



CHNEP Technical Advisory Committee Meeting
Thursday December 3rd, 2020
9:30 am – 2:00 pm
WebEx Virtual Meeting

DRAFT Technical Advisory Committee Minutes

TAC Members Present (with Co-Chairs listed in bold):

Kevin Kalasz	US Fish and Wildlife Service (US FWS)
Melynda Brown	Florida Dept. of Environmental Protection (FDEP)
Dave Blewett	Florida Fish & Wildlife Conservation Commission (FWC)
Betty Staugler	Florida Sea Grant
Jeff Devine	West Coast Inland Navigation District (WCNID)
Amanda Kahn	South Florida Water Management District (SFWMD)
Chris Anastasiou (alternate)	Southwest Florida Water Management District (SWFWMD)
Jamie Scudera	Charlotte County
Rick Armstrong	Lee County
Ernesto Lasso de la Vega	Lee County Mosquito/Hyacinth Control District
Greg Blanchard	Manatee County
Gregory Knothe	Polk County
Ashlee Edwards	Sarasota County
Kraig Hankins	City of Cape Coral
Holly Milbrandt	City of Sanibel
Devon Moore	City of Winter Haven
Daniel Roberts	Peace River Manasota Regional Water Supply Authority
Steve Suau	Progressive Water Resources
Justin Saarinen	Environmental Science Associates

Others Present:

Jennifer Hecker	Coastal & Heartland National Estuary Partnership
Nicole Iadevaia	Coastal & Heartland National Estuary Partnership
Andrew Webb	Coastal & Heartland National Estuary Partnership
Alex Horn	Coastal & Heartland National Estuary Partnership
Chelsea Bojewski	Coastal & Heartland National Estuary Partnership
Elizabeth Noll	Coastal & Heartland National Estuary Partnership
Stephanie Erickson	FDEP
Kristen Kaufman	NOAA
Mark Walton	SWFWMD

1. **CALL TO ORDER AND INTRODUCTIONS**

Co-chair Devon Moore called the meeting to order at 9:30 AM. He shared instructions on how the virtual meeting would be run and then introductions were made.

2. **AGENDA ADDITIONS OR DELETIONS**

No additions or deletions were made to the agenda at this time.

AMANDA KAHN MOVED TO ADOPT THE AGENDA AND DEVON MOORE SECONDED. THE AGENDA WAS ADOPTED UNANIMOUSLY WITH NO FURTHER DISCUSSION.

3. **PUBLIC COMMENT ON AGENDA ITEMS**

No public comments were made at this time.

4. **TECHNICAL ADVISORY COMMITTEE (TAC) MEETING MINUTES**

Kraig Hankins requested that under member updates – “fecal chloroform bacteria” be revised to “coliform” in the FGCU update.

KRAIG HANKINS MOVED TO APPROVE THE REVISED MINUTES AND RICK ARMSTRONG SECONDED. THE MINUTES WERE APPROVED UNANIMOUSLY WITH NO FURTHER DISCUSSION.

6. **CHNEP UPDATE**

CHNEP’s Executive Director, Ms. Jennifer Hecker, presented on programmatic activity occurring since the beginning of the last Management Conference cycle to the current cycle. Activities in this cycle were impacted by the transition to tele-work and adapting to social distancing guidelines. While traditional meetings and public outreach efforts were disrupted, the CHNEP staff managed to quickly adapt to alternate ways of communicating and continuing the work of the partnership. Highlights are as follows:

CHNEP presented at the Sarasota Sustainable Communities Workshop, the Restore America’s Estuaries (RAE) 2020 Summit, and numerous partner meetings and presentations that have garnered media. These include:

- 11/20 [Saving Estero Bay Benefit Features Hollywood Royalty](#)
- 11/20 [Calusa Waterkeeper Online Benefit-Fort Myers Beach Observer](#)
- 9/20 [Calusa Waterkeeper "Saving Estero Bay" Online Benefit](#)
- 8/20 [Where Did the Water Used to Flow?-SUN News](#)

Financial support throughout this economic crisis continues to be a priority. CHNEP received \$509.50 in private donations and three (3) grant applications, completed seven (7) grant progress reports, and wrote thirteen (13) letters of support. CHNEP also submitted seventy-seven (77) habitat projects to the National Estuary Program Online Report (NEPORT).

In addition, public outreach remains essential to CHNEP during Covid-19. FY21 has begun and partners have started processing annual contributions. So far, CHNEP has received contributions from: Polk County, Lee County, Hardee County, City of Winter Haven, City of Venice, City of Punta Gorda, City of Fort Myers, City of Bonita Springs, City of Bartow, Sarasota County, and

the Village of Estero. Staff prepared customized 2021 Invoice letters to all 10 counties and 25 cities in the CHNEP area. These packets included the FY21 invoice, CHNEP CCMP Summary, 2021 Legislative Priorities, and project fact sheets. CHNEP gained 118 new volunteers, 37 new Facebook followers, 1,862 unique website visitors, and have over 5,700 subscribers to CHNEP mailings.

CHNEP has resumed monthly events using adapted virtual platforms. The November Virtual Kid's Fishing Clinic was created in partnership with Bonefish Tarpon Trust and FWC. Attendees completed 4 learning modules and were eligible to receive a free fishing rod and tackle box courtesy of a Fish Florida grant. Some of the content can be found on our YouTube channel: [Coastal & Heartland National Estuary Partnership - YouTube](#).

Other notable outreach accomplishments were the release of the CHNEP 2021 Nature Calendar, contributed environmental educational content to WGPU's Age of Nature [Virtual Scavenger Hunt](#) and to the Conservation Foundation of the Gulf Coast's [Wild About Nature Field Guide to Fun](#) activity book, and the contribution of funds and development assistance of virtual videos centered around the CHNEP CCMP Actions: Water Quality Improvement, Hydrological Restoration, Fish, Wildlife and Habitat Protection, and Public Engagement (they can all be viewed on our YouTube channel).

Ms. Hecker concluded her update by recapping the [2021 CHNEP State and Federal Legislative Priorities](#). She also thanked staff for working together to accomplish so much under the circumstances.

6. SOUTH LEE COUNTY WATERSHED INITIATIVE HYDROLOGICAL RESTORATION PLANNING PROJECT

Marcelo Lago, of Lago Consulting, presented an overview of the project objectives, tasks, and timelines. The goal of the South Lee County Watershed Initiative (SLCWI) is to restore more natural hydrology and water quality to improve environmental conditions in the South Lee County Watershed, which is comprised of the Estero River, Spring Creek and Imperial River watersheds discharging into the Estero Bay Aquatic Preserve. The vast wetland ecosystems are highly susceptible to over-drainage, flooding, and climate change stressors. Restoring wetland hydroperiods will extend hydroperiods, improve water quality, and improve habitat for wetland-dependent wildlife species as well as the human population that depends on its supply of public drinking water. This project will provide SLCWI project partners with the tools needed to move forward with a comprehensive and collaborative plan for future projects to improve the hydrological conditions and habitat in the region. The final deliverable was a science-based, data-driven integrated surface/ground water hydrologic model capable of simulating both dry and wet season water levels and flows. It will fill data gaps and bridge various modeling efforts to build a regional watershed-scaled picture. Results will be useful to resource management agencies to guide appropriate restoration and management of surface waters currently flowing from the South Lee County Watershed. It will also model several TBD restoration scenarios and climate change impacts to help better guide strategic restoration and management actions.

Recently, CHNEP received additional funding from the South Florida Water Management District (SFWMD) to supplement CHNEP funds for the project. CHNEP engaged Lago Consulting, who will work with multiple qualified sub-contractors to conduct data gathering and monitoring and provide updates to existing model files as well as produce the hydrological modeling 'tool', future

scenario model results, and final report. This was an opportunity for the TAC to provide input on the project planning process as work begins.

Discussion was led with two questions from CHNEP and Lago Consulting:

CHNEP Q1: Are there any stakeholders responsible for collecting surface-groundwater monitoring data that have been recently updated that we may not already be aware of?

- Roger Kopp and his team are working to acquire data at Wild Turkey Strand Preserve from loggers that have not been downloaded yet. They have data through 2017 that will be compared to the new data when acquired.
- Rick Armstrong mentioned FGCU as a possible contact. Roger Kopp followed up saying he is working with Don Duke to get data. This will also be a teaching opportunity for students to see how surveying is done. Ms. Hecker inquired if they have reached out to the airport authority. Mr. Kopp said they have all the available data and completed surveys from the airport through 2019 for the Corkscrew Sanctuary project. He stated that there is trouble with calibration in Corkscrew Swamp at one of the monitoring wells and will work to survey and better understand ground elevations to help calibration effort.
- Daniel Roberts commented that Bonita Terra, formerly Citrus Park RV, in Bonita Springs has some surficial ground water monitoring wells that are sampled monthly and one deep-water well.

CHNEP Q2: Are there any additional comments on future restoration scenarios that will be modeled as a part of this project?

- Ms. Hecker mentioned the Edison Farms property hydrological restoration. Mr. Kopp said he worked on the project a number of years ago with Mr. Lago. They did a scenario analysis there, but management has changed since. However, they have files and background information and can reach out to current management for restoration considerations.
- Ms. Hecker also discussed the City of Bonita Springs moving water toward Imperial through the Mirasol flowway to the Cocohatchee River. It will need to be an appropriate amount, area, flow and redirection without inundating the recipient system. Mr. Lago said they worked for the City and are familiar with it. Gulf courses can potentially be used as retention areas during big storms, but more funding is needed.

Steven Suau inquired as to why the calibration period is only two years. Mr. Lago explained that the model is slow running and would take an entire night to finish for more than 2 years calibration period. However, complete simulations will have 7 years. Mr. Kopp explained further that there was a very wet period in 2013 followed by very dry period in 2014. This 2 year period with high and low variation is good for calibration. There were 2 monitoring stations installed in 2015 after this calibration period that had good performances.

7. 'EYES ON SEAGRASS' AND MACROALGAE MONITORING PROJECT IN CHARLOTTE HARBOR

Betty Staugler, the Florida Sea Grant Agent in Charlotte County, gave updates on the citizen-science seagrass monitoring project recently undertaken in Charlotte Harbor that is also finding innovative solutions for creating a long-term macroalgae monitoring data-set. There has been much discussion recently among CHNEP Technical Advisory Committee members, local scientists and agencies, and stakeholders with regards to the continued presence of increased macroalgae in Charlotte Harbor and several other estuaries within the Southwest Florida region.

This issue was addressed in the recently updated SWFWMD Charlotte Harbor SWIM Plan. Additionally, a Florida Macroalgae Steering Committee formed (the group includes members from every Estuary Program in Florida) to develop a workshop this coming spring (2021) with the goal of developing a better understanding of the origins of macroalgae blooms and to develop management solutions.

A comprehensive monitoring program to evaluate macroalgal trends during their peak abundance has been lacking. To fill this gap, Sea Grant has developed a citizen science monitoring program to observe seagrass and macroalgal distribution patterns. This project will soon be expanded to more estuaries in the region that are experiencing unique types of macroalgae blooms of their own. While the types of algae encountered may be unique- this project will explore implementing a consistent and consolidated approach for monitoring data collection.

The goal of this study is to improve our understanding of macroalgal bloom dynamics in shallow seagrass areas. Long-term, survey results can provide documentation of macroalgal distribution patterns, and aid in distinguishing between inter-annual variability and management linked changes in macroalgal biomass. This study will also involve isotopic analysis found during surveys and perhaps bring more light on nutrient dynamics driving such blooms.

A thorough discussion followed Ms. Staugler's presentation. Mr. Moore asked if there were ideas as to why there were more macroalgae on eastern side of bay as opposed to other areas. Ms. Staugler replied that there hasn't been more macroalgae on the eastern versus western side since 2012. She speculated it could be due to an occurrence of hurricanes and red tides. Because there are so many unknowns and questions, she is working with CHNEP to put together a workshop with some of the other NEPs in Florida on macroalgae to address solutions. Ms. Brown stated that Ms. Staugler's findings support the FDEP's annual monitoring at 5 sites in Charlotte Harbor. Ms. Staugler voiced her appreciation to the FDEP for ground-truthing and giving feedback on the methods before sending volunteers out to collect data. Ernesto de la Vega said he has gone out with the volunteers and they love how easy it is to understand. Ms. Hecker thanked both of them for their work and told the TAC that she will keep them posted on dates for the workshop.

Chris Anastasiou mentioned how important filling the data gap of nutrient analysis is and how it will play a big role moving forward. The nutrient load from the red tide event may have fueled algal blooms along the east wall and may also apply to other harbors. This project will help SWFWMD identify projects to reduce nutrient loads and use macroalgae as an indicator as to how well the nutrient loads are being maintained. Ms. Staugler replied that is the goal of the project they are trying to obtain. Mr. Anastasiou then mentioned that seagrass mapping doesn't capture macroalgae and SWFWMD is looking at drone technology to do this and has started developing a scope. This would help identify target areas and should be incorporated into monitoring. They would love to know if anyone is doing something similar.

Stephanie Erickson said that FDEP added macroalgae monitoring to the bi-annual seagrass monitoring in 2016 and they measured dry weight after identification. She asked Ms. Staugler to elaborate on the upcoming nutrient analysis for samples and she responded that the samples will be sent to UF because they have the equipment to measure nutrient content.

Ms. Hecker and Ms. Iadevaia discussed using the CHNEP seagrass pages on the Water Atlas to model something similar with macroalgae and possibly to see how they intersect. They requested any helpful transect and aerial data to be sent to Ms. Iadevaia. The goal would be to see where we

have data and where it is needed to fill research gaps and to get a comprehensive view that would be beneficial to partners, researchers and stakeholders. All of this will be considered as the public workshops are planned.

Jeff Devine asked what the end goal is to changing how we respond to red tides as far as removing bio mass, burying on beach, or letting it sink. Ms. Staugler responded that there are already shifts to collecting fish and getting it off beach because we know it is a form of nutrients for macroalgae and toxic blooms. She mentioned that FGCU has funded projects looking at the amount of nutrients in dead fish. Ms. Staugler reiterated that her goal is to engage volunteers to help collect the data for researchers. Chris Anastasiou asked who a contact is at FGCU and Ms. Staugler said probably Mike Parsons. Mr. Anastasiou followed up by asking if there is any estimate to the amount of dead fish in Charlotte Harbor from the most recent bloom. Ms. Staugler stated that most removal is done by local governments and it is not uniform across counties and municipalities as some get data from landfills or other ways, and some do not try to acquire that data at all. Mr. Anastasiou suggested that the TAC discuss techniques or standardize methods to quantify this in the future.

Ms. Staugler stated that Cindy Heil may have some information on nutrient load contributed by fish. Ms. Hecker said that recorded marine life removed from beaches or water surface does not account for everything still left in the water and is not an accurate number. It was concluded among CHNEP, Ms. Staugler, and the TAC that there needs to be a protocol developed and in place for counties and municipalities on how to report bio mass from bloom events and ways for captains, anglers and other engaged citizens to go and report bio mass. An idea mentioned was to work with FWC to have them sign up ahead of time to document trip to remove deceased wildlife Daniel Roberts asked if any studies have been done on the rising silica levels in the Peace River and macroalgae.

The discussion continued with Dave Blewett adding that the focus needs to remain on controlling nutrient input sources throughout the watershed. Ms. Hecker agreed, but stated keeping the system 'on life support' while we tackle bigger underlying issues during dire situations is just as important to prevent a collapse of the system. Prevention is best, but in some cases we have to look at mitigation and remediation where there are severe impacts. They agreed that a more cohesive effort needs to be made in Charlotte Harbor to pinpoint major sources of nutrient input and causation to get political support in these efforts.

The TAC concluded by discussing the data gap in nutrient load from ungagged areas in the Myakka and Peace Rivers and canal systems. They would like to recommend that the Policy Committee fund efforts to fill these data gaps after the workshops in the spring.

8. HABITAT RESTORATION NEEDS (HRN) PHASE II REPORT FOR CHNEP EXPANSION AREA

Nicole Iadevaia, CHNEP Research & Outreach Manager, presented the final draft report incorporating previous stakeholder and staff comments as well as management recommendations based on the climate impacts study. The HRN Plan articulates CHNEP's habitat restoration vision for the next 50 years of "A diverse environment of interconnected, healthy habitats that support natural processes and viable and resilient native plant and animal communities" (CHNEP 2019). The Plan identifies Preservation/Conservation and Reservation Opportunities, as well as Management/Enhancement and Restoration Targets, in each CHNEP basin. Full implementation of the Plan will have substantial positive impacts on the long-term sustainability of water quality,

water quantity, natural systems, and species populations. The overarching goal of the Plan is to increase the acreages of native habitats in the CHNEP area, both strategically and opportunistically.

CHNEP engaged ESA to expand the existing HRN using the methodology established in Phase I to develop the HRN for the CHNEP expansion area in the freshwater portion of the Caloosahatchee Basin (Phase II). The report created by this project will serve as an addendum to the original HRN Report.

Major recommendations in the Phase II report will include:

- Mapped Preservation/Conservation Opportunities acreages by Major Habitat Types.
- Mapped Management/Enhancement and Restoration Target acreages by Major Habitat Types.
- HRN Phase I took into account habitat impacts that would be exacerbated by climate change focusing on habitat shifts driven by Sea Level Rise. This would not be appropriate for the non-tidal portion Caloosahatchee River in the current report, so ESA worked with Coshow Environmental to model other climate change drivers that would be more appropriate to consider for the area. Results of this study will be reflected in the report conclusions and recommendations.

This was an opportunity for the TAC to see the final product and offer final comment before it moves to Management and Policy for final approvals. Discussion was as follows. Chris Anastasiou asked for detail on how the 7% in PET was determined. Justin Saarinen said the 7% projected increase is simply based on the projected rise in maximum and minimum temperatures driven by an increase in the incoming solar radiation due to global warming. He also added that the 2.5% in response to increased drying high uncertainty was in literature for precipitation driven by tropical storms that match trends in rainfall in Southwest Florida. He further explained that precipitation is event driven but evapotranspiration is constant and remains constant as temperature increases. The reason for alternative scenarios is the uncertainty of the future, and numbers can be updated as projections change. Mr. Anastasiou follow up by saying evapotranspiration is hard to measure and not an exact science. Mr. Saarinen stated that this is a good start and applauded CHNEP for jumping into this because it is very new, but it is important for making sense of things and informative decisions at a watershed scale. Ms. Iadevaia added that CHNEP and ESA also have technical memorandum for climate change scenarios available on the CHNEP website.

Devon Moore stated there is a lot of overlap between habitat and the hydrologic component. Polk County is looking at future growth and development and how it will affect water as they will be digging into the lower aquifer soon. This will cause new issues so getting local counties and municipalities aware and into the discussion is important for strategizing and enacting water saving policies. Mr. Saarinen emphasized that habitats are the result of functions and in Florida it is mostly hydrologic functions, whether it's external like climate change or land use, but this can and should be investigated. Mark Walton with SWFWMD stated they have habitat types and land cover going back 20 to 30 years for GIS viewer that can complement this report in looking as land conditions goals for corridors.

Ms. Saarinen thanked the TAC for comments and stated they handled them as carefully as they could and have all led directly to the evolution of report. Ms. Iadevaia concluded by requesting that TAC members contact her with final comments and she will keep the TAC up to date with the CHEP Water Atlas.

9. A NUTRIENT-BASED ASSESSMENT FRAMEWORK FOR TIDAL CREEKS IN SOUTHWEST FLORIDA

Mike Wessel with Janicki Environmental reviewed the attributes of the tidal creeks dashboard currently in its developmental phase, and provided an interactive walk through of outcomes of the assessment framework for tidal creek data collected to facilitate partner interaction and increase the knowledge set on tidal creek water quality conditions within the CHNEP.

Southwest Florida tidal creeks are critical coastal ecotones that provide habitat for many resident and transient fish species and enhance the resiliency of their receiving estuaries to environmental perturbations. Despite these values, these creeks are under-sampled in most routine water quality programs. Consequently, management and regulatory efforts to protect these creeks lag behind other systems and there remains a need to identify water quality targets and thresholds relevant specifically to tidal creeks. The three contiguous National Estuary Programs of southwest Florida conducted two studies to evaluate tidal creek water quality and establish a management framework for protection of these critical coastal habitats. The initial project sought to identify stressor-response relationships that could be used to support development of regulatory water quality thresholds indicative of nutrient impairment for tidal creeks.

Studies found that despite a variety of statistically significant outcomes, there was no single unifying relationship or threshold that provided adequate sensitivity and specificity to serve as a definitive indicator of impairment for these creeks. Instead, a tidal creek water quality assessment framework was created that includes a screening tool and prioritization scheme to characterize creek-specific water quality attributes and inform natural resource management decisions. The assessment framework is presented using a report card format and includes a number of water qualities “indicators” developed based on the study findings. These assessments can support tracking of water quality management goals, and help refine restoration and management plans in priority tributaries. The assessment framework is packaged using open source software and presented as a dashboard using an Open Science framework to facilitate future efforts for tidal creek management in southwest Florida. These tools provide regional managers with reproducible, transparent, and discoverable products to help make more informed decisions on protecting the environmental health of tidal creeks in the region.

Discussion following Mr. Wessel’s presentation was as follows: Amanda Kahn asked if the x-axis on the bar plots are the annual average and if the information of sampling frequency is available. Mr. Wessel responded that it’s not directly on the dashboard, but it is accessible through source data. Daniel Roberts inquired as to how often new data is uploaded to the dashboard and where it pulls data from. Mr. Wessel stated it is based on the DEP database run 56 through 2017, but they are now up to run 60. They were having issues connecting R studio to Access and working through this to link and update automatically. Ms. Kahn asked if the creek scores are based on all water quality parameters and if you can sort by parameter (e.g., some creek may be fine DO conditions but not nutrients) Mr. Wessel stated that the scorecards are just based on nitrogen right now, but individual indicators include other things. However, although for most areas nitrogen is the limiting nutrient, but Estero and south of the Caloosahatchee it may be phosphorus. Ms. Hecker questioned if the right nutrients were being managed in some areas and Mr. Wessel replied that it is hard to say at this time. Melynda Brown stated that total phosphorus is not graphed and Mr. Wessel suggested that he could put a link to more information, but they are limited to what can be on the display page as it is a free service. Ms. Hecker also added that showing it on the display page is critical for systems where it is the potential limiting factor and suggested switching something else out on those pages to display it. Ms. Hecker commented that if some of these systems are potential phosphorus limited, that this is critical to consider showing it on display

page. Ms. Kahn suggested TSI. Mr. Wessel understand that there are still design issues to work through and is hoping to build it out more when the time and funding is available. He hopes that stakeholders can use this to look at their creek and see what data is still needed. The goal is to build out indicators and make sure it is sound before bringing to the public.

10. CHNEP PROJECTS UPDATES

Nicole Iadevaia, CHNEP Research and Outreach Manager, provided the committee with updates on the progress of select research and restoration projects.

First, Ms. Iadevaia spoke of the recently completed CHNEP Economic Valuation. CHNEP is pleased to announce this project has been completed (all questions and comments were considered and it was approved by Policy at the end of Sept), with county and basin fact sheets as well as full report available at <https://www.chnep.org/natural-resource-economic-valuation>.

Natural Resources in the CHNEP Area:

- \$13.6 Billion in Total Output
- \$3.8 Billion in Regional Income
- \$146 Million in Local & Tax Revenue
- Support Over 148,000 Jobs Annually

2019/2020 Projects:

- Gateway to Myakka River State Park – Marsh Restoration
 - CHNEP is awaiting completed Summer exotics treatments deliverables and invoices from contractor in coordination with the Site Manager
 - Upcoming treatments and native plantings to be completed by Fall 2021
- Warm Mineral Springs Creek Restoration
 - CHNEP and FWC reviewed and paid on deliverables and invoices associated with 60% and 90% design plans and permit agency pre-application meetings according to the scope
 - Stakeholder and public meetings were held virtually to review construction design plans and to gather feedback
- Charlotte Harbor Flatwoods Initiative Hydrological Modeling Project
 - Task 4 1st Quarter Monitoring data downloads and data submission to SWFWMD database has been invoiced and paid. 2nd Quarter is underway.
 - The contractor presented initial finding at Charlotte Harbor Flatwoods Initiative meeting in September
 - CHNEP has received final deliverables and paid invoices for Task 3a) Seasonal survey data memo, documenting biological indicator data collection for wet season conditions
 - Task 5-7 Modeling and Report will occur in 2021

2021 Projects:

- Pine Island Flatwoods Restoration
 - Brought to CHNEP by Lee County and FWC
 - Complete and shovel-ready restoration of 4 abandoned shrimp ponds on conservation land to enhance and expand native habitat and improve hydrology
 - CHNEP will work with finance staff from City of Punta Gorda to issue a 'Request for Qualified Bidders for engineering firm to hire and oversee construction firm while working with engineer of record to oversee project according to design plans

- CHNEP Water Atlas
 - Standard service: data management, site updates, revisions and maintenance
 - Enhancements: Habitat Resiliency to Climate Change (HRCC) Interactive ESRI Map, SFWMD DB Hydro added as a real-time data source, CHNEP seagrass page additions, and Lake Okeechobee additions
- CCHMN Water Quality Monitoring and Assistance in Charlotte Harbor
 - Sample assistance: to provide sample kits to FWC field staff and to pick up water samples to deliver to Lee County Environmental Lab (LCEL) monthly
 - Lower CCHMN: to provide monthly WQ samples and data at 5 randomly selected field sites
 - Upper CCHMN: to provide WQ samples and data at 30 randomly sampled selected sites in lower Lemon Bay, Tidal Myakka and Peace Rivers, Charlotte Harbor, and Cape Haze/Gasparilla Sound

11. TAC MEMBERSHIP UPDATES

US Fish and Wildlife Service is looking for FY21 projects for their coastal program. They are particularly focusing on federally listed or at risk species.

Florida Department of Environmental Protection is continuing to telework and is monitoring programs for the aquatic preserves. They have finished their annual seagrass monitoring for Charlotte Harbor and Estero Bay and are continuing data entry to place on the water atlas. FDEP submitted 2020 colonial wading and dive bird nesting data in coordination with USFWS and Ding Darling data which will be published in the South Florida Wading Bird Report. They are working with SCCF to develop a clam habitat suitability map (suitable locations of hard clams for restoration efforts) and need grants to support aquaculture farmers.

Lee County Mosquito/Hyacinth Control District is conducting pond watch wet plan webinars the 1st Wednesday of every month for home owners, managers of lake and stormwater ponds, etc. Sarasota bay watch is moving 120,000 clams from Pine Island to the north side.

SFWMD will complete their SAV monitoring in the Caloosahatchee next week and will continue to collect data to create reports for water atlas. They completed another trip in collaboration with USF and Harbor Branch FAU to collect water quality data at ½ meter. There is a grant from NASA to get satellite imagery for chlorophyll to predict blooms. SFWMD is also collecting algae bloom information and are continuing with the C43-reservoir water quality feasibility study. Information is available at <https://www.sfwmd.gov/content/c43waterqualitystudy>.

SWFWMD approved the final SWIM plan in November and is preparing it to be sent to DEP soon to be available on the website. Photo interpretation and draft report of seagrass mapping for 2020 imagery will conclude in the next few weeks. The SWFL seagrass working group workshop and will likely be virtual in mid-march of next year.

Charlotte County Parks & Natural Resources have two Scrub jay conservation plan parcels totaling 144 acres that are currently in for title review and the sales contracts have been signed. Out of the 144 acres to be purchased, 103 acres is located directly on the Peace River adjacent to existing SWFWMD conservation lands.

Lee County finished the 3rd round of sampling for microbial source tracking with HBOI and FAU.

Manatee County voters approved a \$50 million conservation lands bond to support conservation lands purchases and operating expenses. The restore coastal watershed program is off to a great start – a 2nd watershed study is next week and 3rd will be later this year. There is a new employee to help oversee the program. The environmental lab is converting to a new lab information management system that will enable them to submit lab data directly to Florida WIN.

Polk County finished the Lake Hancock planting project. The threats assessment project is continuing stream bank restoration on main stem of the Peace River to reduce erosion.

Sarasota County Stormwater Environmental Utility division has a new senior advisor, Amanda Boone. John Ryan will continue as the Environmental Manager until the end of 2021. The county and county commission is interested in groundwater quality data so updates will continue and the county is in process of groundwater study. 2020 citizen seagrass survey has occurred virtually. Alia Court is the sampling research coordinator and will be applying for a seat on the CAC.

City of Sanibel completed an emergency road protection project (tru-line wall & sand placement) in June 2020. Despite some sand loss, it is performing well. The city is finalizing its 2021 legislative priorities. The city remains concerned about the volume of Lake Okeechobee and watershed flows to the Caloosahatchee.

City of Winter Haven is underway on the Lake Conine restoration project. The treatment of wetlands should be done by May 2021. The city is also developing a water supply master plan and is currently looking into potential sites for a nature education center.

12. **PUBLIC COMMENT**

No public comment at this time.

13. **FUTURE MEETING'S TOPICS, LOCATION AND DATE**

The spring TAC meeting is scheduled for: **April 15th, 2021**. Please mark your calendars. Additionally, if you have ideas of prominent scientists you would like to invite or new applicable research (including those outside the CHNEP area) for a future presentations please email CHNEP Research & Outreach Manager Nicole Iadevaia at niadevaia@chnep.org.

14. **ADJOURN**

Co-Chair Devon Moore adjourned the meeting at 2:14pm.