



CHNEP Policy Committee Meeting

Thursday, September 21st, 2023, 9:00 AM – 1:00 PM
Charlotte Harbor Event & Conference Center
75 Taylor St., Punta Gorda, FL 33950

Policy Committee Meeting Minutes - Draft September 21st, 2023

Members Present:

Brian Smith	U.S. Environmental Protection Agency (EPA) Region 4
Sheila McNamara	Central Florida Regional Planning Council (CFRP)
Randy Smith	Southwest Florida Water Management District (SWFWMD)
Ken Doherty	Charlotte County
Mark Smith	Sarasota County
Gaye Sharpe	Polk County
Nancy Johnson	City of Punta Gorda
Mike Miller	City of Sanibel
Emory Howard	Hendry County
James Satcher	Manatee County
Scott Kirouac	Highlands County
Kraig Hankins	City of Cape Coral
Alice White	City of North Port
Ray Sandelli	Lee County
Bill Veach	Town of Fort Myers Beach
Lori Fayhee	Village of Estero

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
Keara Abel	Coastal & Heartland National Estuary Partnership
John Hall	Southwest Florida Water Management District (SWFWMD)
Claire Jubb	Charlotte County
Stephen M. Suau	Progressive Water Resources
Drew Parker	U.S. Environmental Protection Agency (EPA)
Rick Durbrow	U.S. Environmental Protection Agency (EPA)
Amanda Peck	Florida Department of Environmental Protection (FDEP)
Kevin Miller	U.S. Department of the Interior
Lisa Kreiger	Lee County Department of Natural Resources

Agenda Item #1 – Call to Order and Introductions — Brian Smith, Co-Chair

Policy Committee Co-Chair, Brian Smith called the meeting to order at 9:07 AM. Introductions were then made.

Agenda Item #2 – Agenda Additions or Deletions — Brian Smith, Co-Chair

No additions or deletions were made to the agenda.

MIKE MILLER MOVED, SECONDED BY MARK SMITH, TO APPROVE AGENDA WITHOUT ANY ADDITIONS OR DELETIONS. THE MOTION WAS UNANIMOUSLY APPROVED WITH NO FURTHER DISCUSSION.

Agenda Item #3 – Public Comments on Agenda Items — Brian Smith Co-Chair

No public comments on agenda items were made.

Agenda Item #4 – Management Committee Report — Claire Jubb, Management Committee Co-Chair

The CHNEP Management Committee’s last meeting was held on September 8th, 2023. The Committee first heard the Technical Advisory Committee (TAC) report from TAC Co-Chair, Mark Walton. TAC presentations included: Mr. Bill Christie with the USDA Forest Service on new mapping tools to map vegetative changes after hurricanes; Dr. Joshua Daskin with the Archbold Biological Station on the Florida Wildlife Corridor Water Benefits Report; Dr. Yonas Ghile with the Southwest Florida Water Management District (SWFWMD) on the Draft Minimum Flows for Horse Creek and Charlie Creek; Mr. Stephen Suau with Progressive Water Resources on the addendum to the Community Playbook for Healthy Waterways; and Mr. Dave Blewett with the Florida Fish and Wildlife Conservation Commission (FWC) on the FWC-FWRI investigation of sport fish nurseries and forage fish abundance which was followed by a TAC Committee discussion of cyanobacteria and macroalgae blooms being observed in the CHNEP area – including Charlotte Harbor and Lemon Bay.

The Management Committee then heard from Citizen’s Advisory Committee (CAC) Co-Chair, Harry Phillips, regarding the CAC report. Presentations included three new conservation grants: a grant application for a public planting of trees and littoral species at the Estero Community Park Shoreline; an application to conduct ecological assessments and water quality monitoring with area high school students in Lemon Bay at Cedar Point Environmental Park; and an application for public education and materials to build bat-houses and bird nest-boxes in the urban areas of Polk County. CAC members provided input and recommended funding of all three grants (to be awarded at the beginning of FY2024). The CAC report also included information regarding two presentations by prior conservation grant recipients including The Health Organization’s Underwater Marine Debris Reporting and Removal Project in Lee County which resulted in the removal of over 4,000 pounds of debris, and Suncoast Reef Rovers series of underwater clean-ups throughout the waters of Venice which resulted in the removal of over 7,700 pounds of trash. The CAC meeting continued with an update on the Southwest Florida Fish and Wildlife Conservation Area that is being proposed by the U.S. Fish and Wildlife Service (USFWS). CHNEP has submitted a technical comment letter asking USFWS to consider prioritizing areas identified in the CHNEP Habitat Restoration Plan to be included in the new area boundaries. The draft conservation plan will be available for review/comments sometime this fall with final approval expected in December. The CAC report also included information from Jim Beever regarding the “Persistence of Vision” explaining how habitat preservation and restoration projects are usually multi-year endeavors. CHNEP’s Conservation Specialist gave the final presentation about a recently developed Minnesota Sea Grant “game” that may be used for young adult as well as adult

education. Ms. Jubb mentioned that the videos from both the TAC and the CAC presentations are available on the CHNEP.org website as well as CHNEP's YouTube channel.

The Management Committee then carefully reviewed and discussed CHNEP's FY2024 Work Plan and Budget amendments being proposed this cycle, voting unanimously to recommend that the new draft be approved by the Policy Committee. Committee members also heard three presentations (which are to be presented at this Policy Meeting as well) starting with Mr. Stephen Suau who presented about several applications of passive nutrient reduction systems and projects. Committee questions centered around how and where to use these applications to treat sources such as failing septic systems that are cost prohibitive to replace and how to bring these technologies to scale to be able to apply them more widely. The Committee then heard from Ms. Emily Lang (Florida Department of Environmental Protection) who discussed green stormwater infrastructure funding opportunities. Committee questions included what funding requirements were associated with this funding and whether there were examples of green stormwater infrastructure projects on barrier islands. The final presentation of the meeting was from Drew Parker (U.S. Environmental Protection Agency) who spoke about the continuing Hurricane Ian recovery efforts and several federal funding opportunities. Committee members expressed support for the concepts proposed, specifically that CHNEP could be the vehicle for regional coordination of federal recovery efforts. There was also some discussion on the Community Technical Assistant Specialist that would be co-housed with the CHNEP staff but be completely funded and employed by an outside federal agency entity. Overall, the Committee was enthusiastic about that concept to address human capacity limitations amongst member municipalities to accessing and managing more federal funding. One member asked if the mapping of vegetation (from the TAC Committee report) included seagrass and Ms. Hecker offered that the mapping involved terrestrial not aquatic vegetation.

Agenda Item #5 – CHNEP Update — Jennifer Hecker, CHNEP Executive Director

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

CHNEP planned and executed CHNEP TAC and CAC meetings in April as well as Management and Policy Committee Meetings in May (which included a *One Water: Theory v. Practice* presentation); the amended FY2023 EPA 320 Work Plans and Budget and amended FY2022-2024 BIL Work Plan and Budget both received approval at the May Policy Meeting; the FY2024 EPA 320 Work Plan and Budget, the FY2024 EPA Novated 320 Work Plan and Budget, and the FY2024-2026 EPA BIL Work Plan and Budget were approved and submitted to the EPA with respected grant applications on June 1st. CHNEP Equity Strategy received EPA approval (first in the U.S.) thereby waiving matching requirement for BIL funding. All upcoming 2024 Management Conference Committee Meetings schedules, with dates being posted on CHNEP.org; sent out budget reminder letters to CHNEP contributing members for FY2024 budgeting. CHNEP also completed the FY2020-FY2022 Grant Closeout reports and documents which were submitted to the EPA with an application to novate (transfer) the remaining funds to the new host – Charlotte County – in the form of a new grant; submitted mid-year and 3rd Quarter grant reports; sent out CHNEP Conservation Grant responses to Spring awardees; reviewed/revise the budget for FY2024 and FY2025 with County fiscal team as well as completed FY2024 and FY2025 budget adjustments and 4th Quarter FY2023 budget projections; and processed all final FY2023 quarterly

invoices for the 2nd Quarter as well as additional invoices for ongoing deliverable-based technical and outreach projects.

CHNEP staff attended/organized numerous partnership meetings including (but not limited to) organizing and hosting the 2023 Watershed Summit (June 21st-22nd, 2023); ANEP External Affairs Committee Meetings, Directors' Meetings and Executive Committee; Regional Ambient Monitoring Program (RAMP) Meeting; SWFWMD Environmental Advisory Committee; South Florida Ecosystem Restoration SGC/WG Task Force Meeting; Great Everglades Restoration (GEER) Conference; FWC Landscape Conservation Summit; CFRPC Heartland Resiliency Summit; Southwest Florida Estuarine Restoration Team (SWERT) Meeting; Myakka River Management Coordinating Council (MRMCC) Meeting; monthly CHNEP Water Atlas Management Meetings; CHNEP Watershed Summit Hurricane Planning Meetings; FWC Discussion of Snook Management Approach; CHNEP/CFRPC Natural Resource Emergency Response Plan Element Meeting; SWFMD Resiliency Coordination Forum; Charlotte Harbor Flatwoods Initiative (CHFI) Quarterly Meeting; EPA Stormwater/Green Infrastructure Capacity Support Meeting; and Charlotte County Climate Vulnerability Assessment Scope among others.

CHNEP presented at the Manasota Beach Club on *The Impact of Hurricane Ian on Charlotte Harbor and Other Estuaries in Southwest Florida*; participated as a key stakeholder in the South Florida: Clean Coastal Waters Act Listening Sessions – hosted by NOAA in partnership with EPA – for the Interagency Working Group on the Harmful Algal Bloom and Hypoxia Research and Control Act (IWG-HABRCA); served as a panelist at the Resilient Lee Recovery Task Force Critical Infrastructure Workshop on Natural Resources which are held to help shape and inform the Recovery and Resilience Plan for Lee County; served as a panelist at FWC Landscape Conservation Summit Panel Discussion: *Leaders in Conservation – A Vision for Florida's Future*; CHNEP staff gave a poster presentation on *Habitat Restoration Needs Planning*; gave an oral presentation on the collaboration to restore Charlotte Harbor Flatwoods; was the a sponsor of the FWC Summit and helped the event host to plan a field trip to view projects in Charlotte Harbor and along the Peace River along with contacting presenters and holding coordination meetings throughout May; and presented at the Greater Everglades Ecosystem Restoration (GEER) Conferences on *Moving Waters to Restore Rivers, Wetlands, and Estuaries in the Caloosahatchee Basin*.

For outreach events, CHNEP planned and hosted the 2023 Watershed Summit – an event that had approximately 300 registrants who gathered to discuss research, restoration, and environmental issues in Central and Southwest Florida (proceedings and recordings are available at <https://www.chnep.org/2023-watershed-summit>); hosted a booth at the Wild About Nature Festival held by the Conservation Foundation of the Gulf Coast and distributed educational materials to over 100 guests; hosted a booth at the Conservation Carnival held by the Ding Darling Wildlife Society; partnered with the Conservation Foundation of the Gulf Coast to host a volunteer and outreach event at the Myakka Headwaters Preserve in Manatee County; and partnered with Keep Charlotte Beautiful, FWC, FDEP Aquatic Preserves, Sea Grant and Charlotte County to host a post-Hurricane Ian Waterway Clean-Up on the west wall of Charlotte Harbor for which 57 volunteers collected 2,013 pounds of debris from the mangroves, banks, and waterways. CHNEP also drafted scopes and now have purchase orders for contractor to produce both the FY2024 CHNEP small publications and the 2024 calendar (with the photo contest having ended and winning submissions having been chosen. CHNEP drafted an HH inset on climate and hurricane connection and the 2024 calendar is in design to be printed shortly); drafted and sent out a call for

abstracts for the 2024 Southwest Florida Climate Summit to be held on February 28th and 29th, 2024 (information at <https://www.chnep.org/2024-climate-summit>); and created Lower Charlotte Harbor Flatwoods and South Lee County Watershed Initiative brochures (printed copies are available for Committee members and community partners).

CHNEP's public outreach metrics continue to track upward with 1,902 Facebook followers, 36 new Facebook likes, 6,041 subscribers for CHNEP educational mailings, 3,733 unique visitors with 15,334 page visits to the CHNEP website, 7,023 YouTube views and 52 subscribers, and 26 new Instagram followers (with 528 total). Ms. Hecker encouraged Committee members to "save the date" for the 2024 Southwest Florida Climate Summit – February 28th and 29th in Punta Gorda, with the deadline for abstract submissions extended until October 31st.

Agenda Item #6 – Consent Agenda — Brian Smith, Co-Chair and Jennifer Hecker, CHNEP

a. Policy Committee May 25, 2023 Draft Meeting Minutes

No edits were suggested for the Policy Committee May 25, 2023 Meeting Minutes.

b. Amended FY2024 EPA 320 Work Plan and Budget

Cover, Table of Contents, and Policy Committee Page

- Added "Amended September 21, 2023."
- Reordered Task 3 subtasks so that Lee Comprehensive Vulnerability Assessment becomes 3.4 after Charlotte and renumbered the following counties accordingly to follow funding year.
- Added a Yucca Pens Hydrological Restoration Project Phase I as Task 4.5 and renumbered Restoration/Research TBD Project to 4.6 accordingly.
- Updated DeSoto representative as Steve Hickox and Southwest Florida Management District representative as John Hall.
- Table 1 – Public outreach was changed from \$105,612 to \$115,068 to reflect the rising printing and shipping costs related to the annual CHNEP calendar and Research and Restoration was changed from \$1,030,747 to \$1,021,291 to partially cover the increase to public outreach budget.
- Table 4 – Some changes were made to details on projected travel costs, but overall, the travel budget remains the same at \$25,000.
- Table 5 – Public outreach table was revised to change CHNEP calendar from \$35,651 to \$45,107 and the total was accordingly changed from \$105,612 to \$115,068.
- Table 6 – 2022 EPA BIL FY2022 Restoration Project TBD was changed to Yucca Pens Hydrological Restoration Project Phase I - \$76,350; 2023 projected completed/deferred projects removed including 2023 EPA 320 Water Atlas Enhancement; 2023 EPA BIL CHNEP Water Atlas Maintenance and Improvements added in the amount of \$130,588 as is now going to continue as a "No Cost Extension" project into FY2024; 2023 EPA BIL FY2023 Restoration Project TBD changed to Yucca Pens Hydrological Restoration Project Phase I - \$346,170; 2024 EPA 320 TBD Research and Restoration adjusted from \$23,947 to \$14,491 (if novated grant awarded, it would release \$333,876 which will be added to this category); portion of 2024 EPA BIL FY2024 Restoration Project TBD changed to Yucca Pens Hydrological Restoration Project Phase I in the amount of \$327,480 – the remaining amount TBD is now \$77,320; FY2024 Total Research and Restoration Project Budget was changed from \$1,030,747 to \$1,021,291; and

these changes were then carried through all the following corresponding task narratives.

c. CHNEP Citizen’s Advisory Committee New Applicants

The CAC is comprised of two committee members and one alternate for each of the ten counties that CHNEP encompasses. When seats are vacant or become available, CHNEP staff and current CHNEP CAC members seek community leaders to fill them. For those applying for vacant CAC seats, they are asked to contact the CHNEP Policy Committee member from their respective counties to notify them of their interest. They are also asked to attend one CAC meeting. Their applications are brought to the Policy Committee for approval of their potential appointment of becoming official members. They serve in their individual capacity and therefore have no personal alternate. Rather, the appointed county alternate would be contacted.

- Church Roberts was recommended by Pete Quasius who is a current member from Hendry County that is retiring; Mr. Roberts has applied seeking to represent Hendry County – a county that he works extensively – and is well versed in the issues pertaining to Hendry County; Mr. Roberts has emailed Commissioner Howard to make him aware of the application and he offers extensive experience with the habitat types and wildlife in the area; and he has also been involved with many non-profit environmental organizations for much of his 30-year career including serving as Chair for the Estero Bay Agency on Bay Management in Lee County.
- Tonya Bramlage was recommended by Bob Winter who was a CAC member for Charlotte County and is now retired; Ms. Bramlage is seeking to represent Charlotte County – a county that she lives and works extensively in; she emailed Commissioner Doherty to make him aware of her application; she has extensive experience with Charlotte County issues including working with the Lemon bay Conservancy where she is the Director of Communications and Outreach – working on seagrass, tarpon, and clam restoration and research projects as well as LBC volunteer initiatives; she is also a member of Peace River and Venice Area Audubon Society, the Florida Native Plant Society, Lake Watch and Boca Grande Sea Turtle Watch.

d. CHNEP 2024 State Legislative Priorities

These priorities have been reviewed and approved in prior years by the Policy Committee and they include:

- Continue and expand annual funding for the Coastal and Heartland National Estuary Partnership including recurrent dedicated funding.
- Create or strengthen nutrient and pollution reduction policies to reduce loads from wastewater, septic, agricultural runoff, reclaimed water, stormwater, fertilizer, and internal “legacy loads.”
- Support the adoption of updated stormwater standards that require stormwater systems that maximize the capture and treatment of nitrogen and phosphorus to be used in Environmental Resource Permitting statewide.
- Expand funding for innovative nutrient reduction projects, especially those that promote natural system solutions.
- Establish a statewide, long-term funding program through the Florida Department of Environmental Protection with sufficient funds for competitive, local cost-share

projects for estuary restoration including upgrading wastewater treatment to advanced wastewater treatment and increasing capacity; septic to sewer conversion; groundwater contamination remediation projects; habitat restoration (ex. Seagrass, oysters, living shorelines); stormwater retrofitting projects; legacy load/muck removal remediation projects; and resiliency projects and planning.

- Support increased funding of Florida Forever and Florida Rural and Family Lands programs.
- Support local governments' continued ability to enact more stringent environmental protection ordinances.

One Policy Committee member mentioned that from a fiscal standpoint, the increase in the cost of the calendar is roughly a 28% increase and wondered whether the hardcopy could transition/evolve into a virtual version as it may be a tradition that people are holding onto as people are now receiving their information differently. While CHNEP has considered this issue, several CHNEP organizational members as well as the EPA that funds it have indicated the calendar is important to them, and they want it to continue. Ms. Hecker also mentioned that CHNEP gets more contacts (from the public) throughout the year from the calendar than any other outreach initiative. It has significant reach throughout the counties and many supporters are from an older demographic that rely and enjoy the calendar immensely. The calendar also always includes topical substantive information. Ms. Hecker said this is enormous undertaking – not just financially but also as much of the work occurs inhouse. One Policy Committee member mentioned that having previously been a teacher, the calendar offers significant educational value as well. Another Committee member mentioned that a hybrid may be a better way to deal with the costs. It is an “attractive, eye-catching piece that gets the conversation going.” Another member stated that it is function of the demographics in this region that people appreciate tangible things, and this calendar receives numerous compliments. Ms. Hecker indicated that the calendar is a metric in the current Comprehensive Conservation and Management Plan (CCMP), but that the CCMP is going to be revised this coming year – so that might be a good opportunity for Committee members to raise and potentially reevaluate it as a metric.

KEN DOHERTY MOVED, SECONDED BY RAY SANDELLI, TO APPROVE THE CONSENT AGENDA. THE MOTION WAS UNANIMOUSLY APPROVED (WITH ONE ABSTENTION) WITH NO FURTHER DISCUSSION.

Agenda Item #7 – Executive Director Evaluation — Brian Smith, Co-Chair

The annual evaluation for the CHNEP Executive Director was undertaken by the CHNEP Policy Committee, with a written evaluation sent out over the summer for Committee members to fill out and return. 10 members provided responses, with both numeric scoring (1-5 scores) and narrative responses. The average scores were as follows: Ability to Communicate (4.9), Leadership (4.8), Integrity (4.9), Organization and Project Oversight (4.7), Intergovernmental Relations and Interaction with Others (4.7), Budget Planning and Oversight (4.8), Organizational Representation (4.9), Judgement and Decision Making (4.8), Organizational Management and Operations (4.7), and Organizational Outreach (4.8). Narrative written comments were reviewed and were positive. Members stated that Ms. Hecker is doing a great job and that CHNEP has a great team. Committee Member Alice White mentioned she had provided an evaluation and supplied a hard copy. It was discussed that the scores would be recalculated to average in these scores with those previously

received and that the revised evaluation with those scores and comments included would be signed by the Policy Committee Co-Chair.

KEN DOHERTY MOVED TO APPROVE THE EXECUTIVE DIRECTOR ANNUAL EVALUATION REVISED TO ALSO REFLECT COMMITTEE MEMBER WHITE'S ADDED EVALUATION SCORES AND COMMENTS, SECONDED BY RAY SANDELLI. THE MOTION WAS UNANIMOUSLY APPROVED WITH NO ABSTENTIONS OR OBJECTIONS.

Agenda Item #8 – Innovative Nutrient Reduction Projects for Improving Water Quality — Stephen M. Suau, P.E.

Mr. Stephen Suau presented, who has worked in water management in Southwest Florida for forty years in both the public and private sectors. Florida adopted numeric nutrient criteria for phosphorus and nitrogen several years ago in coordination with the EPA. That criteria does acknowledge the diversity of hydrogeology within the state. Different regions have different criteria depending on where you are. The northern part of Charlotte Harbor – north of the Caloosahatchee River is in the West Central Region and the remainder is in the Peninsula Region. The narrative nutrient criteria rules require that in no case shall nutrient concentrations of a body of water be altered to cause an imbalance in natural population of aquatic flora or fauna. There are areas of Florida that are naturally high in phosphorus. Like water, nitrogen can exist as a gas, liquid or solid. Like the water hydrologic cycle, there is a natural nitrogen cycle. With 78% in the air you breathe, nitrogen is the most common element in the atmosphere. The nitrogen atoms are hard to break up but there are nitrogen-fixing bacteria that is naturally occurring that can convert ammonia nitrogen to nitrate. Nitrogen consists of organic nitrogen, nitrite, nitrate, and ammonia nitrogen (in nature with most of it being organic nitrogen). In general, waste products, septic tank effluent, reclaimed water, etc. can be almost 75% nitrate. This means that this water is like liquid fertilizer.

Around 1940, two inventors – Haber and Bosch, discovered how to extract nitrogen out of the atmosphere and that led to the Green Revolution. In the agriculture industry in Florida, people are going back to building soil because the herbicides and pesticides are so expensive that farmers have been paying more per acre for input than for output. As a result, compost piles/operations are becoming more popular due to market demand. There are two current metrics used – one is the amount of dollars per pound that nitrogen reduced and the other is the total annual amount of nitrogen removed. The Florida Department of Health did some of the best research that this presenter has ever seen. Over the course of four to five years, the question they were trying to answer was if there was anything that they could do in the design of septic systems that would remove nitrate. What they found was that if they put some kind of carbon layer in an anaerobic environment (such as woodchips or sawdust which are carbon sources that act as a host) it would facilitate the conversion of nitrate to dinitrogen. In 2016, the State of Florida passed the Springs and Aquifer Protection Act which set in motion that if a septic system was installed, it was required to have one of these carbon layers.

One of the examples of this passive nutrient reduction system is Holly Nursery (North Florida). They fertilize the fields, and that reactive nitrogen is seeping into the adjacent waterways which is

resulting in some high nitrate concentrations. The soils are porous, and stormwater is not being retained as it is an older system. They decided to build a trench long the farm – outside of all the vegetation – about six feet wide and six feet deep. It was then backfilled with fifty percent sawdust and fifty percent sand. This created a barrier and now the water is seeping in the direction of the trench. The cost was about \$50,000 for roughly 1,050 linear feet (\$48 per linear foot) which resulted in approximately 70% reduction in nitrate which equals about 3,125 pounds per year. The system life is about twenty years. Another example of this passive nutrient reduction system is Palmer Ranch (Sarasota County). It includes two gabion baskets filled with woodchips and an internal perforated PVC pipe system. Low flow rated pumps are included to cycle the pond water through each of the systems which together are estimated to be recycling the pond volume in 29 days (approximately one month). The cost was \$20,000 for two systems (\$10,000 each) with 55% total nitrogen reduction (2,935 pounds a year), 77% nitrate reduction (3,398 pounds per year) and has a system life of about twenty years. An additional example is Lakewood Ranch. Braden River Utilities (BRU) is the exclusive non-potable water provider for the growing fifty-square mile Lakewood Ranch service area. Irrigation water sources include groundwater, surface water, City of Sarasota AWT reclaimed water, City of Bradenton AWT reclaimed water, and Manatee County non-AWT reclaimed water. BRU, with cooperative funding assistance from SWFWMD, implemented a passive nutrient reduction system with the objective of reducing nitrogen and phosphorus concentrations in up to one mgd (million gallons per day) of Manatee County's reclaimed water to meet AWT standards using various organic carbon medias. Some of the cell media utilized was sawdust plus biochar, pine mulch plus biochar, woodchips plus biochar, and woodchips alone. (Sawdust is in unlimited supply in Florida.) The cost was \$750,000 for two acres (\$375,000 per acre) with a 66% total nitrogen reduction (12,918 pounds per year), 77% nitrate reduction (17,752 pounds per year – which is probably closer to 90% with labs coming back that the nitrate is practically undetectable) and has a system life of 20 years. In the Lakewood Ranch project, they were also able to run DNA to determine the microbial diversity and they discovered that there were between 550 and 905 different species. In the Charlotte Harbor Watershed, at the Pioneer Mitigation Bank, there are about three miles of passive nutrient reduction systems which edge along the riverine corridors of Troublesome Creek and Hickory Creek. Many of these projects are funded by the private sector which is a good sign that these techniques are cost-effective. The technology can go as far as the imagination can reach. Wherever there are nitrate problems (which is common) in agriculture, in urban wastewater – there are many ways to implement this. There are opportunities all around. Once it is understood what this will do for water/the environment, contractors (e.g., irrigation, media) usually get right on board. Biochar is another passive nutrient reduction media. It is produced by heating organic material with limited or no oxygen. The resulting media is stable carbon/charcoal that can be used as a soil amendment and may be effective in absorbing phosphorus. The ultimate source for control solution is compost with complete beneficial biology as the compost that is readily available is typically not very good.

One member asked about those counties that have water reclamation facilities (expanding to incorporate AWT with a time limit), whether with this technique, could defer going to AWT. Mr. Suau said that much of this information (which has been published from the Department of Health study) says that under certain statute in certain areas you must put in a denitrification system when

installing septic tanks. Even though this may only apply to certain counties there is no reason that the remaining counties cannot require that under ordinance. Mr. Suau suggested possibly incentivizing installing the denitrification systems for homeowner's associations because everyone benefits. This member inquired about what is the most effective technique to remove nutrients from stormwater and Mr. Suau stated stormwater recycling – using it as an irrigation source which is a way of taking those nutrients and reapplying them. Another member commented that the presentation was very interesting and wanted clarification if this is relying on 15 years of solid science of nitrogen mitigation and whether the Department of Health is looking to carry that mitigation statewide. Mr. Suau said that with the legislature constantly changing over time, he cannot say that the current legislature is even aware of the study. Mr. Suau said that the effectiveness of septic tanks depends on the local hydrogeology more than anything else. Another member inquired as to why – with the examples given – does it show that more total nitrogen is removed versus nitrate. Mr. Suau said that the reason is that nitrate is what the denitrification bacteria was targeting. Another member mentioned that in the presentation sand and sawdust (50/50 combination) as well as the longevity of it (about 20 years) and was that because it was submerged with the water table and that there is very little oxygen and Mr. Suau said that is exactly the reason. It was also mentioned that several counties have options for septic tanks – including anaerobic systems. Mr. Suau stressed that is important to remember that in a nitrogen cycle, both an anaerobic and an aerobic environment to be completed. An additional member asked whether building the trench/wall (in the Holly Nursery example) would have any impact on reducing the flow of phosphorus as well. Mr. Suau said that they did not sample that during the testing. A reduction of phosphorus hasn't really been seen in an anaerobic environment but there has been reduction with the use of biochar (about 25%). Another member asked what the cause is of the degradation of the sub straight material that gives a 20-year life and what happens at the end of that life – whether it needs to be disposed of. Mr. Suau said the microbes are eating the nutrients – as bacteria is the most nutrient-dense organisms on the planet. They are also consuming the carbon and what happens is that the gabion baskets will float upwards as the woodchips are consumed. Another member asked for the link to this presentation as well as contact information for Mr. Suau and Ms. Hecker said that it would be provided. Mr. Suau mentioned that he has looked at about 70 long-term water quality monitoring sites to determine how much of the nitrogen on average is in the nitrate. He said that it is difficult to discern the difference in nitrogen quantities in an urban area versus a natural area. What was discovered is that there seemed to be a correlation between the amount of development/wastewater and the percentage of nitrogen that is in the form of nitrate.

Agenda Item #9 – State Funding Opportunities for Green Stormwater Infrastructure — Emily Lang, Florida Department of Environmental Protection

Presenting for Ms. Lang was Ms. Amanda Peck, FDEP. Green stormwater infrastructure (GSI) can be used to supplement or replace traditional gray stormwater infrastructure for managing the impacts of rain in urban areas. GSI reduces pollution and treats stormwater by retaining rainfall near its source instead of directing it to a centralized pond or treatment system. FDEP makes a distinction between GSI and LID (low impact development) in that LID seeks to prevent stormwater runoff while GSI seeks to mitigate it (by using plants and impervious surfaces where

the water may be combined with bioactive materials – BAM – the most popular being the “Bold & Gold” that was produced at UCF). Most of these GSI systems take place underground. If there are plants, there should be “Florida-Friendly Landscaping” (FFL). The nine principles of FFL are: 1) Right Plant, Right Place; 2) Water Efficiently; 3) Fertilize Appropriately; 4) Mulch; 5) Attract Wildlife; 6) Manage Yard Pests Responsibly; 7) Recycle Yard Waste; 8) Reduce Stormwater Runoff; and 9) Protect the Waterfront. The FFL goal is to have beautiful landscapes reducing nutrient pollution, managing stormwater, providing for wildlife, and conserving and protecting Florida’s water. All the information presented may be found at <https://gsi.floridadep.gov/resources/technical-resources>. This website includes technical resources such as general GSI tool and resources; GSI code audit tool; modeling tools; and maintenance manuals and training. There are also regional manuals with a list of region-specific GSI/LID manuals as well as community engagement resources such as an introduction to GSI, GSI education resources, webinar series, and nonpoint publication tools. The goal of these initiatives is to promote GSI success stories which include project goals, design, funding, maintenance, community engagement, and outcomes/results. If members know of any GSI projects, they can submit them at <https://gsi.floridadep.gov/resources/technical-resources>. Another successful example is the Minutemen Corridor Stormwater LID Improvements. The FDEP’s main grant is the EPA 319 Nonpoint Source Grant and while this grant can fund many different projects, the main goal is to have it fund GSI projects. This grant includes overseeing the construction and education of the project; there is a 40% match requirement for which state grants/loans may be used; there is a monitoring requirement; planning and design may be eligible for matching; and the only downside is that it may take 18 months to 2 years to receive the grant award. Other projects that are eligible for this grant award are water quality improvement, groundwater protection, water quality restoration, stormwater treatment best management practices, nonpoint source education, and septic to sewer.

Another grant available is the State Water Quality Assistance Grant (SWAG). This is a state grant for projects that reduce stormwater pollutant loadings in impaired waterbodies. It is for shovel-ready construction projects; there is no match required; there is no water quality monitoring; and there is a fast application-to-grant award date. This grant is may also be used for water quality improvement, groundwater protection, water quality restoration, best management practices, and reuse water. There are 2 formal proposal submission times each year – typically Spring and Fall (with no set date). However, nonpoint proposals may be submitted year-round and if there is funding available, grant awards may be awarded out of cycle. The procedure is to contact Connie Becker Grant Coordinator - (Connie.L.Becker@floridadep.gov) for a copy of the latest grant proposal form. In addition to the Nonpoint and SWAG grants, there is centralized funding resource at the Protecting Florida Together website where you can learn about many other different available grants (<https://protectingfloridatogether.gov/state-action/grants-submission>).

Agenda Item #10 – Continued Recovery and Federal Funding Opportunities — Drew Parker and Rick Durbrow, U.S. Environmental Protection Agency & Federal Interagency Recovery Coordination Team

Mr. Drew Parker began by explaining that the FEMA’s Interagency Recovery Coordination (IRC) is a coalition of various federal agencies that work together after a disaster occurs. The strategies

for recovery included Environmental Finance Centers (EFC), wastewater, drinking water and stormwater infrastructure resiliency; the College/Underserved Community Partnership Program (CUPP) coordinated technical assistance to underserved communities through student internships, practicums and capstone projects; the Recovery and Resiliency Partnership (R2P2) which dealt with conceptual design and planning assistance; and Watershed Resiliency Partnership (WRP) which handled large-scale stormwater management and water quality improvement projects. One example of an R2P2 project was Mexico Beach, Florida which suffered destruction after Hurricane Michael. This was considered a Recover and Resiliency Partnership Project (R2P2- which is a strategy that is a community-focused technical assistance initiative which creates a holistic planning framework aimed at enhancing community resiliency to future storm impacts and strengthening local economies with connections to existing natural assets) which included EPA Region 4, IRC, and the coordination of field operations. The effort was to support coastal recovery after the hurricane and improve the city's future resilience to stormwater impact. The stormwater from neighborhoods east of 15th Street currently moves toward the 8th Street Canal and discharges to the Gulf of Mexico. The proposed system directs stormwater to wetland detention areas (when needed) to balance the flow through the large box culvert into Panther Swamp. Reversing the flow of stormwater north to Panther Swamp presents the opportunity to safely close the 8th Street Canal and create beach access under Highway 98 for pedestrians, bicyclists, golf carts, and paddlers. Vacant wetland properties located along the stormwater network can be enhanced to hold excess stormwater during rain events. The wetlands also provide recreation opportunities for wildlife watching, walking, or biking along the street edges and boardwalk paths. (The concept plans were prepared with assistance from the National Park Service – River, Trails & Conservation Assistance Program.) In extending the existing walking path, it would provide safe, off-street connections for pedestrians and bicyclists between neighborhoods east and west of the park. Greenspaces along the path accommodate amenities such as pollinator gardens, native plantings, outdoor art, and fitness stations.

Rick Durbrow spoke about the Watershed Resiliency Project (WRP - large scale stormwater management and water quality improvements projects) is a proposed strategy to utilize the EPA National Estuaries Program (NEP) framework to foster partnerships between regional, state, and federal agencies to create a long-term recovery vision aimed at improving water quality and stormwater management to enhance regional resiliency to extreme weather events (examples being Project Greenshores in the City of Pensacola and Cascades Park in the City of Tallahassee). The goal is to identify local and regional scale green infrastructure, living shoreline, and nature-based solution projects that provide the greatest impact on reducing flood risk and improving water quality across the entire watershed. It is also to develop design concepts, conduct community outreach, and assist with a framework for implementing strategies. It is also to develop design concepts, conduct community outreach, and assist with a framework for implementing strategies. The Community Technical Assistant Specialist is an identified long-term assistance need (with duties to include needs assessment, grant writing, and project management). This would be a staff position(s) that would work directly with CHNEP and IRNEP staff, reporting to the CHNEP and IRNEP Executive Directors. This additional technical support would greatly enhance the ability of each NEP to serve the needs of its vulnerable and disadvantaged communities that have already been identified in 5-year strategic plans required by the USEPA for the allocation of available Infrastructure Investment and Jobs Act (IIJA) funding to underrepresented communities. Ms. Hecker stated how successful the relationship between the IRC and CHNEP has been over the past year from which a comments/concerns document was created. This was a consolidated document

that was given to the federal agencies to understand concerns people were having and to find ways to address those concerns. Ms. Hecker also that ideally there would be at least 2 community technical assistants housed with the CHNEP staff and they would act the boots on the ground for the 10 counties that CHNEP oversees. One member mentioned Wastewater SRF (Hurricane Ian recovery) as additional source of funding to fill in the gaps.

Agenda Item #11 – CHNEP Technical Projects Updates and New Tools — Nicole Iadevaia, CHNEP

Ms. Nicole Iadevaia, CHNEP Director of Research & Restoration, provided the committee with a brief overview of updates regarding recently completed, current, and on-going technical projects (or phases of projects).

The Coastal Charlotte Harbor Monitoring Network (CCHMN) is a regional partnership of agencies that collects monthly surface water quality data in the estuaries using consistent and technically sound methods. There are about sixty field site samples taken from ten waterbodies each month. Participants collect, analyze, and upload water sample results to a state assessment database (FDEP WIN). CHNEP's role is to: directly fund sampling efforts to fill data gaps; host annual CCHMN partners' meetings; house and update the network's SOPs; conduct field sampling audits; attend RAMP meetings; and upload data onto CHNEP's Water Atlas pages on behalf of partners. The FY2023 CCHMN audits are complete. CCHMN quality assurance activities include annual field audits conducted with each sampling partner; field and laboratory partner participation in the Southwest FL RAMP quarterly meetings; and CHNEP Management Conference review of data and statistical methods during regular water quality status and trends reporting. It is anticipated that further quality assurance measures will be implemented in the future as needed. Each participating agency will continue to ensure techniques are standardized and meet FDEP requirements.

Also, a big overhaul of the CHNEP Water Atlas website is underway. CHNEP is working with a contractor to redo the whole website to make it more complete, accurate, and user-friendly. The data will soon be grouped by waterbody, basin, and watershed pages with their associated WBIDs and impairment status. There will be new dials to see how the most recent data measures against regulatory thresholds. There will be interactive mappers for Water Quality, Hydrology, Wildlife/Habitat and Climate Change that will be displayed to give a comprehensive overview of conditions. At the request of partners, CHNEP has updated the Water Atlas seagrass pages. New features include updated acreage graphs through 2022 and updated transect graphs through 2021; algae and epiphyte graphs for all basins through 2021; and an interactive mapper that has seagrass and macroalgae maps with a monitoring station and transect data and graphs and an FDEP prop scar map layer. The Water Atlas now also feature custom Winter Haven Lake Assessments on the waterbody pages for those lakes within the City of Winter Haven and there is a new landing page for the Place-Based Recreational Fishery Project.

Another project is the Myakka Headwaters Preserve Project which is on 363 acres of conserved land within Flatford Swamp (the Myakka River's largest forested wetland in Manatee County). It involved the treatment of exotic species in a 20-acre floodplain forest and a 4-acre basin forest in April (treatment of Old World Climbing Fern conducted within the two designated parcels totaling 24 acres). Funding agencies conducted a site visit in May. Treatments were successful in meeting treatment success criteria with the agreement. The Conservation Foundation of the Gulf Coast

continues to have volunteer workdays on the property to supplement contract work (if interested go to <http://www.conservationfoundation.com/events/>).

Agenda Item #12 – Policy Committee Member Updates — Brain Smith, Co-Chair

Ray Sandelli, Lee County: Thank you for the overwhelming amount of information. The assistant county manager is now in charge of Grants Management. Trying to communicate information to the public about these issues, including working hard with the media itself so that the information being putting out is factual.

Alice White, City of North Port: Thank you to Stephen Suau for his presentation. One assumes people know about these things already and then you come across a scenario of someone who doesn't (ex. Florida-friendly landscaping). The City of North Port has a Natural Resources Department coming on board that will educate about native trees, water quality, and wildlife. I really appreciated the presentation on Green Infrastructure. The focus in past years was so heavy on the grey infrastructure, I appreciate hearing about ways to incorporate green infrastructure as well. I will be following up with Mr. Suau after the meeting to get more information.

Mark Smith, Sarasota County - Thank you Stephen for the presentation. Cutting back on nutrients and algae growth is a great thing. In Sarasota County, we have FEMA-based flood elevation. The day after Idalia, we ended up with tide flooding on our barrier islands and other places that were worse than during the storm event. Lowering the base flood elevation is not a good idea with the storms getting stronger because of the warmer water and sea level rise. It seems that there is an opportunity for exploring a designed base flood elevation in Sarasota County through this HUD money coming our way. There could be that money to rebuild is contingent on rebuilding three ft above base flood elevation. The Florida Building Code only requires one ft above base flood elevation.

Lori Fayhee, Village of Estero: We had an Estero village council meeting last night and discussed water monitoring, adding sampling sites to collect more data. We are working toward doing the septic to sewer conversion and finding ways to pay for it. We will need to educate residents as to the benefits of doing so. . Excited to share the nutrient cleansing projects with my community. Thank you everyone who presented today.

Randy Smith, SWFWMD: Governing board meeting will finalize our FY2024 budget. In the final stages of peer review right now for the Charlie and Horse Creek MFL and we are deciding if we will have a public meeting in the October/November time frame. We are getting ready to fly our 2024 seagrass mapping effort. We saw large declines in past years. Our Cooperative Funding Application is open and will close on October 6th.

John Hall, SWFWMD: This was my first meeting, I look forward to future information as it becomes available, and I think I will enjoy these meetings moving forward.

Emory Howard, Hendry County: I really got something out of the presentations today. Hendry County is looking forward to a lot of new projects in the new fiscal year. We have good funding for expanding and improving our utility system, moving from septic to sewer. We will have a busy this year making that transition.

Scott Kirouac, Highlands County: Town of Lake Placid on south end of county, they were recipients from USDA \$40,000 grants for Septic-to-Sewer Conversion. They are going to be constructing a new wastewater plant and focusing on the converting septic to sewer. It will reach

out to unincorporated parts of the county as well. SFWMD having discussions about a proposed reservoir called LOCAR, with federal funding in place for this project to start moving forward. The project will capture the water coming out of the Kissimmee River during the rainy season and keeping a more constant level in Lake Okeechobee, hopefully eliminating the need to release water from Lake Okeechobee during the dry season. It will provide huge benefits to the ecology of the lake and environment there. It will take several years to construct on over 14,000 acres. More information is on the SFWMD website. The agencies are currently working with landowners, mostly Lykes Brothers, and they have been receptive in those talks.

Kraig Hankins, City of Cape Coral: The City of Cape Coral received a notice from USDA that we are getting a grant for urban reforestation for marine spaces and parks.

Mike Miller, City of Sanibel: Sanibel is undertaking a beach renourishment project that will focus on mitigating the large scours. It cannot start until after sea turtle season is over by the end of October. It needs to be completed by February for the shorebird nesting season. We think we'll need a lot of sand brought over by truck. It's going to require about 350 easements from privately owned property along the beach. In terms of financing - a little more than half will come from FDEP and less than half from FEMA. In connection with sea turtle, we had a record nesting season this year with over 12,000 nests.

Bill Veach, Town of Fort Myers Beach: The Town of Fort Myers Beach is also undertaking beach renourishment, though we will be doing a little more dredging. There is no vegetation or buildings now to block the light from the beach so are seeing a lot of sea turtles disorientation. There is still much debris bound in the sediment in the channels and a lot of Ian debris was stirred up and washed on shore from Idalia. There is still a lot of debris that is submerged on the gulf side and in our canals, which are part of our stormwater system.

Brian Smith, EPA: Look forward to exploring ways we can collaborate and benefits all the members. There are tremendous grant opportunities right now.

Sheila McNamara, CFRPC: Central Florida Regional Planning Council are working with Heartland counties on their vulnerability assessments. We are also working with Avon Park Air Force Range Area to conduct a military resiliency review.

Agenda Item #13 – Public Comment — Brian Smith, Co-Chair

There were no comments from the public.

Agenda Item #14 – Future Meeting Dates and Topics — Brian Smith, Co-Chair

Contact jhecker@chnep.org if you would like any topics added to future agendas. Upcoming meetings in 2024 are: January 25th, May 23rd, and September 20th.

Agenda Item #15 – Adjourn – Brian Smith, Co-Chair

Meeting was adjourned at 12:41 PM.