in the ponds. Within one day during the storm, the lakes and ponds in Lee County saw serious saltwater intrusion. One month later, these lakes were sampled again and still found to have those high salinity levels. Salinities of above 7 parts per thousand were recorded in Lakes Park through October, levels high enough to kill plants and fish. Mr. Lasso de la Vega sampled two ponds, 80 West and 80 East, to get a profile of oxygen, salinity, and temperature. In both ponds, the saltwater was stratified, with the top of the water column still fresh and the salinity increasing toward the bottom of the water column. The littoral plants in the ponds, including leather fern, were destroyed due to the high salinity levels – the only plant that survived was Swamp Lily. Mr. Lasso de la Vega stressed that it would take a long time to replant and replenish these littoral zones. Additionally, several cars were found sunk to the bottom of ponds. It is advised to aerate ponds to break the salinity stratification. A committee member commented that the die off from saltwater intrusion likely will have subsequent effects. Another committee member asked if it is possible for homeowners to apply for FEMA for damage to littoral zones and stormwater ponds, as they are not just decorative but serve a function, to which Mr. Lasso de la Vega responded that he is not sure.

Mr. Brandon Moody from Charlotte County commented that there were two priorities that stood out: 1) increasing the nimbleness of response, and 2) the end point of the data. Mr. Moody explained he was lucky to have a pocket of money on-hand and that applying for funding would have stalled the sampling process and moving forward it would be beneficial to have things already set up with the funding piece taken care of. Mr. Moody also suggested formalizing the dashboard and developing processes to streamline the data to transform the dashboard into something that is available as a tool to be used when a storm hits. In terms of impacts, Mr. Moody shared that Charlotte County saw major crashes in dissolved oxygen, particularly in the east basin, which have now returned to normal levels, as well as bacteria issues in the west basin.

Following individual contributions from committee members, CHNEP and the TAC co-chair worked to summarize common hurdles seen by all partners included lab capacity issues creating a bottleneck, data formatting consistency for information sharing, and data gaps in vulnerable areas and in communities hit the hardest. Partners expressed the need for a formal communication network for water quality sampling or environmental sampling in general.

Ms. Hecker commented that the Pinellas County Red Tide Response Plan is a good model to use for building response plans with contractors and scopes of work on the ready. Ms. Hecker also commented that she had conversations with Charlotte County about having a warehouse where emergency supplies could be stored, as sample bottles and supply issues were encountered after Ian. A committee member commented that a workshop may be needed to bring in emergency response leaders from each community to start the conversation about a water quality section being built into future emergency response plans. The committee member added that it is a large hurdle to make the emergency management community understand the importance of education, especially as we see the impacts lasting longer and longer. Another committee member commented that they are supportive of a 'Scientific/Monitoring Emergency Response Plan'.

A committee member commented that though the Ian response was rapid and incredible, part of that is due to lucky circumstances including not being understaffed and already having working relationships with partners. Another committee member agreed and expressed that the solution still needs to be easy and streamlined. A committee member commented that one resource for post-storm management is the FDEP Aquatic Preserves, which has a Hurricane Response Plan as well as a Post-Hurricane Plan, which includes looking at erosion on islands that serve as bird rookery habitat, looking at seagrass, secretion, living shorelines, etc.

A committee member commented that it would be helpful to understand at what point it is safe to deploy volunteers, to which another committee member responded that Sarasota County determined it was safe for their volunteers to get back in the water last week based on Enterococcus counts. Members also shared resources such as an upcoming webinar for best practices for mangrove cleanups next week on December 6<sup>th</sup>. Another committee member added that it will be important to bring in the Department of Health on these conversations to define what is and what is not safe, as well as to keep them informed water sampling results so they can plan. A committee member added as a final note that any plans developed could include information on where the marine industries fall in the process and whether they should be included in the plans and conversations or debris clean-up efforts.

CHNEP staff committed to following up with partners on water quality emergency response plan drafting and implementation. Committee members thanked CHNEP for putting together this Hurricane Ian webpage and discussion.

#### **Agenda Item #9 – Coastal Charlotte Harbor Monitoring Network (CCHMN) SOP and QAPP Updates — Nicole Iadevaia, CHNEP**

CHNEP Director of Research & Restoration, Ms. Iadevaia, provided an overview of the Coastal Charlotte Harbor Monitoring Network (CCHMN) and led discussion on necessary updates based on new techniques or science. Highlights are as follows:

The Coastal Charlotte Harbor Monitoring Network (CCHMN) is a regional partnership of agencies initiated in 2001 that collects monthly water quality data using consistent, technically sound sampling design. Long-term random sampling of strategically located stations allows scientific assessment of status and trends. CCHMN field and laboratory partners collect and analyze water samples from 60 randomly selected field sites throughout 10 waterbodies each month, including Lemon Bay, Cape Haze/Gasparilla Sound, Charlotte Harbor, Pine Island Sound, Matlacha Pass, San Carlos Bay, Estero Bay and the Tidal Myakka, Peace, and Caloosahatchee Rivers. Water quality parameters are measured and analyzed using consistent field and laboratory methods. The data is uploaded by partners to WIN (Watershed Information Network), a public database maintained by the Florida Department of Environmental Protection (FDEP). CCHMN supplements other ongoing water quality monitoring programs implemented

by partners, including ongoing fixed station monitoring by counties, cities, agencies, and citizen scientists. The water quality data provided by the CCHMN is an essential component of many water quality assessments and resource management decisions throughout the CHNEP estuarine and tidal waters.

Ms. Iadevaia engaged TAC and CCHMN members to discuss and suggest annual updates as needed based on new techniques or science for the Coastal Charlotte Harbor Monitoring Network SOP (Standard Operating Procedures-2019) or Coastal Charlotte Harbor Monitoring Network QAPP (Quality Assurance Project Plan-2018). The 2018 QAPP will need to be updated to match the 2019 SOPs, including the CHNEP name change, expanded service area, additional contacts, updated references to FDEP field SOPs, updates to partner roles and estimated partner budgets, updates to audit sheet to reflect equipment changes, steps for lab/field communication and blank checks/data qualifier codes, and standard data formatting.

The committee member explained that WIN has made some changes in the past year, and thus adjustments were made to the County database to keep the database as consistent with WIN as possible. Another committee member commented that the new WIN database is much better than STORET and notifies uploaders immediately if there are issues with the data.

Committee members suggested that lab and field sampling communication be captured in the SOPs to ensure that there is continuity in QAQC between the two. They also asked if the chain of custody forms are locked in by the lab or if they can be changed. Ms. Iadevaia responded that the chain of custody forms are created by the individual labs.

Another committee member asked why we don't have enough information to form the TMDLs that were discussed earlier, to which Ms. Hecker responded that the necessary data is being collected, but that the TMDL decision process involves several factors not just meeting sufficient data requirements-although that is an important first step.

#### **Agenda Item #10 – CHNEP Technical Projects Update and New Tools — Nicole Iadevaia, CHNEP**

CHNEP's Research and Outreach Manager, Nicole Iadevaia, presented on updates to technical projects that are already underway, in-progress, or have been completed since the last cycle. Highlights are as follows:

In addition to the items featured earlier on the agenda, several other research and/or restoration projects (or phases of projects) in the program area are currently underway. The [CHNEP Water Atlas](#) has recently completed several enhancements that will be beneficial to multiple users; this includes a new Coastal Conditions Map and Dona and Roberts Bay Data on the Seagrass Pages. The Coastal Conditions Map shows fixed coastal monitoring sites as well as locations where adverse water quality conditions have recently been reported. The latter may include red tide/harmful algal blooms, bacteria, or pollution. Updates to seagrass pages, site specific water quality criteria for CHNEP waterbodies, Clam Habitat Suitability Map, and UF Trend Analysis were recently added as well.

Coming 2023, the CHNEP Water Atlas will include new waterbody and watershed pages with new water quality, hydrology, wildlife/habitat, and climate change interactive mappers. Other enhancements are also planned for FY23, including the addition of Mote 'Healthy Beaches' data on the Coastal Conditions Map, Freshwater Caloosahatchee River Basin Habitat Restoration Needs (HRN) page, Winter Haven Lake Assessments on lake pages, and algae and epiphyte data on seagrass pages.

In addition to the Water Atlas enhancements, several other research and/or restoration projects in the program area have recently been completed or are currently underway. The Lower Charlotte Harbor Flatwoods Hydrological Restoration Project is a recently completed modeling project to create integrated surface/groundwater models for hydrological restoration of the Charlotte Harbor Flatwoods area. This project aimed to restore more natural water flows, improve water quality and environmental conditions, increase natural water storage and moderation of flooding events by modeling the best way to restore areas to meet natural system needs and is already being utilized. The Final Report and appendices are available on the CHNEP Charlotte Harbor Flatwoods Initiative webpage: <https://www.chnep.org/lower-charlotte-harbor-flatwoods-initiative>.

The Myakka Headwaters Restoration project is a 2022-2023 project to remove exotic invasive species and re-plant native species on the Myakka Headwaters property. The property is in the Myakka Watershed and was recently conserved by the Conservation Foundation of the Gulf Coast (CFGC). The project is on 363 acres of conserved land within Flatford Swamp, the Myakka River's largest forested wetland in Manatee County.

The Pine Island Flatwoods Project is to complete a shovel-ready restoration of four abandoned shrimp ponds on conservation land to enhance and expand native habitat for wading birds and aquatic life and improve the hydrology and freshwater flows downstream from the site into tidal creeks, the estuary, and then out into the Gulf of Mexico. This restoration project is in Lee County and was selected to receive CHNEP EPA21-funding. Staff have met with fiscal host City of Punta Gorda staff Lee County and the Engineer of Record to determine best course for procuring this federally funded construction project. Including a 'Request for Qualified Bidders' for engineering firm that will help to hire and oversee construction firm completing project and 'as-builts' according to design plans from engineer of record.

The Tiki Point Harborwalk Living Shoreline Pilot project is an upcoming project with the City of Punta Gorda to develop solutions to mitigate and adapt to the risks of flooding along the Charlotte Harbor shoreline by implementing nature-based features. The Living Shoreline will involve the creation of oyster and mangrove areas in front of existing seawall that will reduce wave action and flooding as well as add habitat. The project will increase resilience and mitigate the risks of flooding and sea level rise using a hybrid nature-based solution to improve habitat and water quality, reduce erosion, and buffer storm effects. The CHNEP was awarded an FDEP Resilient Florida award to fund project activities.

Starting in 2023, CHNEP will partner with Counties to complete Climate Change Vulnerability Assessments over the next 5 years. The goal of vulnerability assessments is to identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in CHNEP Counties. For more information on CHNEP restoration projects, visit the Project Factsheet page on the CHNEP Website: <https://www.chnep.org/chnep-fact-sheets>.

Ms. Iadevaia concluded that CHNEP is having a call for project proposals. Fiscal Year 2023 funding is available through a competitive proposal process for partner projects or initiatives that implement CHNEP's Strategic Plan. Currently, CHNEP can fund projects from \$100,000 up to \$750,000. Also, CHNEP can provide letters of support for other partner grant funding proposals if they further goals in CHNEP's CCMP. Proposals for CHNEP funding must be submitted

electronically by 5:00pm EDT, December 9<sup>th</sup>, 2022. Details and instructions are available on the CHNEP Website at <https://www.chnep.org/project-funding>.

There were no questions or comments from committee members.

### **Agenda Item #11 – TAC Membership Project Updates — Mark Walton, Co-Chair**

Kate Rose, Florida SeaGrant Charlotte County: Florida Sea Grant will be hosting a Mangrove BMP Webinar next week. Additionally, they will be revamping the Eyes on Seagrass program to increase the data accuracy and make things easier for volunteers.

Melynda Brown, FDEP Charlotte Harbor Aquatic Preserves: Staff have been busy with post-Ian water quality monitoring and continuous water quality monitoring. They have 4 stations but are missing 3 and are only able to find one on the west wall of Charlotte Harbor, buried in a lot of sediment. The data sonde did log data during and 2 months after the storm and was still logging. They have been trying to do some seagrass monitoring post storm and recorded loss of Halodule and Thalassia abundance at some stations, Syringodium took a big hit as well. AP staff are working with marine debris issues, marine debris can be reported through the FWC Marine Debris website. This is a great tool so that others can hopefully remove it. Division of Emergency Management has an MOU with FDEP to remove marine debris and FWC has extra funds for that. Estero Bay has thousands of derelict vessels all over the bay and are continuing to help that process to reduce impacts to aquatic preserves and habitats. Heather Stafford retired on the 31<sup>st</sup>, Melynda Brown will be taking over her position as the Regional Manager of the Aquatic Preserves in Tampa, Charlotte Harbor, and Estero Bay. Arielle Taylor-Manges will now be the manager for the Charlotte Harbor Aquatic Preserve.

Dave Blewett, FWC FIM: Monthly fish population monitoring in the Harbor continues. Staff were able to get all samples collected in October following the storm. Compared to Hurricane Charlie in the upper river and lower Harbor, they are not seeing the extent of hypoxia seen previously, maybe due to cooler temperatures and other factors following Ian. In 2016, FWC started monitoring 27 creeks, sampling for fishes and taking water conditions, and in all those creeks they are seeing extended periods of hypoxia and anoxia. Staff are going to be looking at how this effects recruitment of snook, fish assemblages, and will report on that in a few months.

Jeff Devine, WCIND: WCIND has been coordinating with FWC, U.S. Coast Guard, and USACE in post-Ian response. They had one wash out along the Intracoastal in Venice that was 250-ft wide and 20-ft in elevation all washed into the intercoastal. Most of that has been removed, there are still shoal markers out there, but the material had been reestablished on the shoreline. Environmental and engineering firms and derelict vessel contractors are on 5-year contracts, so they are work order based, and have not really slowed down. WCIND are issuing work orders for about 15 more vessels next week. FWC is also doing a larger ongoing contract and have removed over 60 vessels already. There was a lag time in getting that started trying to find out who owns the derelict vessels being removed. The marinas in Lee County took a huge hit and are continuing to have a problem with where to get boats out. There are multiple state law enforcement agencies that are side scanning every creek, river, bay in Lee County for cars. Yesterday, they had over 300 objects that were large enough to be cars. Dave Blewett commented that there's a great picture of someone fly-casting into the mangroves in Estero Bay where there was a Porsche 911. The ongoing contracts have been helpful for keeping things

moving forward. The Army Corps has surveyed and reposted all the channel markers for the intracoastal. The District has awarded an emergency grant to Lee County for replacement of channel markers. Lee County is working on getting a contract for that because the contractor they had in place was local and no longer operational. The Coast Guard is at one boat ramp, DOT is using the boat ramp by the Sanibel Causeway, so boating access to deal with recovery activities and launching boats for water quality sampling is something that needs to be considered for future storm events.

Daniel Roberts, PRMRWS: The monitoring program is continuing. Eight data sondes were left out in the Peace River before the storm, and seven out of the eight have been recovered. Out of the seven that we recovered, six had good data and one had some date errors. The train trestle that used to be along the Peace River is now gone. PRMRWSA is starting to put in new posts and putting data sondes back up. The biggest issue after Ian was communication, internally and externally. Another issue was access under the bridges to get the boats upriver. All sampling had to be put on hold temporarily because there was no access river because the boats could not go underneath the bridge and there wasn't a boat ramp between certain bridges. The Peace River saw 19 inches of rain over 24 hours, and winds never dropped below 60 mph for 13 consecutive hours at the facility, maxing out at 137 mph. PRMRWSA completed hydrologic conditions report that should be presented tomorrow at the board meeting that has all the river conditions based on the historic maxes. This should be posted online tomorrow.

Rick Armstrong, Lee County Environmental Lab: Staff were able to get out in October and sample all 150 of our fixed surface water sites and all random sites. That data has been coming in, about once a week and send to Brandon to upload to the post-Ian dashboard. The lab is short staffed and not currently taking on any new projects.

Ernesto Lasso de la Vega, Lee County Hyacinth/Mosquito Control District: the District monitors the Caloosahatchee River from the Franklin Lock all the way to Lake Okeechobee. Reporting back that nutrients have been low 3 months post-storm, there is no algae reported. A point source being monitoring for a long time is Pollywog Creek. It's a little creek that is providing sources of Phosphorous. This is something to think about, maybe consider cleaning septic tanks.

Brandon Moody, Charlotte County: The County is still in some level of recovery. In terms of monitoring, they were able to continue the newly established watershed monitoring program alongside the post-Ian response monitoring. They will be continuing to do both Harbor and Bay monitoring on some intermittent basis, thank you to all the folks that jumped in and have been communicating and coordinating the Hurricane Response.

Mark Walton, SWFWMD: Chris gave updates for the Hurricane Ian response and water quality monitoring. Other things going on include the Charlotte Harbor seagrass maps were recently completed. They are going through an accuracy assessment analysis now. Once that process wraps up, they will be brought to the TAC to present. Another project that may be of interest is SWFWMD assessments of previous restoration project sites. It just so happens that the sites currently under review are inn SWFWMD southern counties, mostly Sarasota and Charlotte Counties. It's not meant to look at hurricane impacts but is to look at how the maintenance of different restoration sites is going, which designs worked and which didn't and what maintenance is needed. But there will likely be some hurricane impacts so there may be some useful information on what was more resilient and what wasn't to come out of this.

Greg Blanchard, Manatee County: Regarding Hurricane Ian, the Myakka River Basin was the hardest hit areas in Manatee County. One gauge reported 15 inches of rainfall, and the other gauges were similar. The entire Myakka watershed in Manatee County experienced what was roughly a once in 200-year storm. The water levels showed it, and several major highway crossings in the area, including SR -70 and SR-62, were cutoff for days. FEMA flood maps for that area were not very accurate. The sampling facility was without power for 4 days and the lab lost all lab samples. Otherwise, the sampling program was generally not interrupted. There is a coordinated emergency response effort in Manatee County which deals with things like emergency financial purchases and FEMA claims. All departments handed additional FEMA claims to Risk Management within 48 hours after the storm. The biggest problem post storm was power and data availability, several cell towers dropped and there were big holes in the cell network, and they were being used to backfill missing residential connections as everyone moved to 5g instead of their cable. Data communications were stressed. Power failures and signal failures at intersections and getting around the County to even check facilities was difficult.

Kevin Kalasz, US Fish and Wildlife Service (USFWS): Staff are anticipating having some funding dollars come down through the agency for hurricane restoration or relief. For the coastal program, the next funding cycle coming up- proposals are due February 1<sup>st</sup>, for projects less than \$100,000 in a short 2-page proposal.

Kraig Hankins, City of Cape Coral: Water quality sampling was back to normal at all sites in November. There are a couple of projects for nutrient removal, one was looking at floating islands, several of which were decimated by Ian, and the sampling where they remove tops of the roots and shoots at points and analyze them for nutrients was supposed to be done at the end of September, so this wasn't done and hasn't been done yet. They are also looking at nutrient removal with aquatic plant harvesting, including the ten most common plants seen and developing estimates of how much nutrients are removed by these species. Seagrass and oyster spat monitoring will occur in the next month to see what has changed post-Ian. Cape Coral is also working on vessel removal at the Cape Coral Yacht Club.

Paul Semenech, Sarasota County: Update was provided on behalf of the Watershed Planning and Management Group for the Stormwater Division. The new CHNEP funding agreement is ready. The design of the Alligator Creek stream restoration project continues, the County is awaiting the 60% plans. The other part of that project has been submitted a proposal to NOAA for \$15 million in construction funding. Another project is a groundwater nutrients study, which has kicked off and will identify groundwater nutrient hotspots countywide, with focus on coastal areas. The consultant will specifically look at activities that are known to contribute nutrients such as reclaimed water use, septic tanks, landfills, and high usage of fertilizer. There has been quite a bit of progress on the Dona Bay Restoration projects, with four in process right now. Dona Bay Phase 2 is in construction and is a 72-inch pipeline about 1-mile long, connecting two different areas of the overall hydrological restoration area. Regarding Dona Bay Phase 3, the County just hired a consultant to do a predesign study. This is a project that will ultimately result in aquifer recharge, so this first predesign will determine a water budget to determine how many aquifer recharge wells are needed. Regarding Dona Bay Phase 4, the County will be issuing a construction contract. This is the rehabilitation of the weir or control structure at the Kings Gate neighborhood across Cow Pen Slough. Regarding Dona Bay Phase 5, the request for proposals is out right now.

**Agenda Item #12 – Public Comment — Mark Walton, Co-Chair**

There were no comments from the public.

**Agenda Item #13 – Future Meeting's Topics, Location and Date – Mark Walton, Co-Chair**

The next meeting will be held on April 13<sup>th</sup>, 2023 and a new Co-Chair will be elected. Upcoming 2023 meeting dates include August 10<sup>th</sup>, 2023, and November 30<sup>th</sup>, 2023.

**Agenda Item #14 – Adjourn – Mark Walton, Co-Chair**

Meeting was adjourned at 2:00 pm.

DRAFT