

COASTAL & HEARTLAND NATIONAL ESTUARY PARTNERSHIP
FISCAL YEAR 2022-2023
BIPARTISAN INFRASTRUCTURE LAW WORK PLAN



Pine Island | Steve Russell

Aerial sunset views of the Pine Island community and its surrounding estuary in the CHNEP area, which is very vulnerable to sea level rise and is the proposed site of the Pine Island Flatwoods Restoration project.

September 22, 2022
Amended May 25, 2023



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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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COASTAL & HEARTLAND NATIONAL ESTUARY PARTNERSHIP

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CHNEP Executive Director

Ms. Jennifer Hecker

BIPARTISAN INFRASTRUCTURE FUNDING FOR THE CHNEP

On November 15, 2021, President Biden signed the Bipartisan Infrastructure Law (P.L. 117-58), also known as the “Infrastructure Investment and Jobs Act of 2021” (IIJA) or “BIL.” The law’s investment in water is nothing short of transformational. It includes \$50 billion to the U.S. Environmental Protection Agency (EPA) for water infrastructure, the single largest investment in water that the federal government has ever made. The BIL provides \$132 million in funding for the 28 longstanding National Estuary Programs (NEPs) for fiscal years 2022 through 2026. This funding is being evenly distributed to the NEPs, annually providing each with approximately \$909,800 in BIL funds. Importantly, NEP BIL funds are available until expended.

On July 26th, EPA issued a NEP BIL Funding Implementation Memorandum (memorandum), which applies to funding provided under the BIL and provides guidance on uses of funds, timeframes, how to award the funds, and tracking and reporting requirements. The memorandum describes the process for FY 2022 – FY 2026 BIL funds and may be supplemented by additional implementation memoranda as needed. Unless otherwise noted in this document, the FY 2021 – FY 2024 Clean Water Act §320 National Estuary Program Funding Guidance also applies to BIL funding. It outlines the core goals of BIL funding are to:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; and
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels.

As such, it states that NEP projects funded through BIL should seek to: (1) Accelerate and more extensively implement CCMPs, (2) Ensure that benefits reach disadvantaged communities – including that at least 40% of the BIL funding goes to projects benefitting such communities in FY24-26, and (3) Build the adaptive capacity of ecosystems and communities – including addressing climate change and using green and nature-based solutions to enhance resiliency.

It goes on to state that where possible and aligned with the priorities identified in their Comprehensive Conservation and Management Plans (CCMPs), NEPs should engage and educate the public and private sectors on key climate-related vulnerabilities and solutions and provide technical and financial assistance to accelerate progress in response to a changing climate. NEPs should elevate climate efforts through BIL implementation including, but not limited to:

- Assessment and planning projects that involve climate change vulnerability assessments, community resilience and adaptation plans, or hazard mitigation plans
- Restoration, water infrastructure, green infrastructure, stormwater management, and nonpoint source projects that prioritize innovative climate adaptation, hazard mitigation, and resilience solutions
- Projects focused on climate-related research, including those that measure, monitor, and increase carbon sequestration
- Projects focused on climate-related outreach and education

As with annual appropriations distributed to NEPs to implement CWA §320, the funds distributed under the BIL must implement the management conference and EPA-approved CCMP and Work Plan. Therefore, the CHNEP is required to put forth a BIL Work Plan and Budget for each year - with CHNEP being allowed to combine the first two years – FY22 & FY23 – to submit immediately (within 90 days), and then FY24-26 will need to submit to EPA by June 1st each year. Due to the long-term nature of BIL funding, each NEP is also required to develop a BIL Long-Term Plan to submit no later than June 1, 2023.

Accordingly, CHNEP has drafted this BIL FY22 & FY23 Work Plan and Budget for the use of the first two years of Bipartisan Infrastructure Law funding to further resiliency in the CHNEP area, including addressing climate-related factors that affect improving water quality, restoring hydrology, protecting fish, wildlife and their habitat and increasing public engagement as outlined in the four action plans in the 2019 CHNEP CCMP.

CCMP FOCUS IN FY 2023

The Fiscal Year 2023 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, as well as research algae bloom remediation techniques.

HYDROLOGICAL 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. Currently, these include the South Lee County Watershed Initiative and the Charlotte Harbor Flatwoods Initiative 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 host routine volunteer events, as well as routinely host and participate in community 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 2023 ANNUAL BUDGET

Table 1: Fiscal Year 2022 and 2023 BIL Budget Overview

Revenue	
Federal (EPA FY22 Bipartisan Infrastructure Law (BIL) Funding)	\$ 909,800
Federal (EPA FY23 Bipartisan Infrastructure Law (BIL) Funding)	\$ 909,800
Total Revenue	\$ 1,819,600
Expenditures	
Personnel	\$ 33,042
Charlotte County Comprehensive Vulnerability Assessment	\$ 200,000
Polk County Comprehensive Vulnerability Assessment	\$ 200,000
Highlands County Comprehensive Vulnerability Assessment	\$ 200,000
Lee County Vulnerability Assessment	\$ 200,000
CHNEP Water Atlas Maintenance & Improvements	\$ 130,588
Tiki Point Living Shoreline Project	\$ 320,000
Pine Island Flatwoods Restoration	\$ 113,450
Restoration Project(s) TBD	\$ 422,520
Total Expenditures	\$ 1,819,600

CHNEP BIL FUNDED WORK PLAN TASKS

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

Task 1: Management Conference

Task 2: Public Engagement

Task 3: Research Coordination

- 3.1 CHNEP Water Atlas**
- 3.2 Charlotte County Comprehensive Vulnerability Assessment**
- 3.3 Polk County Comprehensive Vulnerability Assessment**
- 3.4 Highlands County Vulnerability Assessment**
- 3.5 Lee County Vulnerability Assessment**

Task 4: Watershed Coordination

- 4.1 Pine Island Flatwoods Preserve Wetland Habitat Enhancement**
- 4.2 Tiki Point Living Shoreline Project**
- 4.3 Restoration/Research Project(s) TBD**

Task 5: Policymaker Education

Note that only those tasks and projects bolded above are funded with Bipartisan Infrastructure Law funding.

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 awarder; 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 Host Agency procedures, secures funding from partners, and assists partners seeking grants and contracts to implement the CCMP.

CCMP Elements Implemented: All

Outputs/Deliverables

- Management Conference committee meetings for 4 committees, 3x/yr.
- Management Conference adoption of Annual Work Plan before June 1, 2023
- GPRR Reporting through EPA's NEPORT, by September 14, 2023

Milestones

- 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 23 Budget

EPA 320 Funds (FY23):

Personnel (Salaries & Benefits)	\$475,956
Staff Travel	\$ 25,000
Overhead Host Administrative Fees	\$165,000

EPA BIL (FY23):

Personnel (Salaries & Benefits) (\$33,041.87 exact) \$ 33,042

SWFWMD (FY23):

Personnel (Salaries & Benefits) \$ 56,000

FDEP (FY23)

Personnel (Salaries & Benefits) \$ 75,000

Note: Total personnel (salaries & benefits) costs are \$639,998 (\$639,997.87 exact).

Local:

Meeting Support	\$ 5,649
Communications Software and Fees	<u>\$ 9,000</u>

Task 1 Total Budget \$844,647

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

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency.
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in this County.

Task 3 Research Coordination

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 23 Budget

EPA 320 Funds:	Staff Time
EPA BIL 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

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its

vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency.

- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in this County.

Task 3.1 CHNEP Water Atlas

Objective: To ensure continuing access to technical information from throughout the CHNEP Study 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.

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 2023 include:

- *Implementation of Waterbody Page Modifications:* implement the new integrated waterbody and basin pages with the four interactive mappers (e.g., water quality, hydrology, fish and wildlife habitat, and climate change) that are reclassified and aligned with FDEP WBID boundaries and CHNEP basin boundaries as well as the flow chart provided by CHNEP which outlines the structure and hierarchy of watersheds, basins, and waterbodies
- *Conceptual Design and Implementation of Basin and Watershed Page Modifications:* design updated basin and watershed pages that include general information on watersheds, a summary and a map of the watershed, and integrated hotlinks to the appropriate associated basin (if watershed page) and waterbody pages (if watershed or basin page).
- *Updates for Water Quality Dashboard and Numeric Nutrient Criteria (NNC) Calculator Tool:* reclassify waterbody segments based on the updated waterbody (WBID) boundaries defined by the Florida Department of Environmental Protection (FDEP) to accommodate the use of waterbody segment water quality data and NNC/threshold values. The UNIVERSITY will make structural changes to the Water Atlas GIS and database to redefine the boundaries of CHNEP waterbodies into tidal, rivers/streams, and lakes. Waterbody specific NNC threshold values will be based on FDEP adopted NNCs or tidal creek NNCs. The Dashboard gauges will also be modified to display a notice indicating whether the latest value is good or poor based on the threshold.

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

Project Location: Entire CHNEP Service Area

Partners and Roles: CHNEP (lead implementer) and all partners entities creating publicly accessible water quality data are users

Outputs/Deliverables Milestones:

- Post and provide access to water quality data updates every 6 months
- Post and provide access to water quality contour map updates annually
- Post and provide access to data analyses, maps and graphs as requested
- Conducting trend analysis on water quality data annually and providing in user friendly format

- Conducting analysis on seagrass data annually and providing in user friendly format

FY 23 Budget:

EPA 320 FY23 Funds:	\$21,000 + Staff Time
EPA BIL FY23 Funds:	\$130,588
Total Budget:	\$151,588 + 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

BIL Priorities Supported:

- 1) Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts through providing the public all accessible climate change data for the region in one place where they can readily view and utilize.
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in this County.

Task 3.2 Charlotte County Comprehensive Vulnerability Assessment

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.

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 to create a final product that is acceptable to the Florida Department of Environmental Protection in order to qualify the County to access additional state funding sources, for which that is a prerequisite for.

CCMP Elements Implemented: potentially all CCMP elements

Project Location: Charlotte County, Florida

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

FY23 Budget (continuing into FY23): 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 that meets state Statutory requirements

BIL Priorities Supported:

- 3) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency.
- 4) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in this County.

Task 3.3 Polk County Comprehensive Vulnerability Assessment

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.

Description: This project will use the climate adaptation planning process to conduct public workshop3 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 to create a final product that is acceptable to the Florida Department of Environmental Protection in order to qualify the County to access additional state funding sources, for which that is a prerequisite for.

CCMP Elements Implemented: potentially all CCMP elements

Project Location: Polk County, Florida

Partners and Roles: CHNEP (Funder), Polk 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

FY23 Budget (continuing into FY23): 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 state Statutory requirements

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in this County.

Task 3.4 Highlands County Comprehensive Vulnerability Assessment

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.

Description: This project will use the climate adaptation planning process to conduct public workshop³ and data analysis to identify pre-existing conditions and climate stressors, including vulnerability modeling to develop recommended Adaptation Action Areas (AAA's) for Highland 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 Highland County that meets all Florida Statutory requirements to create a final product that is acceptable to the Florida Department of Environmental Protection in order to qualify the County to access additional state funding sources, for which that is a prerequisite for.

CCMP Elements Implemented: potentially all CCMP elements

Project Location: Highlands, Florida

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

FY23 Budget (continuing into FY23): 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 Highland County that meets state Statutory requirements

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in this County.

Task 3.5 Lee County Comprehensive Vulnerability Assessment

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.

Description: This project will use the climate adaptation planning process to conduct public workshop3 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. 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 Lee County that meets all Florida Statutory requirements to create a final product that is acceptable to the Florida Department of Environmental Protection in order to qualify the County to access additional state funding sources, for which that is a prerequisite for.

CCMP Elements Implemented: potentially all CCMP elements

Project Location: Lee County, Florida

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 Adaption Strategies and recommended Adaptation Action Areas

FY23 Budget (continuing into FY23): 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

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in selected County.

Task 4 Watershed Coordination

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 smalltooth 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 23 Budget

EPA 320 Funds:	Staff Time
EPA BIL 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

BIL Priorities Supported:

- 1) "Tackle the Climate Crisis" by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency

- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in selected County.

Task 4.1 Pine Island Flatwoods Preserve Wetland Habitat Enhancement

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.

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

Project Location: Pine Island, Lee County, Florida

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

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

Estimated Milestone

- Completed hydrological restoration and wetland habitat creation project with positive impacts on downstream estuary water quality

FY23 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

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting restoration of wetlands that act as carbon sinks and restoration of freshwater hydrological flows that can mitigate saltwater intrusion from sea level rise.
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address additional vulnerabilities that may affect disadvantaged communities in selected County.

Task 4.2 Tiki Point Living Shoreline 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.

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.

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

FY23 Budget Remaining funds from below to be expended + Staff Time

Prior Funding:

EPA BIL FY22 Funds **\$320,000 + Staff Time**

Outcomes

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

BIL Priorities Supported:

- 1) "Tackle the Climate Crisis" by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to identify its vulnerabilities to climate change, in order to mitigate them and take measure to enhance their resiliency

Task 4.3 Restoration/Research TBD Projects

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.

Project Location: TBD with preference to disadvantaged communities in the CHNEP area

Partners and Roles: Will be determined upon project selection and approval of CHNEP Policy Committee.

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 23 Budget

FY23 EPA BIL Funds:	\$346,170 + Staff Time
FY23 Local Funds:	\$ 20,000 for unanticipated project-related expenses
FY23 Total Budget:	\$366,170 + Staff Time

Previous Funding

<u>FY22 EPA BIL Funds:</u>	<u>\$76,350</u>
FY22 Total Budget:	\$76,350 + Staff Time
FY22 & 23 Total Budget:	\$442,520 + Staff Time

Outcomes

- 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 restoration needs will be filled

BIL Priorities Supported:

- 1) “Tackle the Climate Crisis” by reducing emissions that cause climate change and accelerating resilience and adaptation to climate change impacts; in assisting community to undertake restoration projects that enhance their resiliency.
- 2) “Take Decisive Action to Advance Environmental Justice and Civil Rights” by promoting EJ and protecting civil rights at the federal, state, and local levels to identify and address climate mitigation needed in disadvantaged communities in the CHNEP area.