

# **FISCAL YEAR 2009 WORKPLAN & Fiscal Year 2008 Workplan Amendments**



Volunteers Gail Gaumgarten and Rose Young preparing to take shoreline data on August 28, 2007.

## **Charlotte Harbor National Estuary Program Technical Report 08-1 Draft March 31, 2008**



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The Charlotte Harbor National Estuary Program is a partnership of citizens, elected officials, resource managers and commercial and recreational resource users working to improve the water quality and ecological integrity of the greater Charlotte Harbor watershed. A cooperative decision-making process is used within the program to address diverse resource management concerns in the 4,400 square mile study area. Many of these partners also financially support the Program, which, in turn, affords the Program opportunities to fund projects such as this. The entities that have financially supported the program include the following:

U.S. Environmental Protection Agency  
Southwest Florida Water Management District  
South Florida Water Management District  
Florida Department of Environmental Protection  
Florida Coastal Zone Management Program  
Peace River/Manasota Regional Water Supply Authority  
Polk, Sarasota, Manatee, Lee, Charlotte, DeSoto, and Hardee Counties  
Cities and Towns of Sanibel, Cape Coral, Fort Myers, Punta Gorda, North Port, Venice,  
Fort Myers Beach, and Winter Haven  
and the Southwest Florida Regional Planning Council.

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# GLOSSARY OF ACRONYMS

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
CFRPC	Central Florida Regional Planning Council
CHEC	Charlotte Harbor Environmental Center
CHNEP	Charlotte Harbor National Estuary Program
CH-RAMP	Charlotte Harbor-Regional Ambient Monitoring Program
CWPRA	Coastal Wetlands Planning, Protection and Restoration Act
CZM	Coastal Zone Management
EAR	Evaluation and Appraisal Report
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
NOAA	National Oceanic and Atmospheric Administration
NWR	National Wildlife Refuge
PIVOT	Performance Indicators Visualization Outreach Tool
PLRG	Pollutant Load Reduction Goal
PR/MRWSA	Peace River/Manasota Regional Water Supply Authority
R&R	Research and Restoration
RPC	Regional Planning Council
SFWMD	South Florida Water Management District
SRPP	Strategic Regional Policy Plan
SFWWMD	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
TBRPC	Tampa Bay Regional Planning Council
TMDL	Total Maximum Daily Load
USACOE	United States Army Corps of Engineers
USF&WS	United States Fish and Wildlife Service
USGS	United States Geological Service
WCIND	West Coast Inland Navigation District
WMD	Water Management District
WQ	Water Quality
WQQOS	Water Quality Quantifiable Objectives Subcommittee



# Purpose and EPA Guidance

This document provides annual financial and task-based information to meet federal workplan requirements. The focus of this workplan continues to be the implementation of the Comprehensive Conservation and Management Plan (CCMP).

On March 4, 2002, Suzanne Schwartz, Director of the Oceans and Coastal Protection Division of the Environmental Protection Agency (EPA) issued guidance for the development of the FY 03 Workplans prepared by the nation's NEPs. For ease of use, new requirements were shown in bold text. New guidance requirements included special grant condition regarding the use of travel funds and Government Performance and Results Act (GPR) reporting. NEPs were also to have an Implementation Tracking System, Environmental Progress Report and Environmental Indicators in place by 2006. Furthermore, additional information (success stories) is expected for accomplishments of the past year. According to the guidance, NEP Workplans must include the following items:

## Goals and Accomplishments

1. A description of program accomplishments (programmatic, environmental, etc.) and transferable success stories made during the past year;
2. A discussion of which goals were achieved;
3. Discussion of major goals/focus for the coming year and any changes in priorities;

## Ongoing Projects

4. Status of projects that are ongoing from previous year. This shall include a summary of the deliverables and associated milestones or completion delivery dates, project name or CCMP action, the cost, and organization responsible;

## New Projects

5. A description of new projects, activities, or products to be produced in coming year(s) to meet those goals, a discussion of how they are linked to CCMP action plans or seven purposes of section 320, milestones and/or completion/delivery dates for new tasks, cost of the project, activity, or product, and the source of funds to carry it out;
6. Organization responsible for each new project/activity/product and the role of any partners in their development/use;

## Administrative and Financial

7. List of staff and description of their responsibilities/activities;
8. A description of Grants provided from the NEP to local entities. This should include the amount provided, organization conducting the work, purpose, deliverables, and completion dates;
9. Total funds leveraged (section 320 and others) and their source;
10. The non-Federal cost share (match) and its source (specify in-kind or cash from particular entity; if in-kind, indicate type - e.g., office space); if staff, please specify individual, their position and employer, and an estimated dollar value of their contribution to the match; and
11. Travel Documentation.

# Summary of Program Accomplishments

## Calendar Year 2007

This section corresponds to parts 1 through 3 of the EPA Workplan Guidance.

### Calendar Year 2007 Programmatic and Environmental Accomplishments

#### Management Conference

The Management Conference is cited as the most important function of the CHNEP. It is composed of Policy, Management, Technical, and Citizen Committees. In support of the Management Conference function, the CHNEP prepares and implements a task-based budget with specific deliverables. The Management Conference updated the Citizens Advisory Committee and the Technical Advisory Committee by-laws to increase the ability of these committees to provide opinions and recommendations, expand membership and participation opportunities, and ensure compliance with Florida's (Decision-making in the) Sunshine Law.

#### CCMP Update

The CHNEP adopted a procedure to initiate an update of its Comprehensive Conservation and Management Plan (CCMP) every five years. A draft of the CCMP was completed in 2006. In 2007, the CCMP update was laid out with new maps and increased use of graphic images to convey information. The new layout allowed the document to go from 750 to 160 pages with more content. The new CCMP features a graphic vision series. The draft quantifiable objectives and priority actions were the result of a survey among management conference participants and interested public followed by dozens of subcommittee meetings to craft strategies. The draft plan addresses hydrologic alterations, water quality degradation, fish and wildlife habitat loss, and stewardship gaps. A new way to look at the CCMP quickly was developed and entitled "CCMP-at-a-Glance." The document helped to identify gaps, duplications, and improve the structure of the draft CCMP. Conceptual adoption of the plan took place in late 2007.

#### Grants

In 2003, a commitment to pursuing grant opportunities was implemented as a component of the Long Range Financial Strategy. Early successes included shepherding public support for the acquisition of the 72,000-acre Babcock Ranch. In 2007, several grants were successfully obtained through CHNEP's grant applications efforts:

- The FishAmerica Foundation awarded over \$30,000 for a volunteer program to restore the red mangrove (*Rhizophora mangle*) fringe along the west wall of Charlotte Harbor damaged from Hurricane Charley. The wonderful boaters and kayakers who volunteered their time to map the condition of the shoreline in Charlotte County provided much of the data to help define the restoration areas. Ongoing research is uncovering seasonal fish movements between the upper estuary and ocean passes that give credence to the anglers' supposition that these corridors are important fish habitat. This project will use both planting and propagule enhancement to increase the number of recruiting mangroves in two locations where there was almost 100% mortality of the fringing red mangrove forest. The proposed locations, two years after the hurricane, show red mangrove propagule recruitment is well below average. These locations are several kilometers away from healthy mangrove forests, limiting the number of propagules naturally moving onto the damaged shorelines. In addition, as a result of the high level of interest from the angler community, this project will rely on a large number of trained volunteers to conduct collection, sorting, spreading and

planting of mangrove propagules. The total program, with in-kind services from Florida Sea Grant, CHNEP, Florida Fish and Wildlife Conservation Commission, Florida Gulf Coast University and many members of the local boating and angling clubs, is valued at nearly \$100,000.

- The Florida Coastal Management Program and NOAA awarded CHNEP over \$16,000 to engage homeowners within the San Carlos Park community to implement Florida Friendly Landscaping techniques in order to improve stormwater quality through reduction of nutrient runoff, reduce water consumption by irrigation and increase wildlife habitat in the residential yards. Because San Carlos Park is intensely urbanized, it is believed that implementing Florida Friendly Landscaping techniques on the residential land will reduce nutrient discharges to Mullock Creek and ultimately Estero Bay. In recent years, efforts to encourage the use Florida Friendly Landscaping to benefit the environment, water supply and native flora and fauna have had limited success. Despite the development of materials and targeted training, Florida Friendly Landscaping principles have not been implemented within the Estero Bay watershed on a community-wide scale. This project will target homeowners with older yards planted in the “traditional” manner of turf coverage. Through hands-on experiential workshops, homeowners will be exposed to the principles of Florida Friendly Landscaping. Homeowners will participate in the design and planting of demonstration yards and will subsequently design and plant a Florida Friendly Landscape for their own yard. With in-kind services provided by Lee County, Florida Gulf Coast University and CHNEP, the total project is valued at over \$42,000.
- U.S. EPA awarded over \$470,000 through its Wetlands Development Grant for “A Watershed Analysis of Permitted Coastal Wetland Impacts and Mitigation Methods within the Charlotte Harbor National Estuary Program Study Area.” This project will describe and evaluate the regional success of the use of coastal wetland mitigation strategies implemented in the CHNEP Study Area. Researchers will establish the acreage of private mitigation, how well these lands are managed, and the overall success rate of these actions, how well regional mitigation goals are being met and any changes in quantity of coastal wetlands subject to permitted mitigation since the SWANNC Supreme Court decision. Lessons learned while implementing the project will be applicable to improving the understanding of the extent and nature of coastal wetland impacts and utility of existing mitigation requirements and mitigation areas in southwest Florida. The CHNEP anticipates transferring the information and recommendations for improved mitigation practices and monitoring to the SFWMD, SWFWMD, the Florida Department of Environmental Protection (DEP), the USACE, local governments, private conservation organizations, and the public. An improved regulatory review process for wetland mitigation and better protection of coastal wetlands resources could result. The total project, with in-kind services provided by CHNEP, and volunteers participating in the Shoreline survey, is valued at over \$628,000.
- U.S. EPA Office of Wetlands, Oceans and Watersheds awarded \$15,000 to develop a strategic communication plan for CHNEP that will include the development of a communications audit report, a needs assessment report, a strategic communications plan and an evaluation tool that can be used across events and projects.

## **Outreach**

The CHNEP is continuing the publication of its newsletter, *Harbor Happenings*, the annual calendar, and its website. *Harbor Happenings* is now being translated into Spanish and placed on the website. The newsletter provides information on a wide variety of topics including latest research findings, restoration accomplishments, changes in legislation, upcoming events, and information about CHNEP’s partners including the water management districts. CHNEP staff and committee members

have provided presentations at a variety of venues and on a variety of topics. The CHNEP has hosted, or otherwise provided funding to support, a variety of workshops and events including:

- A portable map depicting the elevation within the CHNEP watershed was developed for use at events and for loan to partners.
- Sponsored "Keeping the Peace, Translating Management Plans into Action in the Peace River Watershed" in cooperation with SWFWMD, LE/AD, Cities of Winter Haven and Lakeland and Polk County. The conference was held October 5, 2007, in Bartow with about 70 people attending. The purpose of the conference was to provide staff at management agencies with an opportunity to learn about projects underway in the Peace River watershed. A report summarizing the presentations will be posted on the website at [www.CHNEP.org](http://www.CHNEP.org) in February.
- A professional development course, Project Design and Evaluation, was held for CHNEP partners. Twenty-four people attended the 2.5 day course from December 12 to 14 that was taught by NOAA Coastal Services Center.
- Approximately 45 people from Hardee and Highlands counties attended the Florida Friendly Plant Workshop on January 27, 2007 at SFCC in Bowling Green. The agenda covered Florida friendly plant principles, an overview of native plants, designing your landscape, rainbarrels and a native plant sale. The workshop was sponsored by SWFWMD Peace River Basin Board, CHNEP and SFCC in cooperation with Deluxe Trees and Shrubs, Pine Lily Nursery, DeSoto County Parks & Rec, and others.
- Approximately 90 people, mostly from DeSoto County, attended the Florida Friendly Plant Workshop on February 3, 2007 at SFCC in Arcadia. The agenda covered Florida friendly plant principles, an overview of native plants, designing your landscape, rainbarrels and a native plant sale. Winners of the writing contest were announced with authors reading their entries. The workshop was sponsored by SWFWMD Peace River Basin Board, CHNEP and SFCC in cooperation with Deluxe Trees and Shrubs, Pine Lily Nursery, DeSoto County Parks & Rec, and others.
- CHNEP was asked to participate in panel discussions following WGPU Water Woes series. Stuart Stuass represented the CHNEP on the June 11 panel after Shell Point residents watched the Lake Okeechobee show.
- Developed Curious Kids Nature Club website. The site's architecture, graphic design and interactivities accommodate specific learner styles/intelligences while not presenting conflicting or detrimental experiences for other styles/intelligences. Many options for learning (video, text, quizzes, etc.) are available, which also expand the audience for children to a greater age range (preK to grade 8). Information for teachers are available, including curriculum, correlate to Sunshine State Standards. Each bit of information on the website is "threaded" to other information. For example, if information on mangrove habitats is displayed then links to the animals and issues will be linked to that page. With support from NEP, WGPU modified the structure, provide information on habitats, animals and issues that are of most concern to us, feature the geographic area of the NEP study area, and treat the NEP as co-producer of the project. The NEP's support will be acknowledged in several ways, including by public service announcements (PSA) that WGPU will produce.
- Celebrated National Estuaries Days with a variety of events, including in DeSoto County with "Paddle the Peace" on October 14. Twenty-nine people traveled 10 miles of the river with interpretation provided throughout of the ecological relationships of flora and fauna, seasonally high and low water to the health of the estuary and how choices people make affect the entire watershed.

- As part of National Estuaries Days 2006, 232 Keep Lee Beautiful volunteers removed 4,020 pounds of marine debris during four hours. The event received coverage in 3 newspapers and 4 news stations providing public awareness to this on-going program.

In addition, partners completed the following public outreach grants:

- A "Grow Smart and Profit" portfolio was developed to aid those working with builders and developers to convince them of the value of Florida-friendly landscaping. The portfolio includes 41 full color pages that present the principles of FYN, successful Florida-friendly communities, award and recognition programs, and landscaping techniques and implementation ideas. This guide will help explain how to maintain a Florida yard using best management practices.
- Seventh grade students at LA Ainger Middle School collected data and specimens while enjoying being on a boat in Charlotte Harbor -- a unique and life changing experience that many would otherwise would never have had. The 150 students included exceptional, at risk and regular education students took part in one of five learning excursions. Each student gathered water quality and observational data and gathered specimens during a wading trip. With this grant, 25% of the seventh grade students in Charlotte County were reached.
- Port Charlotte Middle School seventh graders learned about the Charlotte Harbor estuary, in particular the Punta Gorda area, during field trips and class activities. Through this grant, the 140 students were instilled with an appreciation of the estuary. During the field trips the students traveled to Ponce de Leon Park where they walked the trail through the mangroves, learned about native wildlife at the Peace River Wildlife Center, created sand art of native scenes, and waded into the water for a close-up look at the animals that depend on the waters.
- Sarasota County developed a storm drain marker program for the Lemon Bay Watershed. The program includes storm drain markers that identify the watershed, remind people that their storm drains connect to Lemon Bay and not to use the drains to dispose of litter, hazardous fluids or other waste. The program also includes informative and motivational door hangers. Volunteers will install the 1000 markers and 1500 door hangers.
- Coastal Wildlife Club held "Sea Turtle Adventures" workshop on July 17-18, 2007, for 25 elementary teachers who work in the CHNEP study area. The workshop helps teachers increase their awareness of coastal resources with particular emphasis on sea turtles. The workshop provided teachers with field and classroom activities, a binder of resource materials connected to overnight component allowed on-the-beach time observing Turtle Patrol volunteers complete nest evacuations and beach walks to discuss light and nesting habitat issues. The teachers have all been overwhelmingly positive.
- The Turtle Talk children's activity book was translated into Spanish and 5,000 copies were printed. Turtle Talk Zander Srodes will distribute to children throughout the CHNEP study area.
- Five lakeside educational displays were developed and installed at Lake Parker Park in Lakeland by Lakes Education/Action Drive. The signs inform the public about natural features and environmental information helpful to water conservation, water quality and lakeside habitat. Each sign focuses on a different topic: watersheds/Peace River basin, stormwater runoff, alligators, aquatic plants and wildlife identification.
- Estero Bay field map and interpretive guidebook was developed by the Mound House at Fort Myers Beach. This guide will be used by visitors to the historical and archeological site, which is also a stop on the blueways trails.
- Students at J. Colin English Elementary School identified environmental issues. They chose to demonstrate the watershed model, continue with our school wide recycling project, wait until Spring to sample and report on water findings, and chose to create a wetland

presentation. The returning students taught the new kids how to demonstrate the watershed model. A group of twelve students attended the CHNEP Nature Festival and demonstrated the watershed model approximately six times per hour for 5 hours. To learn about wetlands they chose to invite presenters from the Six Mile Cypress Slough and the Calusa Nature Center to our school. In addition, they took an after school field trip to the Slough for a moonlight walk and to see firsthand what a wetland looks like. They researched animals and wrote clues in a game format to use during their wetland presentation. They will also give small groups a bag of objects and tell them to identify how each object compares with an object a wetland does. For example; a sponge soaks up water and a wetland soaks up water and help prevent flooding. They will also include footprints in sand as part of their presentation and a PowerPoint on what they have learned. The returning students taught the new kids how to demonstrate the watershed model. A group of twelve students attended the CHNEP Nature Festival and demonstrated the watershed model approximately six times per hour for 5 hours. Were there any dissemination activities? The students taught 12 kindergarten, first, and second grade classes lesson on recycling. They created posters. A group of 10 students volunteered at the Charlotte Harbor Nature Festival for 5 hours on a Saturday. We plan to share information on water quality results with CHNEP, the Powell Creek Restoration Committee, and Lee County Utilities. We plan to present our wetland presentation at the Lee County Public Library, Cape Coral Branch on January 20, at 2:00 p.m. In March, we are looking forward to the League of Environmental Educators of Florida (LEEF) Conference. 1 teacher, 2 volunteers, and 5 students plan to present our wetland project and attend workshops.

- Explorations V Children's Museum in Lakeland led 16 hour-long hands-on workshops for 343 children in grades 3 to 5. The children and their 70 chaperones used hydrogen and oxygen in a role play activity to understand how molecules join to become water, used a movable thermometer and other visuals to discover the three stages of water, matched water information cards and measured water usage/waste with different handwashing and toothbrushing methods then discussed suggestions for personal water conservation, viewed the EnviroScape model to demonstrate water pollution and its impact on people, land and the environment, viewed a Florida map with outline of the HCNEP watershed and learned how actions in one area affect another, created their own "polluted water" or created own "edible aquifer."
- Crowley Museum and Nature Center produced a handy nature resource guide of plants, insects, mammals, birds and fish that inhabit the five distinct habitats of the center. Each laminated guide is 4x4 inches with a photograph on one side and information on the other. These are used by visitors to the center. The guides as well as supplementary information are posted on the website at [www.crowleymuseumnaturectr.org/Featured%20Species.htm](http://www.crowleymuseumnaturectr.org/Featured%20Species.htm).
- G.WIZ, the Hands-On Science Museum provided water workshops for 200 students in grades 5-8 from south Sarasota County. After completing the workshop, students showed an 80 percent increase in knowledge! Student logbooks were taken back to class for follow-up activities. Teacher evaluations indicated the workshops met the needs of the teachers, the Florida Sunshine State Standards and the district's curriculum standards.

Thirty-six microgrants were completed by partners. Particularly interesting microgrants included:

- DeSoto County Library Association, in support of CHNEP's Florida friendly workshops, held a Florida native plant writing contest and increased the native plant reference books available at the library. All the entries received are posted on the website at [www.CHNEP.org](http://www.CHNEP.org). Four entries were chosen to each receive a \$50 certificate from one of two local native plant nurseries. Another sponsor provided funds to give each of the entrants a \$10 certificate.

- Pilot Club of Fort Myers Beach involved 250 volunteers, including many students, at the 2007 Great America Cleanup/Earth Day Trash Bash on April 27. The volunteers focused on a six-mile stretch of the beach. In 2.5 hours they picked up enough litter to fill two-thirds of a dumpster with lumber, paneling cardboard, metal, items left over from picnics, cigarette butts and volumes of straws. Volunteers included students from Beach ES, Alva MS, Orange River ES, 60 from Canterbury School as well as 30 Brownies and Daises and Pilot Club members. Pilot Club of Fort Myers Beach involved an additional 360 volunteers on September 16, 2006 when they picked up 825 pounds of debris, including 367 plastic bags, 500 cup lids, 1,443 cigarette butts, 539 food wrappers and 548 straws. Volunteers included area families and students from Beach Elementary, Lehigh Middle, Franklin Park, Fort Myers High, and Mirror Lake Elementary Schools.
- The City of North Port devoted the week of June 25 to the environment for the 120+ campers at the city's summer camp. Campers studied the dry creek bed of the Myakkahatchee Creek that flows through the Environmental Park, searched and dissected owl pellets and looked for fossils.
- Coastal Conservation Association produced a 15-minute video to demonstrate boat operation on grass flats. The video will be shown in boating classes, workshops, etc.
- Fourteen people participated in an educational Friends of Billy Creek Fall Paddle. The event was used to help establish the Friends of Billy Creek and get people excited about cleaning it up. It is a pilot of the Caloosahatchee Riverwatch Citizen's Association to establish similar groups on the tributaries of the Caloosahatchee. Most who attended did in fact join the Friends of Billy Creek (FOB).
- The FrogWatch website for the volunteer Southwest Florida Amphibian Monitoring Network includes monitoring dates and forms, protocols for new volunteers, amphibian research and news, downloadable reports summarizing past results, as well as links to other sites. See <http://www.frogwatch.net/index.htm>.
- A CHEC volunteer initiated a native grass demonstration and butterfly gardens at the Charlotte Harbor Environmental Center Alligator Creek site. The site included transplanting species from the property and amending with new plants as well as developing signage that included labeling plants. Grasses included cordgrass, dwarf fakahatchee, wire grass, muhly grass, lopsided indiagrass, sea oats, and other grasses transplanted from property.
- The City of Winter Haven developed a lakefront residents education brochure to provide educational information about stormwater, lakes, aquatic plants, permits, wildlife habitat, docks and seawalls, the watershed, connections to the Peace River and the Lake Awareness Educational Series. The guide was mailed to each lakefront residence -- all 2,500 -- and 500 copies were made available to others at the library, chamber and elsewhere. One panel of the brochure was dedicated to "Do you know your watershed" and CHNEP contact information was provided.
- The landscape at a new church, Unity of Bonita Springs, was cleared of invasive plants and debris and native wax myrtles were planted.
- Sponsored the 11th annual Southwest Florida Invasive Species Workshop held December 1, 2006 with 150 people attending. The number of people interested in this workshop exceeded the space available. Most of those attending are actively involved in natural areas management in southwest Florida and found the information helpful in their work.

## Research

The CHNEP conducts research through partners, contractors, and by staff. The wide variety of research fills gaps in knowledge related to hydrologic alterations, water quality degradation, and habitat loss. Research projects are chosen from a Research Needs Inventory adopted in 2004. Completed elements of the CHNEP research program include:

- The Charlotte Harbor NEP approved a resource-based approach for setting numeric water quality targets for Lemon Bay, Charlotte Harbor and Estero Bay using seagrass light requirements. The document “Numeric water quality targets for Lemon Bay, Charlotte Harbor and Estero Bay, Florida” details the approach and is available from the CHNEP website. To offset future development and maintain current water quality into the future, the program established water quality targets for color, turbidity and chlorophyll a specific to each estuarine segment that encompasses the greater Charlotte Harbor estuarine complex including Lemon and Estero Bays. First we determined percent-light-at-depth targets required to achieve seagrass maximum depth distribution in each segment. Next we applied an optical model which describes total light attenuation as the sum of three partial light attenuation components: color, chlorophyll a and non-algal suspended solids. This allowed us to back-calculate the contribution to total light attenuation by each component in terms of concentration intercepts (e.g.  $\mu\text{g/L}$  chlorophyll). Finally, seasonal water quality data for each estuary segment were plotted with the intercepts overlaid, producing a plane of constant attenuation given our percent-light-at-depth goal. It is this plane of constant attenuation that is our target. This plane allows the concentration for each component to assume any concentration between zero and its intercept; its value dependent on the concentrations of the other 2 components. This objective is in contrast to many water quality targets that set a discrete maximum for each specific analyte without regard to concentrations of other relevant constituents affecting the targeted outcome. Water quality data points located outside of the plane of constant attenuation identify times and locations when water quality did not meet our goals for that estuary segment. These water quality targets will be used by resource managers and NEP partners to hold the line on water quality in the greater Charlotte Harbor estuary, especially those parameters influencing water clarity and seagrass coverage. Resource managers can in the future determine if seagrass and water quality restoration targets are appropriate and easily modify this approach to encompass such targets if so. Subsequent to the approval of this document, the next step for these targets is to develop a Water Quality Management Strategy Working Group consisting of NEP Management Conference members. This group will take the lead role in determining whether segments within the Lemon Bay, Charlotte Harbor and Estero Bay are exceeding the targets herein and resulting pollutant reduction management strategies. The Working Group will also take the lead role in further refining the targets, such as whether seagrass restoration targets are appropriate and refining the partial attenuation coefficients of the optical model included in this approach.
- Final report, appendices, GIS files and database for the FY05 project "Comprehensive Water Quality Status and Trends for the Charlotte Harbor National Estuary Program" by Janicki Environmental, Inc. The deliverables are compiled onto a CD and are available upon request. This report provides a comprehensive analysis of water quality status and trends including surface water, groundwater, streamflow and rainfall using data collected throughout the Charlotte Harbor National Estuary Program study area. The purpose of the report is to: describe time series trends in water quality using fixed station water quality; establish baseline characterizations water quality conditions in the estuarine portions of the study area using water quality data collected with a probabilistic design, and perform a validation exercise of the CHNEP numerical water quality model to assess the validity

and reliability of the model with respect to identifying water clarity target exceedances. These analyses incorporate the preponderance of data collected within the study area. Two periods of record are reported for the analyses. The first is the entire period of record of data collection. For rainfall and streamflow these records may date back to 1940's while for water quality, the initial collection dates tended to be in the late 1970's or after. The second period of record was defined to represent more a recent time period coincident with the existence of the CHNEP. The surface water quality reporting was divided into three regions; the Peace River region, Myakka River region and the Southern Coast region that includes Charlotte Harbor Proper, the Caloosahatchee and Estero Bay. The results of the surface water quality status and trends analyses indicated that there have been both areas of stable or improving water quality as well as areas of declining water quality in many of the basins in the CHNEP study area. Chlorophyll concentrations in the Southern Coast region appeared to be generally improving throughout the region with few exceptions and fecal coliform levels in the estuary appeared to be improving as well. However, several water quality constituents were found to be in declining condition. Ammonia (NH<sub>3</sub>) and nitrate (NO<sub>3</sub>) condition was consistently declining in small magnitude throughout the Southern Coast region though trends in nitrite (NO<sub>2</sub>) were stable. Therefore, concentration increases (declining condition) in NO<sub>2</sub> were primarily due to NO<sub>3</sub>. Salinity decreases found in Estero Bay were coincident with increased streamflow trends in this area. In the Myakka River, many locations appeared to have increased chlorophyll concentrations along with increased nitrogen concentrations indicative of declining water quality conditions. Total suspended solids and turbidity also reported declining condition at several stations in the Myakka region; however, total phosphorous concentrations were improving. In the Peace River, declining chlorophyll and dissolved oxygen conditions were evident only at a few stations in the Upper Peace River while total suspended solids were found to be in declining condition at many stations near the mouth of the Peace River. The 1995-2005 period of record showed very similar results to the period of record results suggesting that the statistical trend test used by this project is robust. An important addition to water quality sampling in Charlotte Harbor since the year 2000 was the incorporation of a probabilistic sampling design for water quality. Assessment of these data was performed. Fundamental predictive models were developed to compare a subset of water quality indicators, namely turbidity, total suspended solids and chlorophyll across stratum and season.

- Conducted a 2-day technical workshop on Colored Dissolved Organic Matter (CDOM). Over 75 participated including those from Florida, California, Maryland, and North Carolina. Summarizing the sources, sinks, and processes of CDOM was CHNEP's first use of conceptual diagrams.

Partners completed the following projects under CHNEP's Research and Restoration Partners Program:

- FY04 R&RP Grant project "Community Level Impact and Potential Management Practices of West Indian marsh grass in the Myakka River Watershed" final report. West Indian marsh grass, *Hymenachne amplexicaulis* is currently invading the watersheds of central and south Florida. During this process, native flora and fauna are being displaced by this aggressive grass. Researchers investigated the impact of *Hymenachne* invasion to flora and macroinvertebrates in Myakka River State Park and evaluated the effect of herbicides for its control. Sites invaded by *Hymenachne* had larger accumulation of biomass, reduced macroinvertebrate abundance and simpler trophic structure than native sites. There was no indication that native insect herbivores were colonizing *Hymenachne*

- and this could be explained by the relatively recent arrival of this grass into Florida. The herbicide experiment suggested that *Hymenachne* can be controlled using a tankmix of glyphosate and imazapir, and the timing of its application should be targeted for early growing season (February to May) when the plant is under stress and before flowering. Management of this invasive grass in infested wetlands must include a combination of strategies such as winter burning, herbicide application and hydroperiod control. Prevention by monitoring and early control is ideal in uninfested wetlands.
- FY06 R&RP Project "Melaleuca Removal from Pop Ash Creek Preserve" final report. Lee County Conservation 20/20 Program removed exotic invasive melaleuca from approximately 63.5 acres of the northern portion of the preserve. NEP funding allowed a "jump start" on stewardship activities in the northern twenty percent of the preserve. Four different methodologies were utilized, depending on the size and density of the melaleuca and the type and structure of the underlying natural community. The first methodology was mechanical removal utilizing a Brontosaurus. This type of heavy equipment removed the larger melaleuca trees that were located within eighteen acres of pine flatwoods with more densely spaced pine trees. The second methodology entailed mowing and then treating with herbicide the 10.5 acres of melaleuca monocultures utilizing a tractor equipped with a mower. The third methodology, consisted of prescribed fire to burn the melaleuca seedlings in approximately 12.4 acres of flatwoods. The final methodology consisted of hand removal of sapling and seedling melaleuca and treatment with herbicide. An experiment was set up in the prescribed burn area. One hundred twenty seedling and sapling melaleuca (and fifteen controls) were marked within a 12.4 acre mesic/hydric flatwoods to see if a late June prescribed burn would kill seedlings and saplings. A random numbers table was used to generate forty points. The closest individual melaleucas within each of the following three size classes (< 51 cm, 52-100 cm, and 100-150 cm) were marked at the randomly generated points prior to the burn. Individual melaleucas within each size class were marked with a labeled washer and a piece of rebar within 15 cm of the stem. Fifteen controls (five of each age class were identified west of the burn unit. Only single stemmed melaleuca without seed capsules were selected. The majority of the melaleuca over 160 cm were removed and treated with herbicide prior to the burn. Post burn, marked washers were loosely tied with wire, and later replaced with zip ties, around each melaleuca stem for more long term recognition and the rebar was flagged for easier recognition. The 120 marked melaleuca and fifteen controls were revisited one month (July 19, 2006), 3 months (September 2006), 6 months (December 2006), 9 months (March 2007) and one year (June 2007) from the burn date. Individual melaleuca saplings were qualitatively described as appears dead or alive (re-sprouts). The results of this study have important land stewardship implications. The ultimate goal for fire dependant communities is to return fire to a historic interval. In the past we waited to control the melaleuca before reintroducing fire to the site. We have now learned that the seedlings and saplings do not need to be controlled first, and that 50% of the seedlings and saplings will be controlled through fire, resulting in the need for less herbicide use and an earlier fire return.
  - Final FY05 R&RP project report "Expanding Bay Scallop Restoration in Pine Island Sound Using Competent Larvae" by Mote Marine Laboratory. Researchers have now had three opportunities to enhance bay scallop populations in Pine Island Sound through the controlled release of hatchery-reared larvae and have seen a dramatic rebound in scallop densities since these activities have begun, especially when compared with the previous ten years of scallop data from the Sound. Researchers discovered that it takes two years, or annual cycles, for a successful larval release to manifest itself in higher adult

abundance throughout the area. In 2005, Pine Island Sound had the highest density of scallops of all the Florida estuaries surveyed by FWRI, including Steinhatchee and St. Joseph's Bay, two regions which have had consistently stable scallop populations and remain open to recreational harvest. Although survey numbers decreased from 2005 to 2006, in 2006, the average scallop abundance was still close to an order of magnitude higher than recent annual abundance values.

### **Restoration**

- The South Florida Water Management District funded CHNEP to conduct a pilot On-Site Treatment and Disposal System (OSTDS) homeowner maintenance outreach program in a watershed impaired for nutrients and fecal coliform (Hendry Creek basin). The program implemented an EPA OSTDS Management Model within the community, explored the efficacy of establishing a county-wide management plan through meetings and workshops with local stake holders, and explores financing tools to fund the operations and maintenance functions of a county-wide management plan. Even with providing free pumpouts and drainfield inspection, only 20% of homeowners were willing to participate. Several reasons were documented.

### **Advocacy and Review**

From time to time, CHNEP advocates positions to protect the watershed and estuaries. Toward this end, the following positions have been taken this fiscal year:

- Letter to USACE regarding the South Fort Meade Mine Expansion and Federal Consistency.
- Letter to the South Florida Water Management District and USACE regarding Backpumping from Caloosahatchee to Lake Okeechobee.
- Letter to USACE reviewing the C-43 Reservoir Preliminary Implementation Report and Draft EIS, requesting water quality component.
- Letter of Support for Woodmere Lakes Stormwater Pond Littoral Planting project.

### **FY 07 Goals Achieved**

Major goals that were achieved in FY 06 include:

- Conceptual Adoption of CCMP Update. Update included extensive use of graphics and color, more compact layout which reduced the size from 750 pages to 160 pages. Late hour additions included a climate change priority action.
- Creation of a comprehensive suite of maps that are served over the internet for general public and technical professional use.
- Update of the Environmental Indicators Report to reflect the CCMP update. Collection of available products to form a State of the Watershed report.
- Completion of key contracts related to the CHNEP visions, including a historic benthic resources map and recommendations for improvements to the permitting decision framework to improve resultant development patterns.
- Completion of the first CHNEP effort to reduce pollution through a targeted effort in an impaired watershed. The Hendry Creek Septic Project (Task 4.3) is expected to reduce bacteria and nutrient pollution from an older community on septic. As a result CHNEP staff are involved with directing the development of a Southwest Florida Regional Planning Council resolution on OSTDS management.
- Updated the Research Needs Inventory based upon CCMP and environmental indicators updates.

## **Major goals expected to be achieved in FY 08**

Major goals that are predicted to be achieved in FY 08 include:

- Completion of key contracts related to the CHNEP visions, including a historic basin boundary map and pre-development vegetation map.
- Draft of an Interlocal Agreement in support of the CCMP Update, including expanding the partnership.
- Conduct the triennial Charlotte Harbor Watershed Summit.
- Completion of a tidal shoreline condition database and map to fill integral knowledge gaps for the environmental indicators and allow integration with GIS maps.
- Prepare a baseline random-sample survey of residents' awareness, preferences, and actions related to estuarine and watershed health.
- Continue to update and revise the Research Needs Inventory.
- Coordination between SFWMD and SWFWMD for biennial seagrass maps including technical transfer and SFWMD staff training.
- Creation of autonomous sensor monitoring program throughout Charlotte Harbor to collect real-time chlorophyll *a*, turbidity and CDOM data by program partners.

## **Major goals/focus for FY 09**

Major goals for the coming year include:

- Publication of a State of the Watershed report.
- Adoption of an Interlocal Agreement in support of the CCMP Update, including expanding the partnership.
- Refinement of numeric water quality targets and initiation of development of exceedance criteria.
- Special issue of Florida Scientist dedicated to research and monitoring results in the Charlotte Harbor watershed.
- Hosted a technical workshop on reservoirs.

## **Priority Changes**

Significant priority changes were made as a result of the CCMP update last year. This year another priority action was added:

- Build capacity for communities and their local leadership to mitigate and adapt to the effects of climate change through joint efforts.

## Final FY 07 Travel

Table 1 details travel expenditures for FY 07. Travel included attendance of at least two staff members at each ANEP meeting.

Table 1. Training and Conference Travel Fiscal Year 2007

<b>Completed Travel FY 07</b>				
<b>Date</b>	<b>Reason for Travel</b>	<b>Staff Member</b>	<b>Location</b>	<b>Expense</b>
December 11 – 13, 2006	Project Design and Evaluation	M. Hilgendorf, J. Boswell	Sarasota, FL	\$456
March 28-29, 2007	EPA Region IV Meeting	L. Beever, C. Corbett, L. Donley, M. Hilgendorf	Atlanta, GA	\$2,145
March 4-8, 2006	ANEP Spring Meeting	L. Beever, L. Donley	Washington, DC	\$3,495
June 18-22, 2007	EPA Community Conference and Training	M. Hilgendorf	Jacksonville, FL	\$845
October 2006 - September 2007	in-state travel to various meetings.	L. Beever, C. Corbett M. Hilgendorf	Within Study-Area	\$13,701

Total:

\$20,642

## Predicted FY 08 Travel

Table 2 details travel expenditures for FY 07. Travel includes attendance of at least two staff members at each ANEP meeting.

<b>Table 2. Training and Conference Travel Fiscal Year-2008</b>				
<b>Date</b>	<b>Reason for Travel</b>	<b>Staff Member</b>	<b>Location</b>	<b>Expense</b>
November 5-9, 2007	ERF Conference	C. Corbett, J. Boswell	Rhode Island	\$2,451
November 13 - 15, 2007	ANEP Autumn Meeting	L. Beever	Puerto Rico	\$1,522
October 2007 - January 2008	Other in-state travel to various meetings.	L. Beever, C. Corbett, L. Donley, M. Hilgendorf, J. Boswell	Within Study-Area	\$5,446
<b>Projected Travel for remainder of FY 08</b>				0
February 24-27, 2008	ANEP Spring Meeting	L. Beever, L. Donley	Washington, DC	\$2,500
April 2008	ASLO Conference	C. Corbett	Orlando	\$1,000
September 2008	ANEP Fall meeting	L. Beever	New York City	\$2,500
February-September 2008	Other in-state travel to various meetings, workshops and conferences.	L. Beever, C. Corbett M. Hilgendorf	Within Study-Area	\$6,081
<b>Total:</b>				<b>\$21,500</b>

# Workplan Projects for FY 07/08 and 08/09

## Task 1: Management Conference and Administration

One of the most important services that the CHNEP provides to its partners is providing a venue to share information regarding habitat, hydrologic, and water quality protection. This venue is the CHNEP Management Conference. The Conference is composed of four committees including Policy, Management, Technical Advisory, and Citizens Advisory Committees and their various subcommittees.

Subtasks include:

- 1.1 Management Conference
- 1.2 General Administration
- 1.3 Grants and Contracts Administration

Deliverables include:

- Committee Agenda Packets
- FY 07 Audit and FY 08 Audit
- Required Progress Reports
- Required Invoice Packets

1.1	<b>Management Conference</b>	
<b>Objective:</b> To provide a committee structure that supports the implementation of the Comprehensive Conservation and Management Plan (CCMP).		
<b>Previous Work:</b> The CHNEP Management Conference was established in 1996 to support the development of the CCMP. Since that date, committee and subcommittee packets have been the staple of the CHNEP process. The FY 06/07 Workplan was adopted in May 2006 and amended in November 2006. Progress reports are issued monthly and incorporated in committee packets. In May 2006, the City of Bonita Springs joined the Management Conference. In 2006, a triennial evaluation report was submitted to EPA. After EPA reviewed the report and conducted an on-site evaluation, CHNEP passed the triennial implementation review. Staff has been working with the Management Conference to revise and update the CCMP. The updated CCMP was conceptually approved in Autumn 2007.		
<b>Description:</b> The primary committees of the CHNEP include the Policy Committee, the Management Committee, the Technical Advisory Committee (TAC), and the Citizens Advisory Committee (CAC). In addition, each committee has subcommittees. The committees and subcommittees each receive an agenda packet. Policy Committee meetings and subcommittees where two or more elected officials attend are advertised in accordance with state law. Committees meet at various locations within the watershed, necessitating the occasional meeting space cost. The Management Conference will continue its work on the Comprehensive Conservation and Management Plan (CCMP) update. A signing ceremony is expected in Spring 2008. The management conference has elected to pursue a Memorandum of Agreement (MOA) or similar instrument defining roles and actions of CCMP signatories to CCMP implementation.		
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Agenda Packets for committees and subcommittees</li> <li>▪ Advertising and meeting space</li> <li>▪</li> <li>▪ Adoption of FY 08/09 Workplan</li> <li>▪ Workplan Tracking System Update</li> <li>▪ Evidence of extending CHNEP partnership</li> <li>▪ Priority Action GPRA Report</li> <li>▪ Travel to ANEP</li> <li>▪ Adoption of CCMP Update</li> <li>▪ CCMP Signing Ceremony</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ Mail one week before meeting</li> <li>▪ Advertise in FAW two weeks preceding date</li> <li>▪ June 2008</li> <li>▪ October 2006</li> <li>▪ September 2007</li> <li>▪ September 2008</li> <li>▪ October and February</li> <li>▪ March 2008</li> <li>▪ March 2008</li> </ul>	
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Agenda Packets for committees and subcommittees</li> <li>▪ Advertising and meeting space</li> <li>▪</li> <li>▪ Adoption of FY 09/10 Workplan</li> <li>▪ Evidence of extending CHNEP partnership</li> <li>▪ Priority Action GPRA Report</li> <li>▪ Travel to ANEP</li> <li>▪ Draft Interlocal Agreement distributed for review</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ Mail one week before meeting</li> <li>▪ Advertise in FAW two weeks preceding date</li> <li>▪ June 2009</li> <li>▪ September 2009</li> <li>▪ September 2009</li> <li>▪ October and March</li> <li>▪ December 2008</li> </ul>	

1.2	<b>General Administration and Supplies</b>	
<b>Objective:</b> To support necessary administration of the CHNEP.		
<b>Previous Work:</b> Annually, the SWFRPC conducts a single audit report. For FY 06, the auditors issued an unqualified opinion (of adhering to generally acceptable accounting principles) letter.		
<b>Description:</b> General administration includes general staff functions such as staff meetings. Supplies such as postage, rentals, telephone, computer/graphic supplies are included in this task. Finally, unforeseen expenses that are at the Director's discretion such as cellular telephone, special computer equipment or software, training materials, subscriptions, memberships, etc.		
<b>2008 Deliverables:</b>		<b>Target Dates:</b>
<ul style="list-style-type: none"> <li>▪ FY 07 Audit Report</li> </ul>		<ul style="list-style-type: none"> <li>▪ February 2008</li> </ul>
<b>2009 Deliverables:</b>		<b>Target Dates:</b>
<ul style="list-style-type: none"> <li>▪ FY 08 Audit Report</li> </ul>		<ul style="list-style-type: none"> <li>▪ February 2009</li> </ul>

<b>1.3 Grants and Contracts Administration</b>	
<b>Objective:</b> To implement the CCMP by ensuring compliance with awarded grant requirements, including reporting and invoicing.	
<b>Previous Work:</b> The CHNEP program staff has been administering the EPA Cooperative Agreement since the inception of the NEP. In the past, CHNEP has either sought or been awarded additional grants from EPA and other agencies, such as the U.S Army Corps of Engineers. Each of these grants has compliance requirements, including specific reporting needs and invoicing processes. In addition, CHNEP has been awarded grant funds for projects that are contracted out to third parties, such as the Regional Coastal funds awarded by USEPA Region 4. Program staff members are responsible for administering the contracts and ensuring all reporting requirements are met. Staff invoices Management Conference partners for contributions and reimbursement for shared project costs.	
<b>Description:</b> Ensure compliance with awarded grants, and cooperative assistance agreements from Federal, state, local agencies and private sources. Develop and submit quarterly progress reports and final project reports as required. Invoice funding source as required, ensure successful project progress and completion. Search for funding for projects that support the CCMP. This task also supports staff time for the management of grants that do not include administrative support in the award, such as the Mangrove Restoration project grant awarded in July 2007.	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Quarterly Progress Reports as required</li> <li>▪</li> <li>▪ Final Reports (financial close out, work products)</li> <li>▪ Invoices for payment</li> <li>▪ Preparation for Close out of CE-97456002-6</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ January, April, July, October</li> <li>▪ As Required</li> <li>▪ As Required</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Quarterly Progress Reports as required</li> <li>▪ Final Reports (financial close out, work products)</li> <li>▪ Invoices for payment</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ January, April, July, October</li> <li>▪ As Required</li> <li>▪ As Required</li> </ul>

## **Task 2: Public Outreach**

Public Outreach is a critical component of implementing the CCMP. Required aspects of the CCMP include outreach to various publics. Information can be delivered in a variety of methods. These methods include newsletters, websites, events, publications, conferences, field trips, workshops, etc.

Subtasks include:

- 2.1 Communications/Publications
- 2.2 Events/Outreach
- 2.3 Public Outreach Grants
- 2.4 Micro-Grants

<b>2.1   Communications/Special Publications</b>	
<b>Objective:</b> To provide essential ongoing communications so that the CHNEP can address specific requirements and issues associated with the Comprehensive Conservation and Management Plan (CCMP).	
<b>Previous Work:</b> Four issues of <i>Harbor Happenings</i> have been published each year since 1997 except for one year when several hurricanes struck the region. The newsletter is also posted on the Program website as an Adobe Acrobat PDF file. Videos produced include a series of two-minute interstitials on estuaries, watersheds, endangered animals, seagrasses and mangroves produced and broadcast by WGCU, a local PBS station. A 7.5 minute video about the value of seagrasses and how boaters can avoid/minimize damage caused by boats will be used by local organizations offering boating courses and will also be available for broadcast. The 26-minute video <i>Neighbor-to-Neighbor Florida-Friendly Landscaping</i> and related 10 one-minute interstitials were produced in cooperation with WGCU, a local PBS station. The video is being broadcast by WGCU and government access channels and is available as a DVD for viewing. Various displays and posters have been produced and collateral has been printed as required. Several interns have been hired since FY03 to assist with public information and education projects. The Charlotte County boaters guide was updated and reprinted and the Lee County boaters guide was digitized and placed on the county website. The program published the proceedings of the 2005 Watershed Summit as a special issue of the <i>Florida Scientist</i> . The program also contributed to a hurricane special issue of <i>Estuaries and Coasts</i> .	
<b>Description:</b> Communication techniques vary. Specific techniques are identified in the CCMP. The quarterly 12-page newsletter <i>Harbor Happenings</i> covers watershed issues, events and updates on Program activities and progress made toward implementing the CCMP. Contributions by program partners and distribution are expected to continue to increase. The program website, <a href="http://www.CHNEP.org">www.CHNEP.org</a> , provides a wide array of technical and public outreach information. It has become an important link between the CHNEP and its varied audiences. With the update of the CCMP, the <i>CCMP Summary</i> – a colorful, succinct version of the CCMP – will be updated and printed. Calendars for 2008 and 2009 will be developed. Working with the broadcast, print and Internet media is a cost effective method of increasing the public’s awareness and understanding of CHNEP and issues of concern. Videos are developed as outreach tools to reach specific audiences with specific messages. Internships serve many purposes, including extending staff and providing students with learning opportunities. Several opportunities will be contracted during the year with each intern doing work that will help implement the CCMP. This task also covers the cost of printing/producing such things as collateral materials (business cards, letterhead), displays, reprinting of resources such as posters and publications as well as postage for mailings. The Program will develop an outreach strategy.	
<b>2008 Funded Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Quarterly Newsletter</li> <li>▪ Website and FTP site</li> <li>▪ Internship</li> <li>▪ Collateral, Displays, Reprintings, etc.</li> <li>▪ 2008 Calendar</li> <li>▪ Outreach Strategy</li> <li>▪ CCMP Update Printing</li> <li>▪ Environmental Places Map</li> <li>▪ Publications Brochure</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ March, June, Sept. and Dec.</li> <li>▪ Ongoing</li> <li>▪ Ongoing</li> <li>▪ November</li> <li>▪ December 2007</li> <li>▪ Spring 2008</li> <li>▪ Spring 2008</li> <li>▪ September 2008</li> <li>▪ Spring 2008</li> </ul>
<b>2009 Funded Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Quarterly Newsletter</li> <li>▪ Website and FTP site</li> <li>▪ Internship</li> <li>▪ Collateral, Displays, Reprintings, etc.</li> <li>▪ 2009 Calendar</li> <li>▪ Citizens BMP/New Residents’ Guide</li> <li>▪ State of the Estuaries and Watersheds</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ March, June, Sept. and Dec.</li> <li>▪ Ongoing</li> <li>▪ Ongoing</li> <li>▪ September 2009</li> <li>▪ December 2008</li> <li>▪ September 2009</li> <li>▪ September 2009</li> </ul>

<b>2.2   Events/Outreach</b>	
<b>Objective:</b> To provide events & outreach programs to address specific requirements associated with implementation of the Comprehensive Conservation & Management Plan (CCMP).	
<p><b>Previous Work:</b> The CHNEP develops a Watershed Summit every three years (2002, 2005, 2008) to discuss latest research findings. <b>Public conferences</b>, focused on specific watersheds within CHNEP, are held on opposite years (2006, 2007). “Cape Coral Canals: A Public Conference on Water Quality and Quantity” was held March 25, 2006 with approximately 100 people attending; “Keeping the Peace: A Peace River Management Conference” was held October 2006 with approximately 70 attending, and the “Everglades Coalition” was held January 2008 with approximately 250 attending. Drawing on the strength of the program's partners, each year since 2000 the celebration of our local estuaries on <b>National Estuaries Days</b> has become bigger and better. In 2007, 35 activities offered provided public hands-on experiences to increase their understanding and concern about the local environment and ranged from festivals to guided walks to boat rides. EPA provided their “Community Culture and the Environment: A Guide to Understanding Sense of Place” on May 10-11, 2006, “Community Planning and Development” on December 4-6, 2007 and “Public Issues and Conflict Management” on June 24-26, 2008. Target outreach projects have focused on programs that are specifically mentioned in the CCMP, including the Florida Yards &amp; Neighborhood (FYN) Program, and audiences targeted such as teachers, hotels and the agriculture industry. CHNEP hosted several workshops to help residents understand the importance of using native plants on their property. Native plant demonstration sites at public locations were also sponsored. A new video inspires others to use native plants on their property. WGPU Public Media’s Curious Kids Nature Club website is redesigned to focus on issues of concern to CHNEP. The material will also be available on DVDs. CHNEP participates in events hosted by others throughout the year. Reports on all of these events are posted on the program website.</p>	
<b>Description:</b> National Estuaries Days will be celebrated with our partners Autumn 2008, culminating with the Charlotte Harbor Regional Nature Festival on November 22. Annually, CHNEP works with NOAA and others to bring a professional development opportunity to area public outreach and environmental education specialists. Annually, CHNEP works with an area partner to bring a public workshop, tailored to a particular community’s needs. For 2007, Estero Bay Agency on Bay Management has proposed a State of the Bay workshop. For 2008, an opportunity to partner with another organization will be made available but the priority will remain the Watershed Summit, shown under Task 3.1. FYN (a.k.a. Florida Friendly) programs are a priority of CHNEP. Opportunities to supplement FYN efforts with partners such as WGPU will continue. Opportunities to target audiences as identified in the CCMP will continue.	
<p><b>2008 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ National Estuaries Days</li> <li>▪ Charlotte Harbor Nature Festival</li> <li>▪ Public Issues and Conflict Management, A Workshop on Effective Collaboration</li> <li>▪ Public Workshop</li> <li>▪ Programs that support FYN</li> <li>▪ Guides, workshops, etc. to target audiences</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ September-October 2007</li> <li>▪ November 3, 2007</li> <li>▪ June 24-26, 2008</li> <li>▪ Spring/Summer 2006</li> <li>▪ Ongoing</li> <li>▪ Ongoing</li> <li>▪ Quarterly</li> </ul>
<p><b>2009 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ National Estuaries Days</li> <li>▪ Charlotte Harbor Nature Festival</li> <li>▪ Public Information &amp; Education Professional Development</li> <li>▪ Public Workshop</li> <li>▪ Programs that support FYN</li> <li>▪ Guides, workshops, etc. to target audiences</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ September-October 2008</li> <li>▪ November 22, 2008</li> <li>▪ September 2008</li> <li>▪</li> <li>▪ Winter 2008</li> <li>▪ Ongoing</li> <li>▪ Ongoing</li> </ul>

<b>2.3 Public Outreach Grants</b>	
<b>Objective:</b> To support CHNEP partners public outreach initiatives to further the Comprehensive Conservation and Management Plan.	
<p><b>Previous Work:</b> In 1999 CHNEP began awarding what are now known as Research &amp; Restoration Partners Grants and Public Outreach Grants. FY07 funding level was \$30,000 for Public Outreach Grants. Fourteen contracts were awarded:</p> <ol style="list-style-type: none"> <li>1. Sailing through the Environment of Charlotte Harbor: LA Ainger Middle School</li> <li>2. Learning about our Estuary: Port Charlotte Middle School</li> <li>3. "Water" we doing? Watershed rescue traveling trunks: Lakes Education/Action Drive</li> <li>4. Manatee, Estuary &amp; Seagrass Education Project for Lee County: Charlotte Harbor Environmental Center</li> <li>5. Upper Peace Kayak Environmental Education Program: City of Winter Haven, Natural Resources Division</li> <li>6. 23rd Annual Everglades Coalition Conference: Sanibel-Captiva Conservation Foundation</li> <li>7. Gopher Tortoise Talks: Turtle Talks</li> <li>8. Protecting Charlotte Harbor, Simple things you can do at home: Peace River Audubon Society</li> <li>9. Florida Yards &amp; Neighborhoods (FYN) Conference: Lee County Extension</li> <li>10. Water Wonders Student Workshop Program: G.WIZ, the Hands-On Science Museum</li> <li>11. IMC Peace River Park Boardwalk Educational Signage: Friends of the Park Foundation, Inc.</li> <li>12. Native Plant Demonstration Garden at Polk County Utilities Building: Polk County Extension Service</li> <li>13. Sea Turtle Adventures 2008, A Workshop for Elementary Teachers: Coastal Wildlife Club, Inc.</li> <li>14. DeSoto Diaries: DeSoto County Parks &amp; Recreation</li> </ol>	
<p><b>Description:</b> Public Outreach Grant projects occur in the CHNEP study area and facilitate public education of environmental issues identified in the CCMP. Projects are typically completed in one year. No matching funds are required and the maximum funding per project is \$3,000.</p> <p>The guidance document to apply for a public outreach grant will be approved and disseminated by December with applications due in September. Draft applications will be reviewed by staff and final applications will be reviewed by the CAC Grants Committee. The Grants Committee recommends which applications should be funded to the CAC, who makes recommendations to the Program Director. Funding decisions may be made as early as October. This timing allows teachers to apply at the beginning of the school year for work that can be done that same year. Projects may begin once a contract is signed and notarized. Information on all the projects funded with a grant are posted on the website at <a href="http://www.CHNEP.org">www.CHNEP.org</a>.</p>	
<p><b>2008 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ POG 2009 Guidance Document</li> <li>▪ Approximately 13 public outreach projects</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ November 2007</li> <li>▪ November 2007 to September 2009</li> </ul>
<p><b>2009 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ POG 2010 Guidance Document</li> <li>▪ Approximately 13 public outreach projects</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ November 2008</li> <li>▪ November 2008 to September 2010</li> </ul>

<b>2.4   Micro-Grants</b>	
<b>Objective:</b> To provide year-round support of CHNEP partners public outreach initiatives that further the Comprehensive Conservation and Management Plan.	
<p><b>Previous Work:</b> The first \$250 micro-grant was awarded in March 2002. Since then 217 grants have been awarded and completed The following applications is a partial list of requests approved in FY07 and FY08 through January 2008.</p> <ul style="list-style-type: none"> <li>▪ Myakka River Management Coordinating Council: Council website 4/07 to 12/07</li> <li>▪ Roseline Young: Blue Waters, Banners for a Better Environment</li> <li>▪ Englewood Elementary School: Habitats and Ecosystems in our Local Environment, a field trip for four fourth-grade classes</li> <li>▪ Fort Myers Beach Pilot Club: Coastal Cleanups on Ft Myers Beach</li> <li>▪ Taylor Ranch School: Estuary Exploration for six classes of fourth grade students</li> <li>▪ Sue Baldwin: Habitat enhancement in Cape Coral Canal, alternative to rock rip-rap</li> <li>▪ Lakes Education/Action Drive: Peace River Environmental Education Network (PREEN) quarterly meetings</li> <li>▪ PGA Kids Afterschool Care: Seagrass Exploration for PGA Kids</li> <li>▪ Friends of the Charlotte Harbor Aquatic Preserves, Inc.: Boys &amp; Girls Clubs Summer 2007 Paddles at Matlacha Pass, Lee County and at Coral Creek, Charlotte County</li> <li>▪ Villa Vincente Retirement Home in Fort Myers: Butterfly garden for residents of Villa Vincente</li> <li>▪ Mangrove Gathering Eco Café on May 11, 2007: Lee County Parks &amp; Recreation</li> <li>▪ Friends of Myakka River, Inc: Beginning Birding Class</li> <li>▪ Lee County Parks &amp; Recreation: Mantanzas Pass and Bowditch Point guided walks</li> <li>▪ Charlotte County Chapter-Coastal Conservation Assoc: Proper operation of a boat on shallow water grass flats</li> <li>▪ 11th Annual Southwest Florida Exotic Species Workshop: December 1, 2006</li> <li>▪ Cape Coral Friends of Wildlife: Burrowing Owl Festival: Fifth annual on February 17, 2007</li> <li>▪ Caloosahatchee Riverwatch Citizen's Association: Friends of Billy Creek Paddle</li> <li>▪ NRCS Lee Soil and Water Conservation District: Southwest Florida Gulf Coast Regional Environthon: December 2006 (sixth annual)</li> <li>▪ Carolyn Fischer: Unity Church of Bonita Yard Reclamation</li> <li>▪ Bobbi Robertson, Lee County Master Gardener: Suncoast Community Friendship Garden</li> <li>▪ People for Trees: North Port 9th annual Tree Festival, April 28, 2007</li> <li>▪ North Port High School: Marine Science Wading Trip to Lemon Bay Park</li> <li>▪ Cape Coral Parks and Rec: An Evening Under the Sea: March 2, 2007</li> <li>▪ FNPS Mangrove Chapter: Plant Native Day, February 24, 2007</li> <li>▪ Southwest Florida Amphibian Monitoring Network: Website maintenance and domain fee for 2007 for FrogWatch</li> <li>▪ CHEC - Cedar Point: Lemon Bay Watershed Public Conference, March 24, 2007</li> <li>▪ City of North Port Parks &amp; Recreation Department: Environmental Fun Week at Mykkahatchee Creek Environmental Park</li> <li>▪ CHEC - Alligator Creek: Reprint Estuary coloring book</li> <li>▪ Peace River Audubon Society: Enrichment/extension activities for 4th grade students in Charlotte County</li> <li>▪ City of Winter Haven: Lakefront Residents Educational Brochure</li> </ul>	
<p><b>Description:</b> One of the four Public Education Goals is “to establish and maintain environmental educational efforts with organizations, educational centers, and government agencies.” This project is also known as “micro-grants” which provide up to \$250 to support immediate public outreach opportunities. These funds allow the Program Office to respond to requests as they arise. The applicants provide audiences with information about CHNEP. Awards are granted under the Director’s authority to implement the CCMP. Information on all the projects funded with a grant are posted on the website at <a href="http://www.CHNEP.org">www.CHNEP.org</a>.</p>	
<p><b>2008 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Approximately 44 small, innovative projects</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ Available year round</li> </ul>
<p><b>2009 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Approximately 44 small, innovative projects</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ Available year round</li> </ul>

### **Task 3: Research**

Research and monitoring are critical tasks to address gaps in knowledge that are obstacles to good decision-making and to determine the conditions of the resources within the Charlotte Harbor watershed. One of the more important roles of the NEP is to serve as a central location of information for the Charlotte Harbor watershed. The program consistently compiles and analyzes data on hydrology, water quality and fish and wildlife habitat for the entire study area so that resource managers, scientists, decision makers and citizens can obtain information gathered by our program partners on a watershed basis or by subbasin. Examples of projects include the “Water Quality Data Analysis and Report for the Charlotte Harbor National Estuary Program” by Janicki Environmental, Inc in 2003 and 2007, “An Analysis of Hydrologic Conditions within the Charlotte Harbor National Estuary Program Study Area” by URS Corporation in 2006, “Assessment of Boat Propeller Scar Damage within the Greater Charlotte Harbor Region” by the Florida Marine Research Institute in 2005, “Historic Coastal Benthic Habitat Map” by Photo Science, Inc. in 2007 and “Historic Hydrologic Subbasins Map” by Gurr Consulting Services in 2007. Another role of the NEP is to ensure that studies and monitoring undertaken in one area of the watershed are duplicated in others as much as practicable to address data gaps and to act as a central clearinghouse for data. NEP partners often request information, data, technical presentations and analyses regarding the Charlotte Harbor region.

Subtasks include:

- 3.1 Research Coordination
- 3.2 Targeted Research
- 3.3 Research and Restoration Partners

<b>3.1 Research Coordination</b>	
<b>Objective:</b> To coordinate monitoring approaches so that consistent and reliable information is available throughout the CHNEP study area and to identify research needs for implementation through partnerships.	
<b>Previous Work:</b> The first comprehensive monitoring program for the coastal region of Charlotte Harbor began in 1996 with the Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network (CHEVWQMN). The Coastal Charlotte Harbor Monitoring Network (CCHMN), an inter-agency program, was started in April 2001 and is managed by CHNEP. CHNEP funded the upload of these data into STORET and train participants in methods. CHNEP staff oversees management and facilitates issue resolution for the CCHMN. In 2003 and 2004, the Fisheries Independent Monitoring Program by the Fish and Wildlife Research Institute (FWRI) expanded into southern Charlotte Harbor through funding by the SFWMD. The SFWMD and SWFWMD are utilizing the same timeframe for seagrass mapping efforts to ensure data comparability for seagrass coverage harbor-wide. The Management Conference approved environmental indicators and targets in 2005 and an approach to setting numeric water quality targets in 2006. In support of these indicators and water quality targets, NEP staff completed a status and trends analysis of seagrass aerial extent for the special issue of <i>Florida Scientist</i> and developed a 3-day technical exchange workshop on colored dissolved organic matter in 2007.	
<b>Description:</b> Continue implementation of the Coastal Charlotte Harbor Monitoring Network (CCHMN) and initiate additional data collection to support water quality targets including an autonomous sensing sampling program for chl a, CDOM and turbidity by SCCF, USF and FDEP. Identify opportunities for partners to develop consistent and geographically complete information, replicating the benefits obtained by better coordination of seagrass mapping and expansion of the FWRI independent fisheries monitoring. Coordinate research and monitoring efforts and filling of data gaps. The TAC will refine the environmental indicators, the Research Needs Inventory and numeric water clarity targets based upon light requirements of seagrass by basin. A Working Group for the implementation of the numeric water quality targets will be developed. CHNEP staff will develop and submit 2 articles to the Charlotte Harbor special issue of the <i>Florida Scientist</i> on mangrove coverage trends to address environmental indicators and an update on the numeric water quality targets. Partners such as FDEP, EPA and NOAA request information and analyses regarding the Charlotte Harbor region somewhat frequently, such as our input into the NOAA Coastal Eutrophication Survey, Southwest Florida Feasibility Study and EPA's Coastal Condition Report. On occasion, our efforts to support our partners take hours, days and even weeks of staff time.	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Annual field audit and meeting of CCHMN members</li> <li>▪ Add new analytes or modify methods to on-going monitoring to support water quality targets</li> <li>▪ Coordinate partners to develop consistent and geographically complete information</li> <li>▪ Respond to Requests for Information pertaining to research and data collection</li> <li>▪ Aid with grant proposals for research and restoration in region</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ April &amp; September</li> <li>▪ September</li> <li>▪ On-going</li> <li>▪ On-going</li> <li>▪ On-going</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Annual field audit results</li> <li>▪ Water Quality Targets update manuscript in journal</li> <li>▪ Mangrove coverage monitoring manuscript in journal</li> <li>▪ Sensor sampling program for chl a, turbidity &amp; CDOM</li> <li>▪ Data gaps filled to refine approach for Water Quality Targets for chlorophyll a and dissolved and suspended matter</li> <li>▪ Coordination between SFWMD and SWFWMD for biennial seagrass maps.</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ April</li> <li>▪ Fall 2009</li> <li>▪ Fall 2009</li> <li>▪ On-going</li> <li>▪ On-going</li> <li>▪ On-going</li> </ul>

<b>3.2 Targeted Research</b>	
<b>Objective:</b> To conduct research targeted for implementation of the Comprehensive Conservation and Management Plan (CCMP).	
<b>Previous Work:</b> The CHNEP contracted with FWRI to analyze changes in boat propeller scarring of the coastal Charlotte Harbor region from Venice to Estero Bay since their 1995 state-wide assessment effort. Also, the program contracted with Photo Science, Inc. to compile historical photographs to develop a 1950s coastal benthic habitat map. The program contracted with Mote Marine Laboratory to compile previously collected benthic invertebrate data and gather original data into an interactive database that will document the usage of various coastal habitats listed within the CCMP by benthic invertebrates. The NEP has contracted with Janicki Environmental, Inc to compile all surface and groundwater data into a centralized database and analyze them for status and trends by subbasin in 2003 and 2007. An update to this project is expected every three years (i.e., FY2010). The program also supported its partners in the implementation of its Long Term Monitoring Strategy through the Coastal Charlotte Harbor Monitoring Network by contracting with GES Research Corporation to develop a systematic protocol to upload the Network data to STORET.	
<b>Description:</b> The CHNEP will continue its on-going support of the Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network (CHEVWQMN) to provide quality assurance, data management, and data analyses for the data collected by the volunteers. SWFWMD contracted with CHEC to provide monthly water quality maps of northern Charlotte Harbor. CHNEP will continue funding an extension of the work to the south to include the entire estuarine portion of the study area. CHNEP will provide funds for SWFRPC to maintain its Internet Mapping Site (ArcIMS). A 2-year effort of developing, implementing, and analyzing a random-sample survey will be pursued to gauge public involvement. Public outreach effectiveness is difficult to ascertain without the use of surveys and other methods. The survey will establish baseline information regarding familiarity and actions regarding estuaries and watersheds by conducting random sample surveys. Respondents will report their awareness of the program(s), understanding of the differences between an estuary and watershed, and identify recent behavioral changes associated with protecting our estuaries and watersheds. The program has contracted with Photo Science to create a tidal Charlotte Harbor shoreline condition map and database incorporating volunteer-collected data. The program contracted with Gurr Consulting to develop an historic hydrologic subbasin map. A pre-development vegetation map of Charlotte County will be produced using protocols established by SWFWMD in the upper Peace River and CHNEP in Sarasota County, completing a data gap of historic vegetation. This map will be used in comparison to current landuse maps to quantify habitat loss by type and location since historic times and in turn prioritization of habitats to preserve and restore. A special issue of the <i>Florida Scientist</i> devoted to research and monitoring results in the Charlotte Harbor watershed will be published. Exceedance criteria for the numeric water quality targets will be developed. The program will host a technical workshop on reservoirs.	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Continue CHEVWQMN, CHEC wq website, Arc IMS</li> <li>▪ Tidal Shoreline Condition Map</li> <li>▪ Research or Monitoring Priority</li> <li>▪ Historic Hydrologic Subbasin Map</li> <li>▪ Pre-development vegetation map for study area</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ On-going</li> <li>▪ September 2008</li> <li>▪ September 2008</li> <li>▪ July 2008</li> <li>▪ April 2009</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Continue CHEVWQMN, CHEC site</li> <li>▪ Random-sample Survey</li> <li>▪ Florida Scientist special issue</li> <li>▪ Water quality targets exceedance criteria</li> <li>▪ Technical workshop on reservoirs</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ On-going</li> <li>▪ September 2009</li> <li>▪ October 2009</li> <li>▪ October 2009</li> <li>▪ Summer 2009</li> </ul>

<b>3.3 Research and Restoration Partners</b>	
<b>Objective:</b> To promote innovative techniques in research and restoration	
<p><b>Previous Work:</b> These projects started in 1997 with the funding of Early Action Demonstration Projects with six projects costing a total of \$85,000. This grew to 12 projects in 1998 at a cost over \$140,000. In 1999, the projects were split into Public Outreach Grants and Restoration Partners grants with 4 projects at approximately \$70,000 going to water quality monitoring, restoration of habitat or baseline benthic invertebrate data collection. In 2000, four habitat restoration projects were funded for a little over \$60,000. In 2001, the grants changed again to allow the funding of applied research. Six projects at a cost of \$73,000 to the program were funded for restoration of habitat on Sanibel, coastal Venice and the Charlotte Harbor Buffer Preserve as well as research into Old Mined Lands and the content of metals and pesticides in oysters in the Caloosahatchee River. In 2002-2004, the program budgeted approximately \$100,000 annually for the Research and Restoration Partners grants. In 2005 through 2007, the budget was decreased to approximately \$50,000.</p>	
<p><b>Description:</b> This grant process provides incentives and seed money for applied research on local issues and restoration within the greater Charlotte Harbor watershed. Applicants are permitted to request \$20,000 per supporting partner up to the cap allocated to this fund. Applicants are required to provide a 50% match that cannot be from SWFWMD funding sources. This grant could be used for small equipment, labor and plants as a contribution or incentive for public and private organizations to improve the environmental quality of their lands. It can also be used for analysis costs, travel and labor for researchers to study issues important to preserving the Charlotte Harbor ecosystem. A proposal would be submitted from an applicant and through a selection process involving the Technical Advisory, Management and Policy Committees, the top projects would be funded.</p>	
<p><b>2008 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Approve RRPP RFP guidance document</li> <li>▪ Commit to partnership funding of RRPP projects</li> <li>▪ Final reports from RRPP projects</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ August 2007</li> <li>▪ April 2008</li> <li>▪ September 2009</li> </ul>
<p><b>2009 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Approve RRPP RFP guidance document</li> <li>▪ Commit to partnership funding of RRPP projects</li> <li>▪ Final reports from RRPP projects</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ August 2008</li> <li>▪ April 2009</li> <li>▪ September 2010</li> </ul>

## **Task 4: Restoration**

Restoration is the most physical expression of CCMP implementation. Operating and Capital projects to implement the CCMP are largely the responsibility of local and regional government. Nearly all of the costs are borne by CHNEP partners and through outside grants obtained by the partners and CHNEP. However, the CHNEP program office provides partners services coordinating watershed initiatives, cataloging restoration needs, participating in Everglades restoration activities, assisting in developing and refining Surface Water Improvement and Management (SWIM) plans, and conducting special studies such as Growth Management in Estero Bay basin. Restoration projects identified in the CCMP include:

- Exotics removal
- Enhancing shoreline habitat and restoring wetlands
- Install shallow water resource markers
- Increasing environmental compliance and enforcement
- Protecting environmentally sensitive land
- Implementing water conservation and reuse programs
- Re-establishing historic hydrologic connections
- Restoring groundwater levels
- Implementing 3-D circulation models
- Installing BMPs and reducing non-point source pollutant from stormwater runoff
- Providing central sewer within 900 feet of all waters
- Expanding Florida Yards and Neighborhoods

Subtasks include:

- 4.1 Watershed Coordination
- 4.2 Everglades Restoration

<b>4.1 Watershed Coordination</b>	
<b>Objective:</b> To develop and update a CHNEP Restoration Plan and participate in activities which will implement this plan and CCMP objectives and actions relating to restoration.	
<b>Previous Work:</b> The CHNEP program office designed a database and GIS shape file procedure which houses proposed restoration ideas. Through the efforts of many partners in coordination with the CHNEP, a restoration needs inventory has been produced. Restoration includes improvements to water quality, habitat, and hydrology and is ready for loading on an internet map server. In addition, the work has been used as the primary source for the Southwest Florida Feasibility Study alternatives development. In addition, the CHNEP program office supports restoration efforts of our partners' watershed initiatives such as such as the Southern Water Use Caution Area (SWUCA) Recovery Strategy, Minimum Flows and Levels, Reasonable Assurance Plans, Basin Management Action Plans, development of basin water budgets etc. In addition, information is generated upon requests of partners.	
<b>Description:</b> Provide staff support for restoration mapping efforts, including hosting the master restoration database and Shapefiles. Funding is allocated to support SWFRPC graphic services and GIS equipment costs. Tracking of restoration plan implementation is performed annually through the annual development of the Government Performance and Review Act (GPRA) report. Participation in watershed initiatives such as the Southern Water Use Caution Area (SWUCA) Recovery Strategy, Minimum Flows and Levels, Reasonable Assurance Plans, Basin Management Action Plans, Southwest Florida Feasibility Study, development of basin water budgets etc. are included in this subtask. Finally, partners such as EPA and NOAA request information and other support regarding restoration and conservation efforts within the Charlotte Harbor region somewhat frequently. In addition, opportunities arise where CHNEP can assist partners in restoration, such as the Southwest Florida biosolids meeting series, Water Planning Alliance meetings, Estero Bay ABM meetings, Lemon Bay League meetings, etc.	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ GPRA Report</li> <li>▪ Watershed Management Plans and “Verified Lists” development</li> <li>▪ Minimum Flows and Levels</li> <li>▪ Water Budget for Charlotte Harbor basins, including through the Lower West Coast Water Supply Plan development</li> <li>▪ Staff support to regional watershed efforts other than CERP/SWFFS such as SWIM planning, TMDLs, SWUCA, Caloosahatchee Regional River Recovery Strategy, and Peace River Management Plan</li> <li>▪ Update and disseminate CHNEP Restoration Needs Inventory</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ September 2008</li> <li>▪ Based on Impaired Waters Rules dates</li> <li>▪ Based on MFL Schedules</li> <li>▪ As opportunities arise.</li>   <li>▪ As opportunities arise.</li>   <li>▪ September 2008</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ GPRA Report</li> <li>▪ Watershed Management Plans and “Verified Lists” development</li> <li>▪ Minimum Flows and Levels</li> <li>▪ Water Budget for Charlotte Harbor basins, including through the Lower West Coast Water Supply Plan development</li> <li>▪ Staff support to regional watershed efforts other than CERP/SWFFS such as SWIM planning, TMDLs, SWUCA, Caloosahatchee Regional River Recovery Strategy, and Peace River Management Plan</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ September 2009</li> <li>▪ Based on Impaired Waters Rules dates</li> <li>▪ Based on MFL Schedules</li> <li>▪ As opportunities arise.</li>   <li>▪ As opportunities arise.</li> </ul>

<b>4.2 Everglades Restoration</b>	
<b>Objective:</b> To support development and implementation of Everglades Restoration.	
<b>Previous Work:</b> CHNEP staff have participated in the development of the Southwest Florida Feasibility Study (SWFFS), co-chaired the Southwest Florida Regional Restoration Coordination Team (SWF RRCT), and served on the Science Coordination Group (SCG). Staff has proposed methods to develop water quality targets for the Charlotte Harbor and Estero Bay regions and have worked with SFWMD to refine these methods and ensure they are incorporated into other SWFFS efforts such as habitat suitability models. On October 20, 2006, CHNEP Director and USFWS Biologist presented science and restoration priorities to the Everglades Restoration Working Group.	
<b>Description:</b> The CHNEP will provide staff support to develop and implement Everglades Restoration. This includes serving on the SWFFS Study Group and its subcommittees, co-chairing the SWF RRCT, and participating on the SCG on behalf of Southwest Florida. Deliverables of the SWF RRCT include a Science Plan update and a Restoration Plan. Although the CHNEP will not provide primary support of restoration mapping outside the study areas, the CHNEP will host the database and shape files in support of the entire SWF RRCT area. These maps have been used as the primary input to the Alternatives Development Group (ADG) products.	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Presentation of Priorities</li> <li>▪ SCG Participation</li> <li>▪ Participation in and support for the SWFFS</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ October 2007</li> <li>▪ On-going</li> <li>▪ On-going</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Presentation of Priorities</li> <li>▪ SCG Participation</li> <li>▪ Participation in and support for the SWFFS</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ October 2008</li> <li>▪ On-going</li> <li>▪ On-going</li> </ul>

## **Task 5: Advocacy and Legislative Action**

The CHNEP Policy Committee is comprised of elected officials and agency heads of federal, state, regional, county, and city agencies. These are the very agencies that will be the likely recipients of CHNEP advocacy and legislative action. The advocacy position represents a great commitment to partnership and trust between the CHNEP partners.

The goals of the CHNEP's advocacy and legislative action stance are:

- To implement the quantitative objectives and priority actions of the adopted *Comprehensive Conservation and Management Plan (CCMP)*,
- To provide policy-makers with a source of review and comment from an organization which represents the considered opinions of diverse interests, and
- To provide a voice for natural systems within the study area watersheds based on the best scientific information available.

Subtasks include:

- 5.1 Legislative Agenda
- 5.2 Advocacy and Review Procedures
- 5.3 Federal Consistency Review
- 5.4 Leveraged Grants

<b>5.1   Legislative Agenda</b>	
<b>Objective:</b> To provide a structure for pursuing legislative action to support the implementation of the Comprehensive Conservation and Management Plan (CCMP).	
<b>Previous Work:</b> The Management Conference approved the CHNEP Legislative Agenda in 2003. This Agenda is presented to the both the State and Federal legislative delegations annually. In FY2005-2006, the Management Conference recommended that CHNEP develop letters of support for two State bills, and one Federal bill. In addition, the Management Conference directed staff to develop model language for land development code for pervious low volume parking lots to be used throughout the Study Area. CHNEP staff have been actively working to develop closer relationships with the Federal elected officials that represent the Study Area.	
<b>Description:</b> The Legislative Agenda is a formal document that presents projects, identified by the Management Conference, that implement the CCMP and which require additional support, either fiscal or policy, in order to be successfully completed. The Legislative Agenda is updated and revised to reflect the current and anticipated legislative opportunities for CHNEP to ensure that the CCMP is considered by elected officials when policy and funding decisions are being made. Moreover, with the updating of the CCMP throughout 2006 and 2007, it is anticipated that the Legislative Agenda will also undergo review and revision by the Management Conference. Additionally, the Legislative Agenda is presented to policy-makers and decision-makers annually. Membership with the Association of National Estuary Programs (ANEP) and attendance at its meetings is encouraged by EPA. However, a portion of the \$4,500 dues is not eligible for EPA funding. Finally, this task also supports the Legislative Subcommittee	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Present agenda to State and Federal Legislative Delegations throughout the CHNEP study area</li> <li>▪ Tracking of relevant legislation</li> <li>▪ Electronic updates to Subcommittee members</li> <li>▪ Letters of support as appropriate to legislators and policy makers</li> <li>▪ ANEP membership</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ November- March</li> <li>▪ As Appropriate</li> <li>▪ As Appropriate</li> <li>▪ As Opportunities Arise</li> <li>▪ January</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Revised FY2009 Legislative Agenda by mid-autumn</li> <li>▪ Present agenda to State and Federal Legislative Delegations throughout the CHNEP study area</li> <li>▪ Tracking of relevant legislation</li> <li>▪ Electronic updates to Subcommittee members</li> <li>▪ Letters of support as appropriate to legislators and policy makers</li> <li>▪ ANEP membership</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ Mid-November</li> <li>▪ November- March</li> <li>▪ As Appropriate</li> <li>▪ As Appropriate</li> <li>▪ As Opportunities Arise</li> <li>▪ January</li> </ul>

<b>5.2   Advocacy and Review Procedures</b>	
<b>Objective:</b> To implement the Advocacy and Review Procedures adopted in February 2003. To provide federal consistency review as required by EPA and incorporate the existing federal consistency review process of the State Clearinghouse as set forth in the CCMP on page 219.	
<p><b>Previous Work:</b> On February 21, 2003, the Policy Committee adopted the Advocacy and Review Procedures that were developed by the Management Conference. Since adoption of the Advocacy and Review Procedures, CHNEP has submitted over 40 letters of either support or comment to other agencies. The topics of the letters: Corps and South Florida Water Management District Lake Okeechobee Protocols, Corps Phosphate Mine Inquiry, Caloosahatchee Coordination, Charlotte Harbor Total Maximum Daily Loads (TMDL) and Pollutant Load Reduction Goals (PLRG), SWANCC Request, Funding Request, and Babcock Acquisition. In FY 05, letters were sent to EPA (Gypsum Research), SFWMD (WSE Regs), SWFWMD (SWUCA), and Corps (404 permit).</p> <p>The CHNEP developed a Federal Consistency Review Report in 1999 which sets forth a procedure for ensuring compliance with the USEPA requirements. In 2000 and 2003, the Management Conference approved the submission of a letter to the U.S. Corps of Engineers requesting a Programmatic EIS regarding the permitting and funding activities within the Peace and Myakka River Basins of the Greater Charlotte Harbor watershed.</p>	
<p><b>Description:</b> The Management Conference developed a list of major categories of actions that may require CHNEP review, comment or letters of support. Staff will continue to develop letters of review, comment, support and inquiry as directed by the Management Conference. Based on the Advocacy and Review Procedures, eleven categories of actions include:</p> <ul style="list-style-type: none"> <li>▪ Environmental Land Acquisition and Conservation.</li> <li>▪ Water Quality rules.</li> <li>▪ Hydrology rules.</li> <li>▪ Changes in structures specified in HA-4.</li> <li>▪ Projects which improve water quality of Lake Hancock and the water exiting the lake.</li> <li>▪ Projects which significantly affect at least one of the habitats listed in FW-2.</li> <li>▪ Projects which significantly affect hydrology in sub-basins.</li> <li>▪ Rules which reduce propeller damage to seagrass beds.</li> <li>▪ Projects that remove invasive exotic species.</li> <li>▪ Legislation that restricts citizen participation on environmental issues.</li> <li>▪ General permits affecting waterways.</li> <li>▪ Review of local comprehensive plans by the CHNEP partnership for implementation of the CCMP.</li> <li>▪ Participation in development of the Management Plan for the Babcock Ranch Preserve.</li> </ul>	
<p><b>2008 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Review, Comment, Support and Inquiry Letters</li> <li>▪ Public Testimony</li> <li>• Review of at least 2 Comprehensive Plans</li> </ul>	<p><b>Target Dates:</b></p> <ul style="list-style-type: none"> <li>▪ As required</li> <li>▪ As Appropriate</li> <li>▪ By end of FY2008</li> </ul>
<p><b>2009 Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Review, Comment, Support and Inquiry Letters</li> <li>▪ Public Testimony</li> </ul>	<ul style="list-style-type: none"> <li>▪ As required</li> <li>▪ As Appropriate</li> </ul>

<b>5.3   Leveraged Grants</b>	
<b>Objective:</b> To supplement implementation of the Comprehensive Conservation and Management Plan (CCMP) through funding of projects from sources other than the EPA Cooperative Agreement.	
<b>Previous Work:</b> The CHNEP Management Conference adopted the first CCMP in 2000. The EPA approved the CCMP in 2001. In 2006-2007, CHNEP identified grant opportunities for partners to fund projects identified in the Research Needs Inventory. At the time of the Workplan development, CHNEP staff continues working with partners to revise the Research Needs Inventory and to identify funding for land acquisition and restoration.	
<b>Description:</b> As part of the Long Range Funding Strategy, it was recommended that CHNEP aggressively pursue Federal and State Funding assistance and new funding sources. CHNEP staff are actively applying for and winning funding through grants from Federal, State and private organizations for our partner organizations to support the implementation of the CCMP. The CHNEP staff utilizes the Research Needs Inventory (revision expected in FY2008), in conjunction with the CCMP, guides CHNEP staff when reviewing grant opportunities. In FY2007 CHNEP staff were successful in capturing over \$500,000 in grant funding for partners. CNEP staff assists partners in identifying, applying for and administering grants from various sources, including Federal and State agencies and private foundations. Staff also searches for funding for specific projects that are being conducted by partners, notify partners of grant opportunities and work with partners to form teams and partnerships for proposal submissions. Staff is maintaining a grants database to track annual grant opportunities to facilitate developing teams and projects in advance of the Request for Application announcements. In addition, CHNEP submits letters of support to granting agencies.	
<b>2008 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Database of Grant Opportunities</li> <li>▪ Email notification of available grants</li> <li>▪ Support letters for inclusion with grant applications</li> <li>▪ Draft and Final Grant applications</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ On going</li> <li>▪ Ongoing, usually bi-monthly</li> <li>▪ As Requested</li> <li>▪ As Appropriate</li> </ul>
<b>2009 Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Email notification of available grants</li> <li>▪ Support letters for inclusion with grant applications</li> <li>▪ Draft and Final Grant applications</li> </ul>	<b>Target Dates:</b> <ul style="list-style-type: none"> <li>▪ Ongoing, usually bi-monthly</li> <li>▪ As Requested</li> <li>▪ As Appropriate</li> </ul>

**Table 3: On-Going Technical Projects (as of 10/1/08)**

<b>Fiscal Year</b>	<b>Project/Contractor</b>	<b>Due Date</b>	<b>Outlay</b>	<b>Contract</b>	<b>Difference</b>
2005	Biosolid Land Spreading--CHEC	3/1/2008	\$0.00	\$10,126.00	\$10,126.00
2005	Vallisneria Restoration in CR--Mote	2/1/2008	\$8,240.00	\$12,169.00	\$3,929.00
	<b>Subtotal =</b>		\$8,240.00	\$22,295.00	<b>\$14,055.00</b>

2006	Hydrologic Subbasin Boundary Map--Gurr Consulting	6/27/2008	\$42,250.00	\$80,000.00	\$37,750.00
2006	Historic Coastal Benthic Habitat--Photo Science	9/30/2008	\$84,600.00	\$94,000.00	\$9,400.00
2006	Identities and effects of ecoestrogens in Caloosahatchee--Mote	2/1/2008	\$13,977.10	\$19,120.00	\$5,142.90
2006	Identification of microbes critical to enhancement of seagrass--SCCF	2/1/2008	\$8,912.81	\$18,458.00	\$9,545.19
2006	ArcIMS website--SWFRPC	9/30/2008	\$11,110.46	\$56,605.46	\$45,495.00
2006	Charlotte Harbor Estuaries Volunteer Monitoring Network	9/30/2008	\$0.00	\$33,000.00	\$33,000.00
	<b>Subtotal =</b>		\$149,739.91	\$211,578.00	<b>\$140,333.09</b>

2007	Fate and Transport of Caloosahatchee ETM Sediment--FGCU	9/30/2008	\$0.00	\$15,296.00	\$15,296.00
2007	Evaluating pharmaceutical to Caloosahatchee wildlife: bull shark--Mote	9/30/2008	\$7,074.67	\$19,936.00	\$12,861.33
2007	Do coastal land alterations impact estuarine food webs?-- Mote	9/30/2008	\$0.00	\$19,220.00	\$19,220.00
2007	Tidal Charlotte Harbor Shoreline Condition Map--Photo Science	6/30/2008	\$75,120.32	\$100,000.00	\$24,879.68
2007	Environmental Indicator Priority--Predevelopment Vegetation Map?	TBD	\$0.00	\$40,000.00	\$40,000.00
2007	Mangrove Restoration project FAF 7057	9/30/2008	\$0.00	\$30,720.00	\$30,720.00
2007	San Carlos Park Florida Friendly Landscaping CZ814	6/30/2008	\$2,310.00	\$16,069.00	\$13,759.00
	<b>Subtotal =</b>		\$84,504.99	\$241,241.00	<b>\$156,736.01</b>

Total= **\$242,484.90    \$475,114.00    \$311,124.10**

**Table 4: On-Going Public Outreach Projects (as of 10/1/07)**

<b>Fiscal Year</b>	<b>Project/Contractor</b>	<b>Due Date</b>	<b>Outlay</b>	<b>Contract</b>	<b>Difference</b>
2004	Children's Book	9/30/2008	\$2,500.00	\$20,000.00	\$17,500.00
2004	POG Estero Bay Field Map And Interpretive Guidebook (Fort Myers Beach)	9/30/2005	\$2,566.75	\$2,900.00	\$333.25
	<b>Subtotal =</b>		\$5,066.75	\$22,900.00	<b>\$17,833.25</b>
2006	POG J Colin English and the Creek Kids (J. Colin English Elem School)	1/26/2008	\$2,012.00	\$2,774.00	\$762.00
	<b>Subtotal =</b>		\$2,012.00	\$2,774.00	<b>\$762.00</b>
2007	Charlotte Harbor Nature Festival	Carry-over	\$12,194.00	\$15,719.34	\$3,525.34
2007	Sustainable Communities	Carry-over	\$5,528.50	\$9,000.00	\$3,471.50
2007	Strategic Communication Plan	9/30/2008	\$0.00	\$15,000.00	\$15,000.00
2007	Public Workshop: Estero Bay	9/30/2008	\$0.00	\$3,000.00	\$3,000.00
2007	CCMP Update Printing	9/30/2008	\$0.00	\$12,000.00	\$12,000.00
2007	Environmental Places Map	9/30/2008	\$0.00	\$20,000.00	\$20,000.00
2007	Publication Brochure	9/30/2008	\$0.00	\$2,500.00	\$2,500.00
2007	Reprint <i>Story of the Greater Charlotte Harbor Watershed</i>	9/30/2008	\$0.00	\$18,000.00	\$18,000.00
2007	Internship contract with Sue Scott	4/17/2009	\$3,050.00	\$9,500.00	\$6,450.00
2007	POG Lakeshore Residents Guides (Lakes Education/Action Drive)	11/13/2007	\$0.00	\$2,700.00	\$2,700.00
2007	POG Cape Water Action (CRCA)	2/28/2008	\$278.25	\$2,625.00	\$2,346.75
2007	POG Upper Peace River Flora and Fauna Study (Hardee County Outdoor Classroom)	11/25/2008	\$0.00	\$2,989.00	\$2,989.00
2007	POG When Nature is Your Neighbor (Lee County Parks & Rec 20/20)	1/19/2007	\$1,696.49	\$3,000.00	\$1,303.51
2007	POG Lemon Bay Watershed Storm Drain Marking Program (Sarasota County Water Resources)	1/19/2007	\$2,275.80	\$2,455.00	\$179.20
2007	POG Rain Barrel Workshops with Polk County Schools (Polk County Ext FYN)	1/30/2007	\$0.00	\$1,395.00	\$1,395.00
2007	POG The Smart Way to Grow Your Yard (Manatee Friends of Ext)	3/20/2007	\$0.00	\$3,000.00	\$3,000.00
	<b>Subtotal =</b>		\$25,023.04	\$122,883.34	\$97,860.30
<b>Total=</b>			<b>\$32,101.79</b>	<b>\$148,557.34</b>	<b>\$116,455.55</b>

**Table 5: Ongoing Research and Restoration Projects Funding Sources**

Fiscal Year	Project/Contractor	SWFWMD	Local/Grants	Total
2005	Biosolid Land Spreading--CHEC	\$10,000.00	\$126.00	\$10,126.00
2005	Vallisneria Restoration in CR--Mote		\$3,929.00	\$3,929.00
2006	Hydrologic Subbasin Boundary Map--Gurr Consulting	\$35,000.00	\$2,750.00	\$37,750.00
2006	Historic Coastal Benthic Habitat--Photo Science		\$9,400.00	\$9,400.00
2006	Identities and effects of ecoestrogens in Caloosahatchee--Mote		\$5,142.90	\$5,142.90
2006	Identification of microbes critical to enhancement of seagrass--SCCF		\$9,545.19	\$9,545.19
2006	ArcIMS website--SWFRPC	\$22,747.50	\$22,747.50	\$45,495.00
2006	Charlotte Harbor Estuaries Volunteer Monitoring Network	\$16,500.00	\$16,500.00	\$33,000.00
2007	Fate and Transport of Caloosahatchee ETM Sediment--FGCU			\$15,296.00
2007	Evaluating pharmaceutical to Caloosahatchee wildlife: bull shark--Mote			\$12,861.33
2007	Do coastal land alterations impact estuarine food webs?-- Mote			\$19,220.00
2007	Tidal Charlotte Harbor Shoreline Condition Map--Photo Science	\$12,439.84	\$12,439.84	\$24,879.68
2007	Environmental Indicator Priority--Predevelopment Vegetation Map?	\$40,000.00		\$40,000.00
2007	Mangrove Restoration project FAF 7057			\$30,720.00
2007	San Carlos Park Florida Friendly Landscaping CZ814			\$13,759.00
	<b>Research and Restoration Total:</b>	<b>\$136,687.34</b>	<b>\$82,580.43</b>	<b>\$311,124.10</b>

**Table 6: Ongoing Public Information and Education Projects Funding Sources**

Fiscal Year	Contractor/ Organization	SWFWMD	Local/Grants	Total
2004	Children's Book		\$17,500.00	\$17,500.00
2004	POG Estero Bay Field Map And Interpretive Guidebook (Fort Myers Beach)		\$333.25	\$333.25
2006	POG J Colin English and the Creek Kids (J. Colin English Elem School)		\$762.00	\$762.00
2007	Charlotte Harbor Nature Festival		\$3,525.34	\$3,525.34
2007	Sustainable Communities		\$3,471.50	\$3,471.50
2007	Strategic Communication Plan		\$15,000.00	\$15,000.00
2007	Public Workshop: Estero Bay		\$3,000.00	\$3,000.00
2007	CCMP Update Printing		\$12,000.00	\$12,000.00
2007	Environmental Places Map		\$20,000.00	\$20,000.00
2007	Publication Brochure		\$2,500.00	\$2,500.00
2007	Reprint <i>Story of the Greater Charlotte Harbor Watershed</i>		\$18,000.00	\$18,000.00
2007	Internship contract with Sue Scott		\$6,450.00	\$6,450.00
2007	POG Lakeshore Residents Guides (Lakes Education/Action Drive)		\$2,700.00	\$2,700.00
2007	POG Cape Water Action (CRCA)		\$2,346.75	\$2,346.75
2007	POG Upper Peace River Flora and Fauna Study (Hardee County Outdoor Classroom)		\$2,989.00	\$2,989.00
2007	POG When Nature is Your Neighbor (Lee County Parks & Rec 20/20)		\$1,303.51	\$1,303.51
2007	POG Lemon Bay Watershed Storm Drain Marking Program (Sarasota County Water Resources)		\$179.20	\$179.20
2007	POG Rain Barrel Workshops with Polk County Schools (Polk County Ext FYN)		\$1,395.00	\$1,395.00
2007	POG The Smart Way to Grow Your Yard (Manatee Friends of Ext)		\$3,000.00	\$3,000.00
	<b>Public Outreach Total:</b>		<b>\$116,455.55</b>	<b>\$116,455.55</b>
	<b>Total Contacts:</b>	<b>\$136,687.34</b>	<b>\$199,035.98</b>	<b>\$427,579.65</b>

# Administrative and Financial

## Description of Grants

Tables 5 and 6 provide the list of on-going grants to FY 06 from the NEP to local entities. Here are those grants plus FY 07 grants, including grant descriptions, funding, organization conducting the work, purpose, deliverables, and completion dates.

### Research and Restoration Partners Grants

Research and Restoration Partners Grants are an opportunity for program partners to approach us for support for projects that will implement our CCMP goals. These grants encourage innovative research and restoration or provide seed money to initiate programs, and the projects typically take a year or more to complete. Projects begin as soon as the contract is signed and notarized by both parties, usually in April-May of each year.

### *Fiscal Year 2008*

1) **Project Name:** Wild Turkey Strand Preserve Restoration

**Project Partners:** Lee County Conservation 2020 and Charlotte Harbor NEP

**Total Cost:** \$41,617

**NEP Funding:** \$20,000

**Completion Date:** September 2009

Wild Turkey Strand Preserve is a 2,629 acre environmental preserve that is part of the Lee County Conservation 2020 program. The preserve was purchased in 2003 for its environmental qualities. It is dominated by cypress, wet and mesic flatwoods, and freshwater marshes. The entire Wild Turkey Strand Preserve is managed according to a land stewardship plan which was written and adopted in 2005. Grant funding from the Charlotte Harbor National Estuary Program will allow treatment of non-indigenous invasive plants including melaleuca (*Melaleuca quinquenervia*), Brazilian pepper (*Schinus terebinthifolius*), wetland nightshade (*Solanum tampicense*), Caesar's weed (*Urena lobata*), West Indian marsh grass (*Hymenachne amplexicaulis*), and torpedo grass (*Panicum repens*) from approximately 80 acres of management unit 5 and restore 2000 feet of emergency fire lines plowed/created by the Florida Division of Forestry created. Addresses FW-1 and FW-3 of CCMP.

**Deliverables:** Final Report

2) **Project Name:** Segment 8 Exotic Removal Project

**Project Partners:** Venice Area Beautification Inc., Charlotte Harbor NEP, Sarasota County, Venice and others

**Total Cost:** \$10,000

**NEP Funding:** \$5,000

**Completion Date:** September 2009

The purpose of this project is to fund the eradication of exotic species along Segment 8 of the Venetian Waterway Park. The park is a multi-purpose bicycle/pedestrian trail approximately 10 miles long and includes the Shamrock Park and Nature Center, the historic train depot, picnic shelters, a canoe launch, a fitness trail and access to Caspersen Park and Beach. Segment 8 is ca. 3 miles long and this project will remove carrot wood, Brazilian pepper, lead tree, Australian pine, Chinese tallow, rosary pea, mimosa, camphor tree, air-potato, Melaleuca and castor bean. Addresses FW-1 and FW-3 of CCMP.

**Deliverables:** Final Report

3) **Project Name:** Restoration of native ground cover on Sanibel Island

**Project Partners:** Sanibel-Captiva Conservation Foundation and Charlotte Harbor NEP

**Total Cost:** \$9,633

**NEP Funding:** \$4,000

**Completion Date:** September 2009

As a result of invasive non-native invasions and development, native, upland, herbaceous plant communities on Sanibel are all but lost. Over the past ten years hundreds of acres of conservation and private lands on Sanibel Island have been cleared of invasive non-native vegetation as part of an effort to restore native plant communities. Despite these efforts, restoration of upland herbaceous communities seems unlikely without specific additional efforts at reestablishment. The disturbance generated from large scale exotic removal results in the establishment of ruderal species that persist over many years in the upland areas. Further, with most of the desirable upland, herbaceous species now absent or rare, natural recruitment is not likely. This project seeks to test methods of reestablishment of native ground cover following a restoration project. Addresses FW-1 and FW-3 of CCMP.

**Deliverables:** Final Report

4) **Project Name:** Do upland drainage alterations contribute to degradation of estuarine creek habitats? Adding water quality analysis as an evaluation tool.

**Project Partners:** Mote Marine Laboratory and Charlotte Harbor NEP

**Total Cost:** \$39,880

**NEP Funding:** \$19,940

**Completion Date:** September 2009

Southwest Florida is experiencing increasing development of coastal and near-coastal areas, with associated loss and degradation of habitats. In some locations, efforts are being made to conserve habitats from development, while in other locations restoration is being used to mitigate habitat loss or degradation. Unfortunately, plans for development, conservation, and restoration or mitigation are being made with inadequate and incomplete information because there are few data demonstrating the ecological effects of this habitat alteration or restoration on estuarine ecology. Of particular concern are estuarine mangrove creeks that are the interface between the Charlotte Harbor estuary and upland habitats undergoing alteration and restoration. Previous research on Charlotte Harbor mangrove creeks of differing habitat quality has indicated that upland habitat alteration negatively impacts mangrove creek fishes, including juveniles of the economically important snook. However, thus far, assignment of creek habitat degradation categories has been based upon qualitative assessment of upland habitat alterations and effects on freshwater flow into the creeks. As part of a larger effort to better quantify these creek habitat quality categorizations, this proposal seeks funds to examine water quality in the four study creeks as a measure of habitat quality. The hypothesis of the research proposed here is that differences in watershed development have resulted in measurable differences in water quality and in nutrient loading to the creek systems. This research will add to a multi-faceted program to examine the potential estuary-wide affects of upland habitat alterations on mangrove creeks and their associated fishes, thereby contributing to a better understanding of the real ecological impacts of development in Charlotte Harbor's watershed. Addresses HA-2 and HA-3 of CCMP.

**Deliverables:** Final Report

### *Fiscal Year 2007*

1) **Project Name:** Fate and Transport of Caloosahatchee ETM Sediment.  
**Project Partners:** Florida Gulf Coast University and Charlotte Harbor NEP  
**Total Cost:** \$32,884  
**NEP Funding:** \$15,296  
**Completion Date:** September 2008

Suspended sediment concentrations and the associated light attenuation in Charlotte Harbor are important factors affecting the health of a variety of organisms, including oysters, clams and seagrasses. This proposal is an extension of ongoing work to study the localized trapped high concentrations of suspended sediments, called the estuarine turbidity maximum (ETM), in the Caloosahatchee River. Recent research by the Project Manager has shown that the ETM migrates as much as 20 km up and down the river over a timescale of weeks, and during high freshwater discharge can be flushed out of the estuary into the surrounding waters. This periodic flushing of ETM sediment introduces a strong pulse of highly concentrated suspended sediment into the environments near the mouth of the River, which is likely to adversely affect oysters, seagrasses, and other benthic organisms. The results of this study will provide further understanding of the effects of controlled freshwater releases from Lake Okeechobee into the Caloosahatchee River. This study will determine the relative amounts of ETM suspended sediment flux into regions outside of the mouth of the river, i.e. Matlacha Pass, Pine Island Sound, and south towards Estero Bay. An additional benefit of this study will be the estimation of suspended aggregate settling velocity, a crucial parameter for future numerical modeling of sediment transport in the Charlotte Harbor Estuary and surrounding waterways. The fieldwork for this proposal will take place during the wet season of 2007. The considerable analyses of the data that is required will be completed in the ninth months subsequent to the field work. Addresses WQ-2, WQ-A and WQ-E of 2007 CCMP.

**Deliverables:** Final Report

2) **Project Name:** Evaluating the risks that pharmaceutical-related pollutants pose to Caloosahatchee River wildlife: observations on the bull shark, *Carcharhinus leucas*.

**Project Partners:** Mote Marine Laboratory and Charlotte Harbor NEP

**Total Cost:** \$76,909

**NEP Funding:** \$17,761

**Completion Date:** September 2008

Recently, there has been growing concern about the ecological and human health risks posed by pharmaceutical-related pollutants originating from human excretion. These compounds can have unexpected and often profound effects on non-target species because many drugs function by altering biological processes that are common in most organisms. Since these contaminants enter the natural environment primarily through domestic and industrial wastewater discharge, they pose their greatest threats to wildlife residing in aquatic habitats bordering highly populated regions. However, there has been very little research conducted on the exposure to and uptake of these pollutants in aquatic species. In the proposed study, researchers will assess the ecological risks that pharmaceutical-related compounds pose to the Caloosahatchee River Basin by examining the presence and concentrations of 12 widely prescribed drugs in surface waters of this river. Researchers will also determine if wildlife populations inhabiting the Caloosahatchee River are threatened by these potentially hazardous compounds by examining exposure to and accumulation of pharmaceuticals in juvenile bull sharks, an abundant and ecologically important resident of this river system. The compounds that will be examined include active components of human contraceptives, lipid-lowering drugs, anti-inflammatory agents, antidepressants, sexual function aids, and anti-psychotics. This will be a part of a larger, comparative study on pharmaceutical exposure in bull sharks residing in several wastewater impacted Florida rivers including the Indian River Lagoon, Hillsborough River, and the Caloosahatchee. By providing new information regarding the presence

of potentially hazardous pharmaceuticals in the Caloosahatchee River, this study will fill gaps in water quality data needed to determine Total Maximum Daily Load levels for these poorly studied compounds. Furthermore, given that these compounds are derived from point source discharges, this study will contribute new data on the ecological impacts of wastewater treatment facilities in the Caloosahatchee River. Addresses WQ-B, WQ-D, WQ-H and WQ-M of 2007 CCMP.

**Deliverables:** Final Report

3) **Project Name:** Do coastal land alterations impact estuarine food webs?

**Project Partners:** Mote Marine Laboratory, SWFWMD and Charlotte Harbor NEP

**Total Cost:** \$40,240

**NEP Funding:** \$19,220

**Completion Date:** September 2008

Southwest Florida is experiencing increasing development of coastal habitats areas, with associated loss and degradation of habitats. In some locations, efforts are being made to conserve habitats from development, while in other locations restoration is being used to mitigate habitat loss or degradation. Unfortunately, plans for development, conservation, and restoration or mitigation are being made with inadequate and incomplete information because there are few data demonstrating the ecological effects of this habitat alteration or restoration on estuarine ecology. Building upon recent and ongoing research, the proposed project will provide information on the impacts of coastal habitat alterations on mangrove associated fishes. Previous research showed that upland habitat alterations reduced number of fish species and fish abundance in mangrove creeks. The proposed research will determine the extent that these changes in fish community structure have in turn caused changes in the trophic web within mangrove creeks. Since juvenile snook, an economically and ecologically important species, rely on these creeks in their early years, changes in available prey can have far reaching impacts on adult snook populations and estuarine ecology. Changes in trophic structure within nursery habitats can influence growth rate, survival, and can cause emigration from poor habitats. If upland habitat alterations are causing trophic shifts, the implications are estuary wide, and more insidious than present data suggest. Addresses FW-C, FW-D, FW-E and FW-I of 2007 CCMP.

**Deliverables:** Final Report

### *Fiscal Year 2006*

1. **Project Name:** Identities and ecological effects of ecoestrogens present in the tidal Caloosahatchee River.

**Project Partners:** Mote Marine Lab and Charlotte Harbor NEP

**Total Cost:** \$38,471

**NEP Funding:** \$19,120

**Completion Date:** September 30, 2007

Due to their ability to impair hormone-regulated processes such as development, reproduction and immune function, environmental pollutants that mimic the female sex hormone estrogen (i.e. "ecoestrogens") pose significant health risks to terrestrial and aquatic organisms. In a previous study, the researcher determined the presence of elevated concentrations of ecoestrogens in the Caloosahatchee River. This follow-up study will identify the specific chemicals and if the concentrations of these compounds are high enough to impact local wildlife by comparing vitellogenin levels in hogchoker fish from the Caloosahatchee and Myakka Rivers using Student's t-test. Addresses WQ-1.

**Deliverables:** Final Report

2. **Project Name:** Identification of microbes critical to the enhancement of seagrass restoration.  
**Project Partners:** Sanibel-Captiva Conservation Foundation, Marine Lab and Charlotte Harbor NEP

**Total Cost:** \$37,127

**NEP Funding:** \$18,458

**Completion Date:** September 30, 2007

The health and quality of seagrass habitats have been defined by density and species composition of seagrasses and the diversity of juvenile fishes in seagrass habitats. These coarse-scale measurements of community responses are not sensitive to short-term stressors, such as pulsed releases of freshwater from S-79. This project would take advantage of DNA-based technologies to provide a rapid, and extremely accurate benthic diversity index. This index is based on the bacteria that live in and around seagrass roots. By identifying the “key” microbes associated with enhanced plant performance under high sulfide conditions, scientists could simply follow the road signs indicative of high quality habitat. Similarly, microbes associated with decreased plant performance can be rapidly detected by their DNA sequence and actions could be taken to improve habitat quality.

Addresses FW-2(a) of CCMP.

**Deliverables:** Final Report

### *Fiscal Year 2005*

1. **Project Name:** Does Nitrogen from Sludge Farm Runoff Persist in the Charlotte Harbor Study Area?

**Project Partners:** Charlotte Harbor Environmental Center and Charlotte Harbor NEP

**Total Cost:** \$25,234

**NEP Funding:** \$10,126

**Completion Date:** September 30, 2007

Residual sludge produced by domestic waste water treatment is often disposed of by land application. The contributions of nitrogen from this source should be monitored to avert coastal nutrient enrichment. This project will measure the presence and extent of sludge nitrogen through the use of stable nitrogen isotope analysis, based on the degree of difference between the sludge and background nitrogen isotope ratios. The methods for this project include seasonal sampling of both nitrogen and the stable nitrogen isotope ratio in filtered water, phytoplankton, and macrophytes from stations along the Peace River, Horse Creek, and selected tributaries which may be impacted by sludge spreading. This project will produce maps of the area affected by sludge nitrogen, and the amount of sludge nitrogen assimilated by different components of the ecosystem. This study may also be of further use as stable nitrogen isotope ratios can be combined with stable carbon and sulfur ratios to assess the effects of sludge spreading in trophic interactions and larger questions of Charlotte Harbor study area ecology. Addresses WQ-C/D.

**Deliverables:** Final Report

2. **Project Name:** *Vallisneria americana* Restoration within the Caloosahatchee River

**Project Partners:** Mote Marine Laboratory and Charlotte Harbor NEP

**Total Cost:** \$24,515

**NEP Funding:** \$12,169

**Completion Date:** September 30, 2007

The drought of 2000 severely reduced the extent of the submerged aquatic vegetation, *Vallisneria Americana* (tape grass or wild celery), in the tidal Caloosahatchee River. Although *Vallisneria* has since returned to the river, its biomass is greatly reduced. This study seeks to assess the efficacy of

restoring the once dominant species using captive-raised plants. Specifically, the strategy will use mature rosettes, immature rosettes, seedlings, and seeds to establish a viable population of *Vallisneria* and ultimately enhance fish and wildlife habitat. Addresses FW-R of CCMP.

**Deliverables:** Final Report

## **Public Outreach Grants**

Public Outreach Grants typically take one year to complete. In FY06 the review schedule and process were modified, allowing contracts to be signed as early as November and granting the Program Director authority to approve applications once approved by the CAC. Projects may begin as soon as the contract is signed and notarized by both parties.

### ***Fiscal Year 2008***

Fourteen public outreach grants were approved.

#### **1. Sailing through the Environment of Charlotte Harbor \***

LA Ainger Middle School, Rotonda West

Total Cost: \$3,910      NEP Funding: \$3,000

Seventh grade students in Englewood (Charlotte County) will participate in one of six environmental field trips on Charlotte Harbor as a result of this grant. Each of the 240 students, including special needs children, will be able to enjoy being out on the water of Charlotte Harbor and Lemon Bay – some for the first time – while they collect and analyze data.

#### **2. Learning about our Estuary, Port Charlotte Middle School \***

Port Charlotte Middle School

Total Cost: \$1,910      NEP Funding: \$1,910

An educational field trip is planned by Port Charlotte Middle School to facilitate a deeper understanding among its seventh grade students of the Charlotte Harbor region. To ensure the success of this effort, students will also complete supplemental bookwork focusing on conservation issues, local flora and the importance of wetlands.

#### **3. Manatee, Estuary and Seagrass Education Project for Lee County \***

Charlotte Harbor Environmental Center

Total Cost: \$3,630      NEP Funding: \$3,000

Through an interactive educational puppet skit, discussion and video, 30 third grade classrooms in Lee County will learn about manatees, their natural history, importance of seagrass habitat to their health as well as threats from declining water quality, watercraft and how the students can help protect both local waters and manatees.

#### **4. Sea Turtle Adventures: A 2008 Workshop for Elementary Teachers \***

Coastal Wildlife Club, Inc.

Total Cost: \$4,730      NEP Funding: \$2,700

A two-day workshop will be offered in 2008 to increase teachers' awareness of coastal resources, including sea turtles and gopher tortoises.

#### **5. Water Wonders Student Workshop Program \***

G.WIZ, the Hands-On Science Museum

Total Funding: \$11,327      NEP Funding: \$2,473

Up to 164 students in Sarasota County fifth to eighth grade classes will participate in a water workshop, a hands-on, science-based educational program that addresses the critical issues of water quality the region's vulnerable water resources. The program focuses on water quality, pollution and the role individuals have in protecting water resources and local ecosystems.

## **6. Gopher Tortoise Talks**

Turtle Talks

Total Funding: \$3,027      NEP Funding: \$3,000

Teenager Zander Srodes began Turtle Talks to educate students of the plight of endangered sea turtles. His program has now expanded to educate children about gopher tortoises, a threatened species that can be found throughout Florida. The tortoise is also considered to be a keystone species in its environment as its burrows are shelter and refuge to more than 250 species that live in the scrub, pine flatlands and dune areas. This grant allows him to provide an activity book about gopher tortoises to each talk participant to help them realize the importance of preserving this treasure.

## **7. Native Plant Demonstration Garden at Polk County Utilities Building**

Polk County Extension Service

Total Funding: \$3,695      NEP Funding: \$2,185

When Polk County residents pay their utility bills, they'll be treated with a native plant demonstration garden. The plants used will be selected based on both their tolerance of droughts and appearance. The garden will be mulched using melaleuca mulch, a recycled mulch made from an invasive tree that is recommended by the University of Florida. Rock will be used in a swale and along a pathway to demonstrate an example of pervious surfaces and how homeowners can reduce runoff pollution by using such materials in their landscape. The demonstration garden will promote the nine principles of Florida-friendly landscaping and serve as a high-profile example to the residents of the county who will learn that using native plants, pervious surfaces, recycled products and appropriate drainage solutions can be beautiful and benefit the environment at the same time.

## **8. IMC Peace River Park Boardwalk Educational Signage**

Friends of the Park Foundation, Inc.

Total Funding: \$6,000      NEP Funding: \$3,000

The Friends is a private, nonprofit foundation formed in 1993 to promote and support public parks and recreation activities in Polk County. The Friends will develop 12 educational signs along the new addition of the IMC Peace River Park Boardwalk to be constructed in 2008 in Homeland. The signs will inform park visitors of the importance of the Peace River and its floodplain to the Charlotte Harbor estuary, migratory birds and amphibians. The signs will also address man's impacts on the river ecosystem, including the Floridan aquifer, mining, agriculture, invasive species and urbanization.

## **9. Protecting Charlotte Harbor: Simple things you can do at home**

Peace River Audubon Society

Total Funding: \$3,697      NEP Funding: \$2,205

In an effort to encourage and inform the public how to better protect wildlife, water quality and water quantity in the Charlotte Harbor watershed, the Society will produce two brochures to be distributed at area events. One brochure will teach landscaping for wildlife concepts and discuss native plants that do well in our area. The second brochure will suggest simple ways people can reduce their home water and energy use. Sample bags of mulch made from the invasive melaleuca tree will also be given away along with information on why it should be used instead of cypress mulch.

### **10. DeSoto Diaries**

DeSoto County Parks & Recreation

Total Funding: \$4,239          NEP Funding: \$3,000

This project creates a youth activity journal on DeSoto County's environment, including the ecology of the Peace River. The journal will include worksheets of word searches, coloring, puzzles and matching, as well as collages, fun facts and journal entries on observations, weather and personal reflections. The camper, park visitor or school group that receives this item will also learn the connectivity of how an individual choice in DeSoto County can affect the Peace River and ultimately the Charlotte Harbor estuary.

### **11. "Water" we doing? Watershed rescue traveling trunks**

Lakes Education/Action Drive

Total Funding: \$11,186          NEP Funding: \$3,000

Two traveling trunks called "Water We Doing" will be developed with LE/AD in collaboration with the Polk County Environmental Education Resource Center (PEER). The trunks include ready-to-use student centers, laboratory investigations and facilitator-led demonstrations using the amazing and fascinating Peace River watershed that they live in as the integrative theme. These trunks are user friendly and ready to be used by teachers throughout the county with no additional preparation required. Each trunk contains supplies for five third grade level classrooms with a week of meaningful, researched activities and investigations.

### **12. Upper Peace Kayak Environmental Education Program**

City of Winter Haven, Natural Resources Division

Total Funding: \$9,903          NEP Funding: \$3,000

UPKEEP will provide citizens of all ages and diversity with natural resource-based recreational opportunities and experiences throughout the Peace River watershed. The kayaks will allow at least 15 paddlers per outing to join a naturalist and explore lakes in Winter Haven, the Peace River, Charlotte Harbor and more. UPKEEP will provide an avenue for exploration, enjoyment and protection of our water resources.

### **13. Florida Yards & Neighborhoods (FYN) Conference**

Lee County Extension

Total Funding: \$4,480          NEP Funding: \$1,600

A day-long conference will focus residents' attention on doing the right thing to protect and maintain healthy estuaries. Eco-friendly lawn care practices are learned skills, needing integrated into routine landscaping maintenance. When residents internalize and apply their knowledge, they identify solutions for environmental problems and can be a catalyst for solving other watershed challenges.

### **14. 23rd Annual Everglades Coalition Conference**

Sanibel-Captiva Conservation Foundation

Total Funding: \$80,308          NEP Funding: \$3,000

For the first time in its 23-year history, the Everglades Coalition annual conference will be held in Lee County. It is the largest annual forum of nonprofit, federal and state government and private interests to focus on the hydrologic system of the Greater Everglades. This conference will focus on the Caloosahatchee estuary and the devastating impacts resulting from the discharges of nutrient laden excess freshwater. The conference will be held January 10-13, 2008 on Captiva Island.

## ***Fiscal Year 2007***

Of the 14 approved, seven are in progress as of October 1, 2007.

### **1. Lakeside Resident's Guide**

Lakes Education/Action Drive

Total Cost: \$5,280                      NEP Funding: \$2,700

There are more than 500 lakes in Polk County, many with large residential developments along their lakeshore. This guide provides shoreline residents with information on how water quality in the lake is affected by their everyday actions through stormwater runoff, yard debris disposal, fertilizer and pesticide application. The guide will also include information about water quality, stormwater runoff, aquatic vegetation (control and maintenance), wildlife, boating safety, permitting requirements for lakeshore property owners, and resources that can provide more assistance.

### **2. Clean Water Action**

Caloosahatchee River Citizens Association/Riverwatch

Total Funding: \$5,625                      NEP Funding: \$3,000

Newcomers and residents alike will learn about water quality issues in the Cape Coral area and how they can preserve, enhance and promote their precious waterways. This nonprofit organization was identified as a need after a CHNEP public conference.

### **3. Upper Peace River Flora and Fauna Study**

Hardee County Outdoor Classroom

Total Cost: \$6,037                      NEP Funding: \$2,989

Students will conduct a study of the Peace River at select sites between Bartow and Gardner to determine the most common plants and animals found during the day. The results will be distributed on a CD to schools and libraries so that it will be a resource for others interested in studying the region.

### **4. When Nature is your Neighbor Brochure and Power Point Presentation**

Lee County BCC (on behalf of Parks & Recreation Conservation 20/20)

Total Cost: \$5,560                      NEP Funding: \$3,000

Thirty of the 31 preserves within the CHNEP managed by Lee County have at least one adjacent private land owner. With the increasing number of new homes adjacent to these new homes, staff has discovered an increased need to provide "neighbors" with accurate information on both the restoration activities that are conducted at the preserves as well as how the neighbor's actions can affect the health of not only the preserves but ultimately the estuary. This program will produce a brochure as well as an outreach program conducted throughout the year to explain the interconnected relationship and provide suggestions of simple action they can take to become good neighbor to these conservation areas.

### **5. Lemon Bay Watershed Storm Drain Marking**

Sarasota County BCC (on behalf of Sarasota County Water Resources)

Total Cost: \$3,955                      NEP Funding: \$2,455

Volunteers will mark storm drains with a specialized placard that reads "This drains to Lemon Bay" as part of an education campaign designed to raise community awareness about the direct connection between land activities, storm drains and local water quality. Many people do not realize that storm drains in their neighborhoods are direct links to nearby creeks and ultimately Lemon Bay. Storm drain marking is an effective way of educating the public about reducing the amount of pollutants entering the stormwater system and protecting surface waters, and serves as a constant reminder.

## **6. Rain Barrel Workshops with Polk County Schools**

Polk County BCC (on behalf of Extension Service)

Total Cost: \$3,008                      NEP Funding: \$1,325

This program will provide water conservation and water quality programs to local school children. The children will receive a rain barrel to decorate and use in their school gardens.

## **7. The Smart Way to Grow Your Florida Yard: Yard Maintenance Guide**

Manatee Friends of Extension (on behalf of Builder-Developer Program serving Manatee, Sarasota and Charlotte counties)

Total Cost: \$73,000                      NEP Funding: \$3,000

While many resources are now available to help explain why and how to develop a “Florida friendly” yard, there are few resources available on how to maintain that yard. This outreach program includes workshops, one-on-one interactions, media, and more to reach builders, developers, realtors, landscape architects and designers, irrigation contractors and homeowners.

### ***Fiscal Year 2006***

Of the 11 approved, one is in progress and two were withdrawn.

#### **1. Creek Kids**

J. Colin English Elementary School

Total Cost: \$4,248      NEP Funding: \$2,774

Fifth grade students become scientific analysts and stewards of three creeks in North Fort Myers. They will map, sample, test, collect and analyze data gathered on these creeks that flow to the Caloosahatchee and that are known for their high levels of pollution. They will then become educators – preparing the fourth grade students to continue the work the next year and sharing their knowledge in presentations to the community. This is the third year of support from the NEP.

### ***Fiscal Year 2005***

Of the 12 approved, all were completed except for one that was withdrawn.

### ***Fiscal Year 2004***

Of the 12 approved, one is in progress.

#### **1. Estero Bay Field Map and Interpretive Guidebook**

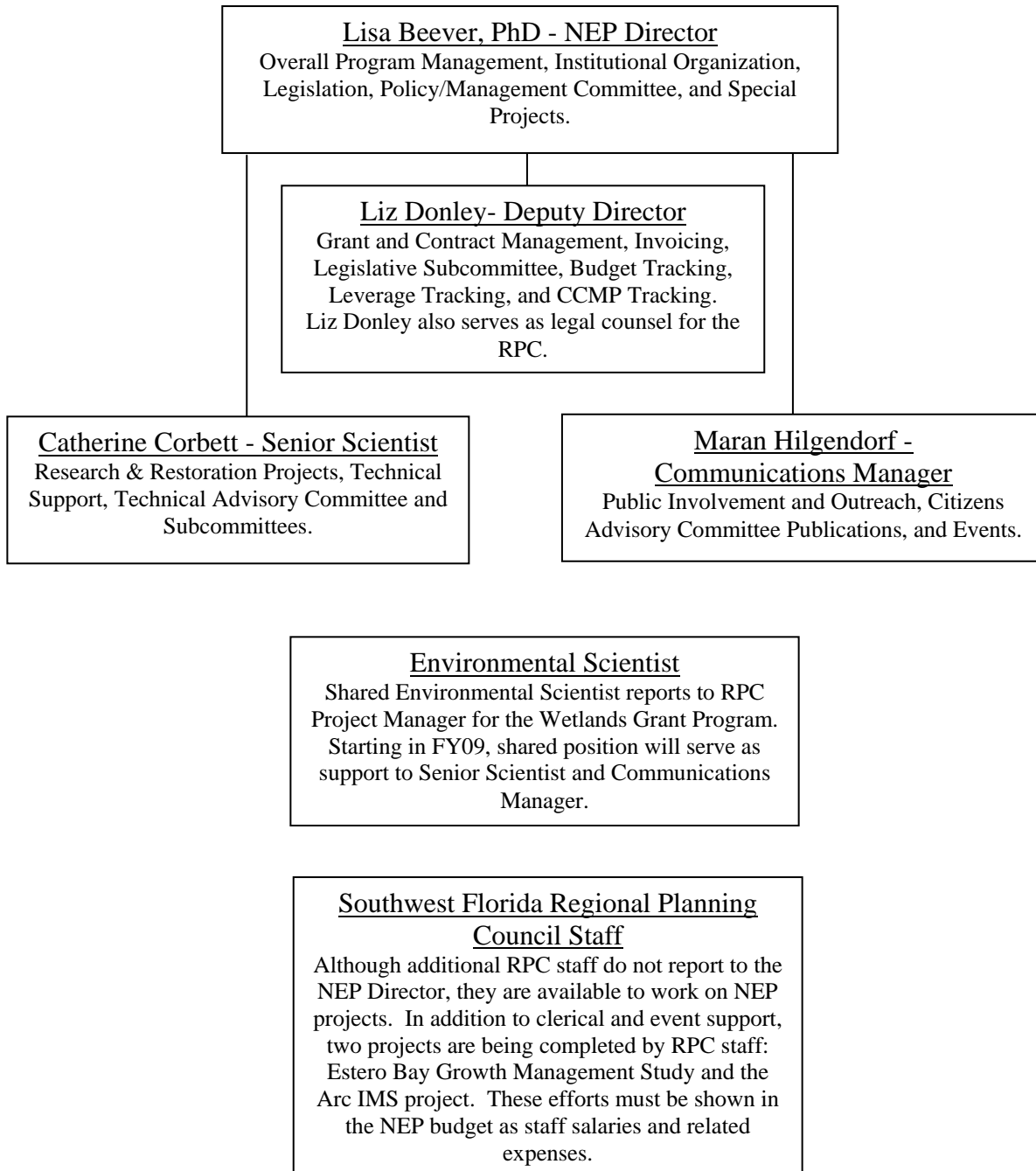
Fort Myers Beach The Mound House

**Total Cost:** \$4,900    **NEP Funding:** \$2,900

The illustrated laminated field map will provide a backdrop of Estero Bay and Matanzas Pass highlighting the diversity of life in the estuary, its operation and the interaction between humans and this unique environment for the last 6,000 years. The guidebook will integrate the human history of this area with habitat use. The documents will be available to kayakers using The Mound House while on the Great Calusa Blueway Paddling Trail.

## List of Staff

The CHNEP staff includes 5 professional positions. As shown in the sub-task descriptions, many deliverables are prepared in-house. Several grants have been submitted to a variety of funding agencies.



To prepare cost estimate targets, staff estimates of time were developed. Tables 7 and 8 identify time estimates by staff member by task.

**Table 7: Expected Staff Time Allocations by Task for FY 08**

Task	Title	Lisa	Catherine	Liz	Maran	Env Scientist	FTE	Other RPC Salaries
1	Management Conference	35%	20%	50%	15%	2%	1.22	\$0
2	Outreach	10%	5%	5%	85%	7%	1.12	\$5,000
3	Research	20%	42%	0%	0%	3%	0.65	\$7,000
4	Restoration	25%	33%	12%	0%	0%	0.70	\$0
5	Advocacy & Legislative Action	10%	0%	13%	0%	0%	0.23	\$0
		100%	100%	80%	100%	12%	3.92	

**Table 8: Expected Staff Time Allocations by Task for FY 09**

Task	Title	Lisa	Catherine	Liz	Maran	Env Scientist	FTE	Other RPC Salaries
1	Management Conference	30%	20%	50%	15%	0%	1.15	\$0
2	Outreach	15%	5%	5%	85%	10%	1.10	\$5,000
3	Research	20%	42%	0%	0%	23%	0.95	\$0
4	Restoration	25%	33%	12%	0%	0%	0.70	\$0
5	Advocacy & Legislative Action	10%	0%	13%	0%	0%	0.23	\$0
		100%	100%	80%	100%	33%	4.13	

**Table 9:  
Total Leveraged (October 1, 2006-September 30, 2007)**

PROJECT Name	Role	Total Leverage	Leveraged Federal		Leveraged State		Leveraged Local		Leveraged Private	
			Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind
320 Match	Primary	\$755,800	0	0	\$239,000	\$388,000	\$112,500	0	\$16,300	0
CHNEP Program Committee Support	Primary	\$31,158	0	\$6,069	0	\$2,231	0	\$16,876	0	\$5,982
Water Wonders Student Workshop Program	Primary	\$9,334	0	0	0	0	0	0	\$9,334	0
Lakeshore Resident's Guide	Primary	\$2,580	0	0	0	0	0	0	\$2,580	0
Greenscape	Primary	\$2,625	0	0	0	0	0	0	\$2,625	0
Sailing through the Environment of Charlotte Harbor's Punta Gorda	Primary	\$910	0	0	0	0	\$910	0	0	0
Sea Turtle Adventures 2007: A Teacher's Workshop	Primary	\$3,000	0	0	0	0	0	0	\$3,000	0
Upper Peace River Flora and Fauna Survey	Primary	\$2,989	0	0	0	0	\$2,989	0	0	0
When Nature is your Neighbor Brochure and Power Point Presentation	Primary	\$3,000	0	0	0	0	\$3,000	0	0	0
The Smart way to Grow Your Florida Yard: Yard Maintenance Guide	Primary	\$70,000	0	0	0	0	0	0	\$70,000	0
Caloosahatchee River Watershed Initiative	Primary	\$15,000,000	0	0	\$10,000,000	0	\$5,000,000	0	0	0
Caloosahatchee Watershed Protection Plan	Primary	\$40,000,000	0	0	\$35,000,000	0	\$5,000,000	0	0	0
Cape Water Action	Primary	\$2,625	0	0	0	0	\$2,625	0	0	0
Charlas de Tortugas libro de actividades	Primary	\$6,372	0	0	0	0	\$6,372	0	0	0
CHEC Water Quality Website Expansion	Primary	\$11,000	0	0	\$11,000	0	0	0	0	0
RRPP grant – DO Coastal Land Alterations Impact Estuarine Food Webs	Primary	\$40,240	0	0	0	0	\$19,200	0	\$21,040	0
Estero Bay Aquatic Preserve 40 <sup>th</sup> Anniversary Interpretive Boat Tours	Primary	\$31,767	0	0	0	0	\$31,676	0	0	0
Estero Bay Watershed Initiative	Primary	\$1,200,000	0	0	\$1,200,000	0	0	0	0	0

PROJECT Name	Role	Total Leverage	Leveraged Federal		Leveraged State		Leveraged Local		Leveraged Private	
			Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind
RRPP grant Evaluating the risks that pharmaceutical-related pollutants pose to Caloosahatchee River wildlife	Primary	\$76,929	0	0	0	0	\$19,936	0	0	\$56,973
RRPP grant Fate and transport of Caloosahatchee estuarine turbidity maximum (ETM) sediment	Primary	\$32,884	0	0	0	0	\$15,296	0	0	\$17,588
FYN Builder Developer Program in Sarasota, manatee and Charlotte Counties	Primary	\$73,000	0	0	0	0	\$3,000	0	0	\$70,000
Hendry Creek OSTDS Study	Primary	\$51,000	0	0	\$50,000	0	0	0	0	\$1,000
Lemon Bay Watershed Management Plan	Primary	\$229,470	0	0	\$154,470	0	\$75,000	0	0	0
Lemon Bay watershed Storm Drain Marking	Primary	\$3,955	0	0	0	0	\$3,955	0	0	0
Life Science and Charlotte Harbor's Punta Gorda	Primary	\$1,160	0	0	0	0	\$1,160	0	0	0
Manatee and Seagrass Education	Primary	\$3,575	0	0	0	0	\$3,575	0	0	0
Mullock Creek Basin Restoration – Homeowner Florida Friendly Yards	Primary	\$47,214	0	0	\$16,096	0	0	31118	0	0
Post-Hurricane Restoration of Red Mangrove Shorelines in a Southwest Florida Estuary	Primary	\$99,204	0	0	0	0	\$17,254	0	0	\$81,950
Rain Barrel Workshops with Polk County Schools	Primary	\$3,028	0	0	0	0	\$3,028	0	0	0
Shoreline Survey	Primary	\$108,500	0	0	\$80,000	0	\$28,500	0	0	0
Trailhead Vista Restoration	Primary	\$45,000	0	0	0	0	0	0	\$45,000	0
Upper Peace River Flora and Fauna Study	Primary	\$6,037	0	0	0	0	\$6,037	0	0	0
<b>Totals</b>		<b>\$57,954,356.00</b>	<b>0</b>	<b>\$6,069.00</b>	<b>\$37,750,566.00</b>	<b>\$390,231.00</b>	<b>\$10,356,013.00</b>	<b>\$47,994.00</b>	<b>\$169,879.00</b>	<b>\$233,493.00</b>

**Table 10:  
Total Leveraged (October 1, 2007- January 31, 2008)**

PROJECT Name	Role	Total Leverage	Leveraged Federal		Leveraged State		Leveraged Local		Leveraged Private	
			Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind
320 Match	Primary	\$769,500	0	0	\$252,000	\$418,000	\$99,500			
CHNEP Program Committee Support	Primary	\$12,9000	0	\$3,225		\$3,225	0	\$3,225		\$3,225
EPA Region 4 Wetlands Development Program Grant	Primary	\$628,828	\$470,494	0	0	0	0	0		\$158,334
Sailing through the Environment of Charlotte Harbor	Primary	\$3,910	0	0	0	0	\$3,000	\$910	0	0
Learning about our Estuary!	Primary	\$1,910	0	0	0	0	\$1,910	0	0	0
"Water" we doing? Watershed rescue traveling trunks	Primary	\$11,186	0	0	0	0	\$3,000	\$8,186	0	0
Manatee, Estuary & Seagrass Education Project for Lee County	Primary	\$3,630	0	0	0	0	\$3,000	\$630	0	0
Upper Peace Kayak Environmental Education Program	Primary	\$4,239	0	0	0	0	\$3,000	0	0	\$1,239
23rd Annual Everglades Coalition Conference	Primary	\$83,308	0	0	0	0	\$3,000	0	\$80,308	0
Gopher Tortoise Talks	Primary	\$3,027	0	0	0	0	\$3,000	0	0	\$27
Protecting Charlotte Harbor: Simple things you can do at home		\$3,697	0	0	0	0	\$2,205	0	\$1,492	0
Florida Yards & Neighborhoods (FYN) Conference		\$4,480	0	0	0	0	\$1,600	0	\$2,880	0

PROJECT Name	Role	Total Leverage	Leveraged Federal		Leveraged State		Leveraged Local		Leveraged Private	
			Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind
Water Wonders Student Workshop Program		\$11,327	0	0	0	0	\$2,473	0	\$8,854	0
IMC Peace River Park Boardwalk Educational Signage		\$6,000	0	0	0	0	\$3,000	0	\$3,000	0
Native Plant Demonstration Garden at Polk County Utilities Building		\$3,695	0	0	0	0	\$2,185	\$1,510	0	0
Sea Turtle Adventures 2008: A Workshop for Elementary Teachers		\$4,730	0	0	0	0	\$2,700	0	\$2,030	0
DeSoto Diaries		\$4,239	0	0	0	0	\$3,000	0	0	\$1,239
Sailing through the Environment of Charlotte Harbor		\$3,910	0	0	0	0	\$3,000	\$910	0	0
Learning about our Estuary!		\$1,910	0	0	0	0	\$1,910	0	0	0
<b>Totals</b>		<b>\$1,682,526</b>	<b>\$470,494</b>	<b>\$3,225</b>	<b>\$ 0.00</b>	<b>\$421,225</b>	<b>\$141,483</b>	<b>\$15,371</b>	<b>\$98,564</b>	<b>\$164,064</b>

## FY 08 Travel Documentation

Travel funds will be used for purposes such as travel to NEP Directors Meetings, National and state conferences, meetings with EPA staff in Atlanta and Washington D.C., and other overnight travel as needed. \$6,000 has been programmed to support additional special travel and local travel. \$400 has been programmed from non-local sources for travel that is ineligible for federal reimbursement. Minor parking, toll expenses, and boat rental fees will also be funded from this account.

**Table 11: Projected Travel in FY 08 (FY2008 EPA Budget Sheet)**

Date	Purpose	# Travelers	Location	Length of Stay	Travel Mode/Est. Cost	Reg. Fee per Staff	Estimated Cost
October 2007	ANEP Annual Meeting	1	Puerto Rico.	6 days	Air /\$800	\$300	\$1,000
November 2007	Estuarine Research Federation	2	Providence, RI	5 days	Air/\$400	\$250	\$2,000
March 2008	NEP/EPA Spring Mtg.	3	Washington , DC	5 days	Air /\$1100	\$300	\$2,500
Spring 2008	Statewide mtg. With Gulf of Mexico Program	1	Tallahassee, FL	4 days	Auto	\$0	\$500
Spring 2008	Technical Transfer	2	Various	3 days	Air/\$500	\$250	\$2,000
May 2008	Meet with Region 4 Staff	4	Atlanta, GA	3 days	Air/\$1,000	\$0	\$2,000
Summer 2008	US EPA Community Involvement Conference	1	Unknown	5 days	Air/\$500	\$250	\$1,500
FY 08	Local Travel	4	Various	<1 day	Auto	\$100	\$6,000
			Total				\$17,500

## FY 09 Travel Documentation

Travel funds will be used for purposes such as travel to NEP Directors Meetings, National and state conferences, meetings with EPA staff in Atlanta and Washington D.C. \$8,000 has been programmed to support additional special travel C., and other overnight travel as needed.

**Table 12: Projected Travel in FY 09**

Date	Purpose	# Travelers	Location	Length of Stay	Travel Mode/Est. Cost	Reg. Fee per Staff	Estimated Cost
October 2008	ANEP Annual Meeting	1	New York City.	5 days	Air /\$500	\$300	\$2,000
November 2008	Restore America's Estuaries	1	Rhode Island	5 days	Air/\$400	\$250	\$1,500
March 2009	NEP/EPA Spring Mtg.	2	Washington, DC	5 days	Air /\$1000	\$100	\$2,500
Spring 2009	Technical Transfer	2	Various	3 days	Air/\$500	\$250	\$2,000
May 2009	Meet with Region 4 Staff	4	Atlanta, GA	3 days	Air/\$1,000	\$0	\$2,000
Summer 2009	US EPA Community Involvement Conference	1	Unknown	5 days	Air/\$500	\$250	\$1,500
FY 09	Local Travel	4	Various	<1 day	Auto	\$0	\$12,500
			Total				\$24,000

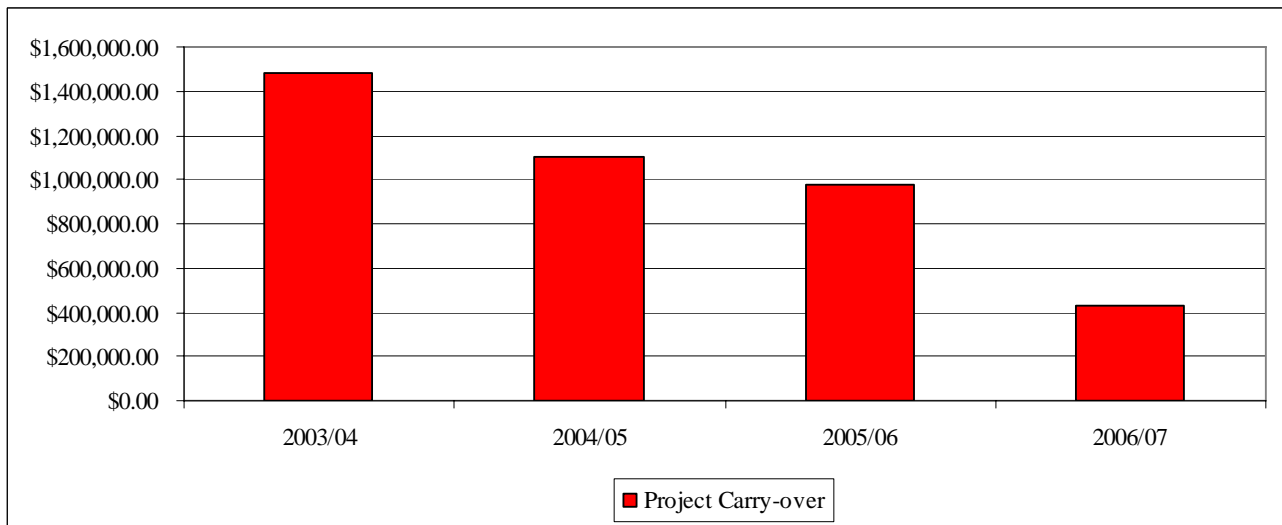
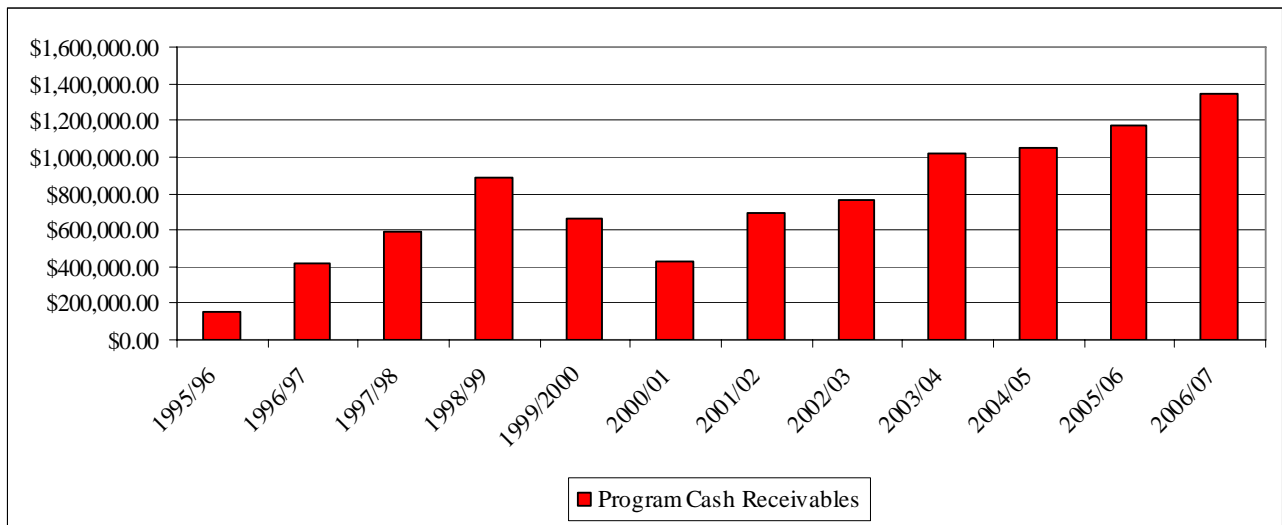
# Workplan Budget

## Income

Cash receivables to the program have been increasing since FY 01, as shown in the graph below.

Total funding is projected at over \$1,880,000 for FY08, including projects that have carried-over from previous years. For FY09, funding is projected at over \$1,175,000.

In last year's FY08 Workplan and FY 07 amendment, carry-over contract funds totaled over \$780,000. For the FY09 Workplan and FY 08 amendment, carry-over contract funds total just over \$427,000, nearly half of last year. This represents a decreasing trend in carry-over and an increasing trend in completing projects.



**Table 13: Charlotte Harbor NEP FY 07 and 08 Income**

Funding Source	Approved FY 07 Funding	FY 08 Request	Approved FY 08 Funding	FY 09 Request
<b>Federal</b>				
Section 320 Funding	\$511,966.00	\$418,000.00	\$418,000.00	\$592,000.00
EPA Watershed Grants				
EPA Outreach Grant	\$15,000.00			
<b>Total Federal</b>	<b>\$526,966.00</b>	<b>\$418,000.00</b>	<b>\$418,000.00</b>	<b>\$592,000.00</b>
<b>State and Regional</b>				
DEP	\$91,096.00	\$75,000.00	\$75,000.00	\$75,000.00
SFWMD	\$100,255.00	\$100,000.00	\$61,755.00	\$49,000.00
SWFWMD	\$110,000.00	\$110,000.00	\$110,000.00	\$110,000.00
Peace Manasota Water Supply Authority	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
<b>Subtotal Regional Income</b>	<b>\$306,351.00</b>	<b>\$290,000.00</b>	<b>\$251,755.00</b>	<b>\$239,000.00</b>
<b>Local</b>				
Charlotte County	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Lee County	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Manatee County	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
Polk County	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Sarasota County	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00
Bartow		\$1,000.00		\$1,000.00
Bonita Springs		\$1,000.00		\$2,500.00
Cape Coral	\$7,500.00	\$7,500.00	\$7,500.00	\$7,500.00
DeSoto County		\$1,000.00		\$1,000.00
Fort Myers	\$7,500.00	\$7,500.00	\$7,500.00	\$7,500.00
Fort Myers Beach	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00
Hardee County		\$1,000.00		\$1,000.00
North Port	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
Punta Gorda	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
Sanibel		\$5,000.00		\$5,000.00
Venice	\$2,500.00	\$2,500.00		\$2,500.00
Winter Haven		\$1,000.00		\$1,000.00
<b>Subtotal Local Income</b>	<b>\$101,000.00</b>	<b>\$111,000.00</b>	<b>\$98,500.00</b>	<b>\$112,500.00</b>
<b>Private/Other Grants/Misc.</b>				
Watershed Summit Sponsorships				\$10,000.00
Workshop Registrations	\$5,170.00		\$5,000.00	\$5,000.00
Nature Festival Sponsorship	\$11,025.00		\$10,000.00	\$10,000.00
Sustainable Communities Conference				\$7,000.00
FishAmercica Grant	\$30,720.00			
FDEP Coastal Management Grant	\$16,069.00			
Donations	\$55.00		\$1,644.00	
Cash on hand, end of FY 07 fiscal year		\$386,749.72	\$736,949.43	
Uninvoiced SWFWMD Contracts, end of 07			\$313,769.71	
Uninvoiced Grants			\$46,789.00	
Anticipated local reserve, end of 08				\$277,777.49
<b>Subtotal Grant/Private Income</b>	<b>\$63,039.00</b>	<b>\$386,749.72</b>	<b>\$1,114,152.14</b>	<b>\$309,777.49</b>
<b>In-Kind</b>				
Match In-Kind: Charlotte Harbor Initiative	\$526,966.00	\$418,000.00	\$418,000.00	\$592,000.00
<b>Subtotal In-Kind</b>	<b>\$526,966.00</b>	<b>\$418,000.00</b>	<b>\$418,000.00</b>	<b>\$592,000.00</b>
<b>Grand Totals in the Fiscal Year</b>	<b>\$1,524,322.00</b>	<b>\$1,623,749.72</b>	<b>\$2,300,407.14</b>	<b>\$1,831,277.49</b>
<b>Program Cash</b>	<b>\$997,356.00</b>	<b>\$1,205,749.72</b>	<b>\$1,882,407.14</b>	<b>\$1,226,777.49</b>

## FY 07/08 Budget Amendment

Major changes within the FY 08 budget included:

- Carry-over amounts from FY07 contracts were added, totaling just over \$427,000.
- Lees effort on the CCMP and Research Coordination than anticipated, allowing for more effort in Public Outreach, Restoration Coordination (including the Southwest Florida Feasibility Study), and Advocacy.
- Minor modifications in fringe and indirect expenses.
- New Grant projects were added, totaling over \$56,000.
- \$40,000 of the Random Sample Survey was moved from FY08 to FY09 (always known to be a 2-year project).
- Small amounts (\$1,000 and under) added to task budgets to allow for flexibility.
- Director used her authority to dedicate up to \$5,000 for necessary equipment so that data taken under the Coastal Charlotte Harbor Monitoring Network was consistent for water clarity.

**Table 14: FY 08 Budget, adopted 5/21/07**

Task #	Task	Personnel	Fringe	Travel	Supplies	Other	Indirect	Total
1	Management & Admin.	\$112,263	\$50,000	\$15,000	\$9,500	\$2,450	\$96,000	\$285,213
2	Public Outreach	\$67,995	\$30,000	\$2,500	\$1,000	\$180,450	\$58,000	\$339,945
3	Research	\$70,057	\$31,000	\$1,000	\$50	\$264,150	\$60,000	\$426,257
4	Restoration	\$30,077	\$13,000	\$2,500	\$50	\$250	\$26,000	\$71,877
5	Advocacy & Leg Action	\$16,296	\$7,000	\$500	\$0	\$4,500	\$14,000	\$42,296
<b>Total</b>		<b>\$296,688</b>	<b>\$131,000</b>	<b>\$21,500</b>	<b>\$10,600</b>	<b>\$451,800</b>	<b>\$254,000</b>	<b>\$1,165,588</b>

**Table 15: Budget Changes between  
5/21/07 FY 08 Budget and FY 08 Budget Amendment (page 61)**

Task #	Task	Personnel	Fringe	Travel	Supplies	Other	Indirect	Total
1	Management & Admin.	(\$20,263)	(\$5,000)	\$0	\$0	\$1,000	(\$18,000)	(\$42,263)
2	Public Outreach	\$9,005	\$8,000	\$0	\$0	\$122,356	\$7,000	\$146,361
3	Research	(\$16,057)	(\$4,000)	\$0	\$0	\$306,624	(\$14,000)	\$272,567
4	Restoration	\$22,923	\$13,000	\$0	\$0	\$250	\$19,000	\$55,173
5	Advocacy & Leg Action	\$2,704	\$2,000	\$0	\$0	\$500	\$2,000	\$7,204
<b>Total</b>		<b>(\$1,688)</b>	<b>\$14,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$430,730</b>	<b>(\$4,000)</b>	<b>\$439,042</b>

## **FY 08/09 Budget**

As in previous years, the Technical Advisory Committee (TAC) recommends specific research projects for funding and Citizens Advisory Committee (CAC) recommend public outreach projects for funding. Carry-over funding for was shown in the FY 08 budget amendment. Next year the FY 09 budget will be amended to address carry-over from FY 08 and earlier.

Project tracking will be accomplished at the task level (1, 2, etc.) Staff hours and deliverables are tracked at the sub-task level. Table 20 is the CHNEP Budget. Additional fiscal controls occur through the contracts with partners. In previous years, line item fiscal controls, host agency budget fiscal controls, SWFWMD contract fiscal controls, and EPA Cooperative Agreement fiscal controls resulted in a high level of complexity for staff and some lost funding from SWFWMD. The contractual fiscal controls will remain in place. However, the broader CHNEP task-based controls allows for funding to be directed at a policy level.

Table 21 is the EPA Cooperative Agreement amounts. For FY 09, it is anticipated that the in-kind match will be restoration projects which are funded through the SFWMD and Lee County but may include cash match to support CHNEP programs. The EPA Cooperative Agreement budget does not include cash which supports the CHNEP from other partners.

**Table 16: FY 07/08 Workplan Budget Amendment**

Task #	Task	Personnel	Fringe	Travel	Supplies	Other	Indirect	Total
1	Management Conference & Admin.	\$92,000	\$45,000	\$15,000	\$9,500	\$3,450	\$78,000	\$242,950
2	Outreach	\$77,000	\$38,000	\$2,500	\$1,000	\$302,806	\$65,000	\$486,306
3	Research	\$54,000	\$27,000	\$1,000	\$50	\$570,774	\$46,000	\$698,824
4	Restoration	\$53,000	\$26,000	\$2,500	\$50	\$500	\$45,000	\$127,050
5	Advocacy & Leg Action	\$19,000	\$9,000	\$500	\$0	\$5,000	\$16,000	\$49,500
<b>Total</b>		<b>\$295,000</b>	<b>\$145,000</b>	<b>\$21,500</b>	<b>\$10,600</b>	<b>\$882,530</b>	<b>\$250,000</b>	<b>\$1,604,630</b>

**Table 17: FY 07/08 EPA Cooperative Agreement**

Task #	Task	Personnel	Fringe	Travel	Supplies	Other	Indirect	Total
1	Management Conference & Admin.	\$89,810	\$40,000	\$15,000			\$76,800	\$221,610
2	Outreach	\$54,396	\$24,000	\$2,500		\$69,094	\$46,400	\$196,390
3	Research							
4	Restoration							
5	Advocacy & Leg Action							
In-Kind						\$418,000		\$418,000
<b>Total</b>		<b>\$144,206</b>	<b>\$64,000</b>	<b>\$17,500</b>	<b>\$0</b>	<b>\$487,094</b>	<b>\$123,200</b>	<b>\$836,000</b>

**Table 18: FY 07/08 SWFWMD Contract**

Task	Project	SWFWMD	CHNEP	Project Total	SWFWMD %
3.2	Random –Sample Survey	\$15,000	\$15,000	\$30,000	50%
3.3	Research and Restoration Partners	\$12,000	\$12,000	\$24,000	50%
3.2	Predevelopment Vegetation Map (Research or Monitoring Priority)	\$27,500	\$27,500	\$55,000	50%
3.2	Water Quality Targets Refinement	\$15,000	\$15,000	\$30,000	50%
3.0	Staff Support	\$40,500	\$40,500	\$81,000	50%
Totals		\$110,000	\$110,000	\$220,000	

**Table 19: FY 07/08 Funding Sources**

#	Task	Federal	FDEP	SWFWMD	SFWMD	Manatee	WMD Carry-over	Local/ Grants Carry-over	Local/ Grants	Total
1	Management & Admin.	\$221,610							\$21,340	\$242,950
2	Outreach	\$196,390			\$61,755			\$116,456	\$111,705	\$486,306
3	Research	\$0	\$39,993	\$110,000	\$20,000		\$136,687	\$82,580	\$309,563	\$698,824
4	Restoration	\$0	\$35,007						\$92,043	\$127,050
5	Advocacy & Leg Action					\$5,000			\$44,500	\$49,500
<b>Total</b>		<b>\$418,000</b>	<b>\$75,000</b>	<b>\$110,000</b>	<b>\$81,755</b>	<b>\$5,000</b>	<b>\$136,687</b>	<b>\$199,036</b>	<b>\$579,151</b>	<b>\$1,604,630</b>

**Table 20: Draft FY 08/09 Workplan Budget**

Task #	Task	Personnel	Fringe	Travel	Supplies	Other	Indirect	Total
1	Management Conference & Admin.	\$86,000	\$42,000	\$15,000	\$9,500	\$3,450	\$73,000	\$228,950
2	Outreach	\$83,000	\$41,000	\$2,500	\$1,000	\$194,350	\$70,000	\$391,850
3	Research	\$55,000	\$27,000	\$1,000	\$50	\$270,650	\$46,000	\$399,700
4	Restoration	\$53,000	\$26,000	\$5,000	\$50	\$500	\$45,000	\$129,550
5	Advocacy & Leg Action	\$19,000	\$9,000	\$500	\$0	\$5,000	\$16,000	\$49,500
<b>Total</b>		<b>\$296,000</b>	<b>\$145,000</b>	<b>\$24,000</b>	<b>\$10,600</b>	<b>\$473,950</b>	<b>\$250,000</b>	<b>\$1,199,550</b>

**Table 21: FY 08/09 EPA Cooperative Agreement**

Task #	Task	Personnel	Fringe	Travel	Supplies	Other	Indirect	Total
1	Management Conference & Admin.	\$68,800	\$33,600	\$13,500			\$58,400	\$174,300
2	Outreach	\$66,400	\$32,800	\$2,100		\$91,000	\$56,000	\$248,300
3	Research	\$38,500	\$18,900	\$900			\$32,200	\$90,500
4	Restoration	\$31,800	\$15,600	\$4,500			\$27,000	\$78,900
5	Advocacy & Leg Action							\$0
	In-Kind					\$592,000		\$592,000
<b>Total</b>		<b>\$205,500</b>	<b>\$100,900</b>	<b>\$21,000</b>	<b>\$0</b>	<b>\$683,000</b>	<b>\$173,600</b>	<b>\$1,184,000</b>

**Table 22: FY 08/09 Proposed SWFWMD Contract**

Task	Project	SWFWMD	CHNEP	Project Total	SWFWMD %
3	Random-Sample Survey	30,000	30,000	60,000	50%
3	Research and Restoration Partners	20,000	20,000	40,000	50%
3	Research and Monitoring Priority	20,000	20,000	40,000	50%
3	Staff Support	40,000	40,000	80,000	50%
<b>Totals</b>		<b>\$110,000</b>	<b>\$110,000</b>	<b>\$220,000</b>	

**Table 23: FY 08/09 Funding Sources**

#	Task	Federal	FDEP	SWFWMD	SFWMD	Manatee	Local/ Grants	Total
1	Management & Admin.	\$174,300					\$54,650	\$228,950
2	Outreach	\$248,300		\$20,000	\$49,000		\$74,550	\$391,850
3	Research	\$90,500	\$40,000	\$90,000			\$179,200	\$399,700
4	Restoration	\$78,900	\$35,000				\$15,650	\$129,550
5	Advocacy & Leg Action					\$5,000	\$44,500	\$49,500
		<b>\$592,000</b>	<b>\$75,000</b>	<b>\$110,000</b>	<b>\$49,000</b>	<b>\$5,000</b>	<b>\$368,550</b>	<b>\$1,199,550</b>

## Table 24: Summary Public Education and Information Projects List

Table 24 represents the individual public education and information projects that will be addressed in FY 08 and FY 09, including remainders of carry-over projects.

FY	Title	Amount
2004	POG Estero Bay Field Map And Interpretive Guidebook (Fort Myers Beach)	\$333
2004	Children's Book	\$17,500
2006	POG J Colin English and the Creek Kids (J. Colin English Elem School)	\$762
2007	POG Cape Water Action (CRCA)	\$2,347
2007	POG Lakeshore Residents Guides (Lakes Education/Action Drive)	\$2,700
2007	POG Lemon Bay Watershed Storm Drain Marking Program (Sarasota County)	\$179
2007	POG Rain Barrel Workshops with Polk County Schools (Polk County Ext FYN)	\$1,395
2007	POG The Smart Way to Grow Your Yard (Manatee Friends of Ext)	\$3,000
2007	POG Upper Peace River Flora and Fauna Study (Hardee County Outdoor Classroom)	\$2,989
2007	POG When Nature is Your Neighbor (Lee County Parks & Rec 20/20)	\$1,304
2007	Strategic Communication Plan	\$15,000
2007	Internship Contract with Sue Scott	\$6,450
2007	Charlotte Harbor Nature Festival	\$3,525
2007	Public Workshop: Estero Bay	\$3,000
2007	Sustainable Communities	\$3,472
2007	CCMP Update Printing	\$12,000
2007	Environmental Places Map	\$20,000
2007	Publication Brochure	\$2,500
2007	Reprint <i>Story of the Greater Charlotte Harbor Watershed</i>	\$18,000
2008	Public Outreach Grants	\$30,000
2008	Micro-Grants	\$12,800
2008	Programs that support FY&N	\$14,700
2008	Guides, workshops, etc. to target audiences	\$23,500
2008	National Estuaries Days	\$1,500
2008	Charlotte Harbor Nature Festival	\$14,000
2008	Public Information & Education Professional Development	\$1,800
2008	Public Workshop: Everglades Coalition support	\$3,000
2008	Quarterly Newsletter	\$26,000
2008	Collateral, Displays, Reprintings, etc	\$5,000
2008	Citizens BMP/New Residents' Guide	\$14,000
2008	State of the Estuaries and Watersheds	\$18,000
2008	2008 Calendar	\$20,000
2009	Public Outreach Grants	\$30,000
2009	Micro-Grants	\$12,800
2009	Programs that support FY&N	\$14,700
2009	Guides, workshops, etc. to target audiences	\$23,500
2009	Internship Contract with Sue Scott--continued	\$5,000
2009	Strategic Communication Plan Implementation	\$25,000
2009	National Estuaries Days	\$1,500
2009	Charlotte Harbor Nature Festival	\$14,000
2009	Public Information & Education Professional Development	\$1,800
2009	Sustainable Communities Conference	\$7,000
2009	Public Workshop	\$3,000
2009	Quarterly Newsletter	\$26,000
2009	Collateral, Displays, Reprintings, etc	\$5,000
2009	2009 Calendar	\$23,000
Total	Note: \$600 is budgeted for the website in both 2008 and 2009	\$494,256

**Table 25:  
Summary Technical Projects List**

Table 25 represents the individual technical projects that will be addressed in FY 08 and FY 09, including remainders of carry-over projects.

Fiscal Year	Project Title	Amount
2005	Biosolid Land Spreading--CHEC	\$10,126
2005	Vallisneria Restoration in CR--Mote	\$3,929
2006	Continuation of CHEVWQMN	\$33,000
2006	Hydrologic Subbasin Boundary Map--Gurr Consulting	\$37,750
2006	Historic Coastal Benthic Habitat--Photo Science	\$9,400
2006	Identities and effects of ecoestrogens in Caloosahatchee--Mote	\$5,143
2006	Identification of microbes critical to enhancement of seagrass--SCCF	\$9,545
2006	ArcIMS website--SWFRPC	\$45,495
2007	Fate and Transport of Caloosahatchee ETM Sediment--FGCU	\$15,296
2007	Evaluating pharmaceutical to Caloosahatchee wildlife: bull shark--Mote	\$12,861
2007	Do coastal land alterations impact estuarine food webs?-- Mote	\$19,220
2007	Tidal Charlotte Harbor Shoreline Condition Map--Photo Science	\$24,880
2007	Predevelopment Vegetation Map--HDR	\$40,000
2007	Mangrove Restoration project FAF 7057	\$30,720
2007	San Carlos Park Florida Friendly Landscaping CZ814	\$13,759
2008	Continuation of CHEC WQ Website	\$21,000
2008	2008 Watershed Summit	\$24,000
2008	Random-Sample Survey	\$30,000
2008	Research and Restoration Partners	\$70,000
2008	Predevelopment Vegetation Map--HDR	\$55,000
2008	Water Quality Targets Refinement--contractor	\$30,000
2008	Coastal Charlotte Harbor Monitoring Network Equipment Support	\$5,000
2009	2008 Watershed Summit Publication	\$15,000
2009	Research and Restoration Partners	\$60,000
2008	Random-Sample Survey (Continued)	\$70,000
2009	Research or Monitoring priority	\$80,000
2009	Continuation of CHEC WQ Website	\$21,000
2009	Reservoir Workshop (?)	\$24,000
Total		\$816,124

**Table 25: FY 07/08 Budget Targets by SWFRPC Codes**

Task #	Sub-Task	EPA	Fringe	Indirect	Travel	Supplies	Supplies	Supplies	Other	Other	Other	Other	Other	Other	Other	Other	Total	
		Translatio n Personnel					Computer /Graphic	Postage	Consulting	Carry-over Contracts	Advertis ing	Printing/Rep roduction	Carry-over Printing	Meetings	Carry-over Meetings	Professio nal Dev		Other Misc
1	Mgmt. Conference	\$92,000	\$45,000	\$78,000	\$15,000	\$1,500	\$6,000	\$2,000			\$200		\$1,000		\$250	\$2,000	\$242,950	
2	Outreach	\$77,000	\$38,000	\$65,000	\$2,500			\$1,000	\$81,600	\$36,459	\$200	\$83,000	\$70,000	\$20,300	\$9,997	\$250	\$1,000	\$486,306
3	Research	\$54,000	\$27,000	\$46,000	\$1,000			\$50	\$235,000	\$311,124	\$150		\$24,000			\$500	\$698,824	
4	Restoration	\$53,000	\$26,000	\$45,000	\$2,500			\$50								\$500	\$127,050	
5	Legislation	\$19,000	\$9,000	\$16,000	\$500											\$5,000	\$49,500	
	<b>Total</b>	<b>\$295,000</b>	<b>\$145,000</b>	<b>\$250,000</b>	<b>\$21,500</b>	<b>\$1,500</b>	<b>\$6,000</b>	<b>\$3,100</b>	<b>\$316,600</b>	<b>\$347,583</b>	<b>\$550</b>	<b>\$83,000</b>	<b>\$70,000</b>	<b>\$45,300</b>	<b>\$9,997</b>	<b>\$500</b>	<b>\$9,000</b>	<b>\$1,604,630</b>

**Table 26: FY 08/09 Budget Targets by SWFRPC Codes**

Sub-Task #	Sub-Task	Personnel	Fringe	Indirect	Travel	Supplies	Computer/Graphic	Postage	Consulting	Advertising	Printing/Reproduction	Meetings	Professional Dev	Other Misc	Total
1	Mgmt. Conference	\$86,000	\$42,000	\$73,000	\$15,000	\$1,500	\$6,000	\$2,000		\$200		\$1,000	\$250	\$2,000	\$228,950
2	Outreach	\$83,000	\$41,000	\$70,000	\$2,500			\$1,000	\$111,600	\$200	\$54,000	\$27,300	\$250	\$1,000	\$391,850
3	Research	\$55,000	\$27,000	\$46,000	\$1,000			\$50	\$246,000	\$150		\$24,000		\$500	\$399,700
4	Restoration	\$53,000	\$26,000	\$45,000	\$5,000	\$0		\$50						\$500	\$129,550
5	Legislation	\$19,000	\$9,000	\$16,000	\$500									\$5,000	\$49,500
	<b>Total</b>	<b>\$296,000</b>	<b>\$145,000</b>	<b>\$250,000</b>	<b>\$24,000</b>	<b>\$1,500</b>	<b>\$6,000</b>	<b>\$3,100</b>	<b>\$357,600</b>	<b>\$550</b>	<b>\$54,000</b>	<b>\$52,300</b>	<b>\$500</b>	<b>\$9,000</b>	<b>\$1,199,550</b>