



## Draft CHNEP Management Committee Meeting Minutes

Friday September 6<sup>th</sup>, 2024, 9:00 am – 1:00 pm

Charlotte County Centennial Park

Large Multipurpose Room

1120 Centennial Blvd., Port Charlotte, FL 33953

### **Members Present:**

Rachel Hart	U.S. Environmental Protection Agency (USEPA)
Melynda Brown	Florida Department of Environmental Protection (FDEP)
Vanessa Bauzo	Florida Department of Agriculture and Consumer Services (FDACS)
Jamie Wolanin	Florida Fish & Wildlife Conservation Commission (FWC)
Jerri Sackett	Central Florida Regional Planning Council (CFRPC)
Phil Flood	South Florida Water Management District (SFWMD)
Vivianna Bendixson	Southwest Florida Water Management District (SWFWMD)
Kris Ramon	Peace River Manasota Regional Water Supply Authority (PRMRWSA)
Allie Pecenka	Sanibel-Captiva Conservation Foundation (SCCF)
Brandon Moody	Charlotte County
Debra Butler	Hardee County
Lesli Haynes	Lee County
Gaye Sharpe	Polk County
Chelsea Dinon	Sarasota County
Justin Mahon	City of Fort Myers
Stefan Kalev	City of North Port
Holly Millbrandt	City of Sanibel
Harry Phillips	Citizen's Advisory Committee Co-Chair
Ernesto Lasso de la Vega	Technical Advisory Committee Co-Chair

### **Others Present:**

Jennifer Hecker	Coastal & Heartland Natural Estuary Partnership
Nicole Iadevaia	Coastal & Heartland Natural Estuary Partnership
Keara Abel	Coastal & Heartland Natural Estuary Partnership
David Fiess	Florida Department of Environmental Protection (FDEP)
Jennifer Shafer	Shafer Consulting
Steve Suau	Carbon-Life, LLC

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

Co-Chair Melynda Brown called the meeting to order at 9:06 AM.

### **Agenda Item #2 Additions or Deletions — Melynda Brown, Co-Chair**

**PHIL FLOOD MOVED, SECONDED BY STEFAN KALEV, TO APPROVE THE CONSENT AGENDA ITEMS AS PRESENTED. THE MOTION WAS CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

### **Agenda Item #3 – Public Comment on Agenda Items — Melynda Brown, Co-Chair**

There was no public comment.

**Agenda Item #4 -- Management Committee May 10<sup>th</sup>, 2024 Meeting Minutes — Melynda Brown, Co-Chair**

Phil Flood commented that the bill he referenced in his member update was SB 1638 and not SV 1638 as was recorded in the May 10<sup>th</sup> meeting minutes. The correction was subsequently made.

**WITH THE CHANGE TO THE PREVIOUS MEETING MINUTES HAVING BEEN MADE, VIVIANNA BENDIXSON MOVED, SECONDED BY PHIL FLOOD, TO APPROVE THE MAY 10<sup>TH</sup>, 2024 MEETING MINUTES. THE MOTION CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

**Agenda Item #5 – Technical Advisory Committee Report — Ernesto Lasso de la Vega, TAC Co-Chair**

Ernesto Lasso de la Vega, the Technical Advisory Committee (TAC) Co-Chair, provided a report from the April 11, 2024 meeting.

Dr. Jennifer Shafer, from Shafer Consulting presented on the CCMP Update, which was previously brought to the spring Management Conference meetings where committee member input on the update was gathered. The presentation highlighted the changes made and how the Management Conference committee input and comments were addressed. The Policy Committee approved update to the CCMP will ultimately be sent to the U.S. EPA for its final acceptance in 2025 and new copies will be provided to the Committee members and partners afterward. TAC members noted emphasis on. Dr. Shafer said that these additions and edits were regarding this update for the next five-year planning and Jennifer Hecker explained that the research primarily was in doing the underlying data analysis and conceptual planning that is needed prior to undertaking restoration and other implementation projects - so those implementation and restoration projects can be of greater focus in the next 5-year CCMP update. The emphasis for this update is on understanding the vulnerabilities and risks and undertaking strategic planning to identify potential projects and strategies to addressing those and mitigating their impacts. Another member asked if oysters should be specifically mentioned as part of the living shoreline and was told that they are mentioned in some existing CCMP actions as well are a separate activity for restoring aquatic habitat resources. Another member asked whether there is a section that deals with policy on a state and federal level and Ms. Hecker said that under Public Engagement, there is a section that addresses policymaker education. Discussion concluded with a consensus from TAC members regarding their comments being sufficiently addressed in the CCMP update draft.

There was also a presentation on Water Quality Trends in Southwest Florida by Dr. Miles Medina of ECCO Scientific LLC. This presentation detailed how effective management and restoration in ecological function and estuarine systems require an understanding in water quality changes over time. He spoke to the fact that researchers recently partnered to compile 20 years of water quality data to investigate trends in nitrogen, phosphorus, chlorophyll-a, oxygen and organic carbon concentrations and apparent color in the upper water column samples from southwest Florida estuaries between 2000 and 2021. Some key takeaways for Charlotte Harbor are that trend results are consistent with the hypotheses that nitrogen enrichment has resulted in macroalgal proliferation and seagrass losses; nitrogen was already trending upward before Hurricane Irma and elevated nitrogen appears to be making the system vulnerable to profound ecosystem changes; and that northern and southern estuary segments exhibited interesting differences. Lake Okeechobee discharges and nitrogen loads remain a major concern and that the Peace River and coastal urban areas also contribute substantial loads. TAC members asked whether there is a way to gauge the relationship between nutrients and chlorophyll in the Gulf, Dr. Medina said that this sort of analysis tells how water quality has changed but does not answer the question of what is driving the change. Members were also told this analysis will be incorporated into CHNEP's Water Atlas, and that Dr. Medina is coordinating with other partners doing similar analysis in the area.

The next presentation was from Casey Craig from FWC's Research Institute. It was on Mangrove Mortality after Hurricane Ian in Charlotte Harbor. This detailed that since Hurricane Ian made landfall in September 2022 in Charlotte Harbor, multiple mapping and monitoring efforts have examined the extensive hurricane damage and the ongoing recovery of the mangrove forests. The conclusions were that Charlotte Harbor mangroves are still experiencing delayed mortality from Hurricane Ian after 16 months, the magnitude of the mortality is influenced by existing hydrologic alteration stressors coupled with storm impacts, and monitoring will continue through 2024. Committee members asked whether there is a way to determine how much acreage was lost due to Hurricane Ian and whether the impact was primarily red, white, or black mangroves. Ms. Craig said that the vegetative imagery could be used for comparison of acreage lost after Ian and that the damage did impact different types of mangroves differently - with red mangroves recovering better and white and black mangroves having a harder time recovering. Another member asked whether mangrove recovery time had anything to do with sulfides in the sediment and Ms. Craig said that while sulfides do impact recovery, the timing of hurricane impacts coincides with the season where mangroves drop propagules which could have had a greater effect due to inhibited propagation. It was also mentioned that it takes time for the effects of these storms to manifest, so it is too soon after Tropical Storm Debby to determine what impact that storm may have on mangroves.

The final presentation was from Dr. David Tomasko of the Sarasota Bay Estuary Program and TAC member Steve Suau of Carbon-Life, LLC, presenting on behalf of all the authors. It was on Red Tide Duration and Nitrogen Loads from the Caloosahatchee River. This presentation shared findings from a joint research effort and a recent publication in the Florida Scientist journal, which looked at the intensification factors of harmful blooms of the marine dinoflagellate *Karenia brevis* and examined whether there is a relationship between land-based nitrogen loads and red tide events in Southwest Florida. This presentation is included in the Management meeting agenda as well. TAC members discussed the relevance of this findings of this study to Everglades Restoration, to which Ms. Hecker offered that CHNEP has a seat on the Science Coordination Group of the South Florida Ecosystem Restoration Task Force on Everglades Restoration and would be looking to share this information through that channel. A TAC member stated that it was interesting to note the correlation between the hydraulic load and the nitrogen load, and he wondered if it would be complicated to determine which one to focus on, and whether there is a way to make sure that the hydraulic load is not attributed to something else. Dr. Tomasko stated that the Caloosahatchee River's water chemistry is not that different than the other river systems in the study, but the nitrogen loading was about 10 times higher due to the higher volume discharges. TAC members inquired about aquifer storage and recovery wells and Jennifer Hecker explained those are being used to the greatest degree feasible but there is still additional storage needs beyond those needed to handle the large volume, to prevent harmfully high-volume discharges to the Caloosahatchee River.

The TAC also engaged in a discussion of the Recurring Cyano/Macroalgae Blooms in Charlotte Harbor and other estuaries. Members were asked to share any information they have on research, management, or mitigation work being done by their agency or municipality during their member update. Interested TAC members were invited to stay after the meeting and participate in an Algae Work Group convened by FWC and Charlotte County for a more in-depth topical dialogue on these blooms. If partners are interested in staying engaged with the Algae Work Group, please contact CHNEP who can provide a link to the meeting notes and other resources. The TAC also heard the CHNEP Program and Technical Projects update presentations being presented at this Management Committee meeting, and shared updates with each other on their respective counties and communities and natural resource-related activities and projects. There were no recommendations formed by the TAC pertaining directly to Management Committee agenda items this cycle; however, the TAC's consensus of the draft CCMP update is relevant to Management Committee's potential recommendation to Policy Committee on whether to approve the current CCMP update draft.

## **Agenda Item #6 – Citizen’s Advisory Committee Report — Harry Phillips, CAC Co-Chair**

Harry Phillips, Citizens Advisory Committee (CAC) Co-Chair, provided a report from the August 21, 2024 virtual meeting that he chaired.

CAC members welcomed the new CAC applicant from DeSoto County, Ms. Linda Waters. Ms. Waters is a librarian and retired educator, who was previously involved in the master naturalist program. She enjoys informing others about the preservation and protection of natural resources. Two new Conservation Grant Applications were reviewed with funding requested amounts, and recommendation by CHNEP staff for CAC review, discussion, and feedback. Both grant applications were recommended by staff for funding with deliverables that include final reports and photos due after completion. The first was for the International Coastal Clean-Up in Charlotte Harbor. The amount requested was \$4000 and it will involve the removal of debris along the coastline. It will provide an opportunity for volunteers to become citizen scientists as well, to audit the debris found, results are shared as part of an international report. A CAC member commented that the International Coastal Clean-Up will be taking place September 21<sup>st</sup> and that there are many different community events leading up to it as well. The second involved native plantings being installed around a public dry retention pond in Lee County by Future Forestry. The amount request was \$6,872 and will involve the reconfiguring and planting a dry retention pond to collect and filter the runoff from a bridge that is part of the Veteran’s Memorial Parkway. One CAC member asked whether there will be monitoring to see if the retention pond plantings survive and another CAC member familiar with Future Forestry’s prior work responded that they have a high level of planting success and returns to its planting sites to maintain the plants and assess progress through their establishment. Another CAC member asked whether the retention pond is something to be constructed, and what will be done about the removal of the invasive species. The retention pond was constructed in the late 1990s. It is unknown whether invasives are present or whether Lee County, who manages the site long-term would remove the invasives. Ms. Iadevaia suggested that the information from the April CAC about the best removal practices of invasives can be added as an attachment back to the applicant. After reviewing the projects and providing feedback, the CAC concurred with the CHNEP staff recommendation to fund these two applications, including information on the best treatment of invasives information in the follow-up emails on the latter application.

The CAC then heard from CHNEP’s Executive Director, Jennifer Hecker, on Red Tide Duration and Nitrogen Loads from the Caloosahatchee River. It discusses how even though red tides initiate offshore and as these blooms get closer to the shoreline, their duration and abundance can increase due to man-made nutrient pollution. Ms. Hecker co-authored the study, which used nitrogen data that was collected from the Myakka, Peace, and Caloosahatchee Rivers as well as Peace and Horse Creeks. It also included red tide data that was collected in Charlotte Harbor and the Gulf of Mexico. One CAC member asked about the graphs showing that the Peace River loads increased in or around 2022 and Ms. Hecker said that the graphs showed that the loads in the Peace River did increase around that time as after Hurricane Ian, the Peace River rose 19 feet higher than ever recorded. The discussion concluded with Ms. Hecker mentioning the CHNEP fact sheet available that can be printed and shared, which includes a QR code to the full published article. Lastly, the CAC heard the CHNEP Program and Technical Project update presentations that are also coming before Management Committee today, and shared updates with each other on their respective counties and communities and natural resource related activities and projects. There were no recommendations formed by the CAC pertaining directly to Management Committee agenda items this cycle; however, the CAC’s consensus of the draft CCMP update is relevant to Management Committee’s potential recommendation to Policy Committee on whether to approve the current CCMP update draft.

## **Agenda Item #7 – CHNEP Update — Jennifer Hecker, CHNEP**

CHNEP’s Executive Director, Jennifer Hecker, presented on programmatic activity occurring since the last Management Committee meeting.

CHNEP planned and executed the Spring Committee meetings; reviewed 2019 CHNEP CCMP, determined that a 5-year update would be needed, and held facilitated discussions during Spring Management Conference meetings to record and synthesize comments from the Committees. Consensus comments were provided to a contractor to begin the CHNEP CCMP update; the draft FY25 EPA 320 Master Work Plan and FY25 EPA BIL Work Plan and budget tables were reviewed and approved at the Policy meeting; CHNEP participated along with staff from Florida’s other 3 National Estuary Programs in a day-long workshop focused on sharing updates, opportunities for collaboration, and lessons learned; reviewed and provided content for the US EPA NEP FY23 Accomplishments Report, including information on Post-Hurricane Ian Remediation Efforts; reviewed and sent a technical comment letter on the SFWMD Draft Sea Level Rise and Flood Resiliency Plan; and CHNEP partnered on a letter of interest for 3 NOAA RESTORE Proposals, of 2 were invited to submit full proposals. CHNEP provided Letters of Support for partner projects including the following: Bond Farm Hydrologic Enhancement projects included in the Florida TIG “Draft Restoration Plan 3 & Environmental Assessment: Water Quality” on the project list for upcoming Deepwater Horizon Natural Resource Damage Assessment Funding; the Conservation Foundation of the Gulf Coast proposal to Florida Department of Environmental Protection for the addition of 35.4-acres of natural lands on Sandpiper Key in Lemon Bay to the Florida Forever list for state purchase; the Wildlands Conservation proposal to the Florida Department of Environmental Protection for the addition of natural lands in the Peace River floodplain to the Florida Forever list for state purchase; and the Florida Water (FloW) Center Proposal from UF and other state universities for the Florida Council of 100 Request for Proposals to create the FL Center for Integrative Water Resource Management.

For Finance and Grants, CHNEP EPA 320 Novated Grant award was received by CHNEP and accepted by CHNEP’s host; CHNEP EPA FY24 BIL grant award was accepted by CHNEP’s host on June 11<sup>th</sup>; sent mid-year report for EPA 320 and EPA BIL FY24 cooperative funding agreements; prepared and finalized EPA FY24 match documentation based on South Florida Water Management District for CERP Caloosahatchee (C-43) West Basin Storage Reservoir Project; the CHNEP EPA 320 and EPA BIL FY25 grant applications with their approved Work Plans and Budgets were prepared and submitted to the U.S. EPA; sent Q2 and Q3 reports for FDEP FY24 cooperative funding agreement (prepared and submitted final invoice for FY24 funding from FDEP and the grant was closed out); received and processed the final reimbursement from SWFWMD for the Myakka Headwaters Project; the fully executed SWFWMD Agreement for FY24 was received by CHNEP and accepted by CHNEP host; a revised version of the Memorandum of Understanding (MOU) between the County and CHNEP was approved at the May Board meeting; and the Interlocal agreements with Highlands County, City of Punta Gorda, and Lehigh Acres Municipal Services Improvement District (LAMSID) were fully executed. CHNEP also updated the conservation grant application and conducted review of previous grants for CCMP and planning for outreach (and sent award email to Conservation Grant Applicant for spring 2024 cycle which was accepted); received Q2 and Q3 quarterly reports for both Upper and Lower CCHMN project, reviewed deliverables and report and processed invoices; received Q2 and Q3 reports FY24 Water Atlas project and processed invoice. CHNEP also received the revised final report for FY23 Water Atlas project and processed final invoice, as well as continued to process private donations via check or PayPal.

CHNEP staff attended numerous partnership meetings since last cycle. For presentations, CHNEP participated in expert panel discussion on case studies and scenarios and Q&A for environmental communication at the Science and Environment Council Meeting; collaborated with EPA to share a keynote presentation by the Miccosukee Tribe of Indians of Florida from 2024 Southwest Florida Climate

Summit at National Estuary Program meetings; and accepted abstracts for the upcoming Restore America's Estuaries 2024 Coastal & Estuarine Summit. For outreach, CHNEP sent out invitations to new CAC applicants; hosted a booth at Wild About Nature Fest in Osprey where over 200 visitors made native wildflower seed bombs; attended Ding Darling Conservation Carnival at Lakes Park where over 240 guests stopped by to play a game, compete in trivia, and receive native wildflower seeds; were involved in partner events shared across platforms and Kids Activity Books were shared at partner events as well; presented a K-8 program for over 20 kids at the Summer Success Institute in Wellen Park and provided Kids Activity Books; completed edits for the Spanish Kids Activity Book text with support from Management Committee member, Dr. Ernesto Lasso de la Vega; and attended the Wildcat Tailgate Party in Wauchula where over 150 visitors participated in Crane Trivia and learned about CHNEP. CHNEP also added new features to the CHNEP website including an accessibility toolbar and accessibility statement (this toolbar allows users to modify text and screen display for easier viewing). CHNEP was featured in Waterline for "The language of science," and CHNEP has 50 new Facebook followers for a total of 1,952 with 7 new "likes" (1,700 total likes), 5,897 subscribers for the educational mailings, 4,298 unique visitors and 6,604 page visits to the CHNEP website, 10,805 YouTube views with 68 subscribers and 299 videos, and 63 new Instagram followers for a total of 596 total followers.

One member asked if the 2025 Southwest Florida Climate Summit was free to attend and Ms. Hecker responded that a final decision has not yet been made as there are benefits to both charging a small entrance fee (optimal way to gauge a better headcount) and to allowing free access to anyone. Another member asked what the 2 NOAA RESTORE proposals were about and Ms. Hecker stated that one was regarding putting more ocean acidification sensors out. The other was partnering with other NEPs regarding having a more comprehensive way to look at nutrient enrichment such as looking at water chemistry, bioindicators, circulation, etc.

**Agenda Item #8 – Amended FY2025 EPA 320 & BIL Work Plans & Budgets — Jennifer Hecker, CHNEP**

Ms. Jennifer Hecker presented the amended FY2025 EPA 320 and BIL Work Plans and Budgets and outlined pertinent removals, carryovers, decreases, updates, and overall adjusted funding in detail for both revenue and expense portions with narrative task descriptions to reflect the changes. The CHNEP Policy Committee page was updated to reflect current members and co-chair names; the Research Specialist II position in the Staff Organizational Chart was revised to "Research and GIS Coordinator" position (the overall budgeted salary remains the same); and the CHNEP Water Atlas budget for FY25 (which is funded by FY25 BIL) was modified from the estimated \$85,000 to \$120,000 based on final negotiated Scope of Work with the contractor, USF (this added funding will allow for refinements, enhancements, and features to the newly relaunched site). As a result of the Water Atlas budget for FY25 being increased, the BIL FY24 TBD Research and Restoration Project budget was reduced by that amount. The remaining \$379,800 TBD Research Restoration Project amount then was fully allocated to the Glades and Hendry County Comprehensive Vulnerability Projects (as a result, the BIL FY24 TBD Research Restoration Project budget line item was removed). To allocate an additional \$20,200 for the Hendry Comprehensive Vulnerability Assessment Project, the previous BIL FY24 TBD Research Restoration Project amount was reduced from \$87,320 to \$67,120 and a line item for \$20,200 of BIL FY24 funding was added for Hendry CVA. The narratives were revised according to the amendments, including the addition of the Glades and Hendry CVA projects under Task 3 Research sections.

**PHIL FLOOD MOVED, SECONDED BY HOLLY MILBRANDT, TO RECOMMEND MANAGEMENT COMMITTEE APPROVAL OF AMENDED FY2025 EPA 320 AND BIL WORK PLANS AND BUDGETS. THE MOTION WAS CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

## **Agenda Item #9 – Draft CHNEP 2025 Comprehensive Conservation Management Plan (CCMP) — Jennifer Shafer, PhD, Shafer Consulting**

The U.S. EPA requires a *Comprehensive Conservation and Management Plan* (CCMP) from each National Estuary Program entity to receive and guide federal funding to the region. The USEPA requires each CCMP to be reevaluated every 5 years to see if it needs a “revision” or an “update.” “Revisioning” is major substantive changes like adding priority actions such as requiring lengthier more extensive review and approval by the EPA. CHNEP did this in 2017-2019 when the entire CHNEP CCMP was rewritten over 2 years with committee input over multiple meeting cycles. “Updating” is for minor substantive changes and updates and requires less of the EPA review process. Since it has been 5 years since the 2019 CHNEP CCMP was approved, CHNEP staff was required to review the CCMP to determine if updating or revisioning was needed and determined that only an update is needed. Updating the CCMP is important because it guides CHNEP funding and staff time; it enables continued federal funding for resource protection in the CHNEP area, some of which is distributed to CHNEP member municipalities/agencies and partner organizations; it is intended to capture the latest science and consensus on the direction of the Partnership’s collective work to further water quality and habitat goals for the region; and these updates are not obligating partners to actions, but instead are used to guide how the NEP can provide programmatic or funding support for research, restoration, and public engagement efforts outlined therein. CHNEP staff read through the entire document and formed an initial list of staff recommendations on the updates that are needed (all graphics with data will also be reviewed and updated with newer information as it is available at the time of updating). The CHNEP CCMP 5-year update timeline is as follows: April/May – staff recommendations presented to CHNEP Management Conference committees (TAC, Citizen’s Advisory Committee, Management, and Policy) and all committee members’ comments are collected; in June/July, there is the procurement of contractor services to create an updated CCMP together with a comment/response document to committee comments, graphics updating, editing, layout, etc.; in August/September, the final draft is brought back to the Fall Management Conference meetings for final review and approval; and in October/November, the updated CCMP is sent to the EPA for final approval (once final draft is approved, it will be printed and distributed in 2025). In preparation for this meeting, committee members were asked to review the 2019 CCMP and staff recommendations, as well as be prepared to provide comments and suggestions relating to the CCMP update. Update suggestions could include adding new and emerging research or issues that the Partnership is working on to reflect the state of the science; removing outdated information or text relating projects and initiatives that have since been completed or retired; and/or making any needed adjustments to an “activity,” including adjusting the metrics to reflect current capacity and priorities. Numerical updates are reflected in all Water Atlas analytics, figures, and tables.

The breakdown for the specific Management Committee member's/staff contributions is as follows:

### **Water Quality Action Plan**

Intro:

- New content on resilient systems approach and nature-based solutions
- Added section on bioindicators as compliment to chemical/physical parameters

WQ-3 Stormwater:

- Expanded the section on the new state stormwater rule

WQ-4 Wastewater:

- Added recommendation for wastewater and stormwater improvements and upgrades to be more resilient to climate change

- Updated Activity 4.1 to reflect caution with non-AWT reuse and revised text

#### WQ-5 Reduce harmful algal blooms and macroalgae:

- New understandings of nutrients, climate, macroalgae, and seagrass health with macroalgae as biological indicator or impairment
- New Activity WQ-5.2 – best practices and technologies to reduce or mitigate HAB impacts

#### Other highlights from the Water Quality Action Plan:

- Hurricane Ian and CHNEP contributions to disaster response
- New CHNEP Water Atlas 2.0 pages and tools
- Updated SWFWMD SWIM Plan
- Improved farm inspections and reporting by FDACS OAWP
- Updates to some counties in statewide OSTDS inventory (total 300k-plus)
- Water Management Districts' 2040 projections for 90-plus % reuse and 99% reduction surface water discharge
- Quantified link between polluted runoff and red tide (Medina et al., Beck et al., Tomasko et al., Hecker)

#### Hydrologic Restoration Action Plan

##### HR-1 Data and modeling:

- Added hydrologic modeling completed for Charlotte Harbor Flatwood Initiative and South Lee County Watershed Initiative

##### HR-2 Increase freshwater and groundwater:

- Added recommendation to balance and promote hydrologic restoration projects as flood protection and water supply protection
- Updated Activity 2.2 to support community adoption of low impact design

##### HR-3 Protect and restore natural flow:

- Added recommendation for hydrologic improvements and infrastructure to be more resilient to climate change
- Updated Activity 3.1 to support floodplain connectivity, reduced stream channelization and fish passage barriers
- Updated Activity 3.2 to support limited estuary connections to coastal ponds
- New Activity HR-3.3 – implementation of vulnerability assessment recommendations to protect water quality and hydrology

#### Other highlights from the Hydrologic Restoration Action Plan:

- 2021 SWUCA Update – all 13 MFLs met for rivers, estuaries, and springs
- New Caloosahatchee River MFL
- Warm Mineral Springs Creek Restoration to benefit manatee refuge

#### Fish, Wildlife and Habitat Protection Action Plan

##### Intro:

- New section on bioindicators (also see general intro)

##### FW-1 Estuaries:



- Revised and expanded the section on clam restoration
- Updated to recommend living shorelines as seawall alternative
- Added new tidal creek assessment framework by Wessel et al. (Hecker)
- New Activity FW-1.3 – protect, monitor, restore...mangroves and salt marshes...establish biological indicator...track changes from sea level rise and hardening

#### FW-2 Land and waterways:

- Revised recommendations to restoration with results of HRN II
- New Activity FW-2.3 – implement habitat restoration needs plan

#### FW-3 Assess and promote benefits of protection and restoration

- Updated Activity FW-3.1 performance measure to technical support to advance HRN implementation

#### Other highlights from the Fish, Wildlife and Habitat Protection Plan:

- The Homosassa shrew has been state-delisted however, the Atlantic sturgeon is now federally endangered
- There has been a loss of 10,000 acres of seagrass since 2014
- Expanded tape-grass restoration in the Caloosahatchee up to 100 acres
- Large-scale coordinated land conservation (e.g., FLWC and EGCA)
- Addition of 87,000 conservation acres since 2019
- \$13.6 billion annually in regional economic benefits from natural resources ~ equal to the projected losses from another serious HAB

#### Public Engagement Action Plan

##### Intro:

- Updated population growth and opportunities to interact with new audiences

##### PE-1 Inform and engage the general public:

- Updated Activity 1.2 performance measure to monthly mass communication about volunteer opportunities

##### PE-2 Expand reach to new audiences:

- Updated Activity 2.1 performance measure to annual public event with diverse perspective and presenters

##### PE-3 Strengthen partner collaboration:

- New Activity PE-3.2 – convene and coordinate partners for post-disaster response

##### PE-4 Increased outreach to policymakers:

- Updated Activity 4.1 performance measure annual meetings with interested officials

#### Other highlights from the Public Engagement Action Plan:

- Population tripled last 50 years with Polk anticipated to be the most populous by 2055
- CHNEP web presence has doubled in the last 4 years
- Annual Southwest Florida Climate Summit began in 2021 and is ongoing
- CHNEP leverages \$1 of federal finding to \$55 in restoration thanks to partnerships

One member asked whether PE-3.2 should include FEMA as a partner and Ms. Hecker said the partners were usually CHNEP members, which FEMA is not so FEMA may need to be contacted to see if they are amenable to being included in that activity. Another member offered that FEMA does a lot of reimbursement for mitigation and remediation activities. One member asked about changing the wording where “non-profit” is listed to simply “partner” to be able to include engineers, etc. and Ms. Hecker stated that the word “non-profit” has been removed. One member suggested including “adaptations plans” after “assessment” in new activity HR-3.3. Another member said that due to the Clean Water Act July 31<sup>st</sup> deadline, there may be even more accurate OSTDS data to include in the update.

**AFTER DISCUSSION, ERNESTO LASSO DE LA VEGA MOTIONED, SECONDED BY JAMIE WOLANIN THAT THERE WAS CONSENSUS FROM MANAGEMENT COMMITTEE MEMBERS THAT THEIR COMMENTS AND INPUT FROM THE PREVIOUS MEETING CYCLE MEETING HAVE BEEN SUFFICIENTLY ADDRESSED AND INCORPORATED INTO THE CCMP UPDATE. THE MOTION WAS CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

**STEFAN KALEV MOTIONED, SECONDED BY HARRY PHILLIPS THAT THERE WAS ALSO CONSENSUS FOR THE MANAGEMENT COMMITTEE TO RECOMMEND THAT THE POLICY COMMITTEE APPROVE THE DRAFT 2025 CHNEP CCMP. THE MOTION WAS CARRIED UNANIMOUSLY WITH NO FURTHER DISCUSSION.**

**Agenda Item #10 – Link Between Duration of Coastal Red Tide Blooms and Riverine Nitrogen Loads in Southwest Florida — Steve Suau, Carbon Life, LLC, and Jennifer Hecker, CHNEP**

Red tide is a regional phenomenon that generally originate in offshore waters; however, it is not unrealistic to expect a link between watershed loads and red tides. Once these blooms are transported to nearshore waters by currents and winds it is believed that their abundance and duration can increase due to man-made nutrient pollution. Humans can cause red tides to be worse if it has been initiated and the water mass with *Karenia brevis* is transported towards Southwest Florida, then anthropogenic nutrient loads could potentially exacerbate events. *Karenia brevis* can utilize nutrients from human as well as natural sources. Nutrient loads in Southwest Florida’s coastal waters are 2 to 4 times higher than in pre-development times. Recent studies have shown links between intensification of events and nitrogen loads from the Caloosahatchee River.

This presentation was on a study looking at data from the Myakka River, Horse Creek, Peace River, Joshua Creek and the Caloosahatchee River. For an event to be considered a “red tide”, the study looked at two thresholds: one where the maximum daily cell count is greater than 100,000 cells per liter for 30 or more days, and the other threshold where the maximum daily cell count is greater than 10,000 cells per liter for 30 or more days. There was also a built-in buffer of one week where for example, if there are 20 days in exceedance and then 5 days of no data (or below threshold), then followed by an additional 20 days in exceedance, this would be considered a single 45-day event (i.e. not two 20-day events separated by 5 days). There were 12 red tide events meeting the second threshold, and 11 events that exceeded the higher first threshold. During these events, the days with no data averaged 23% of the time, with weekends representing 29% of all days as weekends were sampled less often than weekdays. TN loads and hydraulic loads were both examined with a potential explanatory variable. It was compared to red tide event durations with a potential response variable. TN and hydraulic loads were upon those 30 days before and 30 days after initiation of red tide event. The hypothesis was that TN loads during the initial phases of bloom are the most important. The conclusions were if red tide events are initiated offshore and the water mass is then transported towards Southwest Florida, anthropogenic nitrogen loads can increase their longevity; with the overall pattern appears to be driven by the Caloosahatchee River (a finer scale may be needed to understand the role of the Peace and Myakka Rivers). This is consistent with the findings of

Medina et al., and hydraulic loads had almost identical explanatory power (excessive TN loads reflect excessive hydraulic loads and this cannot be fixed with only the same efforts as those that are working in Sarasota Bay). This study supports existing objectives to reduce TN loads from the Caloosahatchee River, inclusive of Lake Okeechobee discharges to the west coast of Florida. Policies that are more protective of Southwest Florida coastal waters and ecosystems from Lake Okeechobee discharges will help mitigate red tide.

One member asked what should be said when policymakers ask whether enough is being done to mitigate red tide. Mr. Suau said that this study was intentional when it did not specify any specific solutions, as was designed to generate dialogue as to what different solutions may be utilized and beneficial. Another member offered that the goal should be about directing water south rather than west and reservoirs may also serve to mitigate the inundation that the west gets from Lake Okeechobee. A member offered that the solution may be found in Everglades restoration and implementation of basin management action plans.

### **Agenda Item #11 – CHNEP Technical Projects Updates— Nicole Iadevaia, CHNEP**

Nicole Iadevaia, CHNEP’s Director of Research and Restoration, provided the committee with a brief overview on project progress since the previous Management Committee meeting. Highlights are as follows:

The CHNEP Water Atlas is a publicly accessible online tool providing regional water resource data and information about the historical and current conditions of our watersheds and ecosystems. The objective is to translate water quality and other data collected by partners into one place to give holistic management picture to create live ‘reports’ of status and trends. It has four interactive mappers- water quality, hydrology, wildlife/habitat, and climate stressors. The new waterbody, basin, and watershed pages are now live for over 600 waterbodies. The pages are presented with associated FDEP WBIDs and appropriate impairment criteria. Other tools and updates include the NNC calculator Water Quality Dashboard updated threshold values and waterbody Class and Type conform with waterbody classifications from FDEP; Water Quality Trends page has been updated with data through 2022 (with trends for 2023 now in process now); Non-Assessed Waterbody Pages are complete; and there are new layers for CCMP Maps.

The Coastal Charlotte Harbor Monitoring Network (CCHMN) is a regional partnership of agencies that collects monthly surface water quality data. CHNEP funds the sampling, coordinates the Network, conducts field sampling audits, and uploads data into CHNEP Water Atlas. Q1-3 data has been collected. Upper Charlotte Harbor partners are working on Data Management/Optimization to create electronic field entry form to streamline field data entry. Field and laboratory partners participate in the Southwest Florida RAMP quarterly meetings and field/lab method comparison to support data validation. The annual audits completed and CHNEP contributed comments to manuscript for trend analysis of CCHMN data.

Other upcoming projects include Comprehensive Vulnerability Assessments. CHNEP and Charlotte County are currently working with a contractor to manage the project which is expected to start in late summer. CHNEP is also working with Lee County on a CHNEP-funded project addition to start this fall. CHNEP is also working with the Central Florida Regional Planning Council to complete CHNEP-funded project additions in the Heartland Counties (each of which it tailored specifically for the individual county). The Yucca Pens Hydrological Restoration Planning Project has been added to the work plan and CHNEP is working with FWC (as well as WMDs and USFWS) to manage, with contractor procurement can begin later in the fall. For the Tiki Point Harborwalk Living Shoreline Project, CHNEP is working with City of Punta Gorda to manage, and contractor procurement can begin later in the fall. For the Pine Island Flatwoods Habitat Restoration, CHNEP is working with Lee County to manage, and contractor procurement can begin once Lee County has additional funds budgeted. Also, the last call has gone out to provide data for the 2024 National Estuary Program Online Reporting Tool (NEPORT) to report on

annual conservation, management, and restoration accomplishments. CHNEP continues to produce and update fact sheets on basin water quality, basin seagrass health, and state and federal research and restoration funding opportunities.

One member asked how citizen science data was vetted and Ms. Iadevaia responded that most of this science is collected by the Aquatic Preserves program which is accepted FDEP-WIN, and they go through a rigorous QA-QC training. The other data is separated out when the trend analysis is done, and this data is not aggregated and is caveated identifying the distinction.

### **Agenda Item #12 - Management Committee Member Updates — Melynda Brown, Co-Chair**

Justin Mahon (City of Fort Myers): I wanted to introduce myself as this is my first time here. I am the Environmental Compliance Manager for the City of Fort Myers. I grew up in this area (Port Charlotte) and am impressed by the growth since then.

Phil Flood (South Florida Water Management District): About 3 weeks ago, our governing board awarded a \$6 million dollar construction contract to begin on the water quality treatment component of the C-43 reservoir. It should be done to coincide with the completion of the reservoir next year. Our agency is working with DEP on some basin management action plan workshops. DEP will be sending out notices next month for some BMAPs meetings that will directly affect us. They will be talking about the Caloosahatchee, the Everglades – West Coast and Lake Okeechobee. Legislatively, even though the session doesn't start till March, they announced when the committee meetings will start and that will be December, with additional meetings in January and February. The session will be from March till the first week in May. There is a new speaker and a new senate president and with that comes new priorities. The senate president represents the Peace River watershed. The governor is expected to continue his support of the Everglades restoration. The projections are if the economy stays strong, there will be another \$2 billion surplus next year (but that may indicate that there will be a \$2 billion shortfall in the following year).

Vivianna Bendixson (Southwest Florida Water Management District): I would like to extend my thanks to CHNEP and DEP for providing a Letter of Support. The District had applied for a NOAA grant for the Cape Haze project (Coral Creek phase 3) and we have just received the Notice of Award. The award is \$3.7 million from NOAA. We are grateful for this support as well as the support for the previous phases. It is an important project encompassing 410 acres of restoration in a critical area.

Melynda Brown (FDEP): From the DEP Aquatic Preserves, we have been watching these macroalgae blooms in Charlotte Harbor and Matlacha Pass and have already discussed the fishkills that were associated with that. The staff has a lot of challenges monitoring the seagrass this year with limited visibility and algae blooms. Progress is being made and there seems to be better conditions. In 2025, the 50<sup>th</sup> anniversary of the Aquatic Preserves Act will be celebrated statewide. While there are older acts, this act brought together the aquatic preserves, management, and rulemaking. There will be different celebrations and a website is being worked on. From the SWERT team, there was a meeting a few weeks ago focusing on oyster and clam restorations. We are trying to get a work group together to help secure permits.

Brandon Moody (Charlotte County): I would like to thank Sea Grant. They have been working with Charlotte County and other partners to really focus on the algae blooms in Charlotte Harbor. They are about to send out a year's worth of bloom collection to determine nutrients among other things being looked at. Charlotte County will utilize interns to gather data for analysis and determine such factors as distribution sources. There has been another position added to the department which will focus on water quality and related issues. The County is almost done with the draft of the One Charlotte One Water plan which is a comprehensive water quality management strategy. The initial iteration will be discussed by

the commissioners in November with subsequent public hearings. It encompasses several strategies that the County can and should undertake to improve water quality. It also addresses challenges and concerns.

Holly Milbrandt (City of Sanibel): As we approach the 2-year anniversary of Hurricane Ian, we are still in the midst of recovery efforts. The City of Sanibel celebrates its 50<sup>th</sup> anniversary in November and year-long celebrations are planned. They will be hosted by the City as well as other organizations on the island. The Chamber of Commerce will be the clearinghouse for those events. We have completed our initial beach renourishment project. This has included close to 400,000 pounds of sand have been placed. There are additional permits for work to be done around the Sanibel lighthouse. That area is particularly vulnerable and needs additional protection. It will start in November and will hopefully be finished by the end of the year. Also, Tropical Storm Debby seemed to be a more significant event than was initially anticipated. Storm surge was felt island wide. Sanibel has started a process to update its stormwater master plan.

Allie Pecenka (SCCF): SCCF is co-teaching a class right now titled “Preserving Paradise.” It is the first time it has been done. It is being taught with Captains for Clean Water, the Sanibel Chamber of Commerce, and the Everglades Foundation. It involves gathering local business leaders and teaching them about improving water quality. The class is full for this year. There has been a lot of watershed runoff over the last few weeks and months.

Stefan Kalev (City of North Port): The City of North Port fared pretty well after Tropical Storm Debby. As a new Natural Resources Division, we are working on a couple of projects pertaining to canopy coverage throughout the city. That, indirectly, has an impact on water quality. Also, we are contemplating establishing simple air quality monitoring efforts, and maybe in the future, this will lead to water quality monitoring efforts as well. I would also like to thank the CHNEP for all of the outreach materials that were provided to us. They are popular and people enjoy them, and we have distributed a couple hundred of the kids’ activity books. The feedback is very positive.

Gaye Sharp (Polk County): We have our Peace Creek Canal that feeds into the Peace River, and we have a project on the canal that is known as Lake Annie. We are getting ready to begin the construction of wetlands around that area. We are prioritizing going along the Peace River Canal then down the Peace River utilizing more nature-based solutions and types of projects. We are trying to do it from a water quality standpoint and being able to hold the floodwaters a bit longer so that we do not have to peak everything at the same time. We have a new purchase agreement with property owners for another thousand acres along the Peace Creek Canal to do another type of wetlands treatment system (further down the Canal). On Phyllis Branch, which is a tributary into the Peace River, there is a continuous sampler going on. We are going to try to use some of the clay bentonite to absorb some of the phosphorous and with the sampling, we can determine how successful this is. We are trying to mix technology along with the wetlands treatment system as we move along depending on the space.

**Agenda Item #13 - Public Comment — Melynda Brown, Co-Chair**

There was no public comment.

**Agenda Item #14 - Future Meeting Date and Topics — Melynda Brown, Co-Chair**

The upcoming Management Committee meetings for 2025 are January 10<sup>th</sup>, May 9<sup>th</sup>, and September 5<sup>th</sup>. Members were asked to block the date on their calendars and plan to attend in person.

**Agenda Item #15 - Adjourn — Melynda Brown, Co-Chair**

Meeting was adjourned at 12:37 PM.