

COASTAL & HEARTLAND NATIONAL ESTUARY PARTNERSHIP FISCAL YEAR 2025 WORK PLAN



2024 Southwest Florida Climate Summit, an annual public education and engagement event that the CHNEP organizes and hosts each year for the region

May 23, 2024

[Amended September 20, 2024](#)



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The Coastal & Heartland National Estuary Partnership (CHNEP) is comprised of citizens, elected officials, resource managers and commercial and recreational resource users working to improve water quality and ecological integrity of other natural resources in its boundaries. A cooperative decision-making process is used to address diverse resource management concerns in its 5,416-square-mile area. Many of these partners also financially support the Partnership. The governmental entities in the CHNEP and its service area include:

U.S. Environmental Protection Agency

U.S. Fish & Wildlife Service

U.S. Army Corps of Engineers

U.S. Geological Survey

U.S. Department of Agriculture

National Oceanic & Atmospheric Administration

Florida Department of Environmental Protection

Florida Fish & Wildlife Conservation Commission

Florida Department of Economic Opportunity

Florida Department of Agriculture

Central Florida Regional Planning Council

Southwest Florida Regional Planning Council

Southwest Florida Water Management District

South Florida Water Management District

West Coast Inland Navigation District

Peace River/Manasota Regional Water Supply Authority

Florida Gulf Coast University

University of South Florida

University of Florida

Polk, Sarasota, Manatee, Lee, Charlotte, DeSoto, Hardee, Hendry, Highlands, and Glades Counties and the incorporated Cities and Towns of Dundee, Haines City, Auburndale, Lake Alfred, Lake Wales, Lake Hamilton, Lakeland, Winter Haven, Eagle Lake, Bartow, Fort Meade, Bowling Green, Wauchula, Zolfo Springs, Arcadia, Venice, North Port, Punta Gorda, Fort Myers, Fort Myers Beach, Cape Coral, Sanibel, Estero, LaBelle, Moore Haven, and Clewiston.

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CHNEP Executive Director

Ms. Jennifer Hecker

PREVIOUS YEAR – FY2024 - PROGRAM ACCOMPLISHMENTS

- WQ-1: Support a comprehensive and coordinated water quality monitoring and assessment strategy
- CHNEP continued to support the Coastal Charlotte Harbor Monitoring Network (CCHMN), providing funding and staff support including conducting the annual auditing and convening the various sampling entities to hold an annual meeting.
 - CHNEP staff continued to support the Florida Department of Environmental Protection's Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network (CHEVWQMN) this included updating the Water Atlas Aquatic Preserve pages and CHEVWQMN biannual data updates.
 - CHNEP staff worked with USF to revise and update the CHNEP Water Atlas as well as ensure all publicly available water quality data is being uploaded.
 - CHNEP staff presented on American Water Resources conference, Biennial Coastal & Estuarine Research Federation, Gulf of Mexico Conference, EcoSummit, Geospatial Water Technology, Coastal Habitat Integrated Monitoring and Mapping, and the CHNEP Water Atlas.
- WQ-2: Develop water quality standards, pollutant limits, and clean-up plans.
- CHNEP drafted and submitted a technical comment letter to the Florida Department of Environmental Protection regarding the prioritization of development of Total Maximum Daily Load pollutant limits within Outstanding Florida Waters in the CHNEP area.
- WQ-3: Reduce urban stormwater and agricultural runoff pollution
- CHNEP will continue to provide public presentations and information on urban stormwater and agricultural runoff pollution.
 - CHNEP will continue to support partners in the implementation of stormwater and agricultural runoff reduction projects.
- WQ-4: Reduce wastewater pollution
- CHNEP continued to support its partners in their septic to sewer conversions of those areas that were determined to be high priority.
- WQ-5: Reduce harmful algae blooms
- CHNEP continues to update the Coastal Conditions mapper that displays harmful algae bloom data on the CHNEP Water Atlas, for the public to see and understand the magnitude of harmful algae blooms impact on water quality to build public support for taking actions to reduce blooms.
- HR-1: Conduct data collection, modeling, and analyses to support hydrologic restoration
- CHNEP completed the Charlotte Harbor Flatwoods Initiative (CHFI) hydrologic restoration project, which entailed extensive surface and ground water data collection to create a model and hydrological restoration planning tool (available at the CHNEP Water Atlas). The final report has been made available.
- HR-2: Increase fresh surface water and groundwater availability to support healthy natural systems
- CHNEP and its partners continued to support the implementation of recovery strategies and projects related to upholding the Minimum Flows and Levels and Minimum Aquifer Levels in the CHNEP area.
 - CHNEP continued to use its educational outreach materials and events to reinforce the need of sufficient freshwater for healthy natural wetlands, rivers, and estuaries.

HR-3: Preserve and restore natural flow regimes

- CHNEP continues to support the South Lee County Watershed and Lower Charlotte Harbor Flatwoods Initiatives, that would restore more natural flow regimes to a large portion of the CHNEP area.

FW-1: Protect, restore, and monitor estuarine habitats

- CHNEP continued to support and participate in the Southwest Ecosystem Restoration Team (SWERT). SWERT partners focus on the restoration and enhancement of estuarine habitat including coastal marsh, mangroves, oyster reefs and seagrass.
- CHNEP staff worked with USF to add new features and tools, as well as enhancements to the text and documents on existing pages throughout the CHNEP Water Atlas. Some of the updates included the Seagrass pages and the Trends Analysis page.

FW-2: Protect, restore, and monitor environmentally sensitive lands and waterways including critical habitat areas

- CHNEP completed the Myakka Headwaters Preserve, which included replanting of native species and removal of exotic invasive plants. The final report was received and the project has been closed out.

FW-3: Assess and promote the benefits of land, waterway, and estuary protection and habitat restoration

- CHNEP drafted and submitted a technical comment letter in support of the proposed US Fish & Wildlife Services Everglades to Gulf Conservation Area, as well as a letter in support of the proposed Southwest Florida Water Management District Cape Haze Ecosystem Restoration Project for NOAA's Transformational Habitat Restoration and Coastal Resilience.

PE-1: Promote environmental literacy, awareness, and stewardship through expanded education and engagement opportunities for the general public.

- CHNEP designed, published, and distributed 26,000 copies of the 2024 Calendar, which included an educational Harbor Happenings insert on Blue Carbon.
- CHNEP organized and hosted the 2-day 2024 Southwest Florida Climate Summit, with more than 200 participants, as well as provided the proceedings and a Citizen Climate Change Action Guide on the CHNEP website.
- CHNEP created new funding and seagrass fact sheets, making them available on CHNEP website.

PE-2: Expand reach of education and engagement opportunities to new target audiences

- CHNEP continued to support projects that engage citizens in natural resource protection including at outreach booths at the Swamp Cabbage Festival, Highlands Hammock Civilian Conservation Corps festival, Chalo Nitka Rodeo, and the Water, Wings and Wild Things Festival, as well as other events that reach new target audiences.

PE-3: Strengthen non-profit partner collaboration in education and engagement programs

- CHNEP provided Conservation Grants to numerous area non-profits, including for several volunteer clean-ups, volunteer water quality monitoring, educational interpretive signs, habitat restoration and other activities that implement CHNEP Comprehensive Conservation & Management Plan priority actions.
- CHNEP worked with the Myakka River Management Coordinating Council (MRMCC) to support updates to the MRMCC website, an educational resource about the watershed.

PE-4: Increase outreach to policymakers to enhance understanding and support for CCMP implementation

- CHNEP staff met with numerous local, state, and federal policymakers to educate them about CHNEP, its CCMP, and the current research and project funding needs of our partners.

CCMP FOCUS IN FY 2025

The Fiscal Year 2025 Work Plan and Budget reflects the approved 2019 CCMP, which outlines the 5-year organizational strategic plan and has the following visions, goals, objectives, and strategies:

WATER QUALITY

VISION: Waters that meet their designated human uses for drinking, shellfish harvesting, or swimming and fishing, while supporting appropriate and healthy aquatic life.

GOAL: Water Quality Improvement.

OBJECTIVE: Meet or exceed water quality standards for designated uses of natural waterbodies and waterways with no degradation of Outstanding Florida Waters.

STRATEGY: Support comprehensive and coordinated water quality monitoring programs and projects and programs that reduce pollutants entering waterways.

WQ-1: Support a comprehensive and coordinated water quality monitoring and assessment strategy

- CHNEP will continue working with partners to collect water quality monitoring data and uploading it to the CHNEP Water Atlas for access by interested parties and the public.
- CHNEP will work with our partners to develop new information pages on the Water Atlas as needed.
- CHNEP will continue to fund and support the Coastal Charlotte Harbor Monitoring Network (CCHMN).

WQ-2: Develop water quality standards, pollutant limits, and clean-up plans

- CHNEP will continue to support, providing technical comment as appropriate, the development and implementation of water quality standards, pollutant limits and clean-up plans.

WQ-3: Reduce urban stormwater and agricultural runoff pollution

- CHNEP will continue to provide public presentations and information on urban stormwater and agricultural runoff pollution.
- CHNEP will continue to support partners in the implementation of stormwater and agricultural runoff reduction projects.

WQ-4: Reduce wastewater pollution

- CHNEP will continue to support partners in the implementation of wastewater discharge reduction and reuse projects, as well as septic to sewer conversion projects.

WQ-5: Reduce harmful algae blooms

- CHNEP will continue to provide public presentations and information on harmful algae blooms and nutrient pollution.

HYDROLOGIC RESTORATION

VISION: Natural freshwater flow across the landscape to the estuaries.

GOAL: Enhanced and improved waterbodies with more natural hydrologic conditions.

OBJECTIVE: Adequate aquifer recharge and freshwater volume and timing of flow to support healthy natural systems.

STRATEGY: Support data-driven watershed planning and hydrological restoration projects to preserve or restore natural flow regimes and provide sufficient fresh surface and groundwater to natural systems.

HR-1: Conduct data collection, modeling, and analyses to support hydrologic restoration

- CHNEP will continue to actively participate in gathering data and supporting modeling and analyses as well as fund integrated ground and surface water models to improve decision-making with regards to hydrological restoration projects.

HR-2: Increase fresh surface water and groundwater availability to support healthy natural systems

- CHNEP will continue to promote water conservation and sufficient flows and levels of freshwater to support natural systems.

HR-3: Preserve and restore natural flow regimes

- CHNEP will work with partners to identify funding sources to facilitate capital programs that coordinate water storage, flood control, water quality and disaster planning.
- CHNEP will continue participating and providing technical assistance in Everglades' restoration through project review, meeting participation and technical comment.

FISH & WILDLIFE HABITAT PROTECTION

VISION: A diverse environment of interconnected, healthy habitats that support natural processes and viable, resilient native plant and animal communities.

GOAL: Natural habitat protection and restoration.

OBJECTIVE: Permanently acquire, connect, protect, manage, and restore natural terrestrial and aquatic habitats.

STRATEGY: Promote and facilitate permanent acquisition and effective protection and management of critical natural habitats including wildlife dispersal areas, movement and habitat migration corridors, wetlands, flowways, and environmentally sensitive lands and estuarine habitats.

FW-1: Protect, restore, and monitor estuarine habitats

- CHNEP will continue to work with Southwest Florida Estuarine Restoration Team (SWERT) partners on designing, permitting and constructing seagrass, oyster, and other estuarine restoration projects in CHNEP area.

FW-2: Protect, restore, and monitor environmentally sensitive lands and waterways including critical habitat areas

- CHNEP will continue to share the Habitat Restoration Needs report and maps to support the conservation, management and enhancement of environmentally sensitive lands and critical habitat areas necessary for habitat resilience and migration.
- CHNEP will continue to offer grants to assist engaged citizens that promote the protection and management of public environmental lands and waterways.

- CHNEP will continue to directly engage in funding and project managing habitat restoration projects.

FW-3: Assess and promote the benefits of land, waterway, and estuary protection and habitat restoration

- CHNEP will continue to use its comprehensive regional Economic Valuation study to promote the economic return on investment from land, water and estuarine protection and restoration investments.

PUBLIC ENGAGEMENT

VISION: An informed, engaged public making choices and taking actions that increase protection and restoration of estuaries and watersheds.

GOAL: Public education and engagement.

OBJECTIVE: Increase the proportion of the population that supports and participates in actions to protect and restore estuaries and watersheds.

STRATEGY: Promote environmental awareness, understanding, and stewardship to the general public, new target audiences, and policymakers; and strengthen non-profit partner collaboration in education and engagement programs.

PE-1: Promote environmental literacy, awareness, and stewardship through expanded education and engagement opportunities for the general public

- CHNEP will continue to share information about routine volunteer events to provide environmental education and public engagement opportunities.
- CHNEP will continue to produce free educational materials and distribute them throughout the CHNEP area.
- CHNEP will continue to disseminate information about public engagement opportunities through Constant Contact, on social media, and on the www.chnep.org website.

PE-2: Expand reach of education and engagement opportunities to new target audiences

- CHNEP will continue to conduct educational workshops and events, including in underserved communities, as a way to introduce natural resource protection information to new target audiences in that area.

PE-3: Strengthen non-profit partner collaboration in education and engagement programs

- CHNEP will continue to administer a Conservation Grant program to foster community natural resource protection projects and initiatives that support CCMP implementation, including with non-profit partners.
- CHNEP will continue to seek and work with non-profit organizations on collaborative initiatives.
- CHNEP will continue to sponsor events that foster non-profit partner collaboration to educate and engage the public on issues relating to CCMP implementation.

PE-4: Increase outreach to policymakers to enhance understanding and support for CCMP implementation

- CHNEP will continue to meet and send information to local, state, and federal policymakers, explaining CHNEP's role in supporting CCMP implementation.

FISCAL YEAR 2025 ANNUAL BUDGET

Table 1: Fiscal Year 2025 Budget Overview

Revenue	
Federal (EPA FY25 Programmatic 320 Funding)	\$850,000
Federal (EPA FY24 Novated 320 Funding Carryover)	\$333,875
Federal (EPA FY25 Bipartisan Infrastructure Law (BIL) Funding)	\$909,800
Partner FY25 Contributions (Local)	\$133,000
Partner FY25 Contributions (State – SWFWMD & FDEP)	\$205,000
Total Revenue	\$2,431,675
Expenditures	
Personnel (FY24 EPA Novated 320, FY25 EPA 320, SWFWMD, FDEP, Local)	\$669,810
Overhead Administrative Fees	\$256,869
Public Outreach	\$106,321
Research and Restoration (FY25 EPA 320, FY24 & FY24 EPA 320 CO, SWFWMD, & Local)	\$442,875
Research and Restoration (FY25 EPA BIL Funding)	\$899,800
Policymaker Education	\$4,500
Added Reserves	\$51,500
Total Expenditures	\$2,431,675

Note: The Federal BIL is also further detailed in separate BIL Work Plan and Budget per EPA BIL Funding Guidance. Also, FY24 Novated Work Plan and Budget outlined those funds will be used towards personnel, all to be expended in FY25 as indicated above.

Table 2: Fiscal Year 2025 Administrative Budget

Funder	Title	Amount
EPA 320	Host Fees	\$184,869
EPA 320	Materials and Supplies / Printer Lease	\$25,000
EPA 320 / EPA BIL*	Staff Travel	\$25,000
Local	Meeting Support	\$10,000
EPA 320	Communication Software & Fees	\$12,000
Total		\$256,869

Note: \$10,000 from EPA BIL and \$15,000 from EPA 320

Table 3: Fiscal Year 2025 Cooperative Funding Revenue

Funding Source	2025 Budget	Type
Federal:		
EPA Section 320 Funding	\$ 850,000	Clean Water Act Section 320 Grant
EPA Bipartisan Infrastructure Law	\$ 909,800	EPA Bipartisan Infrastructure Law Grant
Total Federal:	\$ 1,759,800	
Sarasota County	\$ 25,000	County Appropriation
Charlotte County	\$ 25,000	County Appropriation
Lee County	\$ 25,000	County Appropriation
Polk County	\$ 15,000	County Appropriation
Manatee County	\$ 5,000	County Appropriation
DeSoto County	\$ 500	County Appropriation
Hardee County	\$ 500	County Appropriation
City of Cape Coral	\$ 7,500	City Appropriation
City of Fort Myers	\$ 5,000	City Appropriation
City of Punta Gorda	\$ 5,000	City Appropriation
City of Sanibel	\$ 2,500	City Appropriation
City of Fort Myers Beach	\$ 2,500	City Appropriation
City of Venice	\$ 2,500	City Appropriation
City of North Port	\$ 1,000	City Appropriation
City of Winter Haven	\$ 1,500	City Appropriation
Village of Estero	\$ 5,000	Village Appropriation
City of Arcadia	\$ 500	City Appropriation
City of Bartow	\$ 500	City Appropriation
Peace River Manasota Regional Water Supply Authority	\$ 3,500	District Appropriation
Total Local Government Revenue	\$ 133,000	
FDEP	\$ 75,000	District Appropriation
SWFWMD	\$ 130,000	District Appropriation
Total State/District Revenue	\$ 205,000	
Non-Federal FY25 Revenue	\$ 338,000	
Total FY25 Revenue	\$ 2,097,800	
Non-Federal Match Requirement	\$ 850,000	SFWMD-funded project(s)

Table 4: Fiscal Year 2025 Travel Budget

Date	Purpose	# Staff	Location	Length of Stay	Travel Mode	Reg. Fee	Estimated Cost
Nov. 2024	Restore America's Estuaries Conference	2	Washington, DC	5	Air	\$1,590	\$3,700
Jan. 2025	Everglades Coalition	1	Florida	4	Auto	\$ --	\$1,300
Feb. 2025	American Water Resources	4	Fort Myers, FL	1	Auto	\$300	\$200
Mar. 2025	NEP/EPA Spring Meeting	1	Washington, DC	4	Air	\$500	\$3,000
Apr. 2025	League of Environmental Educators in Florida	1	Ocala, FL	2	Auto	\$150	\$600
Jun. 2025	Gulf of Mexico All Hands Meeting	1	TBD	1	Auto	\$1,800	\$4,000
April 2024	Resiliency Florida	1	Bonita Spring, FL	3	Auto	\$500	\$200
<u>Oct. 2024 - Sep. 2025</u>	Local Travel: Meetings/Mileage	6	Various	1 to 2	Auto	\$800	\$6,360
Subtotal						\$5,640	\$19,360
Total							\$ 25,000

Note: \$10,000 from EPA BIL and \$15,000 from EPA 320

Table 5: Fiscal Year 2025 Public Outreach Budget

Funder	Title	Amount
Local	CHNEP Sponsorships	\$10,000
Local	CHNEP Conservation Grants	\$30,000
EPA 320	CHNEP Publications (Calendar)	\$45,107
Local	CHNEP Publication Support (Contractor)	\$5,000*
Local	CHNEP Events	\$16,214
Total		\$106,321.00

*Note: Publication Support is funded by Manatee County.

Table 6: Fiscal Year 2025 Research and Restoration Projects Budget

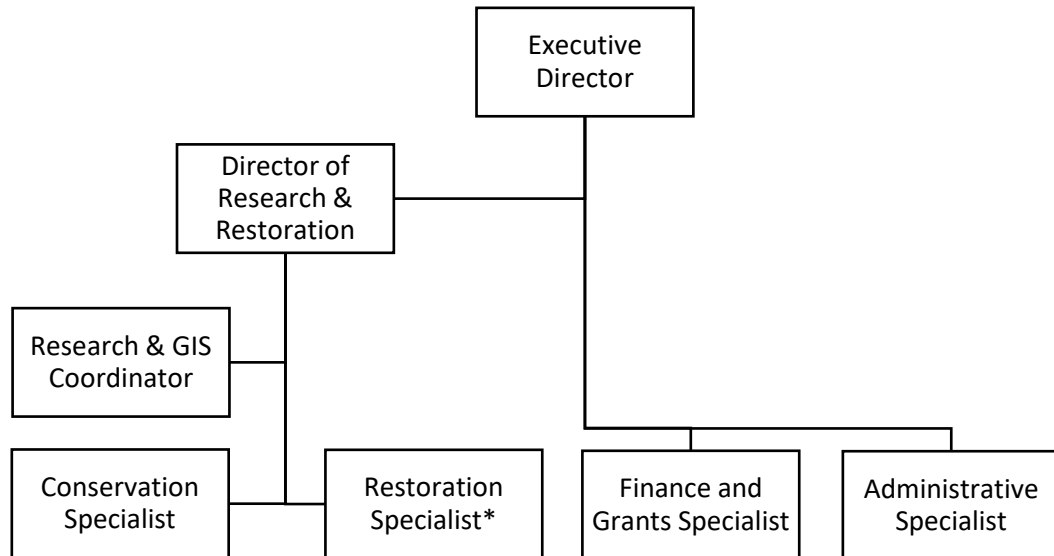
FY	Funder	Project Title	Amount
2022	EPA BIL	Pine Island Restoration Project	\$113,450
2022	EPA BIL	Charlotte County Vulnerability Assessment	\$200,000
2022	EPA BIL	Lee County Vulnerability Assessment	\$200,000
2022	EPA BIL	Tiki Point Living Shoreline Project	\$320,000
2022	EPA BIL	Yucca Pens Hydrological Restoration Project Phase I	\$76,350
EPA BIL FY22 Total			\$909,800
2023	EPA_320	Water Quality Trend Analysis	\$60,000
EPA 320 FY23 Total			\$60,000
2023	EPA BIL	Polk County Vulnerability Assessment	\$200,000
2023	EPA BIL	Highlands County Vulnerability Assessment	\$200,000
2023	EPA BIL	Yucca Pens Hydrological Restoration Project Phase I	\$346,170
EPA BIL FY23 Total			\$746,170
2024	EPA_320	Research <u>& Restoration</u> TBD	\$49,491
EPA 320 FY24 Total			\$49,491
2024	EPA BIL	CHNEP Water Atlas Maintenance & Improvements	\$85,000
2024	EPA BIL	DeSoto County Vulnerability Assessment	\$200,000
2024	EPA BIL	Hardee County Vulnerability Assessment	\$200,000
2024	EPA BIL	Yucca Pens Hydrological Restoration Project Phase I	\$327,480
<u>2024</u>	<u>EPA BIL</u>	<u>Hendry County Vulnerability Assessment</u>	<u>\$20,200</u>
2024	EPA BIL	<u>Research & Restoration TBD</u>	<u>\$67,120</u>
EPA BIL FY24 Total			\$899,800
2025	EPA_320	Lower CCHMN – Water Quality Monitoring	\$13,000
2025	SWFWMD	Upper CCHMN – Water Quality Monitoring	\$74,000
2025	Local	TBD Project Money to cover unanticipated costs	\$20,000
2025	EPA_320	Submerged Aquatic Vegetation Restoration and Water Quality Study	\$260,000
<u>2025</u>	<u>EPA 320</u>	<u>Research & Restoration TBD</u>	<u>\$75,875</u>
EPA-, SWFWMD, & Local FY25 Total			\$442,875
2025	EPA_BIL	Sarasota County Vulnerability Assessment	\$200,000
2025	EPA BIL	Manatee County Vulnerability Assessment	\$200,000
2025	EPA_BIL	CHNEP Water Atlas Maintenance & Improvements	<u>\$120,000</u>
2025	EPA BIL	<u>Hendry County Vulnerability Assessment</u>	<u>\$179,800</u>
<u>2025</u>	<u>EPA BIL</u>	<u>Glades County Vulnerability Assessment</u>	<u>\$200,000</u>
EPA_-BIL FY25 Total			\$899,800
FY25 Total Research & Restoration Project Budget			\$1,342,675

Table 7: Fiscal Year 2025 SWFWMD Budget

Task	Project	SWFWMD	Project Total
1 (Work Plan Task 3.1)	CCHMN - Upper Charlotte Harbor	\$ 74,000	\$ 74,000
2 (Work Plan Tasks 3 & 4)	Staff Support	\$ 56,000	\$ 112,000
Total		\$ 130,000	\$ 186,000

STAFF ORGANIZATION CHART AND RESPONSIBILITIES

The FY25 CHNEP staffing plan includes seven full-time professionals, including the following positions:



Executive Director: Responsible for overall program management including cultivating and strengthening partnerships and soliciting funding, as well as is the liaison to Policy and Management Committees.

Director of Research & Restoration: Responsible for management of research and restoration projects and initiatives, as well as is the staff liaison to Technical and Citizens Advisory Committees.

Finance & Grants Specialist: Responsible for finance, grants, and contracts administration.

Research & GIS Coordinator: Responsible for GIS coordination, assisting project management of scientific research projects and initiatives, as well as drafting the technical content for articles, grant proposals and reports.

Restoration Specialist: Responsible for providing assistance with restoration projects and initiatives, as well as drafting the technical content for articles, grant proposals and reports. [* Note: this position would be filled as 1-year locally funded contractor position if filled in FY25]

Conservation Specialist: Responsible for providing a variety of public outreach and engagement duties, including environmental education programs, volunteer and member support, marketing, etc.

Administrative Specialist: Responsible for providing a variety of administrative support functions relating to payroll, database management, donation processing, meeting preparation, etc.

NEW AND ONGOING PROJECTS

The CHNEP projects are organized according to task. There are five tasks, as follows:

Task 1: Management Conference

- 1.1 Materials and Supplies

Task 2: Public Engagement

- 2.1 Conservation Grants
- 2.2 2025 Publications
- 2.3 Public Engagement Events
- 2.4 Sponsorships

Task 3: Research Coordination

- 3.1 Water Quality and Seagrass Monitoring and Mapping Programs
- 3.2 CHNEP Water Atlas
- 3.3 Charlotte County Comprehensive Vulnerability Assessment
- 3.4 Polk County Comprehensive Vulnerability Assessment
- 3.5 Highlands County Comprehensive Vulnerability Assessment
- 3.6 Lee County Comprehensive Vulnerability Assessment
- 3.7 DeSoto County Comprehensive Vulnerability Assessment
- 3.8 Hardee County Comprehensive Vulnerability Assessment
- 3.9 Sarasota County Comprehensive Vulnerability Assessment
- 3.10 Manatee County Comprehensive Vulnerability Assessment
- 3.11 Water Quality Trends Analysis
- 3.12 Hendry Comprehensive Vulnerability Assessment
- 3.13 Glades Comprehensive Vulnerability Assessment

Task 4: Watershed Coordination

- 4.1 Submerged Aquatic Vegetation Restoration
- 4.2 Pine Island Flatwoods Preserve Wetland Habitat Enhancement
- 4.3 Tiki Point Harborwalk Living Shoreline Pilot Project
- 4.4 Yucca Pens Hydrological Restoration Project Phase I
- 4.5 Submerged Aquatic Vegetation Restoration and Water Quality Study
- 4.6 Restoration/Research Project(s) TBD

Task 5: Policymaker Education

- 5.1 Comprehensive Conservation & Management Plan Updating and Reprinting

CLEAN WATER ACT (CWA) CORE PROGRAM GOALS & TASKS THAT PROJECTS ARE DESIGNED TO ADDRESS:

- 1) Establishing water quality standards
- 2) Identifying polluted waters and developing restoration plans
- 3) Permitting discharges of pollutants from point
- 4) Addressing diffuse, nonpoint sources of pollution
- 5) Protecting wetlands
- 6) Protecting coastal waters through the National Estuary Program
- 7) Protecting large aquatic ecosystems
- 8) Ensure clean and safe water for all communities
- 9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 1 Management Conference: Administration, Finance, Operations

Objective: Provide committee structure that supports the implementation of the CCMP; support administration of CHNEP; ensure compliance with grant and agreement requirements as awardee and awardee; and seek additional funding support for identified projects.

Description: The CHNEP office provides staff support to the Management Conference, furnishes operations and finance support, ensures compliance with Administrative Host procedures, secures funding from partners, and assists partners seeking grants and contracts to implement the CCMP.

CCMP Elements Implemented: All

Outputs/Deliverables/Milestones

- Management Conference committee meetings for 4 committees, 3x/yr.
- Management Conference adoption of Annual Work Plan before June 1, 2024
- GPRA Reporting through EPA's NEPORT, by September 14, 2025
- Administration of Program Office operations and finances, ongoing
- Collaborate with partners on CCMP implementation, ongoing
- Compliance with Host Agency finance and procurement requirements, ongoing
- Compliance with Funders' grant reporting requirements, ongoing

FY 25 Budget

EPA 320 Funds	
Personnel (Salaries & Benefits)	\$202,935
Staff Travel	\$15,000
Overhead Host Administrative Fees	\$184,869
Communications Software and Fees	\$ 12,000
EPA 320 FY24 Novated Funds	
Personnel (Salaries & Benefits)	\$333,875
EPA BIL Funds	
Staff Travel	\$10,000
SWFWMD Funds	
Personnel (Salaries & Benefits)	\$56,000
FDEP Funds	
Personnel (Salaries & Benefits)	\$75,000
Local Funds	
Personnel (Salaries & Benefits)	\$2,000
Meeting Support	\$10,000
Total Budget (Total personnel costs are \$669,810)	\$901,679

Outcomes

- Fully informed and engaged CHNEP Management Conference
- Other federal, state, and non-profit grants obtained to funding CCMP implementation
- Increased participation, understanding and support of NEP mission by partners
- Continued commitment from partners to fund CHNEP and CCMP activities
- Funding opportunities and assistance provided to partners to implement initiatives and projects that further CCMP implementation.

CWA Core Program Goals/Objectives Addressed: Potentially all.

Task 1.1 Materials and Supplies

Project Objective: To provide the necessary supplies for the program office to function

Project Description: CHNEP the development and purchase of the needed materials and supplies to operate the CHNEP program office.

CCMP Elements Implemented: All

Outputs/Deliverables/Estimated Milestones

- Supplies obtained necessary to maintain effective and efficient CHNEP office operations
- Copier leasing

FY 25 Budget

EPA 320 Funds	\$25,000
Total Budget	\$25,000

Outcomes

- Increased awareness of CHNEP and CHNEP's CCMP
- Expanded CHNEP partnerships
- Engaged decision-makers and citizens in CHNEP activities

CWA Core Program Goals/Objectives Addressed: (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 2 Public Engagement

Work Plan Objective: Provide essential ongoing communications so CHNEP can address specific requirements and issues associated with the CCMP; as well as to support the CHNEP Management Conference and partners' public outreach initiatives to further CCMP implementation.

Description: Tools used to provide continuous support of the overall program include website, social media, and regular media. They range from events (workshops, festivals, and trainings) to publications (magazines, calendars, and books), to videos and target audience initiatives.

CHNEP Staff create all the public education and engagement content for the following:

- YouTube: Videos and talks (PDF files with linked with audio) posted share presentations online
- Facebook/Instagram: Routine posts promote CHNEP projects
- Constant Contact: Notices of Management Conference meetings and events are sent to subscribers
- CHNEP website: The CHNEP.org website provides current information about projects, meetings, grant opportunities, and volunteer activities

CCMP Elements Implemented: PE-1, PE-2, PE-3, and PE-4.

Partners and their roles: CHNEP is the lead in conducting its public outreach activities, doing so in cooperation with and in support of its partners.

Outputs/Deliverables/Milestones

- Updated website for Management Conference meetings and activities
- Routine posts on Facebook and Instagram social media
- EventBrite messages to promote and handle registrations for events
- Constant Contact messages to announce Management Conference meetings
- Monthly communications through various CHNEP media channels

FY 25 Budget

EPA 320 Funds	Staff Time
FDEP Funds	Staff Time
Total Budget	Staff Time

Outcomes

- Educated and engaged citizenry who are knowledgeable about the CHNEP and the natural environment of southwest Florida.
- Educational resources and events that enhance protection of natural resources and CCMP implementation
- New partnerships and strengthened existing partnerships through funding opportunities for projects that implement the CCMP

CWA Core Program Goals/Objectives Addressed: (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 2.1 Conservation Grants

Objective: To implement the CCMP through award of funding to community partners for CCMP-related community projects and initiatives.

Description: Conservation grant proposals are solicited and awarded in the \$500 to \$4,999 range to selected citizens, organizations, businesses, government agencies, schools or universities that are undertaking activities outlined in the CHNEP CCMP.

CCMP Elements Implemented: All

Outputs/Deliverables/Milestones

- Outputs vary with project, but all projects submit a final project report with supporting documentation
- All proposals reviewed and recommendations for funding completed according to the cycle schedule:
- Summer Deadline is August 1, 2024 for October 2024 award notice
- Winter Deadline is December 1, 2024 for February 2025 award notice
- Spring Deadline is April 1, 2025 for June 2025 award notice
- All payments are expected to be processed by September 30, 2025

FY 25 Budget

Local Funds	\$30,000
Total Budget	\$30,000 + Staff Time

Outcomes

- Strengthened and expanded partnerships to protect and restore the CHNEP area
- Engaged citizens assisting in environmental education, research, monitoring, and restoration activities
- Expanded CHNEP outreach and education
- Enhanced natural resource protection

CWA Core Program Goals/Objectives Addressed: Potentially all 1) Establishing water quality standards, 2) Identifying polluted waters and developing restoration plans, 3) Permitting discharges of pollutants from point, 4) Addressing diffuse, nonpoint sources of pollution, 5) Protecting wetlands, 6) Protecting coastal waters through the National Estuary Program, 7) Protecting large aquatic ecosystems, 8) Ensure clean and safe water for all communities, 9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 2.2 2025 Publications

Project Objective: Educate, motivate, and engage the public and partners through creating an annual nature calendar and other periodic publications that showcase the importance and diversity of the native, natural environment, as well as raise awareness of CHNEP and its efforts to implement the CHNEP CCMP.

Project Description: CHNEP designs, publishes, and distributes an annual calendar with an educational insert section, with images donated by citizens. Additionally, the CHNEP also produces periodic publications including fact sheets on CHNEP activities and progress towards implementing the CCMP.

CCMP Elements Implemented: PE-1, PE-2, PE-3, and PE-4.

Partners and their roles: Articles and images are donated by interested citizens and Management Conference partners. The calendars are distributed in multiple ways, including U.S. Mail to individual citizens and in bulk to 200+ partners that volunteer to redistribute in their area and at events.

Outputs/Deliverables/Milestones

- CHNEP periodic publications
- CHNEP annual Calendar

FY 25 Budget

EPA 320 Funds	
Publications	\$45,107
Local Funds	
Publications Support	\$5,000
(from \$5,000 Manatee County contribution)	
Total Budget	\$50,107 + Staff Time

Outcome: Informed public and CHNEP partners all become more knowledgeable and engaged in the stewardship of the natural environment in which they live.

CWA Core Program Goals/Objectives Addressed: (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (7) protecting large aquatic ecosystems.

Task 2.3 Public Engagement Events

Project Objective: Support projects, initiatives, and workshops that educate and engage people about the issues that affect the natural environment in the CHNEP area, so they become better stewards.

Project Description: Events provide information and activities for various audiences, ranging from citizens to environmental professionals to decision-makers. Events also provide opportunities for partners to network, collaborate and learn about projects and solutions to environmental issues. CHNEP organizes and hosts routine citizen science and volunteer events that involve presentations followed by resource-protection activities.

CCMP Elements Implemented: PE-1, PE-2, PE-3, and PE-4.

Partners and their roles: CHNEP Management Conference members, other partners and the public participate in all of these events. Local nonprofit and government partners provide support.

Outputs/Deliverables/Milestones

- Plan, promote and facilitate at least 10 public engagement events annually

FY 25 Budget

EPA 320	\$16,214
Total Budget	\$16,214+ Staff Time

Outcomes

- Increased understanding of how personal actions affect the environment
- Enhanced sense of stewardship in natural resource protection
- Increased numbers of partners conducting activities that help fulfill the CCMP
- Professional exchange and technological information transfer amongst partners

CWA Core Program Goals/Objectives Addressed: (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 2.4 Sponsorships

Project Objective: Implement of CCMP through support of CCMP-related conferences, workshops, and events.

Project Description: Support for environmental conference, workshops, symposia, etc. through sponsorships, which support implementation the CHNEP CCMP.

CCMP Elements Implemented: All

Outputs/Deliverables/Milestones

- CHNEP acknowledged as event sponsor, with logo on event materials
- All funds awarded, obligated and payments processed by September 30, 2025.

FY 25 Budget

Local Funds	\$10,000
Total Budget	\$10,000

Outcomes

- Strengthened and expanded partnerships to implement the CCMP
- Engaged scientists, researchers, stakeholders, and decision-makers in events that educate and inform about research, monitoring, and restoration activities relevant to CHNEP
- Informed general public, potential partners, and targeted audiences about CHNEP's mission

CWA Core Program Goals/Objectives Addressed: (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (7) protecting large aquatic ecosystems.

Task 3 **Research Coordination**

Work Plan Objective: To ensure collection, reporting and access to consistent region-wide, technically sound water quality and biological data throughout the CHNEP area. To identify and resolve gaps in scientific data and address emerging research needs through partnerships and innovative research.

Description: CHNEP coordinates some water quality sampling as well as works with partners to identify and resolve gaps in water quality and biological data, specifically through refinements to the Monitoring Strategy. In addition, CHNEP assists partners with compiling, analyzing, mapping, and conveying complex technical information in an understandable manner so it can be used to implement effective resource protection and restoration projects. The resulting data is used to assess resource status and trends, to be incorporated into resource management plans.

CCMP Elements Implemented: WQ-1, WQ-2, HR-1, FW-2, and PE-1.

Partners and Roles: outlined below in the respective subtasks

Outputs/Deliverables/Milestones

- CHNEP Water Atlas: Review and assess uploaded water quality sampling data
- Water Quality Monitoring: Monthly water quality data, quarterly RAMP participation, and CCHMN annual field audits and meetings
- Seagrass Monitoring: Annual seagrass data
- Seagrass Aerial Mapping: Biennial and 6-year seagrass aerial mapping
- Data Management: Biannual up-dates of water quality data
- Data Access: Ongoing access to water quality data, graphing and analyses and response to data requests
- Data Analysis and Use: Annual up-dates of water quality contour maps and, and periodic refinement of Research Needs Inventory and environmental indicators

FY 25 Budget

EPA 320 Funds	Staff Time
FDEP Funds (Staff Time)	Staff Time
SWFWMD Funds (Staff Time)	Staff Time
Total Budget	Staff Time

Outcomes

- Consistent region-wide, technically sound water quality and biological data needed to assess resource status, trends, and complex interactions
- Public access to water quality and seagrass data to partners via CHNEP Water Atlas
- Increased data analyses, maps, and graphs to enhance and evaluate protection and restoration efforts
- Increased collaboration of monitoring, mapping and management among resource managers and agencies from throughout the CHNEP Area
- Expanded used of data by partners to assess resource conditions, manage resources and implement effective and efficient management programs and restoration projects

CWA Core Program Goals/Objectives Addressed: All

Task 3.1 Water Quality and Seagrass Monitoring and Mapping Programs

Project Objective: To ensure collection, reporting and mapping of consistent, technically sound long-term water quality and seagrass data throughout the CHNEP estuaries and tidal creeks. The resulting data is shared with partners to be used for assessing resource status and trends and implementing effective management programs and restoration projects.

Project Description: CHNEP participates in four coastal water quality and seagrass monitoring and mapping programs. CHNEP coordinates the Coastal Charlotte Harbor Monitoring Network (CCHMN), which is a partnership of agencies that provides monthly water quality data using a probabilistic sampling design. CCHMN field and laboratory partners collect and analyze water samples from 60 randomly selected field sites throughout 10 waterbodies each month, including: Lemon Bay, Cape Haze/Gasparilla Sound, Charlotte Harbor, Pine Island Sound, Matlacha Pass, San Carlos Bay, Estero Bay, Tidal Myakka, Peace, and Caloosahatchee Rivers. Water quality parameters include depth, clarity, temperature, salinity, dissolved oxygen, pH, conductivity, chlorophyll a, color, nitrogen components, phosphorus components, turbidity, suspended solids, and organic Carbon. CHNEP coordination activities for the CCHMN include developing and updating Standard Operating Procedures and field Quality Assurance Project Plan (QAPP), conducting annual field audits, hosting annual meetings, participating in quarterly Regional Ambient Monitoring Program (RAMP) quality assurance meetings, providing access to the data through the CHNEP Water Atlas, including data graphing, mapping, and reporting, and assisting with field sampling and equipment repair as needed. Additionally, CHNEP supports activities for the Florida Department of Environmental Protection’s Aquatic Preserves water quality monitoring project known as the Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network (CHEVWQMN) this included uploading and analyzing data collected by on the CHNEP Water Atlas. CHNEP also supports the Aquatic Preserve seagrass monitoring program by providing access to the data through the CHNEP Water Atlas and assisting with monitoring as needed. CHNEP also supports activities for the seagrass aerial mapping including reviewing draft results and providing maps of the seagrass results on the CHNEP Water Atlas.

CCMP Elements Implemented: WQ-1, WQ-2, HR-1, FW-1, FW-2, FW-3, PE-1, and PE-3.

Partners and Roles:

CCHMN

Water Quality monitoring support	\$13,000 \$74,000 In-kind	EPA 320 (Lower CCHMN) SWFWMD (Upper CCHMN) Charlotte County, Lee County, Cape Coral, FDEP
RAMP WQ quality assurance	In-house In-kind In-house	CHNEP Staff (Primary) Charlotte County, Lee County, Cape Coral, FDEP, FWRI, SWFWMD CHNEP Staff (Primary)
CHEVWQMN:		
Water Quality monitoring support	In-kind In-kind In-kind	FDEP CHAP, EBAP Friends of CHAP and EBAP Charlotte Harbor Environmental Center
Seagrass Transects	In-kind	FDEP (CHAP, EBAP, & South District)
Seagrass Aerial Mapping	In-kind In-house	SWFWMD, SFWMD CHNEP Staff

Outputs/Deliverables/Milestones

- CCHMN: Monthly water quality data, annual field audit results, annual meeting, and quarterly RAMP participation
- CHEVWQMN: Monthly water quality data and biannual quality assurance results
- Seagrass Monitoring: Annual seagrass transect data
- Seagrass Aerial Mapping: Seagrass aeriels and maps from SWFWMD every 2 years and from SFWMD every 6 years
- RAMP: participation in quarterly meetings

FY 25 Budget

EPA 320 Funds:	\$13,000 + Staff Time
SWFWMD Funds:	\$74,000
Total Budget:	\$87,000

Outcomes

- Coordinate monthly water quality sampling
- Provide consistent region-wide, technically sound water quality and seagrass data needed to assess resource status, trends, and complex interactions
- Provide technical comment on appropriate resource management actions and regulatory programs

CWA Core Program Goals/Objectives Addressed: (1) establishing water quality standards, (2) Identifying polluted waters and developing restoration plans, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 3.2 CHNEP Water Atlas

Project Objective: To ensure continuing access to technical information from throughout the CHNEP area to scientists, resource managers and users, elected officials, and the public through a user-friendly web-based tool. The resulting data, maps and graphs are easily accessible for use to evaluate resource conditions, answer site and topic specific questions, and convey scientific information in an understandable manner to support effective management programs and restoration projects.

Project Description: CHNEP maintains and enhances the CHNEP Water Atlas, a web-based, data management and mapping system that provides historical information, scientific data, water resource maps, resource management actions, volunteer opportunities and current events from throughout the CHNEP area. Tools are available to map, analyze and graph data related to specific locations and topics to assist partners with identifying, prioritizing, and implementing projects that address CCMP water quality, habitat, hydrology, and stewardship goals. CHNEP support includes maintenance, improvements, and enhancements of all the CHNEP Water Atlas components, including home page design and database updates. In addition to maintenance, the CHNEP works with USF to make upgrades and improvements on an annual basis. New Water Atlas Features/Improvements planned for 2025 include:

- *Annual Adjustment of WBID Boundaries, NNC Values, and Water Quality Dashboard:* This task will compare the most recent WBID run data from the Florida DEP and adjust the Waterbodies GIS layer and associated data tables. Waterbodies shall be classified to be aligned to WBID boundaries and waterbody classifications used by the Florida Department of Environmental Protection (FDEP). The Water Quality Dials and NNC Calculator tools will be updated to reflect changes to FDEP WBID boundaries, classifications, and NNC/threshold values.
- *Annual Water Quality Trends and Seagrass Analysis:* These tasks will update seagrass and algae trend charts, spatial data and calculated acreages on basin pages and interactive map and update results of the WQ trends to include the period of January 1, 2024, to December 31, 2024.
- *New Lake Okeechobee Waterbody Page & LOSOM Updates to the Lake Okeechobee & Caloosahatchee Estuary Tracker:* A new Lake Okeechobee waterbody page will be created with water quality, habitat, hydrology, and climate change maps and customized content, several additional map resources will also be incorporated. The Lake Okeechobee & Caloosahatchee Estuary Tracker will be updated according to the new adopted Lake Okeechobee Service Operating Manual (LOSOM).
- *SCCF Data added to Real-Time Data Mapper:* This task will be used to expand data available on the Real-Time Data Mapper to include real time monitoring from SCCF RECON (River, Estuary and Coastal Observing Network) sensors.

CCMP Elements Implemented: WQ-1, WQ-2, HR-1, FW-1, FW-2, FW-3, PE-1, and PE-3.

Partners and Roles: All entities creating publicly accessible water quality data.

Outputs/Deliverables/Milestones

- Post and provide access to water quality data updates every 6 months.
- Post and provide access to data analyses, maps and graphs as requested.
- Annual Update of WBID Boundaries and NNC Values
- Conducting trend analysis on water quality data annually and providing in user friendly format
- Conducting analysis on seagrass and macroalgae data annually and providing in user friendly format

FY 25 Budget

EPA BIL Funds	\$120,000
Total Budget	\$120,000 + Staff Time

Outcomes

- Data publicly provided to public and resource managers to assess effectiveness of protection and restoration efforts.
- Increased coordination on sampling and monitoring efforts amongst resource managers and agencies in the CHNEP area
- Access to water quality and seagrass data to partners via CHNEP Water Atlas

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.3 Charlotte County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Charlotte County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Charlotte County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. Vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community, with particular focus on addressing the needs of disadvantaged communities as defined by the US EPA. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Charlotte County that meets all Florida Statutory requirements. This will qualify Charlotte County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), Charlotte County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY₂₅ Budget (continuing into FY25): Remaining funds from below to be expended + Staff Time

Prior Funding

EPA FY22 BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Charlotte County meeting statutory requirements

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 3.4 Lee County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Lee County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Lee County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Lee County that meets all Florida Statutory requirements. This will qualify Lee County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), Lee County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget (continuing into FY25) Remaining funds from below to be expended + Staff Time

Prior Funding

EPA FY22 BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Lee County that meets state Statutory requirements

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.5 Polk County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Polk County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Polk County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. Vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community, with particular focus on addressing the needs of disadvantaged communities as defined by the US EPA. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Polk County that meets all Florida Statutory requirements. This will qualify Polk County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), Polk County, Central Florida Regional Planning Council

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget (continuing into FY25) Remaining funds from below to be expended + Staff Time

Prior Funding

EPA FY23 BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Polk County that meets statutory requirements

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystem, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 3.6 Highlands County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Highlands County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Highlands County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Highlands County that meets all Florida Statutory requirements. This will qualify Highlands County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), Highlands County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget (continuing into FY25) Remaining funds from below to be expended + Staff Time

Prior Funding

EPA FY23 BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Highlands County that meets statutory requirements

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan

Task 3.7 DeSoto County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in DeSoto County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for DeSoto County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for DeSoto County that meets all Florida Statutory requirements. This will qualify DeSoto County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), DeSoto County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget (continuing into FY25)	Remaining funds from below to be expended + Staff Time
<u>Prior Funding</u>	
EPA FY24 BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for DeSoto County that meets state Statutory requirements

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.8 Hardee County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Hardee County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Hardee County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Hardee County that meets all Florida Statutory requirements. This will qualify Hardee County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), Hardee County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget (continuing into FY25) Remaining funds from below to be expended + Staff Time

Prior Funding

FY24 EPA BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Hardee County that meets state Statutory requirements

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.9 Sarasota County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Sarasota County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Sarasota County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Sarasota County that meets all Florida Statutory requirements. This will qualify Sarasota County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements

Partners and Roles: CHNEP (Funder), Sarasota County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget

EPA BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Sarasota County that meets state Statutory requirements.

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.10 Manatee County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Manatee County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Manatee County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Manatee County that meets all Florida Statutory requirements. This will qualify Manatee County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements.

Partners and Roles: CHNEP (Funder), Manatee County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaptation Strategies and recommended Adaptation Action Areas

FY 25 Budget

EPA BIL Funds	\$ 200,000
Total Budget	\$ 200,000 + Staff Time

Outcomes

- Climate Change Vulnerability Assessment for Manatee County that meets state Statutory requirements.

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.11 Water Quality Trend Analysis

Work Plan Objective: To support a comprehensive and coordinated water quality monitoring and assessment strategy by providing additional analysis and information on water quality trends for individual monitoring stations and hydrologic regions throughout CHNEP estuaries where data is collected monthly by agencies, municipalities and community science programs. This data will be shared through the CHNEP Water Atlas to ensure continuing access to technical information from the CHNEP Area to scientists, resource managers and users, elected officials and the public through a user-friendly web-based tool. The resulting data, maps and graphs are easily accessible for use to evaluate resource conditions, answer site and topic specific questions, and convey scientific information in an understandable manner to support effective management programs and restoration projects.

Project Description: CHNEP supports partner objectives to make updates of water quality data to the CHNEP Water Atlas, a web-based, data management and mapping system scientific communication tool that the program also funds and maintains. The Water Atlas can be utilized for research and science communication; it provides historical information, scientific data, water resource maps, and analysis tools. This project would involve data mining and cleaning to create a complete period of record dataset suitable for both traditional and novel trend analysis methods using long-data available through the state assessment database FDEP WIN (Watershed Information Network) and its predecessor STORET. A Trend Analysis for individual stations, strata and parameters will be conducted and shared via user-friendly maps and graphs using an open science data visualization tool such as a Shiny Dashboard. Code used to run these programs and analyses would be publicly available and the analyses could be conducted on an annual basis when new data is made available by sampling agencies.

CCMP Elements Implemented: WQ-1, WQ-2, WQ-3, FW-1, FW-2, PE-1, and PE-4.

Partners and Roles: All entities creating publicly accessible water quality data

Outputs/Deliverables/Milestones:

- Full Period of Record dataset for water quality monitoring stations and strata suitable for trend analyses as well as instructions and other metadata
- Trend analysis on water quality data for individual stations, strata and parameters provided in user friendly format as well as code used to run trend analyses.

FY 25 Budget

Remaining funds from below to be expended + Staff Time

Prior Funding

FY23 EPA Funds	\$60,000
Total Budget	\$60,000 + Staff Time

Outcomes

- Data publicly provided to public and resource managers to assess effectiveness of protection and restoration efforts
- Increased coordination on sampling and monitoring efforts amongst resource managers and agencies in the CHNEP area

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.12 Hendry County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Hendry County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Hendry County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Hendry County that meets all Florida Statutory requirements. This will qualify Hendry County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements.

Partners and Roles: CHNEP (Funder), Hendry County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaption Strategies and recommended Adaptation Action Areas

FY 25 Budget

<u>EPA BIL Funds</u>	<u>\$ 179,800</u>
<u>Prior Funding</u>	
<u>FY24 EPA BIL Funds</u>	<u>\$ 20,200</u>
<u>Total Budget</u>	<u>\$ 200,000 + Staff Time</u>

Outcomes

- Climate Change Vulnerability Assessment for Hendry County that meets state Statutory requirements.

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 3.13 Glades County Comprehensive Vulnerability Assessment

Project Objective: To identify local climate change impacts and vulnerabilities and present adaptation responses that can help reduce community vulnerability and/or increase resilience in Glades County, Florida.

Project Description: This project will use the climate adaptation planning process to conduct public workshops and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Glades County. The Consultant will gather and update the County's vulnerability assessment utilizing new elevation data, updated sea level rise projections, shoreline information, capital project data, social vulnerability index, and stormwater management data. The updated vulnerability modeling with new elevation data will be used to determine infrastructure and habitat impacts as well as areas of increasing vulnerability for a 2030, 2060, and 2100 sea level rise assumption horizon. Using the best available data, the contractor will also incorporate an analysis of stormwater management and social vulnerability using best practices such as the Center for Disease Control's Social Vulnerability Index or other evaluation strategy (identifying vulnerable populations and potential public health risks). That information and input will be synthesized into a summary of current and projected climate changes for the community. The contractor will then use these vulnerability assessments to develop proposed adaptation strategies. One of the foundational concepts of Fla Stat 380.093 and FEMA's CRS program is to assess the flood risk of a community using best available tools, data, and methodologies. The larger goal of both programs is to capture multiple types of weather-related scenarios to project and model how various flood risks would affect the community. This project will produce a final Climate Change Vulnerability Assessment for Glades County that meets all Florida Statutory requirements. This will qualify Glades County to access additional state funding sources.

CCMP Elements Implemented: potentially all CCMP elements.

Partners and Roles: CHNEP (Funder), Glades County

Outputs/Deliverables/Milestones

- Data Collection and Analysis
- Vulnerability Modeling and Analysis (including stormwater, social, etc.)
- Summary of Current and Project Climate Changes
- Summary of Proposed Adaption Strategies and recommended Adaptation Action Areas

FY25 Budget

<u>EPA BIL Funds</u>	<u>\$ 200,000</u>
<u>Total Budget</u>	<u>\$ 200,000 + Staff Time</u>

Outcomes

- Climate Change Vulnerability Assessment for Glades County that meets state Statutory requirements.

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4 Watershed Coordination

Work Plan Objective: To coordinate partner efforts around protection and restoration on a watershed scale.

Description: CHNEP to coordinate protection and restoration efforts including mapping, monitoring, reporting (including in the annual development of the Government Performance and Review Act (GPRA) report). Additionally, CHNEP staff will provide technical support in watershed initiatives such as: Southern Water Use Caution Area (SWUCA) Recovery Strategy, Minimum Flows and Levels, Reasonable Assurance Plans, Basin Management Action Plans, Southwest Florida Comprehensive Watershed Management Plan, Charlotte Harbor Flatwoods Initiative, Lehigh Watershed Initiative, South Lee County Watershed Initiative, and Caloosahatchee River Watershed Protection Plan. Southwest Florida Estuarine Restoration Team (SWERT) facilitates region-wide estuarine habitat restoration that addresses endangered small-tooth sawfish critical habitat. CHNEP also participates in state and federal processes to identify landscape scale conservation corridors with public and private partnerships to provide habitat and species migration and climate change adaptation. Additionally, CHNEP participates in Everglades Restoration projects relevant to the CHNEP Study Area; this includes participating on the Science Coordination Group on behalf of Southwest Florida. As opportunities arise, CHNEP also assists partners in conducting restoration activities.

CCMP Elements Implemented: All

Partners: CHNEP, Florida Gulf Coast University, Florida SeaGrant, Coastal Wildlife Club, Lee County Parks and Recreation Department, Lee County Department of Natural Resources, Charlotte Harbor Environmental Center, Sanibel-Captiva Conservation Foundation, Friends of Charlotte Harbor Aquatic Preserves, Lee County Conservation 2020 Program, Calusa Land Trust, City of Fort Myers, Mote Marine Lab, Sarasota Estuary Program, and Tampa Bay Estuary Program.

Outputs/Deliverables/Milestones

- GPRA Report
- Technical support for Charlotte Harbor Flatwoods Initiative, Lehigh Watershed Initiative, & South Lee County Watershed Initiative

FY 25 Budget

EPA 320 Funds	Staff Time
FDEP Funds	Staff Time
SWFWMD Funds	Staff Time
Total Budget	Staff Time

Outcomes

- Improved resource management
- Annual summaries of partners' restoration activities through the GPRA report
- Increased number and effectiveness of Best Management Practices (BMPs), plans and restoration activities

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4.1 Submerged Aquatic Vegetation Restoration

Project Objective: To ensure development of technically sound Submerged Aquatic Vegetation (SAV) restoration targets; implement restoration initiatives and projects which restore and protect SAV throughout the CHNEP estuaries and tidal rivers.

Project Description: CHNEP coordinates and participates in collaborations to collect data on SAV status and trends and implement restoration projects throughout the Study Area. The CHNEP Management Conference adopted SAV targets in 2005 and refined targets in 2009, with the understanding that additional field assessment is needed to capture full extent of SAV distribution in the tidal rivers due to naturally highly colored river water. CHNEP convened the Caloosahatchee River SAV Targets Working Group (CRSAVTWG) in 2013 to begin developing sound SAV targets for the tidal and some oligohaline reaches of the Caloosahatchee River and has been working since to assist with the implementation of activities to assist meeting those targets. CHNEP also participates in the Southwest FL Seagrass Working Group and FWC Seagrass Integrated Monitoring and Mapping (SIMM) technical team.

CCMP Elements Implemented: FW-1, FW-2, PE-1, PE-2, and PE-3.

Partners and Roles: CHNEP coordinates the TAC subcommittee and other SAV working groups including the SWER and SWFLSWG. Other partners in the TAC or working groups include: FDEP Charlotte Harbor and Aquatic Preserves, Florida Sea Grant, FWC, SWFWMD, SFWMD, Lee County, Charlotte County, Sarasota County, SCCF, and FGCU.

Outputs/Deliverables/Milestones

- Exchange technical information, monitoring and mapping methods, and emerging SAV issues
- Reporting and showcasing success of SAV restoration projects

FY 25 Budget

EPA 320 Funds	Staff time
Total Budget	Staff time

Outcomes

- Increased protection and restoration of natural systems
- More region-wide water quality, biological and physical data
- Advancement on the development of SAV Targets
- Adaptation of SAV restoration projects based on lessons learned

CWA Core Program Goals/Objectives Addressed: (6) protecting coastal waters through the National Estuary Program and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4.2 Pine Island Flatwoods Preserve Wetland Habitat Enhancement

Project Objective: This project will increase the area of restored wetland habitat through hydrological restoration. Wetlands naturally filter out pollutants and provide freshwater base flow to maintain healthy salinity levels in tidal creeks and estuaries. As a result of increasing wetlands on-site, cleaner, and more appropriate flows of freshwater will be flowing across and off-site — supporting healthier and more abundant aquatic life downstream

Project Description: Pine Island Flatwoods Preserve (part of the Lee County Conservation 20/20 Program) is a 919-acre passive area which supports 134 wildlife species. This project is identified in the Pine Island Flatwoods Preserve Land Stewardship Plan, to control exotic plant species, provide freshwater to wildlife outside of the wet season, and restore hydrology of the site. The proposed 1.27-acre project area presently includes four abandoned shrimp farm ponds surrounded by multiple earthen spoil berms. The planned construction activities include the removal of these berms, construction of 100 feet of new berm to ensure wetland water retention, and re-contouring of the current shrimp pond area to create two distinctive water management areas for habitat enhancement purposes. Following construction, the enhanced freshwater marsh will be approximately 2 to 2.5 feet deeper and will connect to the Pine Island Sound estuary through an estuarine pond and outfall. Restoration of these old shrimp ponds will provide wetland habitat and a freshwater source to wildlife year-round. The project will also improve water quality and flows downstream.

CCMP Elements Implemented: HR-3, FW-1, FW-2, FW-3

Partners and Roles: Lee County is the site owner manager as well as permit applicant, FWC will serve as a project consultant, and CHNEP is the restoration project funder and manager.

Outputs/Deliverables/Milestones

- CEI (construction engineering and inspection) support services for construction
- Site construction plans, mobilization, earthwork, and demobilization tech memo
- Native planting and maintenance technical memo

FY25 Budget

Remaining funds from below to be expended + Staff Time

Prior Funding

EPA FY22 BIL Funds	\$113,450
Total Budget	\$113,450 + Staff Time

Outcomes

- Increased protection and restoration of natural systems and habitats
- Restoration and success monitoring methods will be available to designing and implementing future restoration project
- Collaboration and technical information exchange will be enhanced between partners
- Identified CHNEP Habitat Restoration Needs plan activities for the area will be addressed

CWA Core Program Goals/Objectives Addressed: (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4.3 Tiki Point Harborwalk Living Shoreline Pilot Project

Project Objective: Create the Tiki Point Harborwalk (TPH) living shoreline project, working with the City of Punta Gorda. The project will increase resilience and mitigate the risks of flooding and SLR using a hybrid nature-based solution to improve habitat and water quality, reduce erosion, and buffer storm effects as outlined in the. It will include data collection, final design and permitting, and construction. CHNEP will also assist in raising public awareness and engage and educate local partners and citizens on the benefits of living shorelines, using this project as an example.

Project Description: The project aims to further develop solutions to mitigate/adapt to the risks of flooding along the Charlotte Harbor shoreline by implementing nature-based features. Application of these nature-based solutions will decrease wave energy along the shorefront and assist in providing a buffer to SLR and flooding for the historic downtown district of Punta Gorda and US 41, a primary evacuation route for the region which is susceptible to flooding. CHNEP will work alongside the City of Punta Gorda, who will be procuring both CEI (construction engineering and inspection) support services for construction and the construction contractor, to educate and hold public workshops for the citizens of Punta Gorda. This will allow education as to why living shorelines are so important in the region. The Vulnerability Assessment (VA), included in the 2019 City of Punta Gorda Adaptation Plan, implemented a GIS-based analysis of the City's public infrastructure using SLR projections and tropical storm surge elevations. The project site is within the VA's Historic Downtown Focus Area and is identified as a low-lying flood prone area (54% flooded with 3 ft. of SLR). This shoreline includes a waterfront promenade connecting two City parks.

CCMP Elements Implemented: HR-3, FW-1, FW-2, FW-3.

Partners and Roles: City of Punta Gorda is the site owner manager as well as permit applicant, CHNEP will assist with aspects of public outreach for this project. The project will be partially funded by CHNEP along with FDEP and the City of Punta Gorda.

Outputs/Deliverables/Milestones

- Construction Plans
- Pictures/Videos of before and after construction
- Fact Sheet on benefits of nature-based solutions such as a hybrid living shoreline

FY25 Budget

Remaining funds from below to be expended + Staff Time

Prior Funding

EPA BIL FY22 Funds

\$320,000

Total Budget:

\$320,000 + Staff Time

Outcomes

- Mitigated flooding, erosion, and sea level rise along a portion of the Charlotte Harbor waterfront
- Collection of data needed for final design and permitting of a nature-based solution, such as a hybrid living shoreline outlined
- Creation of a more resilient public park space with flood protection, habitat, and eco-tourism benefits

CWA Core Program Goals/Objectives Addressed: (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4.4 Yucca Pens Hydrological Restoration Project Phase I

Project Objective: This project will be completed in partnership with the South Florida Water Management District, Florida Fish & Wildlife Conservation Commission, and the other members of the Charlotte Harbor Flatwoods Initiative. The primary objectives are to work with a contractor and partners to conduct monitoring and modeling as well as created final design and permitting for a large-scale hydrologic restoration project in the Yucca Pens Unit State Wildlife Management Area (located in the Charlotte Harbor Flatwoods area in Charlotte and Lee Counties). This project is meant to aid the restoration of more natural flow to approximately 8,000 acres of wetlands, which will increase fresh surface water and groundwater availability and substantially improve hydrology as well as water and habitat quality for fish and wildlife species of concern.

Project Description:

The CHNEP has already created a Lower Charlotte Harbor Flatwoods Strategic Hydrologic Restoration Plan, as well as a preliminary conceptual surface and groundwater hydrologic model that simulates appropriate timing and quantity of water flows required to improve wetland habitat conditions, minimize erosion and offsite flooding, improve groundwater recharge, and reduce the risk of wildfires. This project is a recommendation of that Plan to further plan, engineer and design water management features on the Yucca Pens Wildlife Management Area (WMA) to restore more natural freshwater retention and sheet flow across the property. Using the existing Plan modeling and recommendations, additional hydraulic and hydrologic local-scale modeling will inform the final design, which will include 1) earthen ditch blocks in smaller ditches that will increase storage and surface water hydrology (a green solution), 2) the re-establishment of connections to several tidal creeks to the west of Yucca Pens Unit will be designed with concrete low water fords installed through existing off-road vehicle ruts and ditches in Yucca Pens (a green-gray solution providing additional stability as well as access for management vehicles and recreational users) and, 3) a groundwater seepage barrier is planned at the southern boundary of Yucca Pens Unit along the Gator Slough Canal (to address the significant effects the canal has on the local water table). The intent is for the project to be ‘shovel-ready’.

Together all proposed solutions will, once implemented, restore flows from the Yucca Pens Unit to Charlotte Harbor at several locations rather than as point source flowing into Charlotte Harbor and Gator Slough Canal. This will improve the hydrology in Yucca Pens which will also improve habitat quality for species of concern. It will also improve the water quality in the Charlotte Harbor estuary due to a return to a more natural hydroperiod and better timing of downstream flows. By holding additional water, the hydrologic restoration will also protect aquifer recharge and reduce the potential for saltwater intrusion with sea level rise further protecting water supply.

CCMP Elements Implemented: WQ-3, HR-1, HR-3, FW-2, and FW-3.

Partners and Roles: FWC is the site owner manager as well as permit applicant, CHNEP is the planning and design project funder and manager. The USFWS as well as the SWFWMD and SFWMD will serve as project consultants.

Outputs/Deliverables/Milestones

- Construction Plans
- Cost Estimates and Implementation Phasing Plan
- State, Local and Federal Permits

FY25 Budget

Remaining funds from below to be expended + Staff Time

Prior Funding:

FY22 EPA BIL Funds	\$76,350
FY23 EPA BIL Funds	\$346,170
FY24 EPA Funds	\$327,480
Total Budget	\$750,000 + Staff Time

Outcomes

- Data collected and modeling conducted for design and permitting for large-scale hydrological restoration
- Flood reduction as well as water quality and habitat improved Resilience and ecosystem functions of important wetlands and tidal creeks enhanced, as well as aquifer recharge

CWA Core Program Goals/Objectives Addressed: (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4.5 Submerged Aquatic Vegetation Restoration and Water Quality Study

Project Objective: To ensure development of technically sound Submerged Aquatic Vegetation (SAV) restoration initiatives and projects which restore and protect SAV throughout the CHNEP estuaries and tidal rivers. This project is to undertake seagrass restoration and research that will provide the comprehensive data needed to inform nature-based solutions for stormwater water quality management. This supports the goals of improving water quality naturally without compromising flood control.

Project Description: This project will include conducting research and restoration using Submerged Aquatic Vegetation (*Vallisneria americana*) in a canal in the Charlotte Harbor and Caloosahatchee basins. Once approval(s) are obtained and the planting of the *Vallisneria* occurs, water quality monitoring as well as vegetation, biological and benthic surveys will be conducted to determine the nutrient removal efficiency of *Vallisneria americana*. Research findings and restoration documentation will be included in a final project report, outlining the efficacy of using *Vallisneria americana* as a nature-based solution for nutrient removal in stormwater systems based on data collected as a part of the project. The results are intended to demonstrate the return on investment for the potential adoption of such strategies as a best management practice.

CCMP Elements Implemented: FW-1, FW-2, PE-1, PE-2, and PE-3.

Partners and Roles: Counties that manage stormwater canals will be the restoration site owners, CHNEP will fund the restoration, university and non-profits will assist with monitoring and results analyses. CHNEP coordinates the TAC subcommittee and other SAV working groups including the SWERT and SWFLSWG. Other partners in the TAC or working groups include: FDEP Charlotte Harbor and Aquatic Preserves, Florida Sea Grant, FWC, SWFWMD, SFWMD, Lee County, Charlotte County, Sarasota County, SCCF, and FGCU.

Outputs/Deliverables/Milestones

- Technical report and exchange of information related to SAV restoration and use as a nutrient reduction best management practice (BMP)
- Reporting and showcasing success of SAV restoration projects
- Restoration of SAV in a man-made canal will create critically important habitat for fish and wildlife and will improve water quality by reducing erosion and removing nutrients from the water column.

FY 25 Budget

EPA BIL Funds	\$260,000
Total Budget	\$260,000+ Staff Time

Outcomes

- Increased protection and restoration of natural systems
- More region-wide water quality, biological and physical data
- Advancement of SAV restoration and monitoring techniques
- Adaptation of SAV restoration projects based on lessons learned

CWA Core Program Goals/Objectives Addressed: (2) identifying polluted waters and developing restoration plans, (4) addressing diffuse, nonpoint sources of pollution, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 4.6 Restoration/Research TBD Project(s)

Project Objective: To solicit and award funding for a restoration/research project that addresses the CCMP Priority Actions has long-term applicability and serves as a model for addressing habitat restoration and improvement and resource management challenges.

Project Description: CHNEP will fund a restoration/research project(s) that implements CCMP Priority Actions, has long-term applicability, and serves as a model for addressing habitat restoration and resource management challenges. Assurances of long-term conservation use of the area after restoration/research is completed is an essential component of the project, as are monitoring restoration success and informing and educating the public about habitat values and restoration/research methods. Proposed projects should address at least one Priority Problems and implement one Priority Action, be transferable, demonstrate value to the community, and include monitoring and educational components.

CCMP Elements Implemented: Will be determined upon award.

Partners and Roles: Will be determined upon award.

Outputs/Deliverables/Milestones

- Habitats will be restored and protected within 2 years of project selection and remain in conservation use long term.
- Restoration/research techniques will be transferable to other projects and locations following completion of the project.
- Success monitoring methods, results and educational tools will be available to guide design and implementation of additional cost-effective restoration following completion of the project.

FY 25 Budget

<u>EPA 320 Funds</u>	<u>\$75,875</u>
<u>Local Funds</u>	<u>\$ 20,000 for unanticipated project-related expenses</u>
<u>Prior Funding:</u>	
<u>FY24 EPA Funds</u>	<u>\$49,491</u>
<u>FY24 BIL Funds</u>	<u>\$67,120</u>
Total Budget	<u>\$212,486</u> + Staff Time

Outcomes

- Restoration and success monitoring methods available for design of future restoration projects.
- Enhanced collaboration and technical information exchange between partners.
- Identified CHNEP restoration needs filled.

CWA Core Program Goals/Objectives Addressed: (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (7) protecting large aquatic ecosystems, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 5 Policymaker Education

Work Plan Objective: Support policymaker education and legislative action to support the implementation of the CCMP; implementing the Policy Review Procedures.

Description: This project is to support staff time to conduct policymaker education that implements the CCMP. Additionally, membership dues (\$4,500) in the Association of National Estuary Programs (ANEP) are included in this task as they are not eligible for EPA funding.

CCMP Elements Implemented: PE-4.

Outputs/Deliverables/Milestones

- Letters of support for legislation as directed
- Meetings with policymakers to educate them about CHNEP and its CCMP, as well as funding and support needed for its implementation
- Continue ANEP membership
- Provide input on CCMP topics as requested by policymakers on the Management Conference
- Legislative updates to Management Conference as appropriate
- Hire a contractor to assist with policy maker education

FY 25 Budget (all from local funding only):

Local Funds:	
ANEP Dues	\$4,500
Total Budget:	\$4,500 (Local \$ only)

Outcomes

- Informed policymakers as the CHNEP and the CCMP recognized and utilized as a resource by legislators (local, state, and federal) and their staff
- Improved policies and funding that assist in implementing the CCMP

CWA Core Program Goals/Objectives Addressed: (1) establishing water quality standards, (2) identifying polluted waters and developing restoration plans, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

Task 5.1 Comprehensive Conservation & Management Plan Updating and Reprinting

Work Plan Objective: Create an updated CHNEP Comprehensive Conservation and Management Plan (CCMP) 5-year strategic plan, reprint, and disseminate to all local, state, and federal elected leaders in the CHNEP area.

Description: EPA requires each National Estuary Program entity to update their CCMP every 5 years. The CHNEP undertook a major revision of its CCMP in 2019, which was approved by the EPA then. Therefore, at least an updating is required in 2024 and this task would be to undertake that updating with the assistance of a contractor to facilitate gathering and incorporating Management Conference committee input, updating all graphics and maps, helping to update design elements and prepare for printing, as well as to work with printer to ensure printed appropriately. Once printed, this task would also pay for the mailing costs associated with mailing to all local, state, and federal elected leaders in the CHNEP Area to provide them education on the collective CHNEP goals, objectives, actions, and activities needed to guide the organization and regional natural resource protection and restoration efforts from 2024-2029.

CCMP Elements Implemented: PE-4.

Outputs/Deliverables/Milestones

- Updated 2024 CHNEP CCMP printed document

FY 25 Budget

Remaining funds from below to be expended + Staff Time

Prior Funding

FY23 EPA Funds

\$80,000

Total Budget

\$80,000 +Staff Time

Outcome

- Updated CHNEP CCMP reflecting collective priority actions and activities

CWA Core Program Goals/Objectives Addressed: (1) establishing water quality standards, (2) identifying polluted waters and developing restoration plans, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, (8) Ensure clean and safe water for all communities, and (9) Protect and restore waterbodies and watersheds of the EPA Strategic Plan.

CLEAN WATER ACT CORE PROGRAM SUPPORT

CHNEP supports the Clean Water Act (CWA) core programs through direct funding of projects, staff assistance to partners and partner activities. Provided below are representative activities of CHNEP support for CWA core programs during Fiscal Year 2025.

Water Quality Monitoring for Water Quality Standards

The CHNEP manages the Coastal Charlotte Harbor Monitoring Network (CCHMN), a regional partnership of agencies that collect monthly water quality data using consistent, technically-sound sampling design. The long-term random sampling of strategically located stations allows for the scientific assessment of water quality status and trends. The CCHMN was created to fill gaps in coastal water monitoring and initiate a unified sampling approach throughout the CHNEP area. CHNEP also contributes to this project by assisting in the monitoring of upper and lower Charlotte Harbor within the project area. CHNEP creates and maintain the EPA approved Quality Assurance Project Plan (QAPP) and Standard Operating Procedures for the CCHMN, conducts annual field audits and meetings, contracts and assists with field sampling, and compiles and analyzes collected water quality data through the CHNEP Water Atlas. CHNEP and CCHMN partners also participate in the Regional Ambient Monitoring Program (RAMP) which holds quarterly meetings. RAMP participants share current water quality field and laboratory issues and conduct quality assurance field sampling and laboratory analyses. CHNEP provides ongoing support to the CCHMN and the Charlotte Harbor Estuary Volunteer Water Quality Monitoring Network (CHEVWQMN), as their data is entered into the state Watershed Information Network (WIN) database and is used to evaluate status and trends of state, regional, and local estuarine conditions. The data is used locally by CHNEP to develop future water quality targets and numeric nutrient data. Charlotte Harbor is also a Southwest Florida Water Management District (SWFWMD) Surface Water Improvement and Management (SWIM) priority Water Body.

The continuation of consistent data collection throughout this project area will help to assess impairments, determine total maximum daily load limits (TMDL), and develop basin management action plans for the watershed. The gathering of water quality data results in valuable information that is used for guidance on the improvement of water quality based on records starting in 2000.

Controlling Non-Point Sources

CHNEP funds Conservation Grants, many of which are aimed at educating or implementing non-point source pollution reduction. Examples include fertilizer restriction brochures and signs, native landscaping workshops, marine debris reduction, rain gardens, etc.

The CHNEP hosts the CHNEP Water Atlas site, a web-based resource center providing both technical users and interested community members and policy makers with a one-stop shop to find local data on water quality, flow, and habitat to information about educational events and volunteer resources in Central and Southwest Florida. The site includes up to date and historical data, trend analysis, historical maps and studies, water resource maps, and much more. It is a readily accessible way to find more information about local waterways.

Protecting Wetlands and Coastal Waters

CHNEP undertakes Research and Restoration Projects that implement living shorelines, flowways and wetland restoration, oyster and seagrass restoration, and other measures aimed at up taking and reducing pollutants in waterways.

GLOSSARY OF ACRONYMS

ANEP	Association of the National Estuary Program
BIL	Bipartisan Infrastructure Law
BMAP	Basin Management Action Plan
BMP	Best Management Practice
CAC	Citizens Advisory Committee
CAMA	Coastal and Aquatic Managed Areas
CCHMN	Coastal Charlotte Harbor Monitoring Network
CCMP	Comprehensive Conservation and Management Plan
CERF	Coastal and Estuarine Research Federation
CFRPC	Central Florida Regional Planning Council
CHEC	Charlotte Harbor Environmental Center
CHEVWQMN	Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network
CHNEP	Coastal & Heartland National Estuary Partnership
CWPRA	Coastal Wetlands Planning, Protection and Restoration Act
CWA	Clean Water Act
CZM	Coastal Zone Management
EPA	Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FWC	Florida Fish & Wildlife Conservation Commission
FWRI	Fish and Wildlife Research Institute
GIS	Geographical Information System
GPRA	Government Performance and Results Act
HAS	Hydrological Alterations Subcommittee
HCS	Habitat Conservation Subcommittee
LID	Low Impact Development
MFL	Minimum Flows and Levels
NRCS	Natural Resources Conservation Service
NEP	National Estuary Program
NNC	Numeric Nutrient Criteria
NOAA	National Oceanic and Atmospheric Administration
NWR	National Wildlife Refuge
PR/MRWSA	Peace River/Manasota Regional Water Supply Authority
RAMP	Regional Ambient Monitoring Program
SFWMD	South Florida Water Management District
SWFWMD	Southwest Florida Water Management District
SWFRPC	Southwest Florida Regional Planning Council
SWIM	Surface Water Improvement Management
SWUCA	Southern Water Use Caution Area
TAC	Technical Advisory Committee
TMDL	Total Maximum Daily Load
USACOE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Service
VOHM	Volunteer Oyster Habitat Monitoring
WCIND	West Coast Inland Navigation District
WMD	Water Management District
WQ	Water Quality
WQQOS	Water Quality Quantifiable Objectives Subcommittee