

# *Implementation Streamline Review*

## *Delaware Estuary Program*



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**DELAWARE**

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**ESTUARY PROGRAM**

Prepared by the Delaware Estuary Program  
January 2002

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This Implementation Streamline Review of the Delaware Estuary Program was completed through a combined effort of the following committees, Implementation Teams and Staff Work Group. Special thanks goes to Martha Maxwell-Doyle who compiled the information provided into a meaningful document.

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## **PURPOSE**

In Fiscal Year 1994, EPA identified its intent to provide up to four years of base post-CCMP support to NEPs with approved CCMPs. This funding was to be contingent upon evidence of adequate implementation progress, i.e., upon evidence that funding was contributing effectively to environmentally-sound management and conservation of the estuary. The funding was also contingent on sufficient annual funding levels. By FY 2001, the Agency had continued providing to Tier I, II, and III NEPs post-CCMP funding support beyond the first four years as well as providing all NEPs considerable technical assistance and other programmatic support.

The primary purpose of the implementation review (formerly known as the biennial review) has been to assist EPA in making funding decisions for those NEPs that are in the post-CCMP, or implementation, phase, and to evaluate implementation progress. The implementation review process also provides an opportunity for NEPs to (1) highlight their successes and strengths, (2) identify and address areas for improvement, and (3) demonstrate that stakeholder commitments, as well as community support and momentum, are being maintained and increased. In addition, the process provides an opportunity to specifically evaluate EPA's progress in carrying out its CCMP commitments and to identify ways that EPA can better assist the NEPs individually and collectively.

In 2000, a taskforce composed of EPA and NEP representatives recommended some major changes to the biennial review process. Pertinent to the Delaware Estuary Program, a Tier II program, all Tier I - IV NEPs, which have undergone one or more full reviews, now will undergo a streamlined review every three years. Additionally, there will be a more collaborative approach to the review process through increased interaction between the review teams and the NEPs, and to the extent possible, by holding on-site reviews.

## INTRODUCTION

The Delaware Estuary Program (DELEP) is in its sixth year of implementation. Through the collective efforts and coordinated authorities of its participants, DELEP continues to strive for success in its role to implement the Comprehensive Conservation and Management Plan for the Delaware Estuary (CCMP). DELEP's role is to act as a provider of information, facilitator, a leader in providing a regional watershed focus, and a provider of incentives throughout the Delaware Estuary Region to encourage actions toward the implementation of the CCMP.

### **A Brief History of Delaware Estuary Program and CCMP**

The Delaware Estuary is located in the Mid-Atlantic region of the United States, and includes the portions of Pennsylvania, New Jersey and Delaware, through which the Delaware River flows. It stretches approximately 133 miles, from the falls of the Delaware River at Trenton, New Jersey and Morrisville, Pennsylvania, south to the mouth of the Delaware Bay between Cape May, New Jersey and Cape Henlopen, Delaware.

The Delaware Estuary Program (DELEP) is a partnership of governmental agencies, non-profit organizations, the private sector, and citizens, working together to restore and protect the Delaware Estuary. It was established in 1988 to develop a Comprehensive Conservation and Management Plan (CCMP) in order to protect and enhance the natural resources of the Delaware Estuary. Delaware Estuary Program agency partners include: Delaware Department of Natural Resources and Environmental Control, Delaware River Basin Commission, New Jersey Department of Environmental Protection, Partnership for the Delaware Estuary, Inc., Pennsylvania Department of Environmental Protection, Philadelphia Water Department, U.S. Fish and Wildlife Service, U.S. and Environmental Protection Agency, Regions II and III. In addition, DELEP's various Implementation Teams and Advisory Committees contains a cross section from both the public and private sectors.

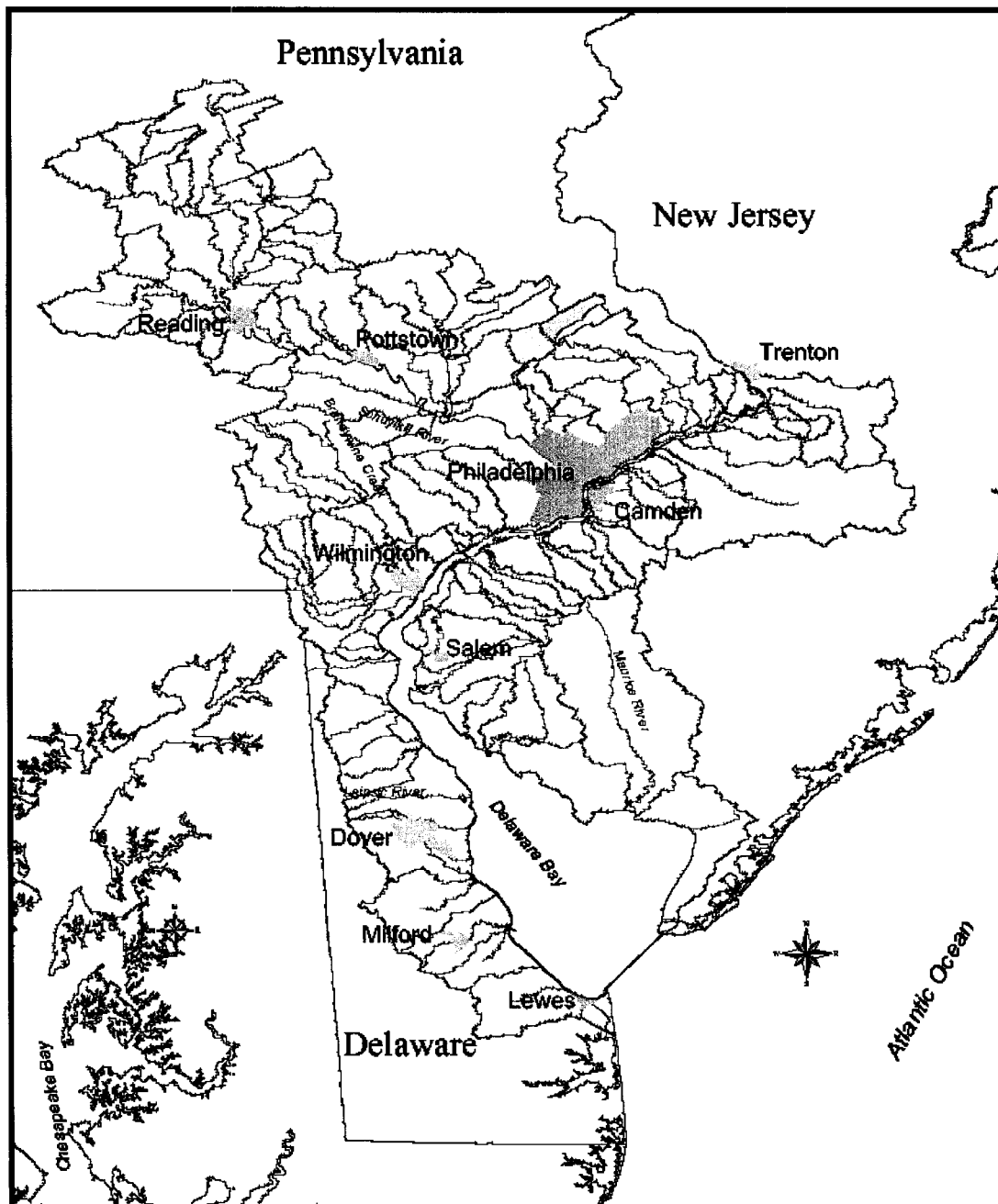
The CCMP entitled *The Delaware Estuary - Discover Its Secrets -- A Management Plan for the Delaware Estuary* was completed in 1996. The CCMP was developed through the participation of hundreds of stakeholders and thousands of hours of active input to develop goals for the Delaware Estuary Region. The CCMP focuses on watershed management in the broadest sense. It reflects the dedication of the agencies and residents to incorporate protection of the Delaware Estuary into actions at all levels, from the education of our children to the actions of federal, state, and local governments and business and industry.

During the development of DELEP's CCMP, five goals were established:

- Provide for the restoration of living resources of the Delaware Estuary and protect their habitats and ecological relationships for future generations; Reduce and control point and nonpoint sources of pollution, particularly toxic pollution and nutrient enrichment, to attain the water quality conditions necessary to support abundant and diverse living resources in the Delaware Estuary;
- Manage water allocations within the Delaware Estuary to protect public water supplies and maintain ecological conditions in the Delaware Estuary for living resources;
- Manage economic growth of the Delaware Estuary in accordance with the goal of restoring and protecting the living resources of the Delaware Estuary; and;
- Promote greater public understanding of the Delaware Estuary and greater participation in decisions and programs affecting the Delaware Estuary.

These goals continue to be achieved through many activities completed both through the implementation of the CCMP and through the coordination of ongoing efforts. Both types of action must be considered to fully achieve the vision set forth in the CCMP.

## Delaware Estuary Watersheds





## I CCMP IMPLEMENTATION

Over the last three years, DELEP has continued to evolve and refine itself as a program. DELEP is notable among the NEPs for many reasons. Due to its wide scope, DELEP is one of the most geographically and politically complex National Estuary Programs in the nation. Coordination and implementation activities must occur among three states, two EPA regions, twenty-two counties, hundreds of municipalities, and a multitude of non-governmental stakeholder groups. This is further complicated by the fact that at the State level, regulations protecting the environment vary. Despite these challenges, DELEP continues to make progress towards helping to bring the various participating entities together to reach a common goal of Estuary restoration and protection. The current watershed planning and management process that each of the three states have been engaged in will further help to accomplish the Action Items set forth in the CCMP.

DELEP provides a critical mechanism that facilitates partnerships that cross jurisdictional boundaries. These partnerships might not occur without the Estuary Program. This critical role continues to illustrate how the final outcome will be far greater than the sum of the parts. Primary examples of such partnerships fostered by DELEP include but are not limited to: The PCB Initiative; The formation of the Fish Consumption Advisory Implementation Team; and the development of the Pea Patch Island Special Area Management Plan (SAMP). These will be discussed in more detail later in this report.

The Program also continues to address those areas outlined in the November 20, 1997 and December 30, 1999 Biennial Review response letters. Areas highlighted included: **Enhanced Program/Infrastructure Coordination; Monitoring; Public Outreach and Involvement; Prioritization of Action Items; Tracking Implementation Progress; and Funding.** The following sections of this document will address these areas, the steps taken to meet those challenges, and new implementation activities accomplished to date.

### **Enhanced Program/Infrastructure Coordination**

#### Creation of a Program Office at the Delaware River Basin Commission:

The 1999 DELEP Biennial Review letter recommended that:

"The Program should also re-evaluate the need for a lead state now that a Program Coordinator has been hired. The annual transition between lead agencies seems to cause a momentum loss, and transferring that responsibility to the Coordinator would help the program maintain its momentum."  
(1999 Biennial Review Letter)

In response, the Delaware Estuary Program went through a seven-month review process to evaluate the potential advantage of creating a Program Office. On February 2, 2001, after careful consideration and discussion, the Steering Committee agreed that a Program Office would be created on or before July 1, 2001. The Steering Committee further agreed that the office would be housed at the Delaware River Basin Commission (DRBC) in West Trenton, New Jersey.

DRBC made a major commitment to support DELEP and to help facilitate the implementation of the CCMP. This commitment included the dedication of funds, facilities and DRBC staff support to assist DELEP and the Program Office. As outlined in DELEP's Roles and Responsibilities Memorandum of Agreement (Attachment #1), the role of DRBC includes, but is not limited to:

1. Serve to facilitate cooperation among its members and foster consensus as to the identification and development of state and federal decisions related to the Estuary.
2. Manage and support the Delaware Estuary Program Office, the Office of Monitoring and Mapping, and the Regional Information Management Service.

3. Provide technical expertise and coordinate technical CCMP actions.
4. Establish and support advisory committees e.g. MAC, IMAC, TAC and share these support groups with DELEP.
5. Foster active partnerships among existing organizations to promote CCMP implementation.
6. Serve as a source for water resource information for the Basin.
7. Conduct an annual performance evaluation of the Program Director with input from the Steering Committee and the EIC.

As the water resource management agency for the entire Delaware River Basin, DRBC already had a number of programs in place that directly benefit the Program. DRBC's Advisory Committees were already established and working on a number of estuary related issues. Examples of some of the supported programs are: The Delaware River and Bay Water Quality Assessment (305b) report, Estuary Boat Run program, IMAC and PCB and Toxics initiatives. These programs will be discussed in greater detail later in this report.

#### Program Office Responsibilities

The Program Office, headed by a Program Director, directs and manages all aspects of DELEP on a daily basis. The Program Office reports directly to the Executive Director of the Delaware River Basin Commission (DRBC). Specific roles of the Program Office include:

1. Directs and has responsibility for overall progress on CCMP implementation within the available budgetary resources and tracks progress.
2. Develops annual and three-year priorities, budget and work plan in consultation with Implementation Teams and other identified implementing partners and recommends identified team priorities to the EIC for its consideration and recommendation to the Steering Committee.
3. Develops, in conjunction with the EIC, an annual program schedule for the EIC and Implementation Teams.
4. Prepares and submits the triennial review, the annual budget, work plan and grant application to EPA Region III with the concurrence of the EIC and approved by the Steering Committee.
5. Serves as the point of contact for the Delaware Estuary Program.
6. Composes letters and correspondence on behalf of DELEP.
7. Provides all logistical support (i.e. location, agendas, minutes) for the Steering Committee, EIC and EIC Work Group meetings.
8. Chairs the EIC Work Group.
9. Maintains an archive of all Program Documents.
10. Maintains the DELEP calendar and schedule on [delep.org](http://delep.org).
11. Identifies and pursues resources to implement the CCMP.
12. Prepares other documents requested from EPA headquarters (such as Government Performance Results Act requirements).
13. Prepares monthly program updates for EIC and Steering Committee.

*staff* [ In addition to the Program Director, a Program Assistant and a shared secretary were hired to staff the Program Office in August 2001. The Program Assistant assumed the administrative responsibilities previously performed by the Lead State. These responsibilities include: the taking of meeting minutes, compiling input for work plans, developing the annual budget, and the compilation of the implementation streamline review.

Additional organizational changes that have occurred within DELEP since the 1999 Biennial Review:

- The Delaware River Basin Commission is now included as a non-voting member on the Steering Committee.
- A representative of the Philadelphia Water Department is now an official member of the Estuary Implementation Committee (EIC).
- The Monitoring Implementation Team (MIT) was dissolved and the Monitoring Advisory Committee (MAC) was created in 2000. The MAC is advisory to both the Delaware River Basin Commission (DRBC) and DELEP. The Executive Director of DRBC appoints each member of the MAC, based upon recommendations of the DRBC Commissioners and members of DELEP's Steering Committee. The MAC includes representation from the following participants: Delaware; New Jersey; New York; Pennsylvania; US Environmental Protection Agency (EPA); USGS; US Army Corps of Engineers (ACOE); National Oceanic and Atmospheric Administration (NOAA); National Park Service; Academia; Agriculture (NRCS) / Forest Service; Delaware River Basin Fish & Wildlife Cooperative; Volunteer Monitoring; Regulated Community; and the Land Use Planning Community.
- The Regional Information Management Service Implementation Team (RIMSIT) was dissolved and the Information Management Advisory Committee (IMAC) was created. As with the MAC, it was felt that an advisory committee with official appointees would garner more support and participation from the partners and operate more effectively. The IMAC includes one member from each of the four Delaware River Basin states (DE, NJ, NY, PA), and one member from each of the following: ACOE; EPA; DELEP RIMS; and Academia.
- The IMAC expanded the DELEP RIMSIT to include New York State. One major project being implemented is to develop a unified system of basin-wide watershed information that is envisioned by the CCMP and the Flowing Towards the Future report.
- The Habitat and Living Resources Implementation Team (HLRIT) experienced a change in leadership during the past three years due mostly to personnel changes within participating agencies. Recently, Mr. Jed Brown, USFWS - Delaware River Fisheries Coordinator agreed to fill the chairperson's position. During the most recent transition period between chairpersons, an Ad Hoc group was formed. Led by the DELEP Program Director, the group has been working with a consultant to develop a habitat prioritization and restoration plan for the entire Delaware Estuary.

**Note:** For additional details, see FY 99, 00, 01 work plans (Attachment #2) that have been included for review.

### **DELEP Implementation Activities**

DELEP and its various partners have continued to put into action a multitude of activities that further the implementation of the CCMP. As of September 30, 2001, **110 habitat related projects have been initiated and 91,736 acres restored within the Delaware Estuary.** (See attached DELEP GPRA data for complete list of projects. Attachment #3) The following section outlines the various activities which have been undertaken over the last three years.

## Flowing Towards The Future

CCMP Action Items: L1-L5, L10, L13-15, L17, W1, W5, W7, W11, W13, H1, H4, H6, E2-5, E9-11, E14-16, E23

In 1999, subsequent to the Biennial Review, DELEP in cooperation with DRBC, the State of New Jersey, the Heritage Conservancy, and numerous federal, state, public and private partners embarked on a multi-phase, multi-partner project entitled, *Flowing Towards the Future (FttF)*.

FttF was designed to be a visioning and direction-setting process for the entire 13,539 square mile Delaware River Basin. The project consisted of 1) watershed workshops; 2) a watershed-wide conference and 3) a Governor's Summit. Through a series of facilitated discussions, representatives from the various participating agencies and organizations formed a Coordinating Committee for the purpose of conducting a series of basin-wide workshops in preparation for a Governors' Summit (Governors of NJ, PA, DE, and NY) and conference. The State of New Jersey, (as the lead state for DELEP) and the Heritage Conservancy were co-chairs of this committee. See Final FY 2001 Work Plan for further information on each event - Attachment #4)

Among the products of *Flowing Towards the Future* were the report, A 21st Century Vision and Directions for the Delaware River and its Watersheds, and a matrix listing of the 28 existing regional plans covering the Delaware River was also compiled. The process also resulted in a mandate from the Basin governors and three federal agencies for the Delaware River Basin Commission to develop a Basin-wide Regional Information Management Service and a new Basin-wide comprehensive water resources plan. To assist in the development of the comprehensive water resources plan, the Watershed Advisory Council (WAC) was established in early 2001. The WAC, including members from a broad spectrum of stakeholder interests, held its inaugural meeting in January 2001. Over the next two-and-one-half years, the WAC will continue to work closely with the Commission's advisory committees and new ad hoc committees to study water supply, flow needs, and other issues, and to identify water management goals and a recommended course for attaining those goals.

### Environmental Indicators

CCMP Action Items: M2, M4, M6

DELEP is committed to improving and maintaining the state of the environment in the Delaware Estuary. All 77 Action Items have a measure of success and the development of indicators is a tool that allows the program to communicate this. To measure progress towards enhancing and preserving this diverse ecosystem, DELEP developed and published an initial set of nine land and water environmental indicators in 2001.

This first suite of Delaware Estuary Environmental Indicators was published as a report containing information on indicators for which data was readily available. It also examined respective trends, importance, economic, environmental and social impacts and knowledge gaps. This report was produced through the cooperative effort of several federal, state, local and non-profit agencies. The purpose of this report was to inform the public and environmental managers about the health of the Estuary. The report was circulated throughout the Estuary as a stand alone document and reprinted and circulated in the Fall 2001 issue of the Estuary News - Newsletter. The report was also distributed nationwide through the other national estuary programs. See the attached "Delaware Estuary - Environmental Indicators" for complete details - Attachment #5

Since the publication of the initial suite, DELEP has begun the task of developing measurable goals. The establishment of these measurable goals will act as a management tool through which many other organizations within the Estuary can set standards. The goals will also lead to updated and/or new indicators to assess the environmental health of the Estuary. As part of the overall development process, DELEP held an Estuary Indicators' Workshop on January 22<sup>nd</sup> and 23<sup>rd</sup>, 2002. The Indicators' Workshop was be an opportunity to determine additional monitoring needs.

The IMAC, HLRIT, MAC, and PPIT are all assisting the Program Office in development of the indicators as well as providing necessary data.

### State of the Estuary Report

**CCMP Action Items: M6, E9, E15**

The DELEP Program Office, in conjunction with the Partnership for the Delaware Estuary and other partners, has begun laying the framework for a State of the Estuary Report. The purpose of this report is to educate the general public on issues affecting the Estuary, provide tools to facilitate involvement and ongoing improvement, and to direct natural resource managers towards the needs of the Estuary. The Report will incorporate DELEP's Environmental Indicators. The Report is scheduled to be published in the Fall of 2002. (pending funding availability)

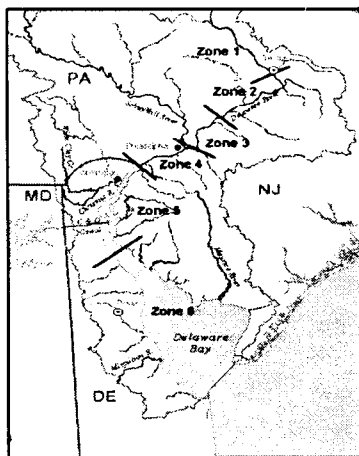
### The PCB Effort

**CCMP Action Items: T1, T3, T4, T5**

*DRBC lead this for*  
The PCB effort was undertaken to support DELEP's goal to achieve water quality standards and to eliminate fish consumption advisories in the Delaware Estuary. The DRBC has taken the lead on development of PCB TMDLs on behalf of the Estuary states. The effort is a multi-year, multi-phased project that involves; monitoring, inventories, mapping, modeling, a plan for reducing loadings, and ultimately, a TMDL. Public workshops will initiate a stakeholder process including an issues assessment and create a TMDL Implementation Advisory Committee. DELEP's role is to aid DRBC in the timely completion of the TMDL, to participate on the DELEP TMDL Advisory Committee and to facilitate implementation of reductions in PCB pollution through public education.

In 1996, DRBC embarked on a study of the PCB situation in the Estuary. This study, carried out by the Toxics Advisory Committee (TAC), focused on two classes of potential sources of PCBs to the Delaware Estuary; wastewater treatment plants and tributaries. The results indicate that wastewater treatment plants (WTP) and tributaries discharging to the tidal Delaware River are active and significant sources of PCBs to the system. The study demonstrates that the current fish contamination problem cannot be attributed solely or predominately to historic sediment contamination already in the Delaware Estuary. The final report entitled A Study of the Loadings of Polychlorinated Biphenyls from Tributaries and Point Sources Discharging to the Tidal Delaware River was released in June 1998.

The study indicated the need for additional steps to mitigate the impact of PCBs on aquatic life and human health. A follow-up study of one of the major waste water treatment plants contributing PCB loads was initiated by DRBC. (See PCB Track Down Study listed below.)



### The PCB Strategy

In order to address the issue of PCBs in the Estuary, the TAC drafted a PCB Strategy. The goal of this strategy is to ensure that the DRBC water quality standards for Total PCBs for Zones 2, 3, 4 and 5 of the tidal Delaware River (Delaware Estuary) are achieved. Achieving these standards will ensure that the health of humans and living resources using the Estuary are protected and eliminate the necessity for advisories limiting consumption of fish and shellfish caught in the Estuary. This strategy includes six major elements designed to establish Total Maximum Daily Loads (TMDLs) for Total PCBs by

September 30, 2003. Several of the DELEP partners are providing resources to assist in this effort.

### PCB Source Track Down Study

Members of DELEP's Steering Committee provided seed funding to begin a pilot program to work with Publicly Owned Treatment Works (POTWs) to track down the sources of PCBs entering their systems. The study will identify potential/actual sources of PCBs entering the sewer system and

begin to implement load reduction measures using a variety of approaches including education/outreach, pollution prevention and regulation. The results and techniques developed in this pilot study will be shared with the other major POTWs to assist in their load reduction activities. The cities of Camden, Philadelphia and Wilmington have agreed to develop preliminary work plans outlining how they will conduct the track downs in their systems.

#### **Expert Panel Formed**

The expert panel was formed in 2001 as a first step toward formulation and development of a PCB model for the Delaware Estuary. The six individuals who comprise the panel are national/international experts on various aspects of PCB modeling including sediment and atmospheric deposition. The panel has met several times to design the model.

The PCB model will be used to establish the maximum acceptable loading of PCBs to the various segments of the Estuary and allocate this loading to point and non-point sources. It will also be used to assess a range of PCB control alternatives in order to evaluate their effectiveness in achieving water quality standards that protect human health and aquatic life, and eliminate the Fish Consumption Advisories.

#### **Air Deposition Research**

The Toxics Advisory Committee (TAC) is currently investigating various sources of PCBs to the Estuary. Steven Eisenreich of Rutgers University made a presentation on air deposition of PCBs at the December 2000 TAC meeting. Dr. Eisenreich has made several conclusions based on his data, including that the majority of the PCBs in the atmosphere are coming from local sources. NJDEP and EPA have provided funding for this sampling program.

#### **PCB Workshops**

Three public workshops were held to explore the sources, risks, unknowns, and potential actions to address PCBs in the Delaware Estuary. A panel of experts addressed the risks to human health, the impacts on fish and wildlife, the regulatory steps, and the strategies being used to reduce PCBs in the environment. The workshops were designed to educate the public about the toxic nature of PCBs and what is being done to reduce and eliminate their impact. The workshops were offered in all three states in the Estuary. Total attendance from the workshops was approximately 200 people.

#### **Fish Consumption Advisory Implementation Team**

#### **CCMP Action Items: T6**

There are several fish advisories in place in the Delaware Estuary. However, the States use different procedures for the detection and evaluation of fish tissue. The States independently issue fish advisories. The result has been inconsistent advice to the public. Fish consumption advisories were selected as a priority issue for the purpose of establishing uniform or compatible fish collection and analysis procedures, and compatible fish assessment and reporting for the Estuary.

The DRBC has agreed to facilitate the establishment of the Fish Consumption Advisory Implementation Team (FCAIT). The Team was put into place in December 2000. DRBC and the Delaware Department of Natural Resources and Environmental Control are completing a summarization of existing procedures for establishing fish consumption advisories for the states of Delaware, New Jersey and Pennsylvania. The FCAIT is planning on convening in early 2002 to begin laying out the framework for uniform/compatible collection and analysis methods.

#### **Horseshoe Crabs**

#### **CCMP Action Items: H1, H5**

The Horseshoe Crab is an important species to the Delaware Estuary, as well as up and down the entire East Coast of the United States, due to the multiple roles it plays within the estuarine system. Delaware Bay hosts the largest concentration/population of horseshoe crabs in the world. The spawning of horseshoe crabs is an event of national significance. Related to this, the Delaware Bay

La Barge

supports up to 80% of the Western Hemisphere's shorebird population. From a hemispheric and ecosystem perspective the horseshoe crab spawning, and related shorebird migration are unique and dramatically important events. In addition, horseshoe crabs are important as bait for fisheries, as an eco-tourism draw, and their blood is extracted for biomedical purposes. Historically, horseshoe crabs were harvested for fertilizer and livestock feed. This practice ended in the 1960s. Horseshoe crabs are currently being harvested for use as bait for conch and eel pot fisheries. Landings for this purpose have significantly increased, according to the National Marine Fisheries Service, between 1990 and 1996. Another use of horseshoe crabs is for biomedical research and use. Blood is drawn from the crabs, and a clotting agent in the blood is used to detect human pathogens in medical equipment. (Atlantic States Marine Fisheries Commission Stock Assessment Report 98-01, 1999)

DELEP's Habitat and Living Resources Implementation Team, in cooperation with the USFWS, USGS, and the States of Delaware and New Jersey, is currently developing a horseshoe crab indicator to measure the status and trend in the population. So far, US Fish and Wildlife Service has agreed to fund a volunteer coordinator to count crabs. This long term monitoring data will provide critical information to help manage the resource and measure results.

#### **Habitat Restoration and Prioritization**

**CCMP Action Items: H1, H3-5, H10, E6, M5**

Habitat loss and fragmentation, whether it is in the form of upland, wetland or marine impacts, has been an ongoing problem throughout the Northeastern United States, dating back through colonial times. Habitat restoration, preservation and enhancement have long been, and continue to be, a primary goal of Delaware, New Jersey and Pennsylvania (the 3 member States of the Delaware Estuary Program). The Habitat and Living Resources Implementation Team (HLRIT) of the Delaware Estuary Program (DELEP) was formed to strengthen and coordinate management, protection and restoration of natural habitats within the Estuary through federal, state, local and private coordinated holistic efforts.

The Program identified the need for a planned approach to habitat restoration activities in the Estuary. To address this, the State of Delaware applied for and received funding from EPA. In 2001, the DELEP Wetlands Prioritization and Improvements Project began. An outside contractor was hired to develop the following deliverables:

- A prioritization of wetlands and other habitats;
- A database matching projects, funds and funding sources for wetlands; and
- A process by which to monitor losses and gains to critical wetlands habitat.

Once this phase has been completed, an Estuary Habitat Restoration Plan will be developed. The Plan will provide a detailed plan and guidance in furthering DELEP's HLRIT activities.

#### **Habitat Restoration Projects**

Habitat restoration, protection and enhancement are of extreme importance within the Delaware Estuary. DELEP's habitat restoration activities have been grouped under three (3) specific DELEP roles; Facilitation, Coordination and Implementation.

- DELEP serves as a facilitator of estuarine restoration activities, through HLRIT and the Public Participation Implementation Team (PPIT). Currently, the Mini-grant program provides funds to existing organizations and agencies to do on-the-ground, action projects. These minigrants are the first steps in the fulfillment of the habitat restoration goals of DELEP and are managed by the Partnership for the Delaware Estuary (Partnership), the non-profit public education and outreach arm of DELEP.

- DELEP serves as a coordinator of estuarine restoration activities, through HLRIT and the PPIT, by creating the forum for discussion of habitat restoration projects of local and regional interest. This effort is bolstered by the Partnership via their lead role in the Corporate Environmental Stewardship Program (CESP).
- DELEP serves as an implementer of estuarine restoration activities through coordination with HLRIT, PPIT, the Partnership, other Implementation Teams and Advisory Committees within DELEP and local and regional organizations and agencies. This is accomplished via the development of specific activities and design methods aimed at accomplishing the goals and objectives of the CCMP under Habitat and Living Resources.
- DELEP serves as a bridge to the future through the continuation of the Mini-grant program, by encouraging corporate interest in habitat restoration via CESP and through a more focused approach to implementation of habitat restoration needs via increased local and regional education and outreach efforts.

#### Highlights of several DELEP Habitat Restoration Projects

##### Burrows Run Preserve -Riparian Restoration Project

In 1999, DELEP granted \$10,000 in Clean Water Action Plan funding to the Delaware Nature Society to restore a riparian woodland ecosystem and increase the natural diversity in the flood plain of the Burrows Run. The Burrows Run is a tributary of the Red Clay Creek that flows into the Christina Creek and then into the Delaware Estuary. The project occurred in Northern New Castle County, Delaware. The project is helping to restore a riparian woodland ecosystem in flood plain of the Burrows Run by planting native trees, shrubs, and herbaceous plants; reducing competition for growing space for native vegetation by controlling exotic invasive vegetation; and increasing the natural diversity of flora and fauna along flood plain and in the creek by providing high quality habitats and improving physical characteristics of the stream. This activity supports implementation of Actions H4, H5, L4, L5 and L6.

##### Corporate Environmental Stewardship Program

In the area of habitat protection, DELEP undertook an innovative project entitled the Corporate Environmental Stewardship Program (CESP). This initiative is a corporate outreach, education and demonstration project administered collaboratively by DELEP; the Partnership; the Wildlife Habitat Council, and the New Castle Conservation District, in partnership with many other organizations. Two workshops entitled, "A Wildlife Habitat and Wetland Management for Private/Corporate Property Owners", were presented to more than 100 representatives of the regions corporate and business community on January 19 and 28, 1999. An information brochure promoting the CESP and offering some how-to-get-started guidance was developed and used in the workshops, for corporate briefings, and as an outreach tool. Two additional workshops were held in Pennsylvania in February 2001 targeting Pennsylvania Corporations. Corporations that participate in CESP are eligible for demonstration grants up to \$5,000. The corporations must provide a minimum match of 25%. To date, the CESP has either implemented or made commitments to the following wetland and habitat enhancement demonstration projects:

- Tornetta Realty, Bentwood Condominium Site - Plymouth Meeting, PA
- Berkleigh Country Club - Kutztown, PA
- McNeil CHC & Whitemarsh Township - Fort Washington, PA
- Waste Management - Biles Island, PA
- Waste Management - Tulleytown, PA
- Visteon - Lansdale, PA
- Williams Transco - Frazer, PA
- International Petroleum Company - Wilmington, DE

*good idea!*



- PG&E Logan Creek Generating Station – Swedesboro, NJ
- Mannington Mills – Salem, NJ
- NJ American Water – Cinnaminson, NJ

The Partnership has also been actively working to raise additional dollars to establish CESP as an ongoing initiative. In addition to the \$95,431 Pennsylvania Growing Greener Grant the Partnership received to support CESP activities in the Estuary region of the Commonwealth over the next two years, a total of \$50,000 was raised from NJ DEP and EPA Region II for CESP work in New Jersey. Three workshops will be held early next year to identify additional corporations in New Jersey that are interested in participating in CESP. This activity supports implementation of Actions Items: H4 and H5.

#### Cooper River Fishway Restoration Project

The Cooper River in New Jersey has historically been an important spawning and rearing habitat for migrating and residential fish population. EPA NEP funds along with additional leverage funding to restore both the Wallworth Lake and Evans Pond Fishways. This benefited the migratory fish species of alewife, blueback herring, and american eel, as well as other residential fish. The two fishways now provide access to approximately four miles of river for these fish species. The project has been selected for an award from Coastal America. The partners on the project included NOAA-NMFS, USFWS, EPA (Regions II and III), NJDEP, Camden County Department of Parks, Delaware Riverkeeper, Public Service Electric and Gas, and Fish America Foundation.

#### **Watersheds**

Watersheds are recognized as the fundamental unit for environmental management and protection. DELEP recognized the need to address and solve problems on a watershed basis, working collaboratively with all of the partners in the basin. To that end, DELEP created a Watershed Implementation Team (WIT) in January of 2000.

The WIT was created in order to increase outreach to local watershed organizations and to provide them with the tools and resources they need to effectively implement elements of the CCMP at the local level. The team decided to meet quarterly and consisted of representatives from: 3 State Watershed Programs; Estuary Program Director; DRBC Watershed Planner; Partnership for the Delaware Estuary Inc.; and the EPA Watershed Planner.

The WIT met a few times to determine the best activities for the group to undertake. It was determined that there are many existing organizations that were already doing good work in the area of watersheds. The WIT decided that the main value DELEP could add in this arena was to hold workshops on various topics (such as beneficial landscaping, etc.) Given this limited scope it was proposed that the PPIT or the HLRIT would take on the responsibility of putting on these workshops. At their December 17, 2001 meeting, Steering Committee approved the dissolution of the WIT and the subsequent transfer of responsibilities for the workshops to the PPIT.

#### **Technology Seminars**

**CCMP Action Items: L5, L12, E2**

Since education and outreach is a key component to addressing many of the issues that are facing the Estuary, technology seminars are imperative to the success of the program. One such proposed seminar involves educating the public on ways to control non-point source pollution. NJDEP is taking the lead on planning and holding this seminar. The seminar will focus on the impact of fecal coliform from geese populations on water bodies.

### **Prioritizing Implementation Activities**

In November 1998, during a DELEP Coordinating Conference, the Implementation Team Leaders identified the priority project areas for their teams. This was done in order to identify areas for interaction, and to ensure that all Implementation Teams activities were complementary and moving in the same direction. The identification of priority projects facilitated the development of a five-year Strategic Implementation Plan (SIP). The SIP has provided DELEP with a more focused approach to implementing the CCMP.

Utilizing the SIP, a 3-Year Plan and Budget Projection was also developed. The purpose of the 3-Year Plan was twofold; first, to integrate, where feasible, the priorities into the annual budget and work plan and, second, to facilitate advance planning efforts which help DELEP garner future and longer-term funding for its activities. The Ftf process mentioned previously was also incorporated into the development of this planning process for DELEP.

3 year  
strategic  
plan  
#6

The 3-Year Plan depicted key areas and priority actions/activities, which the program should pursue. These included Infrastructure Coordination, Education/Outreach, PCB's, Horseshoe Crabs, Habitat Restoration, Fish Consumption Advisories, Watersheds, and Environmental Indicators. For additional details see the 3-Yr Plan which has been included for review - Attachment #6.

### **Major Stakeholders Contributions in Implementation:**

The contributions of DELEP's numerous stakeholders and their programs has had an enormous impact on the implementation of the CCMP. While some of these programs are directly geared towards the Program, a number of the contributions indirectly benefit the Estuary. The watershed planning process is an example of a major initiative being pursued by all 3 states that will have a significant impact of the ultimate health of the Estuary. The following section has been prepared with the assistance and contribution of those major stakeholders. This section provides an overview of the kinds of initiatives being pursued that directly and indirectly benefit the Delaware Estuary.

### **The Partnership for the Delaware Estuary, Inc.**

The Partnership continues to both promote the Delaware Estuary as a regional resource through public outreach and education and to identify external sources of funding to implement CCMP Action Items. Over the past three years, the Partnership has experienced several transitions including, the naming of a new Executive Director, hiring of a Development and Communications Director, and a change in the Chair of the Board of Directors. Through its new leadership, fundraising activities and outreach and coordination with watershed organizations in the Delaware Estuary region have increased significantly. The Partnership activity highlights include:

#### **New Jersey Minigrant Programs**

**CCMP Action Items: L4, H5, E10-13, E18, E19**

Three minigrant programs, funded by EPA Region II, are underway in New Jersey: Maurice-Cohansey, Lower Tributaries and Rancocas Creek. A fourth minigrant program for Crosswicks Creek was just announced through a RFP that was sent to over 500 organizations in this watershed.

Through these programs, a total of \$100,300 will be distributed to organizations working in these three watersheds. (See appendix #1 for minigrants awarded.)

#### **Corporate Environmental Stewardship Program**

**CCMP Action Items: H5, L12, L14**

As previously discussed, the Partnership has been working with partners across the region to promote habitat enhancement on corporate properties since 1998. In October 2001, the Partnership hired a full-time staff person to coordinate all of their habitat enhancement initiatives. Since that time, the CESP has been successful in identifying many new corporate partners across the region.

Wilmington Montessori National Fish & Wildlife Foundation 5 Star Grant **CCMP Action Item: H5**  
Working in partnership with the Wilmington Montessori School, New Castle Conservation District, DNREC, and DuPont, the Partnership for the Delaware Estuary is coordinating a streambank restoration project on Perkins Run. The project has been designed to involve the school community in the actual restoration activities and will include classroom learning extensions. The total budget for the project is over \$50,000.

Sense of Place Program

**CCMP Action Items: H5, E1, E3**

Based on the Sense of Place minigrant project funded to the Natural Lands Trust by EPA Region II, the Partnership received a Pennsylvania Coastal Zone Management (CZM) grant to work with schools and other institutions to develop habitat awareness and enhancement projects on their properties. Working closely with the U.S. Fish and Wildlife Service and several other partners, three workshops were held last spring to get people thinking about how they can better manage their land. We are now in the process of designing and installing five planting demonstration projects at the following locations:

- Silver Lake Nature Center – Bristol, PA
- Archbishop Ryan High School – Philadelphia, PA
- Baldi Middle School – Philadelphia, PA
- Horatio B. Hackett Elementary School – Philadelphia, PA
- Hills of Bethel Civic Assoc. – Boothwyn, PA

Wilmington Storm Drain Stenciling Initiative

**CCMP Action Item: E18** ✓

This project, funded by Delaware's Department of Natural Resources and Environmental Control, took place in April 2001. Two hundred volunteers marked 1,000 storm drains in and around the City of Wilmington. A kick-off event was held in the City's Rodney Square. Mayor Baker and DNREC Secretary Nicholas DiPasquale joined students in marking the first storm drains in the First State. The kick-off received both television and print coverage.

Philadelphia Storm Drain Stenciling/Drawing Contest Initiative

**CCMP Action Item: E18**

In the Spring of 2000 and 2001, the Partnership coordinated storm drain stenciling programs in Philadelphia. This activity was funded by the PADEP's Growing Greener Initiative and by the Philadelphia Water Department (PWD). Two thousand volunteers marked over 10,000 storm drains across the City with the "YO, NO DUMPING DRAINS TO RIVER" message. Kick-off events were held in 2000 at Arch Bishop Ryan High School and in 2001 at the Center in the Park and featured the PWD Commissioner, local elected official, and Captain Sewer, PWD's mascot. Both years, the kick-off events received both TV and print coverage. In addition to the stenciling activities that took place, the program included a calendar drawing contest in both 2000 and 2001 and in 2001 a stormwater pollution prevention advertising campaign on SEPTA's buses and subway cars.

Teachers' Institute

**CCMP Actions Items: E9, E13** ✓

The Partnership continues to host the Delaware Estuary Teachers Institute. Held each July, the week-long program is funded by a PA DEP - Growing Greener grant, PSEG, NJDEP, DNREC, and Connectiv. Space is limited to no more than 30 teachers. During the week-long program, teachers travel to places in PA, NJ, and DE where they participate in classroom and field experiences. These experiences provide the participants with a greater understanding of the wide variety of resource use issues within the Estuary and the interconnections between human actions and Estuary ecosystem. Upon completion of the Institute, participants become part of a regional network of educators, who motivate and support each other to provide Estuary education. 2002 will mark the 6<sup>th</sup> year this program has been offered by the Partnership.

#### Philadelphia Water Department

**CCMP Action Items: E1, E18, L5**

The Partnership continues working with the PWD as a facilitator and education consultant to their Water Quality Citizens' Advisory Council. Recent highlights of this partnership have included: the completion of an Estuary water education resource guide, implementation of the storm drain stenciling program described above; creation of a dog waste collection pilot project in Manayunk; and development and acquisition of funding of the Clean Water Partners - a program to promote Best Management Practices with commercial businesses that will address source water protection for the City.

#### 2000 and 2001 Delaware River Sojourn

**CCMP Action Items: E2, E3, E10**

For the past two years, the Partnership has coordinated the estuary portion of the week-long Sojourn. In 2000, Sojourn participants canoed the Christina River in Delaware and in 2001, participants canoed the Cohansey and Maurice Rivers in New. Educational speakers were invited to speak both years. Planning is underway for the 2002 Sojourn, which will include paddling on both the Brandywine River in Delaware and the Darby Creek in Philadelphia.

#### Ecotourism

**CCMP Action Item: E3, E10**

Through a grant from the Delaware Tourism Office, the Partnership coordinated the production and distribution of an ecotourism brochure for the St. Jones Watershed in central Delaware. This is the second in a series of ecotourism brochures for the Estuary. The first ecotourism guide was developed for the Cohansey Watershed in southern New Jersey.

In addition, the Partnership recently received a grant from Pennsylvania CZM to produce an ecotourism brochure for the entire coastal region of Pennsylvania. This resource guide will be completed in September 2002. The Partnership will also be working on a fourth brochure focused on the Rancocas Watershed in New Jersey.

#### Pennsylvania Coast Day 2002

**CCMP Action Items: E2, E3**

The Partnership has received a PA CZM Grant to plan, coordinate and implement the first-ever Coast Day celebration in Southeastern Pennsylvania. This event is scheduled to take place in late September 2002.

#### Planning Initiatives

**CCMP Action Items: L2, L7, L12**

Through a grant from U.S. EPA headquarters, the Partnership is continuing to work on a watershed/land use planning initiative for the Cohansey Watershed in New Jersey. Partners on this project include: the City of Bridgeton, Rutgers University's Institute of Marine & Coastal Sciences and their Center for Remote Sensing and Spatial Analysis, and NJ DEP. With the build-out analysis now complete, two workshops will be held in 2002 to present these planning and visioning tools to government officials and the public at large.

#### 2001 NEP Education/Outreach Workshop

**CCMP Action Item: E2**

In June 2001, the Partnership and DELEP cosponsored a workshop that brought together 13 National Estuary Programs for a two-day workshop in Philadelphia. The first day of the workshop was spent sharing success stories. That evening our guests were given a tour of the Fairmount Water Works. The second day of the workshop was focused on identifying and prioritizing education and outreach initiatives that the NEPs could work on collectively. The highest ranked project was the development of a national advertising campaign on estuaries. Since the workshop, a subcommittee has been meeting to flesh out the details for the ad campaign. These ideas were presented at the November NEP meeting in Florida where they were very well received. The subcommittee is now going to develop a budget so that fundraising can begin to support the campaign.

#### Launching of New Partnership Website

**CCMP Action Item: E16**

In April 2001, the Partnership launched its new website, [www.DelawareEstuary.org](http://www.DelawareEstuary.org). This website was designed so that Partnership staff can update information on a regular basis.

#### "Experience the Estuary" Celebration

**CCMP Action Items: E2, E3**

In 1999, the Partnership established its annual fundraising event – the "Experience the Estuary" Celebration. The event has grown to include a silent auction, dinner and presentation of the "Excellence in the Estuary" Awards. The first Celebration was held at the New Jersey State Aquarium as part of the Flowing to the Future Governor's Summit and included approximately 100 guests. In 2000, more than 150 people attended the Celebration, which was held at Fox Point State Park in Delaware. In 2001, the "Experience the Estuary" Celebration was at Lloyd Hall in Philadelphia's Fairmount Park. More than 250 of the region's environmental leaders attended the event, which included a silent auction, dinner, and the presentation of the 2<sup>nd</sup> annual Excellence in the Estuary Awards. George Mallet, news anchorperson on Fox Philadelphia News, emceed the evening's festivities.

#### Miscellaneous Activities

Other Partnership activities that are underway include the organization's third annual appeal campaign; hiring of a development consultant that will assist us in strategically targeting prospective funding sources; and completing work on a new video about the Delaware Estuary.

The Partnership continues to provide the following services for the Program:

#### Minigrants

**CCMP Action Items: L4, H5, E10-13, E18, E19**

The FY '00 minigrants, funded by EPA, totaled \$20,000 and supported eight projects. The FY '01 DELEP minigrants, funded by EPA and The William Penn Foundation, totaled \$35,500 and funded eight projects. For the FY '02 DELEP minigrants, we received 34 proposals requesting a total of \$123,441. A total of \$35,500 is once again available for distribution. *minigrants*

#### Newsletter/Mailing List

**CCMP Action Item: E15**

The Partnership continues the writing, editing, and overseeing of the production and mailing of 26,000 copies of the quarterly newsletter, *Estuary News*. The newsletter has expanded in size to 16 pages. The mailing list continues to be refined to eliminate duplicates and new names are added on a continual basis. This fall we published a special issue of the newsletter, which featured the DELEP indicators. This 26-page issue was made possible by funding from The William Penn Foundation.

#### Public Participation Implementation Team (PPIT)

**CCMP Action Item: E1**

The Partnership continues to facilitate and coordinate the activities of DELEP's PPIT.

#### Public Information Materials

**CCMP Action Item: E15**

In the Spring of 2001, The Partnership wrote and oversaw the design and production of a DELEP brochure and folder. Presently, they are in the process of printing five DELEP fact sheets on water conservation, conservation landscaping, household hazardous waste, nonpoint source pollution, and the horseshoe crab shorebird connection.

In March 2000 and 2001, the Partnership worked with the Philadelphia Water Department and the U.S. Fish & Wildlife Service to develop an exhibit for the Philadelphia Flower Show. Our 2001 exhibit, entitled "You too, can be a Great Gardener..." focused on conservation landscaping techniques and won first place in the education category. Currently they are planning for the 2002 Flower Show which will feature a rooftop garden. For these exhibits, DELEP provides the funds to

pay for the printing of the exhibit's brochure and is listed as a co-sponsor on exhibit-related printed materials.

The 800 Toll Free Telephone Number

**CCMP Action Item: E1**

The Partnership continues to maintain and respond to requests for information via DELEP's toll free telephone number. On average, the Partnership receives approximately 200 calls per month on the 800 number. The 800 number is publicized on all printed DELEP outreach materials, including *Estuary News*, press releases, etc.

General Education

**CCMP Action Items: E1, E2**

Representatives of the Partnership participated in the following events on behalf of DELEP: Delaware Coast Day 1999, 2000, 2001; DNREC's WaterFest 2000, 2001; AstraZeneca's Earth Day Celebration 2000, 2001; Fort Mott's Earth Day Festival; Lower Merion's Earth Day Celebration; Philadelphia's Urban Migratory Bird Treaty Kick-off; Cusano Center at Tinicum Wildlife Refuge opening celebration; Schuylkill Center for Environmental Education's Teacher Information Exchange Event; Downtown Wilmington Summit; Dover's Eco Walk; Pennsylvania Watershed Conference, and six classroom presentations, etc.

Development and Communications Director

In 2000, the Partnership established a new staff position, Development and Communications Director, originally funded entirely by NEP moneys. The Director works closely with DELEP participants to move projects and resources from the identification phase to the implementation phase. The Director researches, prepares and tracks funding proposals to governmental agencies, corporations, and foundations; assists in the development and writing of Partnership for the Delaware Estuary and DELEP outreach materials, including but not limited to press releases, reports, brochures, fact sheets, PSA's, and the newsletter; and helps to establish relationships with organizations across the Delaware Estuary in order to provide support and visibility of activities that are either already on-the-ground or that are being planned, which will help to implement the goals of the CCMP.

For details about funding proposals developed and submitted over the past three years, please refer to the attached proposal update. Also attached is a sampling of the outreach materials that were developed during the past three years.

The Partnership is also implementing the following initiatives to enhance the development and outreach efforts of DELEP:

- Working with the Delaware Riverkeeper Network and the Pennsylvania Delaware Estuary Sea Grant Office to develop a strategy for education and outreach on fish consumption information. Once completed, this strategy will be presented to the appropriate DELEP implementation teams and DRBC Advisory Councils for their endorsement. Once endorsed, funding to implement the strategy will be sought.
- Distributing one public service announcement (PSA) per month, which will be sent to print and electronic media, to promote DELEP/Partnership publications, such as the Indicators Report, HHW Study, ecotourism brochures, *Living Resources*, etc.
- Working to develop a distribution strategy for the first-ever State of the Estuary report, slated to be completed in September 2002. The proposed distribution strategy is to print 550,000 copies of the report, 525,000 of which will be inserted in newspapers across the Estuary Region (Philadelphia Daily News, Trenton Times, Courier Post, Daily Journal, News Journal, and Delaware State News). The budget for going with this strategy is \$70,000. Once our

distribution strategy has been finalized, the Partnership will work to secure the funding to design, print, and distribute the report.

- Participating in many high visibility environmental events and celebrations that are held across the region. In the past, these have included Coast Day in Delaware, Earth Day in Philadelphia, and Bay Day in New Jersey.

For details about funding proposals developed and submitted over the past three years, please refer to the attached proposal update. Also attached is a sampling of the outreach materials that were developed during the past three years.

## **EPA Region II**

- ▶ **REMAP**  
Funding from the Regional Environmental Monitoring and Assessment Program (REMAP) in EPA's Office of Research and Development (ORD) is in place for the Cohansey-Maurice Watershed investigation. An initial \$350,000 was provided in FY'98 to characterize water quality, biological health and examine relationships with land use in the Cohansey-Maurice sub-watershed... For FY'99 an additional \$45,000 was provided for benthic macroinvertebrate identification and enumeration.
- ▶ **Delaware Estuary Sub-watershed Initiative** **CCMP Action Items - E12, E23**  
Regional Geographic Initiative funds for the Partnership for the Delaware Estuary, Inc, were awarded in the amount of \$150,000 to provide minigrants to 3 New Jersey sub-watersheds in the Estuary (Lower Tributaries, Rancocas, Crosswicks Creek) to fund implementation of DELEP priority actions, including nonpoint source control and habitat restoration.
- ▶ **Corporate Environmental Stewardship Program** **CCMP Action Items - L12, L14**  
Regional Geographic Initiative Funds in the amount of \$20,000 were awarded to assist the Partnership for the Delaware Estuary in holding CESP workshops in NJ.
- ▶ **Smart Growth** **CCMP Action Items - L18, L16, L13**  
Regional Geographic Initiative Funds in the amount of \$12,500 were awarded to the Partnership for the Delaware Estuary to the Partnership in rendering outreach assistance to a transit-oriented development project being conducted in the NJ Route 130 Corridor which is a joint project of NJ Office of State Planning and the Delaware Valley Regional Planning Commission and partners - including DELEP and Region 2.
- ▶ **PCBs** **CCMP Action Items - T1, T4**  
Funds from the Water Quality Cooperative Agreement Allocation under Section 104(b)3 in the amount of \$200,000 have been allocated to the Delaware River Basin Commission to assist in the PCB project currently under way. The funds will be used for field sampling and analytical services.
- ▶ **Mid-Atlantic Federal Partners for the Environment (MAFPE)**  
Region 2 provided coordination assistance and \$4,000 in funding in support of a three-day Mid-Atlantic Watershed Roundtable (MAWRT) that was held at the Heritage Conservancy in December 2001. The purpose of the Watershed Roundtable, which was attended by watershed organizations throughout the Mid-Atlantic region including organizations within the Delaware Estuary, was to identify how to better coordinate and leverage efforts among the various watershed groups. Regions 2 and 3 are working together to address the charges

from the December gathering and to identify the next steps in this initiative. Financial assistance was provided by MAFPE partners – NOAA, USDA/NRCS and others.

### **EPA Region III**

EPA Region III has several Priority Areas, including estuaries. The Estuaries Priority includes: the Chesapeake Bay, Delaware Estuary Program, Delaware Inland Bays and Maryland Coastal Bays. Each Priority Area has a Regional Action Plan (RAP), which is being implemented through cross-divisional efforts. The Acting Director for the Chesapeake Bay Program Office serves as the Executive Team Leader, and the Delaware Estuary Program Coordinator serves as the staff Priority Team Leader. The RAP consists of numerous activities in the areas of toxics and nutrients. All activities are coordinated with the Chesapeake Bay Program Office, Regional Estuary Programs and various other divisions.

In addition, EPA Region III was successful in securing additional agency funding, totaling approximately \$260,000, for PCB efforts from the following programs: Great Waters, Persistent and Bioaccumulative Toxics (PBT), Regional Applied Research Efforts (RARE).

#### **The States:**

##### **Delaware - Delaware Department of Natural Resources and Environmental Control**

The Delaware Department of Natural Resources and Environmental Control has been a major supporter of DELEP throughout the years. In response to input from the Program's principal participants, Delaware facilitated a reorganization of the Program that included the creation of a Program Office at DRBC.

Delaware continues to provide extensive funding for DELEP activities. Delaware has included DELEP and the Partnership as line items in their State's Budget. Delaware has further assisted the Partnership by initially donating and now discounting rent for the Partnership's Offices. Additionally, Estuary funding is also being generated through Delaware's Environmental License Plates program. The State of Delaware also provides funding to the DRBC for the PCB TMDL development process. These items have been included in the financial section of this Report.

##### Watershed Management Approach

##### **CCMP Action Items: Action L2**

Delaware's Watershed Management Approach involves teams from each of the Department of Natural Resources and Environmental Control's six divisions—Air and Waste Management, Fish and Wildlife, Parks and Recreation, Soil and Water Conservation, Water Resources and Office of the Secretary. Each team produces an assessment based on monitoring and research. To further protect the environment a list of prioritized problems is developed with public input. Plans are then put into action to restore the health of each watershed and for preventing further pollution. Delaware includes four basins the Piedmont, the Chesapeake Bay, Delaware Bay and Estuary and Inland Bays.

Additional notable on-the-ground efforts in Delaware that supported implementation of the Program's CCMP by basin locations:

##### **Piedmont Basin**

##### The Northern Delaware Wetlands Rehabilitation Program

##### **CCMP Action Items: H4, H5**

The Northern Delaware Wetlands Rehabilitation Program was established by the Department of Natural Resources and Environmental Control to bring together civic and business leaders,



scientists, resource managers, and property owners to develop strategies to restore nearly 10,000 acres of wetlands-31 distinct sites along the Christina and Delaware rivers in New Castle County.

These marshes once contained some of the state's richest waterfowl populations and served as important nursery grounds and breeding habitat for a wide variety of fish and other wildlife. The goals are to improve water quality, increase wildlife populations and control nuisance plants.

#### Low-flow TMDLs

#### **CCMP Action Item: W12**

Low-flow TMDLs for the Christina Basin have been set for Brandywine Creek, Christina River, Red Clay Creek and White Clay Creek. Delaware has no wastewater treatment plants that discharge into the Christina River Basin but Delaware stands to gain improvements in water quality from reductions in nutrient discharges from six Pennsylvania wastewater treatment plants. New Castle County draws a significant portion of its drinking water from the Christina Basin, and the Brandywine is the single source of Wilmington's drinking water. The TMDLs address low-flow conditions, which are most critical during summer months when water holds less oxygen and flows typically reach their lowest levels. The TMDLs are designed to improve water quality when pollutants reach maximum levels due to less dissolution in low water flows.

#### The Riverfront Development Corporation of Delaware **CCMP Action Items: L1, L9, L14, L15, L16**

The River Front Development Corporation was established to create economic vitality along the Wilmington's Christina River and Brandywine River where there was an industrial wasteland. Brownfields restoration and redevelopment along the Urban Waterfront. Projects in the reporting period include continuing the Restoration of the 225 acre Russell W. Peterson Wildlife Refuge, Shipyard Shops First Phase, The 1.3 mile-long Riverwalk, the Dravo Plaza, Delaware Center for the Contemporary Arts, River Taxi, ING Direct, the Riverfront Market and the Backstage Café.

#### Delaware Bay and Estuary Basin

##### Pea Patch Island Special Area Management Plan

#### **CCMP Action Items: H4, H8, H10, T1**

Pea Patch Island heronry is the largest heronry north of Florida on the East Coast. To better manage this unique resource, a Special Area Management Plan (SAMP) was developed. Working together, representatives from local, state and federal government agencies, nonprofit organizations, business and industry have identified a number of sources or concerns that may manifest themselves as problems or changes in the natural condition of the habitat that the birds utilize. Progress has been made as shown in the "June 2001, Pea Patch Island SAMP Progress Report: Three Years of Strategy Implementation" to implement the SAMP using CZMA Section 309 funding. To date, no long term dedicated funding source has been identified.

##### The Delaware National Estuarine Research Reserve

#### **CCMP Action Items: E2, E4, E5**

The Delaware National Estuarine Research Reserve (DNERR) is a cooperative program between the Delaware Department of Natural Resources and Environmental Control, Division of Soil and Water Conservation, Delaware Coastal Programs and the National Oceanic and Atmospheric Administration. The goal of the program is to establish, protect, and manage natural estuarine habitats for research and education. The DNERR consists of two main components, the Blackbird Creek and St. Jones Reserve. These sites include both brackish and freshwater estuarine represent the diverse estuarine ecosystems found throughout the Mid-Atlantic.

##### Oyster Fisheries Management.

#### **CCMP Action Item: H5**

Oyster Fisheries Management Changes to Direct Harvest from Natural Beds. Public workshops held in 1999 and a subsequent meeting of the Advisory Council on Shellfisheries strongly supported the direct harvest of oysters from the state's natural oyster grounds. Direct harvest of oysters from natural beds has been prohibited since the 1950s. All oysters harvested from natural oyster beds historically have first been transferred from the natural beds and deposited on leased shellfish grounds before being harvested for marketing. Oyster diseases and parasites appear to favor

higher salinity where leased shellfish grounds are located. For this reason, direct harvest is now preferred. The Division of Fish and Wildlife considers a limited direct harvest from natural oyster beds the best option if oyster harvesting resumed in Delaware Bay. Legislation changes and new regulations allowed a fall 2001 harvest with limited entry and strict harvest rules. The current oyster stocks can only support a limited harvest of 24,795 bushels.

### **New Jersey - New Jersey Department of Environmental Protection**

NJDEP conducts an array of activities that benefit the Delaware Estuary and advance achievement of CCMP action items, including ambient monitoring, listing of impaired waters, establishment of watershed restoration strategies, TMDLs to address impairments, and open space acquisition. Some of the activities most directly related to CCMP implementation are described below.

#### **Watershed Management**

**CCMP Action Items: L2-5, E1, E2, E10-12, E16, E18, E23, T3-5, and W12**

New Jersey's watershed management process is currently taking place in all 4 watershed management areas (WMA) located within the Delaware Estuary. (see Delaware Estuary Watershed map on page 2.) This initiative is carried out through the Department's Division of Watershed Management using funds from the Corporate Business Tax and other sources. For the first two years of the process, \$400,000 was allocated to each WMA. The ultimate goal of watershed management is to provide a comprehensive and dynamic watershed management plan for each WMA that will, at a minimum, identify strategies to address watershed restoration and means for water resources management to protect water quality, water quantity and ecosystem health. This will be accomplished with diverse stakeholder groups through the development of a vision, baseline, assessment, gap analysis, strategy development and implementation process, with measurable goals and objectives and indicators of success. For the first 4 year cycle, the process will identify a mutually agreed upon set of goals and objectives specific to each watershed management area which will be the focus of the initial strategy development. The process will be iterative, tackling additional issues as resources allow.

This process first began in the Delaware Estuary in February of 1998 for WMA 19 (Rancocas Creek Watershed). In order to accelerate the process, with additional resources made available, the Department of Environmental Protection's Division of Watershed Management (Division) contracted with the County of Burlington to organize and facilitate watershed management in WMA 19. DVRPC is the lead facilitating entity in WMA 18 (Lower Delaware River Tributaries) and WMA 20 (Crosswicks Creek and Tidal Upper Delaware Tributaries), in partnership with the Regional Planning Partnership, Burlington County and the South Jersey RC&D. Cumberland County leads the WMA 17 (Delaware Bay Tributaries) process. All of these entities work with a consortium of stakeholders representing a diversity of interests in the Delaware Estuary Region. The activities of each WMA are coordinated with, complement, and/or support CCMP action items. For example, under development, using CZM funds, is a project to characterize and assess riparian buffers for the purpose of identifying areas in need of restoration. This will build on an earlier project to characterize and prioritize the streambanks of the Rancocas Creek, which was funded with 319(h) funds, one of the sources for Action-Now projects. The areas identified as needing restoration will be a focus area for future Action-Now grants.

#### **Watershed Management Area 17**

On October 3, 2000 Cumberland County and the Division of Watershed Management signed a contract for the County's Department of Planning and Development to facilitate the Watershed Management process. The signing was held in Bridgeton and was highlighted by an ecotourism event, which included a kayaking trip in the Cohansey River attended by the Commissioner of the New Jersey Department of Environmental Protection (NJDEP) and Cumberland County

Freeholders. As an example of cooperation with estuary partners, this trip served as a launch for a brochure, developed by the Partnership with funding from NJDEP, on ecotourism in Cumberland County and as the backdrop for a video, all of which was designed to raise awareness of the watershed management process in the WMA.

Several Action Now projects have been funded in this WMA with 319(h) funds made available through the Clean Water Act. These include a successful "Backyard Habitat" program (\$19,000) in the headwaters of Scotland Run and a Salem GreenKeepers project (\$101,000). A special allocation of \$1.3 M of Corporate Business Tax (CBT) money was also allocated for the purpose of setting up a State Conservation Cost Share program to assist farmers in WMAs 17 and 18 to implement conservation management plans on their farms in order to address nonpoint sources of pollution, a key cause of water quality impairments.

#### Watershed Management Area 18

The Division contracted with the Delaware Valley Regional Planning Commission (DVRPC) as its lead entity to organize and facilitate development of a comprehensive watershed management plan for this region. This signing on May 8, 2000, was highlighted by an announcement by Governor Whitman of the intent to accelerate watershed management efforts and a proclamation of Watershed Awareness month.

The Action Now committee has been actively seeking project ideas for consideration for future funding by NJDEP and other sources. Five Action Now projects funded through 319(h) for FY 2000 are currently underway. The projects range from construction of biofilter wetlands to riparian buffer and/or streambank restoration and total \$643,330. Many new proposals are being considered for the FY 2001 funding cycle. A Watershed Restoration Action Strategy outline has been developed and approved by EPA, which enables this WMA to receive supplemental 319(h) funds.

The Education and Outreach committee will be coordinating workshops to train volunteers in the methods of conducting River Assessments (RATS program) to help evaluate the status of stream banks throughout the watersheds. This group is also conducting a survey of all available educational resources, which will help to guide their future actions. Another example of cooperation with other estuary partners was the storm-drain-stenciling project in the City of Camden that was a joint effort of NJDEP and the Partnership for the Delaware Estuary.

#### Watershed Management Area 19

The watershed management process in Area 19 is well underway; local stakeholders along with Department, have been actively working on the process since February of 1998. With the availability of additional resources, on November 21, 2000 at Cedar Run Wildlife Refuge, NJDEP signed a contract with Burlington County to assume the role of facilitating the watershed management process.

A Watershed Restoration Action Strategy outline was prepared for this WMA and approved by EPA, enabling the use of supplemental money made available from 319(h) of the Clean Water Act in this area. Numerous action now projects have been funded with this source, as well as CBT funds, to address water quality impairments in the WMA.

The Nonpoint Source workgroup is currently working with Dr. Mark Robin from UMDNJ-School of Public Health to perform a Watershed Pesticide Monitoring Pilot Project.

The Public Education and Outreach Subcommittee has produced and distributed an educational brochure about the Rancocas Creek Watershed. This brochure was distributed to all the local newspapers and all the townships in the watershed. The committee has various projects in their workplan including developing a newsletter, a website and an educational video dealing with the

Rancocas Creek. In addition to the projects listed above the committee has been working with the Water Resources workgroup to produce and distribute water conservation pamphlets to all citizens of the watershed.

#### Watershed Management Area 20

On November 29, 2000, the NJDEP signed a contract with the DVRPC, at an event held at Wainford Park, to facilitate the watershed management process in WMA 20. The DVRPC is working with the Regional Planning Partnership, the South Jersey RC&D and Burlington County to facilitate the process and involve the stakeholders.

WMAs 18, 19 and 20 have been the focus areas for minigrants funded by EPA Region II and administered by the Partnership, another example of cooperation and combining resources to accomplish watershed management and CCMP objectives. Refer to discussion under minigrants.

#### Pea Patch Island SAMP

#### **CCMP Action Items: H1, H5, H9 H10**

New Jersey's Coastal Zone Management Program, interacts with other coastal states and federal agencies on a variety of coastal issues to find coordinated solutions to coastal problems. As part of this initiative, the Department continues to be an active participant in the Pea Patch Island Special Area Management Plan (SAMP) process. New Jersey plans to continue improving its working relationships with the State of Delaware with regard to the exchange of information regarding shorebird habitat, heron foraging areas and pesticide usage and contamination in the region.

New Jersey has participated in the Pea Patch Island SAMP process through representation on the Habitat and Living Resources Implementation Team (HLRIT) of the Delaware Estuary Program (DELEP). New Jersey has begun to explore avenues to identifying heron foraging and resting habitat within New Jersey for the Heronry on Pea Patch Island. New Jersey has begun a dialog with representative of the State of Delaware CZM program to recognize these areas as critical wildlife habitats that are worthy of protection under New Jersey's Rules on Coastal Zone Management.

A meeting was held on May 1, 2000 in Camden, New Jersey with representative of both CZM program's to discuss future efforts with regard to Pea Patch Island and to discuss how to best incorporate the findings and goals of the SAMP into New Jersey's CZM program. Following the meeting, New Jersey awarded a Coastal Zone Management Act Section 309 Grant, in the amount of \$40,000, to Manomet to investigate and identify heron foraging and resting habitat within New Jersey for the Heronry on Pea Patch Island.

On January 12, 2001, Manomet submitted a progress report on the status of their investigation. All field work had been completed between April 9, 2000 and August 12, 2000.

Final data analysis and interpretation has been completed. Data from this study was incorporated into the June 2001 *Progress Report for The Pea Patch Island Heronry Region Special Area Management Plan* prepared by the Delaware CZM Program. The draft of this report was distributed to all members and participants on the Pea Patch Island SAMP Implementation Team on March 1, 2001 for review and comment. Jay Springer, New Jersey's representative to the Delaware Estuary Program and the Pea Patch Island SAMP Implementation Team provided comments on behalf of New Jersey on the draft report.

Manomet found that species such as Great Egrets and Little Blue Herons from the Heronry feed almost exclusively in wetland habitats in New Jersey. Other species that also feed heavily in New Jersey wetland habitats were Great Blue Herons and Glossy Ibises. Of interest, three of these four species (Great Egret, Great Blue Heron and Glossy Ibis) showed the greatest percentage of increase in population on Pea Patch Island.

## **Pennsylvania - Pennsylvania Department of Environmental Protection**

As a major stakeholder, Pennsylvania DEP continues to contribute, and in many cases go beyond, CCMP implementation. Listed below are brief summaries of a limited number of DEP programs / initiatives have been chosen to highlight DEP's CCMP activities. Additionally, web links are included for: 1) projects completed for Growing Greener years 2 and 3; 2) Nonpoint Source Management Program Project Summary's for FY's 1998, 1999 & 2000; and 3) Environmental Education Events and Projects Reports for 2000 & 2001. They list projects completed in all of Pennsylvania and include, but are not limited to those in the DELEP study area.

It is clear that the majority of PADEP's CCMP implementation is not completed with National Estuary Funds, but through delegate programs as well as non-delegated programs. It would be beneficial for EPA to be flexible in the expectations for delegated programs and PA's State Activities Plans to allow for maximum CCMP implementation. PADEP will be asking EPA for additional flexibility in order to implement the Environmental Futures Planning Process, which will focus on watershed priorities and environmental indicators. It is expected that resource will be diverted to the EFP2 effort this year.

### Environmental Futures Planning Process

### **CCMP Action Items: L2, L3, L5, W2, E2, E23**

DEP's Environmental Futures Planning Process (EFP2) is performance-based planning involving all DEP staff, and stakeholders, in deciding DEP's priorities and activities. The focus is on results first, and activities second.

The planning starts with a "*baseline*" snapshot of environmental conditions—what are the conditions of our waters? Our air? Our land? Then we look at *why* those conditions exist—what causes air quality to be above health levels? What causes it to be within safe levels? Next, we set *objectives* to target the top priorities. We will actively seek public involvement in these steps. Finally, we will develop detailed Environmental Action Plans to meet our broad planning objectives. These plans will cover all of DEP's activities in our bureaus, regions, watersheds and District Mining Offices.

This is a new process both for people inside and outside of DEP. Realizing that it will take some time for this new process to fully govern everything that is done around the Commonwealth. PA DEP is working hard in 2001 to integrate EFP2 into their thinking and planning. PA DEP is looking forward towards setting their priorities in the 21st Century as related to the Delaware Estuary.

### Growing Greener

### **CCMP Action Items: L2, L3, L5, H5.1, E23**

The Growing Greener Program signed into law by Gov. Tom Ridge in 1999 will invest nearly \$650 million over five years to preserve farmland and protect open space; eliminate the maintenance backlog in State Parks; clean up abandoned mines and restore watersheds; and provide new and upgraded water and sewer systems. Over the last two years, \$7,352,416.00 (2000) and \$4,735,668.00 (2001) has been allocated to Growing Greener projects in the Delaware Estuary. For a complete listing of projects, please refer to the links below:

<http://www.dep.state.pa.us/growgreen/SecondRoundList.htm>

<http://www.dep.state.pa.us/growgreen/GGFirstYearReport/Default.htm>

### Watershed Approach

### **CCMP Action Items: L2, L3, L5, W2, E2, E23**

The Pennsylvania watershed approach allows a comprehensive view of a watershed and facilitates protection of both our surface and ground water resources, among other benefits. The Pennsylvania watershed approach promotes:

- Broad-based stakeholder partnerships;
- Increased understanding of in-stream water quality and any related impairment from point

or nonpoint sources;

- Facilitation of drinking water source protection;
- Pollution prevention and resource stewardship...an evolving environmental ethic across Pennsylvania;
- Opportunity for comprehensive resource-based planning; and,
- Integration of related strategies for wetlands protection, fisheries and wildlife resources and local planning.

#### Coastal Zone Management

**CCMP Action Items: L2, L3, L5, H5.1, E6, E23**

The Pennsylvania Coastal Zone Management (CZM) Program, located in the Office for River Basin Cooperation (ORBC) of the Department of Environmental Protection (DEP), seeks to protect and enhance fragile coastal resources, while reducing conflict between competing land and water uses.

The CZM Program has the unique federal consistency provision and uses it along with state and federally approved policies to oversee and guide the management of coastal resources. The ten policy areas cover Floodplain/Stormwater Management, Dredging, Fisheries, Wetlands, Public Access, Historic Structures, Port Activities, Energy Facilities, Intergovernmental Coordination, and Public Involvement.

#### Coastal Nonpoint Pollution Program

**CCMP Action Items: L2, L3, L5, E23**

The National Oceanic and Atmospheric Administration (NOAA) and U.S. Environmental Protection Agency (EPA) issued final approval May 16, 2001 for Pennsylvania's Coastal Nonpoint Pollution Program, submitted in 1995 in accordance with Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990.

Pennsylvania is the fifth state of the 33 coastal program states and territories to receive full approval. The program covers practices to reduce nonpoint source pollution from five types of activities: forestry, agriculture, urban runoff, hydromodification, and marinas and recreational boating. Pennsylvania is addressing these sources largely through existing programs. Final approval qualifies Pennsylvania for additional Coastal Zone Management Program funding to address nonpoint pollution sources to our coastal waters and their tributaries. Please refer to the links below for a listing of projects funded.

<http://www.dep.state.pa.us/dep/deputate/watermgt/WC/Subjects/NonpointSourcePollution/98PRSU M.DOC>

<http://www.dep.state.pa.us/dep/deputate/watermgt/WC/Subjects/NonpointSourcePollution/1999prsu m.htm>

<http://www.dep.state.pa.us/dep/deputate/watermgt/WC/Subjects/NonpointSourcePollution/2000prsu m.htm>

#### Watershed Restoration Action Strategies

**CCMP Action Items: L2, L3, L5, E23**

Watershed Restoration Actions Strategies (WRAS's) are developed in cooperation with federal, state and local agencies, watershed-based organizations and the public for those watersheds most in need of restoration. WRAS's are described as plans to restore watersheds that do not meet clean water, natural resource and public health goals. Federal Clean Water Act Section 319 grant funds received from U.S. EPA are to be targeted to those watersheds most in need of restoration as identified in Pennsylvania's unified watershed assessment and for which WRAS's have been developed. WRAS's are dynamic documents that will be updated regularly as more information becomes available and as remediation measures are implemented and water quality improvements are documented.

#### Unified Watershed Assessment

**CCMP Action Items: L2, E23**

The Commonwealth has made a significant investment in assessing the condition of its 83,000 miles of free-flowing surface waters and publicly accessible lakes. The Department of Environmental Protection, USDA Natural Resource Conservation Service and cooperating agencies are in the midst of significant initiatives to assess all surface waters by the year 2002 and involve stakeholders in locally-led processes to identify local resource concerns. These efforts form the basis of the Commonwealth's submission of a unified watershed assessment and discussion of watershed restoration priorities.

Pennsylvania has coordinated efforts between state environmental agencies and USDA to create a unified watershed assessment that identifies watersheds needing restoration (Category I), watersheds needing preventive action to sustain water quality (Category II), pristine or sensitive watersheds on federal or state lands (Category III) and watersheds with insufficient data to make an assessment (Category IV).

#### Water Resource Conservation Legislation

**CCMP Action Items: L2, L5, W2**

At 15 Water Forums held all across Pennsylvania in the Spring of 2001, there was agreement that we need to deal with water resources in a more effective way. We need more information about the water we have – how it's used and how much we have. We need to identify areas of the Commonwealth where water demand may overtake water supply. We need to teach people and business how to use the water we have more efficiently, just like we learned to recycle, prevent pollution and lower our energy use. We also need to set standards for the construction of more than 15,000 wells drilled in Pennsylvania every year.

We now have a historic opportunity to address this problem through legislation – Senate Bill 1230 and House Bill 2230 – which do the four basic things most often recommended in water forums: 1) update the State Water Plan; 2) identify Critical Water Planning Areas; 3) create a water Conservation Program; and 4) set Water Well Construction Standards. \* Water well standards are included in separate legislation in the House.

#### Acid Mine Drainage

**CCMP Action Item: L2**

Pennsylvania has extensive programs to address concerns regarding acid mine drainage in the Upper Schuylkill River watershed.

#### Five-Year Plan for TMDL Development

**CCMP Action Items: L2, L3, L5, T4**

Pennsylvania DEP's plan was developed by the Bureau of Water Supply and Wastewater Management and Updated on November 6, 2001

#### Fish Consumption Advisory

**CCMP Action Items: T6**

(April 11, 2001) - Following a national recommendation from the U.S. Environmental Protection Agency (EPA), state officials today issued a one-meal-per-week consumption advisory for fish caught in the state's waterways.

#### Geographic Information System

**CCMP Action Items: L13**

The Department of Environmental Protection, working through a cooperative partnership with the Environmental System Research Institute, Inc. (ESRI), will make available the latest commercial release of ArcView GIS software and training to selected schools (with a conservation/environmental education curriculum) and nonprofit groups (with a conservation/environmental mission) at no cost. Additionally, DEP will make available various data layers and metadata on Pennsylvania's environment.

#### Pennsylvania Environmental Education Grants Program

**CCMP Action Items: E6, E23**

The Environmental Education (EE) Act of 1993 set aside 5% of the pollution fines and penalties collected by the Department of Environmental Protection (DEP) annually to stimulate environmental education in Pennsylvania. This allocation established a grants program that funds sound EE projects. Please refer to the links below for a listing of projects funded.

<http://www.dep.state.pa.us/dep/deputate/enved/EnviroEd/event00.pdf>

<http://www.dep.state.pa.us/dep/deputate/enved/EnviroEd/EventsReport2001.pdf>

#### Citizens' Volunteer Monitoring Program

**CCMP Action Items: E11**

The quality of our water is important to all of us. Pennsylvania's Citizens' Volunteer Monitoring Program (CVMP) has been initiated to help both organizations and individuals concerned about water quality more quickly reach agreement on the nature of water quality issues and begin to share resources and plan for the future.

#### The Land Recycling Program (Act 2)

**CCMP Action Items: L16**

Pennsylvania's Land Recycling Program encourages private cleanups of contaminated properties and the return of those sites to productive use.

#### Household Hazardous Waste (HHW)

**CCMP Action Items: T2**

Act 101 of 1988 (*The Municipal Waste Planning, Recycling, and Waste Reduction Act (section 1512)*) as amended by Act 190 of 1996 (*The Small Business and Household Pollution Prevention Act of 1996*), authorizes programs to collect and manage HHW, provided they are registered with DEP. Most ongoing programs collect HHW once a year at one or more drop-off sites (one-day programs). Others offer such services on an ongoing basis (permanent programs).

#### The Regulatory Basics Initiative

**CCMP Action Items: L15**

The Regulatory Basics Initiative (RBI) was an unprecedented effort on the part of the Department of Environmental Protection (DEP) to ensure that Pennsylvania's environmental regulations make sense and are working in the most effective way possible. The success of the initiative is due not only to the efforts of DEP staff, which were extensive, but also to the efforts of the many private citizens, local governments and businesses that helped provide the meaningful input that was necessary to successfully meet the needs of our large and diverse state.

### **Philadelphia Water Department**

The Philadelphia Water Department (PWD)—one of the oldest municipal water departments in the United States—provides water treatment and supply, wastewater collection and biosolids recycling services to the nation's fifth largest city, with a population of more than 1.4 million people. Its massive sewer system network contains 1,600 miles of combined sewers, 1,200 miles of separate sanitary and storm sewer lines, 150 miles of intercepting sewers, 169 combined sewer-regulating chambers, 84,600 manholes, and 75,000 stormwater inlets.

To effectively manage these facilities, the PWD has embraced a comprehensive watershed management program that minimizes water pollution from all sources in a manner that is based on good science and achieves a sensible balance between ratepayer costs and environmental benefit. Watershed management integrates the department's "wet weather" programs – combined sewer overflow and stormwater management – with a new drinking water source protection program. This concept also takes full advantage of a myriad of pollution, political initiatives and environmental goals to foster city and regional partnerships to support initiatives which enhance the health of the region's waterways and the public's perception of its environment.



The Philadelphia Water Department's Office of Watersheds is working to achieve viable and measurable improvements to the region's waterways by implementing planning and management strategies that foster good science, public involvement and fiscal responsibility. Our goal is to meet regulatory requirements while enhancing the health and aesthetics of our environment. The Office of Watersheds has been charged with the mission of integrating traditionally separate tasked programs, including Philadelphia's Combined Sewer Overflow (CSO) program, the Stormwater Management Program, and its Source Water Protection Program, to maximize the resources allocated to these programs and to ensure the comprehensive achievement of each of their goals. To achieve its mission, the Office of Watersheds has initiated a number of projects to date, including:

### **Regional Watershed Partnerships**

Implemented a watershed-based approach for identifying and addressing water quality concerns, issues and activities in a public/private partnership programs in the city's Darby-Cobbs and Tacony-Frankford watersheds, recognizing the importance of land management and storm flood control on water quality. The Partnerships were formed under the initiative of the Water Department to coordinate watershed activities and leverage resources geared toward the development of a watershed management plan. Specific projects are in place to improve the environmental health and quality of life in the watershed. These include watershed characterization, ongoing water quality assessments and public education. Similar regional and community-based partnerships will also be established in the city's non-tidal Schuylkill, Wissahickon, Pennypack, Poquessing, and Delaware watersheds.

### **Source Water Protection Programs (SWAPs)**

PWD is the lead in the Schuylkill River Source Water Assessment Consortium, working with Philadelphia Suburban Water Company and Pennsylvania American Water Company, to perform a comprehensive source water assessment of the Schuylkill River watershed. This projected, funded in part by the PA Department of Environmental Protection (PADEP), will culminate in the provision of federally required Source Water Assessment Reports to the PADEP and water suppliers, while providing comprehension information on point and non-point sources of pollution, identifying possible contamination sources, and establishing long term relationships between the PADEP and utilities, in addition to the establishment of watershed-wide early alert program in the event of emergencies affecting raw water quality. A similar study for the Delaware River is underway.

### **Watershed Redevelopment Program in Mill Creek**

The Philadelphia Water Department, working with its partners at the Sulzberger Middle School, the University of Pennsylvania, and the Mill Creek Coalition in West Philadelphia, received a PA Growing Green grant in the fall of 2000 to implement an innovative stormwater management demonstration project in the Mill Creek/Schuylkill River watershed. The stormwater demonstration project, constructed over a vacant, trash-strewn lot selected by the community and school, reduces stormwater runoff in a cost effective and sustainable manner, thereby affording environmental improvements in local receiving waters. This project also enhances the science and environmental education curriculum at Sulzberger Middle School through the creation an outdoor classroom and environmental study area for the students. The implementation of this urban watershed restoration project will enhance the community established over the buried Mill Creek flood plain, as well as create a sustainable environmental and educational resource. Currently the partners are identifying additional vacant lots for the creation of vacant lot renewal prototypes for the Mayor's Neighborhood Transformation Initiative.

### **Saylor's Grove Wetland Development**

The Philadelphia Water Department (PWD) is designing and developing a stormwater treatment wetland at Saylor's Grove, a 3.25-acre parcel of the Fairmount Park System located at the intersection of Lincoln Drive, Wissahickon Avenue and Rittenhouse Street. Saylor's Grove drains into the Monoshone Creek, a tributary of the Wissahickon Creek. Working with partners such as Fairmount Park and Monoshone watershed groups, through funding provided by a state Growing Greener grant, the one-acre wetland will be designed to treat a portion of the 70 million gallons of urban stormwater runoff per year generated by 156 acres of urban lands that are substantially impervious. The function of the wetland is to clean and slow down stormwater runoff before it discharges into the Monoshone Creek.

### **River Conservation Plans**

The Philadelphia Water Department's (PWD), in partnership with Fairmount Park and Frankford Group Ministry, has been awarded a PA Department of Conservation and Natural Resources (DCNR) grant for the development of a River Conservation Plan for the Philadelphia portion of the Tacony-Frankford Watershed. Essential to this process are the goals of conserving and enhancing the cultural and natural resources of the watershed in a manner consistent with a wide-range of stakeholder input, in addition to the development of a watershed-wide management plan. The partners will use a watershed partnership approach in order to foster cooperation between political boundaries to build consistent goals focused on environmental results. This approach is intended to synthesize the results of concurrent and future watershed-based planning activities in this watershed into a comprehensive river conservation plan. Such activities could include, but are not limited to, source water assessments, stormwater management planning, natural lands master planning, and other local grassroots efforts.

## **Challenges and EPA Assistance**

### **DELEP Specific**

The participating stakeholders have played a major role in implementing the CCMP as detailed in the previous sections. The implementation of DELEP's CCMP continues to be a challenging and rewarding endeavor.

- The Program is challenged in several ways. Geographically, the Delaware Estuary is larger than most of the other national estuary programs. There are a large number of state, county and local governments in this diverse area within a mix of urban, suburban and rural communities. The complexity of the issues facing these differing communities is challenging for our Program to tackle.

EPA could assist DELEP in overcoming some of the barriers to CCMP implementation in this complex environment by helping to garner more federal resources for estuary-wide projects. The type of additional funds that would be most useful to DELEP could be modeled after Pennsylvania's Growing Greener grant program, which allows for more non-traditional socio-economic projects. This flexibility would facilitate DELEP's implementation efforts in such a diverse area and would allow for more creativity in addressing the issues.

- Another challenge facing the program is communication throughout the various levels of government. Specifically, EPA could assist in developing tools and programs geared towards municipal leaders to educate them on the key role municipalities play in their respective estuaries.

- A final challenge faced by the Program is that a significant portion of our resources (i.e. time, energy and funds) are tied up in coordinating between federal, regional and state efforts rather than working on local projects. Any initiative to further streamline administrative requirements would be greatly appreciated.
- EPA has provided crucial support by retaining the services of highly trained facilitators for the Program when it was engaged in considerable soul-searching. That support greatly facilitated the necessary Program reorganization. More recently, DELEP was able to take advantage of the services of Battelle for our Indicators Workshop through EPA support. We appreciate this highly valuable contractor support that EPA provides and we could benefit by even more opportunities to utilize this type of contractor service.

### National Coordination

Federal agency coordination is an important role for EPA HQ to perform for the NEPs. In this era of shrinking resources, it is critical to develop working relationships on a national level (including other divisions/offices of EPA) and it is an activity that is very time and resource consuming for local NEPs. An intense coordination effort at the HQ level could be mutually beneficial for each of the federal agencies identified and could help each leverage resources and further implement their programs while helping with the implementation of CCMPs.

If EPA HQ could keep the NEPs apprised of national or local opportunities for coordination or funding from these other federal agencies (DOI, NOAA, FWS, DOE, etc.) it could be most helpful and efficient for implementation of some of our more difficult CCMP action items.

In essence, EPA HQ could be acting as a liaison with other federal agencies and EPA offices/divisions for the NEPs. It is quite possible that this kind of coordination is already happening at the HQ level. However, communication back to the local level of local and national level activities of relevance would be very beneficial.

### NEP Technical Coordination/Guidance

An additional major role that EPA HQ could provide would be the compilation of information on different NEP activities and the facilitation of technical transfer throughout the NEPs. This would provide NEPs with an efficient central repository to look to for guidance/benchmarks/templates. Understandably, HQ would not be able to do this for every topic, but, a few significant and normally difficult activities could be chosen for which HQ could compile and analyze information. For example: Who has had the most successful Indicators, Tracking Systems, Toxics programs, non-point source pollution efforts? While some of this information collection has been done on a limited basis, a more comprehensive effort would benefit all of the NEPs as they move forward with the implementation of their CCMPs. EPA should also facilitate this tech transfer among Regions and NEPs via conferences, workshops, electronic communication, etc.

Another significant role for Headquarters would be to coordinate and communicate estuarine research activities conducted by the EPA Office of Research and Development. Communicating this type of information would greatly assist the NEPs in determining their research needs and in reaching out for existing information.

Finally, the Delaware Estuary Program is particularly interested in being the East Coast demonstration project for "proof of concept" of the EPA/NOAA PIVOT collaboration. The Estuary Program study area offers a real platform to document to Congress and area constituents the synergy among NEPs/NERRs/CZM Programs/and Watershed Management Initiatives in achieving

positive environmental outcomes. A meeting to discuss this application of PIVOT to this area is requested.

## II ENVIRONMENTAL RESULTS FROM IMPLEMENTATION

The ultimate measure of success in the implementation of DELEP's CCMP will be the positive environmental changes that result. DELEP recognizes that to achieve positive environmental results two key activities must occur. First, there is a need to develop and/or refine the various measurement tools; i.e. measurable goals, environmental indicators, monitoring activities and the tracking database. Secondly, the projects themselves must be carried out. These tools collectively measure the success of the Program. Over the last three years, the Program in conjunction with its numerous partners, have been in the process of developing an environmental management system. Simultaneously, as highlighted in the previous section, a number of implementation activities have been and continue to be implemented. The system has helped us to identify focus areas, and will further help us to refine a strategy to implement a challenging CCMP.

Towards this end, we have developed draft measurable goals, and held a workshop to allow technical experts to review these goals and suggest indicators. This process will culminate in final measurable goals, an amended to the CCMP, further indicators and a State of the Estuary Report to be distributed on National Estuary Day.

### A) Environmental Results Management System

During this implementation review, the Delaware Estuary Program has addressed the challenge of a large geographic scope and politically complex implementation network by making a concerted effort to put in place an environmental management system that keys on Government Performance and Results Act objectives and National Environmental Performance Partnership System principles. In brief, the program employs a "Plan-Do-Check-Adapt" model to optimize major stakeholder coordination and inform discussion about future program direction. The system consists of the following components:

- *Plan:* Establishment of environmental or management objectives that are linked to environmental outcomes.
- *Do* Actions taken to accomplish objectives, with a focus on protecting the environment.
- *Check* Establishment of a tracking system that links monitoring and performance measures to compare results from the actions with the measurable objectives in the plan.
- *Adapt* Necessary changes made to the system as a result of the check.

Results based management is cyclic and some components of the system are still under development. By the time, if not before the next EPA review cycle the Delaware Estuary Program will have goals and objectives that are clear and measurable. DELEP will have refined a method to track environmental progress in achieving the goals and objectives. This information will be disseminated to a range of audiences for a range of uses, and the measures will be used to regularly inform decisions regarding priorities, program management, and budget allocation.

### B) Monitoring

The Monitoring Plan for DELEP was developed to coordinate and expand the ongoing activities of the state and federal agencies, DRBC and various public and private groups. Through NEP and DRBC funds, a full-time Monitoring Coordinator was hired by DRBC. An initial major goal for the

Monitoring Plan and the Monitoring Coordinator was to provide a better description of the individual monitoring activities. Efforts began to evaluate the comparability among similar monitoring activities and the modification of activities to lead to a more seamless database for the Delaware Estuary. Other immediate goals for the Monitoring Coordinator included: Evaluate data availability and reporting from individual monitoring activities; carry out monitoring inter comparability exercises; interpretation, integration and syntheses of data to assess utility of monitoring activities; and to evaluate extended and expanded monitoring activities.

The Monitoring Coordinator has also been assigned the task of compiling and evaluating the available data for all major tributaries into the Estuary. Additional responsibilities included: compiling an indicator map for fishable/swimmable uses; evaluate data from the 1999 Maurice & Cohansey River REMAP Study (when available); evaluate data from the Coastal 2000 Study and update the Basin Monitoring Matrix to include volunteer monitoring efforts.

Annual Monitoring Reports: The Monitoring Coordinator has been responsible for preparing Annual Monitoring Reports. To date two Monitoring Reports have been produced. The Monitoring Report was also made available in a downloadable file on both the DRBC and DELEP websites. The MAC has agreed to a Monitoring Report prepared in a two-year (biennial) cycle to provide for greater data synthesis and evaluation compared to the yearly time frame. This new cycle also provides for an enhanced ability to coordinate with State programs, and reduce redundancy (Attachment #7).

Monitoring Matrix: A Monitoring Matrix was also developed which listed present environmental studies in the Delaware River Basin. The monitoring matrix is a living document that will continue to incorporate information on volunteer monitoring efforts and new government initiatives and identifying ways to create a more consistent methodology of analytical methods (Attachment #8).

Coastal 2000 Program: To facilitate the Coastal 2000 program, two working meetings were conducted with the States of Delaware, New Jersey and Pennsylvania and Federal representatives. Three proposals were developed; A New Jersey Coastal Zone effort (excluding Delaware Bay) was prepared by the New Jersey Marine Sciences Consortium (NJMSC), a Delaware Bay and Bay Tributaries proposal was prepared by the NJMSC and DRBC, and a Delaware Inland Bays Proposal was prepared by the State of Delaware. Sampling of water, sediment and fish tissue at 38 locations in the Bay and tributaries commenced in August of 2000 and continued for 38 additional stations during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of FY01. Analysis of the field and laboratory data commenced as this information was received.

Public Health: Public health is a critical issue within the Delaware Estuary. Bacteriological data for all major tributaries into the Estuary continues to be compiled. This data in 1999 provided an indicator and allowed mapping of fishable/swimmable areas. Nutrient data from a number of sources continues to be identified and evaluated. Nutrient data for the period 1990 - 2000 has been evaluated will be included in the next monitoring report. This is an identified Clean Water Action Plan (CWAP) priority item. The following activities are ongoing public health related activities being pursued in FY2001:

- Coordinate the development of systematic shellfish closure information for the Bay;
- Present mapping based upon shellfish and fishing closure areas on DELEP and DRBC web pages;
- Identify and prepare appropriate mapping materials, in coordination with the respective State health officials, which present non-compliance areas within the Delaware River Basin for levels of total and fecal coliforms and enterococcus

- bacterial levels;
- Facilitate the dissemination of information supporting the above activities;
- Develop acceptable levels for bacteria and nutrients in the Delaware River Basin for use in criteria development.

#### Boat Run Partial Expansion

DRBC and Delaware's Department of Natural Resources and Environmental Control (DNREC) currently sample eighteen stations from Fieldsboro, New Jersey to Port Mahon, Delaware for routine bacteria, heavy metals, nutrients, and conventional pollutants fifteen times per year. The minimal plan in the CCMP suggests the addition of four new stations; one upstream of Fieldsboro near Trenton, and three below Port Mahon to the mouth of the Delaware Bay. The three down bay stations were added on an interim basis for five periods beginning in 1999. The remaining need is to implement these four stations at a frequency of fifteen times per year. The FY2001 Special Monitoring Opportunities budget of \$15,000 were used for sampling the Lower Delaware Bay to the mouth and near Trenton, NJ (four additional stations sampled seven times during 2001). This activity supports implementation of Action M.4.

### **III STATUS OF IMPLEMENTATION TRACKING SYSTEM**

#### Background

DELEP has long recognized that DELEP's Compendium of Estuary Activities should be directly tied to a tracking system. With input and direction from the RIMS Implementation Team, the development of the tracking database began in 1999. Initially designed in an Access database format, this provided the framework for action item implementation tracking.

Over the last 3 years, the database has continued to evolve and be refined. In 2001, in order to better meet the demands of web based data, the Tracking Database is housed at New Jersey Office of Information Technology. The data was converted into an Oracle database format. Current features of DELEP Tracking Database include:

- Being searchable and allowing the user to retrieve data by keywords, location or on a particular topic of concern.
- The generation of customized reports to fit the needs of the EIC and the Work Group Members.
- The ability for partners to directly input data. (unique user ids and passwords)
- The ability of partners to get information about the progress of activities in the estuary.

There are four methods to produce a report; by action item, by project or management plans, by lead agency, or by a global search on the database. The stakeholders also anticipated generating their own agency level reports such as the GPRA and Implementation Streamline Review.

With the addition of the Program Assistant, the tracking database has undergone some quality assurance and control procedures, thereby identifying problems with the system. The RIMS Coordinator and the Program Assistant have met directly with NJOIT to discuss how to resolve these problems and take appropriate action. A plan to resolve the QA/QC problems (duplicate projects without corresponding contact id's, duplicate projects with no contact id, incorrect response to report queries, incomplete data records, etc.) was discussed and implemented. Also discussed were methods to make it easier for an end user to view projects as they relate to issues in the

CCMP (habitat, toxics, etc.).

The plan to implement the changes and quality control updates is currently underway. Once this has been accomplished, GPRA data will be uploaded and a revised web interface for reports generation will be completed. It is anticipated that this process will be completed by February 2002. Samples of DELEP's Tracking Database are attached - Attachment #9.

### DELEP Summary of CCMP Initiated Actions

Total Priority Actions In CCMP	Actions Initiated Baseline (1999)	Total Actions Initiated (1999-2001)	Cumulative Total Initiated	Actions Items uninitiated
77	54	+10	64 (83%)	L7, 8, 11, 18 W8,9, H2, 3, 7, 8 E20, 22 M5

#### IV. STATUS OF FINANCING STRATEGIES/LEVERAGING OF FUNDS

The post CCMP or implementation funding categories are mentioned in section a below. These funds account for those areas absolutely necessary for the program to function. The leveraged funds provide funding and, buy-in and support from the program partners to actually help the program to move forward toward implementation of the CCMP.

The leveraged funding amounts listed below represent only a portion of the resources committed by DELEP partners. The items noted are those tracked in the workplan/budget process each year. Other activities, discussed in the narrative sections, would increase the leveraged funds to well beyond the \$3,839,573 accounted for here.

#### A) EPA post CCMP Funding

	1999	2000	2001	2002
Program Office	85,229	73,570	*101,183	172,571
Education/Outreach	87,162	169,500	*159,806	154,429
Information Management	51,423	49,462	45,786	11,000
Monitoring	70,686	33,468	63,975	
PCB Project	25,000			
Habitat Projects	25,000	10,000		2,000
<b>TOTAL BUDGET</b>	<b>344,500</b>	<b>336,000</b>	<b>*370,750</b>	<b>340,000</b>

\* Includes Carryover funding

### B) DELEP Leveraged Funding

<b>FY1999</b>	<b>EPA II</b>	<b>EPA III</b>	<b>DRBC</b>	<b>Partnership</b>	<b>DE</b>	<b>NJ</b>	<b>PA</b>	<b>FWS</b>	<b>Total</b>
Program Office		60,000	33,056						<b>93,056</b>
Education/Outreach					27,141				<b>27,141</b>
Information Management			49,675						<b>49,675</b>
Monitoring			54,017						<b>54,017</b>
Habitat Projects	*50,000				12,859				<b>62,859</b>
<b>TOTAL BUDGET</b>	<b>50,000</b>	<b>60,000</b>	<b>136,748</b>		<b>40,000</b>				<b>286,748</b>

<b>FY2000</b>	<b>EPA II</b>	<b>EPA III</b>	<b>DRBC</b>	<b>Partnership</b>	<b>DE</b>	<b>NJ</b>	<b>PA</b>	<b>FWS</b>	<b>Total</b>
Program Office			11,539						<b>11,539</b>
Education/Outreach	10,000				*58,000	*20,000	*21,534		<b>109,534</b>
Information Management			65,463						<b>65,463</b>
Monitoring			65,188			30,000			<b>95,188</b>
PCB Project	10,000		10,000		5,000	10,000			<b>35,000</b>
Habitat Projects	*50,000				15,000				<b>65,000</b>
<b>TOTAL BUDGET</b>	<b>70,000</b>		<b>152,190</b>		<b>78,000</b>	<b>60,000</b>	<b>21,534</b>		<b>381,724</b>

<b>FY2001</b>	<b>EPA II</b>	<b>EPA III</b>	<b>DRBC</b>	<b>Partnership</b>	<b>DE</b>	<b>NJ</b>	<b>PA</b>	<b>FWS</b>	<b>Total</b>
Program Office			11,390		15,000				<b>26,390</b>
Education/Outreach				32,375	50,000	*5,000	*67,595		<b>154,970</b>
Information Management			65,190			7,000	15,000		<b>87,190</b>
Indictors						7,630			<b>7,630</b>
Smart Growth	*12,500								<b>12,500</b>
Monitoring	45,000		61,390			15,000			<b>121,390</b>
PCB Project		20,000	6,000		50,000	80,000			<b>156,000</b>
Habitat Projects	*96,844					40,000	*150,000	15,400	<b>302,244</b>
<b>TOTAL BUDGET</b>	<b>154,344</b>	<b>20,000</b>	<b>143,970</b>	<b>32,375</b>	<b>115,000</b>	<b>154,630</b>	<b>232,595</b>	<b>15,400</b>	<b>868,314</b>



<b>2002</b>	<b>EPA II</b>	<b>EPA III</b>	<b>DRBC</b>	<b>Partnership</b>	<b>DE</b>	<b>NJ</b>	<b>PA</b>	<b>FWS</b>	<b>Total</b>
Program Office			66,885						<b>66,885</b>
Education/Outreach				79,308		*5,000	*97,283		<b>109,308</b>
Indicators				21,000					<b>21,000</b>
Information Management			68,464		15,000	9,380			<b>92,844</b>
Monitoring	6,000		147,916			10,620			<b>171,536</b>
PCB Project	210,000	255,000	183,000		280,000	472,500	208,000		<b>1,408,500</b>
Habitat Projects		33,000			11,000	*25,000	*95,431		<b>154,431</b>
Watersheds						3,000			<b>3,000</b>
<b>TOTAL BUDGET</b>	<b>216,000</b>	<b>288,000</b>	<b>466,265</b>	<b>100,308</b>	<b>306,000</b>	<b>525,500</b>	<b>400,714</b>		<b>2,302,787</b>

\* = These funds were obtained by or passed through the Partnership to implement the CCMP, and may be mentioned in Appendix 2 in more detail.

<b>DELEP</b>	<b>EPA II</b>	<b>EPA III</b>	<b>DRBC</b>	<b>Partnership</b>	<b>DE</b>	<b>NJ</b>	<b>PA</b>	<b>FWS</b>	<b>Total</b>
<b>TOTAL BUDGET 1999-2002</b>	<b>490,344</b>	<b>368,000</b>	<b>899,173</b>	<b>132,683</b>	<b>539,000</b>	<b>740,130</b>	<b>654,843</b>	<b>15,400</b>	<b>\$3,839,573</b>

### Other Programs:

<b>Coastal Zone Management</b>	<b>FY1999</b>			<b>FY2000</b>			<b>FY2001</b>		
	<b>*DE</b>	<b>**NJ</b>	<b>PA</b>	<b>*DE</b>	<b>**NJ</b>	<b>PA</b>	<b>*DE</b>	<b>**NJ</b>	<b>PA</b>
Federal	<b>846,500</b>	650,000	286,164	907,000	650,000	278,578	910,000	650,000	709,395
State Match	<b>666,500</b>	500,000	330,548	737,000	500,000	416,659	787,000	500,000	746,557
<b>TOTAL</b>	<b>1,513,000</b>	<b>1,150,000</b>	<b>616,712</b>	<b>1,644,000</b>	<b>1,150,000</b>	<b>695,237</b>	<b>1,697,000</b>	<b>1,150,000</b>	<b>1,455,952</b>
<b>Total per Year</b>	<b>\$3,279,712</b>			<b>\$3,489,237</b>			<b>\$4,302,952</b>		

\* DE monies were monies requested, and not necessarily received

\*\* NJ Monies are only approximations. Concrete numbers will be available upon request, within one week.

Note: a project breakdown of Pennsylvania's CZM projects in the Estuary is available in appendix 3.

#### Delaware:

The State of Delaware has secured a \$50,000 line item for DELEP as well as a \$50,000 line item for the Partnership. Economic recession may effect these numbers as cuts in all of the states, but this money has advanced the implementation of the CCMP over the last three years.

#### New Jersey:

New Jersey commits one FTE per year from the Lower Delaware Bureau of the Division of Watershed Management to the Delaware Estuary Program. A portion of this commitment is the designation of a State Coordinator for the Program. This supports Action L2.

New Jersey committed approximately \$80,000 in FFY 2001 to study the effects of PCB's on Raptors (primarily Eagles and Ospreys) in the Delaware Estuary. Chlorinated organic compounds, such as PCBs, chlordane and DDT have been found in the tissue of fish and shellfish in the Delaware Estuary. In addition to the human health risks posed to individuals who consume contaminated fish, PCBs also represent an ecological risk to wildlife and aquatic biota in the Estuary, particularly sediment-dwelling organisms. Elevated levels of PCBs, DDT and its metabolites, and chlordane have been detected in peregrine falcon eggs from the Delaware Estuary (Jarman et al., 1993). Chlorinated pesticides appear to adversely affect populations of birds of prey (raptors) in the Delaware Estuary. Although more study is needed, there is evidence that eggshell thinning due to toxic substances is continuing to affect the stability of raptor populations. This supports Action T5 and T6.

New Jersey, in coordination with other local, state and federal agencies, is helping the DRBC develop a PCB Strategy for the Delaware Estuary. This strategy includes six major elements designed to establish Total Maximum Daily Loads or TMDLs for Total PCBs including allocations for point and non-point sources, including the atmospheric deposition of PCB's, and a margin of safety by September 30, 2003. Although much additional work is needed to identify and quantify all sources of PCBs to the Estuary, it was proposed that the Program immediately initiate efforts to reduce the PCB loadings from the major sewage treatment plants while the comprehensive loading information and a comprehensive PCB strategy is being finalized. Since 1999 New Jersey has committed nearly \$620,000 to this effort which includes the aforementioned Raptor Study, Monitoring and the overall PCB Project. This supports Actions T5, T6, M1, M4 and M5.

#### Pennsylvania:

Pennsylvania commits one FTE per year combined from the Watershed and Coastal Zone Management Programs to the Delaware Estuary Program. A portion of this commitment is the designation of a State Coordinator for the Program. This supports Action L2.

All the programs mentioned under state initiatives contribute a million of dollars and personnel time to the Delaware Estuary

PA Growing Greener grants were for \$7,352,416 in 2000 and \$4,735,668 in 2001.

### **C) Successful Approaches and Challenges to Obtaining Funding**

For the past three years when it comes time to create the budget, the Program has a much longer list of projects that need to be funded than can be funded. As a result, the states and DRBC contribute to elevate the shortfall at the end of the process. This does not satisfy the entire budget, but gets about \$50,000 more worth of projects funded. Two years ago, we also created a three-year budget and plan, to be able to plan ahead, and procure funds, so there is no emergency need.

This has worked slightly better than before. However, it serves more as a planning device to make sure we are on target. The program has not yet been able to apply for grants, or get commitments ahead of time. The Program Office would like to make this our next goal. This would add to the tremendous funds that the Partnership applies for and receives to implement the CCMP.

The Partnership for the Delaware Estuary has experienced a tremendous amount of growth over the past three years. With larger grants from The William Penn Foundation and the Pennsylvania Department of Environmental Protection's Growing Greener Initiative, we have been able to leverage additional dollars, which means our growth has continued into 2002 and most likely into 2003. This growth has also required the Partnership to be more strategic in how we manage our time, in the types of programs we initiate, and who we approach for funding.

The Partnership's fundraising now, more than in the past, involves obtaining and sustaining corporate sponsorship, private foundation dollars, and Board involvement. Certain funding sources may not react to a written proposal, but may require a personal meeting to discuss opportunities and build relationships. Funders are more apt to fund within a particular geographic region, rather than for a project that covers the entire Estuary. This has resulted in piloting projects in a region and, if they are successful, to expand the efforts into other regions of the Estuary.

There are still a number of untapped financial resources for the organization and the manner in which the Partnership seeks out funding must be streamlined. This has brought-up a number of questions - How will we sustain the organization once the larger grants have ended? What is the Partnership's potential for raising additional dollars for capacity building or unrestricted support? In rethinking the way to operate the organization, the Partnership has begun to diversify sources of funding with an annual appeal and a fundraising event. The way to conduct the annual appeal has become much more organized. Bringing in an outside consultant has brought in many new ideas and forced the Partnership to think outside of the box.

## **Appendix # 1**

### **DELEP Minigrant Program**

The Partnership continues to manage and expand the general DELEP Minigrant Program. Over the last three years, *(number)* of minigrants have been awarded totaling (\$) in total funding for implementation related activities.

### **Clean Water Action Funding**

In 1999, \$20,000 in mini grant funding was allocated through the Clean Water Action Fund for the following projects:

<b>City Parks Assn. Region Parks Institute</b> Upstream/Downstream Conference	<b>Awarded \$200</b>
<b>DE River Keeper Network</b> Volunteer Monitoring Program Expansion	<b>Awarded \$2,500</b>
<b>Federation of Gloucester County Watersheds</b> Protecting Our Waters: Gloucester County's Watersheds Video	<b>Awarded \$1,500</b>
<b>Gilbert Spruance Elementary</b> "Children Protecting the Environment" Homepage	<b>Awarded \$2,100</b>
<b>Manayunk Development Corp.</b> Manayunk Canal Towpath Self-Guided Walking Tour	<b>Awarded \$2,200</b>
<b>NJ Coastal Heritage Trail Route</b> Interpretive Nature Trail Exhibits Project	<b>Awarded \$3,250</b>
<b>NJ Sea Grant Extension Program</b> Developing a Delaware Estuary Oyster Culture Curriculum	<b>Awarded \$2,890</b>
<b>Swarthmore Borough EAC</b> Little Crum Creek Appreciation Days	<b>Awarded \$2,360</b>
<b>Vare Middle School</b> "What did Delaware?" study unit	<b>Awarded \$2,200</b>

**In 2000, \$20,000 in mini grant funding was allocated through the Clean Water Action Fund for the following projects:**

**Cape May Co. Technical School District, NJ**

**Awarded \$2700.**

**Dennisville Eel Ladder Project "Give Eels a Boost"**

The Cape May County Technical School District students constructed and installed eel ladders to help returning eels reach their natural habitat and complete their life cycle.

**Fairmount Park Commission (NLREEP), PA**

**Awarded \$3,300**

**BioBlitz 2000 ¥ Restoration Projects (\$3,300)**

This project restored habitats in several areas of the Wissahickon watershed as part of BioBlitz 2000 annual event.

**Girl Scouts of the Chesapeake Bay, Inc., DE**

**Awarded \$4,200**

**Birch Run Meadow Restoration and Education Trail**

This project removed invasive plant growth from the Council-owned, Camp Country Center's meadow bordered by Birch Run. Girl Scouts replanted native species. A marked trail, describing native plant/animal life and how meadow conditions affect the quality of creeks/streams was completed. Funding was only awarded for the plants and trail markers. U.S. Fish & Wildlife provided the consulting services at no cost.

**Brandywine Valley Association, PA**

**Awarded \$2,500**

**Downingtown Volunteer Monitoring Program (\$2,500)**

The Brandywine Valley Association organized and oversaw a volunteer stream monitoring program in the Borough of Downingtown, Chester County, PA. This project established a community-based volunteer stream monitoring project to educate citizens regarding how they can protect and improve water quality in the Delaware Estuary.

**Bala Cynwyd M.S., PA**

**Awarded \$900**

**Rid Invasives & Replant Natives**

This project eliminated Japanese Knotweed from a 60'x15' eroding stream bank along Mill Creek and replanted the area with native trees, shrubs, grasses, and ground cover.

**Challenge Program at the Kalmar Nyckel Shipyard, DE**

**Awarded \$3,500**

**Watershed Education Project**

Funding was provided to further expand and develop the Challenge Program's watershed education project that explores the Christina River Watershed in partnership with the Stroud Water Research Center.

**John Bartram Assoc./Historic Bartram's Garden, PA**

**Awarded \$2,910**

**Fishing on the Schuylkill**

The John Bartram Association undertook two related initiatives at Historic Bartram's Garden to help improve the public's access to and understanding of the lower Schuylkill River and its living resources: 1) fishing on the Schuylkill, a special event for family audiences to be held April 29, 1999 and 2) development of an educational lesson on ichthyology for grades 4-8 that will be incorporated into the Garden's core environmental education curriculum, now being offered to 10,000 children annually.

In January 2001, a total of \$35,000 in minigrants funds were made available to support Estuary projects. \$20,000 was allocated by DELEP to fund minigrants program and the Partnership was successful in raising an additional \$15,000 of minigrant funding through a grant from The William Penn Foundation. This grant will also increase the funds available for the DELEP FY 02 minigrant program by \$15,000. The Partnership also received funding from William Penn to identify other sources of funding that will enable them to continue expanding the dollars available for distribution through the minigrant program. Minigrants Awarded:

**Lower Makefield Township  
Earth Day 2001**

**Awarded: \$1,500**

Purchase of native tree seedlings and preparation and printing of educational brochures that were distributed at township-wide Earth Day activities and for promotional advertising of Earth Day activities.

**Perkiomen Watershed Conservancy  
2001 Annual Stream Cleanup**

**Awarded: \$1,500**

Clean up of 60 miles of streambank along the Swamp, East Branch Perkiomen, Towamencin, and Perkiomen Creeks through use of 250 volunteers. Create a written inventory of stream conditions and other point and nonpoint source pollutants.

**Old Pine Farm Natural Lands Trust**

**Awarded: \$2,800**

**Big Timber Creek Meadow and Creek Bank Restoration Project**

Restoration of 400 feet of creek bank and two acres of meadow adjacent to that site. Enhance "Watchable Wildlife" by improving habitat and food sources and removing invasive plants that are destroying much of the native habitat in the area.

**Ecological Research & Development Group  
Web-based Interactive Time-Line**

**Awarded: \$5,000**

Development of a web-based interactive time-line dating back to the formation of the Delaware Bay, focusing exclusively on the development of the horseshoe crab spawning habitat and shallow water nurseries.

**The Peopling of Philadelphia Collaborative  
By Water-By Land Urban Ecology Workshop for Teachers**

**Awarded: \$2,860**

Two three-day teacher workshops addressing the environmental consequences of population growth and technological advancement in the Delaware Estuary.

**Schuylkill Riverkeeper  
2001 Schuylkill Watershed Congress**

**Awarded: \$1,832**

Providing technical training and raising citizens' awareness through the 4<sup>th</sup> annual Schuylkill Watershed Conference. The event fostered cooperation and networking with over 150 participants including individual citizens, government officials, and the private sector representatives.

**Philadelphia Department of Recreation  
Fishing on the Delaware**

**Awarded: \$3,055**

Upgrade recreational fishing program for urban children at the Philadelphia Department of Recreation's Fish Hatchery, located in Pleasant Park on the banks of the Delaware River in Northeast Philadelphia.

**Network Arts**

**Awarded: \$5,000**

**History of Pollution in the Delaware Estuary**

Creation of an education and mosaic-making project at Penn Treaty Middle School. Network Arts will work with the entire seventh grade to study water quality and its effect on wildlife in the Delaware Estuary. They will then create a mosaic mural depicting what they learned.

**Berkana Center for Media and Education**

**Awarded: \$1,875**

**Horseshoe Crabs and Shorebirds: Science and Public Policy**

Conduct three curriculum development workshops to develop a multi-disciplinary ecosystem-based curriculum to use with public middle school students that will focus on science, conservation, and public policy issues related to the horseshoe crabs and shorebirds on the Delaware Bay.

**Building Environmental Education Solutions (BEES)**

**Awarded: \$1,500**

**Hamilton-Trenton Marsh as a Learning Laboratory – Teachers Workshop**

Design and implementation of a workshop that will provide training and activities for using the Hamilton-Trenton Marsh as an outdoor classroom.

**Stroud Water Research Center**

**Awarded: \$3,078**

**Storm Drain Stenciling Project: From Classroom to Creek**

Creation of classroom programs, a stormwater activity guide, and a stenciling project addresses the issue of nonpoint source pollution in the Chester-Ridley-Crum Watershed. Volunteers and students become aware of the connection between the storm drain and the stream, and share this information with the community.

**Monmouth County Planning Board**

**Awarded: \$5,000**

**Stream and Watershed Identification Project**

Placement of stream and watershed identification signs at Monmouth County-owned bridges and publication of a companion "Eco-Tips" brochure to encourage homeowners to protect stream corridors and decrease nonpoint source pollution.

The Partnership has also received Regional Geographic Initiative funding from EPA Region II to support four Watershed Minigrant Programs in New Jersey totaling \$185,300 in grants allocations. The fourth program for the Crosswicks Creek Watershed is just getting underway. The status of the other three programs is as follows:

**Maurice/Cohansey Minigrant Program**

**Aquaculture Development Corporation** **Awarded: \$11,050.00**

**Restoration of the Cohansey River Seed Beds**

Used readily available Delaware Bay seed oyster resources to test the feasibility of restoring up bay seed oyster beds with down bay seed. Growth, survival, and disease levels on new oyster reefs was evaluated.

**Natural Lands Trust** **Awarded: \$22,945.00**

**School-site Wildlife Habitats and Water Quality Field Trips**

Trained and assisted students and teachers at four elementary schools in setting up school-site wildlife habitats utilizing native plants, and supervised related field trips to study water quality at local bodies of water and streams. Additional funds were awarded to create a guidebook and video, which will establish a template and reference resource to enable many other schools to benefit from the lessons learned through this project.

**Ecological Research Development Group** **Awarded \$24,160.50**

**Horseshoe Crab Education**

Developed a horseshoe crab education pilot program around national and New Jersey science standards, which was taught in five middle schools, grades 3-6.

**New Jersey Division Of Fish & Wildlife** **Awarded \$12,050**

**Bureau of Shellfisheries**

**Re-establishing Oyster Stock in the Tributaries of Back Creek and Nantuxent Creek, Delaware Bay**

Stocked 4,000 bushels of oysters into Back Creek and Nantuxent Creek. Through this project the Bureau of Shellfisheries 1) raised awareness or resource restoration and provided a new oyster supply for tongers; 2) increased the amount of larvae flowing across the natural seed beds, potentially increasing recruitment; 3) made use of the oyster stocks on the uppermost and underutilized beds; 4) heightened public awareness concerning the ecological importance of oyster beds; and 5) provided for populations of oysters which may have more limited exposure to disease.

**Berkana Center for Media and Education** **Awarded \$5,000**

**Horseshoe Crab Survey Instructional Video**

Worked with a member of the Atlantic States Marine Fisheries Commission as he conducted a beach survey of spawning horseshoe crabs. The survey was video taped and developed into an 8-10 minute instructional video presentation.



## **Lower Tributaries Minigrant Program**

### **Old Pine Farm Natural Lands Trust**

**Awarded \$2,430**

#### **Big Timber Creek Mud Flat Restoration Project**

Restore a 15-acre mud flat along Big Timber Creek Park. The goal is to enhance wildlife habitat and food sources and to remove a section of invasive wetland plants that is taking over the area. 4-6 nesting boxes will be installed and tons of tires, drums of oil and other junk will be removed. A "trash net" will be built and installed to prevent trash from washing into the creek from storm drains above the flats.

### **Camden Greenways**

**Awarded \$5,000**

#### **Year 2001 Workplan**

The Year 2001 Workplan will further the efforts Camden Greenways, Inc. has initiated to promote waterfront corridor restoration and public access along the Delaware River, Cooper River and Newton Creek in Camden. The workplan includes gathering information needed to enforce new conservation buffer requirements, securing acquisition funding for key privately-owned waterfront parcels, improving one section of the greenway in North Camden, finalizing plans for natural areas in Farnham Park, and training new Camden Greenways, Inc. Board members.

### **Harrington Middle School's EcoWild Club**

**Awarded \$725**

#### **EcoWild Watershed Study**

The EcoWild Club is doing an intensive watershed study of Management Area 18. The students will participate in hands-on activities that include biologically and chemically assessing bodies of water in the watershed. A tri-fold pamphlet explaining their project will be produced to share with other teachers.

### **South Jersey Land Trust**

**Awarded \$3,000**

#### **Oldmans Creek Watershed Parcel Mapping Project**

The South Jersey Land Trust contracted with Castle Valley Associates to digitize all of the land parcels in the Oldmans Creek Watershed resulting in an ArcView-ready data layer. This information will be used as a tool for targeting land acquisition projects in SJLT's Raccoon Creek and Oldmans Creek Watersheds Project Area.

### **Raccoon Creek Watershed Association**

**Awarded \$4,681**

#### **Promoting Watershed Management Tools – Electronic Parcel Mapping & GIS Data**

The Raccoon Creek Watershed Association is completing a CD, which contains parcel mapping and GIS information for the entire watershed. The goal is to promote this tool to each environmental committee and township and borough councils within the watershed.

The CDs will be distributed free of charge to all interested public agencies within the watershed. The CD will also be promoted to the public through the creation of a newsletter that educates the public on the use of GIS information.

**Federation of Gloucester County Watersheds****Awarded \$4,870****Building Watershed Awareness and Protection – A Collaborative Approach**

The Federation/Member Associations with the Gloucester County Department of Parks and Recreation conducted the fourth annual WaterFest, a public festival held on June 10, 2001. The combined organizations also produced a joint watershed brochure, published a combined tri-annual newsletter, and expanded the role of and participation in their combined web site.

**Omni Environmental Corp./Camden Co. Parks Dept.****Awarded \$5,000****Cooper River Lake Biofilter Wetland – Educational Trails and Signage**

Educational trails and signage are being designed and constructed to provide visitors to Cooper River Lake with the opportunity to explore a biofilter wetland and learn about the need for treating storm water before it enters our lakes and streams. The biofilter wetland design incorporates trails and waypoints to guide visitors through the site and educational signage was designed, fabricated and installed.

**Boy Scouts****Awarded \$5,000****Pine Hills Scout Reservation Wetland Restoration**

The Boy Scouts will enhance approximately 2 acres of palustrine-forested wetlands and 0.5 acres of upland within the Pine Hills Scout Reservation in Pine Hills Borough, Camden County, New Jersey.

**Rancocas Minigrant Program****Woodford Cedar Run Wildlife Refuge****Awarded \$3,600****Water, Water Everywhere but Not a Drop to Spare**

Developing an in-school watershed education program for grades 4-8, incorporating EnviroScape, a Sand-Tank Groundwater Flow Model and other hands-on materials. In addition, a Teacher In-service Program will be presented at the Refuge in the spring of 2001, with emphasis on watershed and water-related science content.

**Rancocas Watershed Association****Awarded \$5,000****“The Inceptor”: Stormwater Runoff Control**

The RWA is analyzing “The Inceptor” for its effective potential use in a parking lot, on a highway and near a farm in the hopes to prove that it can be used to reduce the pollutant loading from stormwater runoff.

**Omni Environmental Corp./Mt. Holly Township.****Awarded \$5,000**

Educational trails and signage are being designed and constructed to provide visitors to Woolman Lake with the opportunity to explore a biofilter wetland area and learn about the need for treating storm water before it enters our lakes and streams. The biofilter wetland design will incorporate trails and way points to guide visitors through the site and educational signage will be designed, fabricated and installed.

**Woodford Cedar Run Wildlife Refuge****Awarded \$5,000****Water Conservation: Every Drop Counts**

The Refuge is producing a 12-page booklet about water and watershed conservation and mail it to all 9,000 homes in Medford Township. A classroom guide will also be produced for the 310 teachers in Medford's four elementary schools and middle school to help them use the booklet effectively with their students.

**New Brandywine Environmental****Awarded \$4,998.85****Pemberton Township Lake Management Program**

This grant is funding the initial chemical and physical monitoring of the six municipally owned lakes. Using the funds provided, New Brandywine Environmental will purchase and dedicate to the Township, a Secchi disc and Horiba U-10 Water Quality Checker capable of in-situ measurements to 10 meters for pH, Dissolved Oxygen, Conductivity, Turbidity, Temperature, and Salinity. Biweekly sampling events shall be performed by Township public works personnel, and the results reported to the DPE, NJDEP, and WMA 19 PAC.

**Appendix 2: The following is a summary of the Partnership Development Activity from January 3 to December 31, 2001.**

**Partnership for the Delaware Estuary Grant Writing - Development Activity**

**Non DELEP Grant Money Committed between January 3, 2000 and December 31, 2001**

<u>Source</u>	<u>Program</u>	<u>Committed</u>
NJ DEP	Ecotourism - Cohansey	\$10,000
NJ DEP	Camden Stenciling	\$10,000
ANJEC	DELEP Minigrant Report	\$4,500
State of Delaware	2000 General Operating and Programming	\$50,000
State of Delaware	2001 General Operating and Programming	\$50,000
City of Wilmington	NPS Education Program	\$2,553
New Castle Conservation District	Corporate Environmental Stewardship	\$25,000
Delaware DNREC	2000 Institute	\$3,000
PA Coastal Zone Management	Environmental Stewardship Program	\$30,400
Philadelphia Water Department	Stormwater CAC 2000	\$100,000
PA DEP Growing Greener	PA CESP	\$95,431
PA DEP Growing Greener	2000 & 2001 Institute	\$21,534
PA DEP Growing Greener	2001 Stenciling - Philadelphia	\$33,035
PA DEP Growing Greener	Estuary Video	\$34,560
USEPA - NEP	Build-out Analysis - Cohansey Watershed	\$35,000
USEPA II - Regional Geographic Initiative	Rancocas Creek	\$50,000
USEPA II - Regional Geographic Initiative	Crosswicks Creek	\$50,000
PSEG	2000 Institute	\$5,500
League of Women Voter's - WREN	Estuary Traveling Display	\$2,810
William Penn Foundation	General Operating and Programming	\$245,300
Delaware Tourism Office	Ecotourism - St. Jones	\$3,750
Conectiv	2001 Institute	\$2,500
PSEG Services Corp.	2001 Institute	\$7,000
Five Star Restoration Challenge Grant		\$10,000
DuPont Edgemoor Plant	School Yard Habitat Restoration	\$5,000
Delaware Community Foundation		\$2,000
U.S. EPA Region II - RA Priority	NJ CESP	\$20,000
NJ DEP	NJ CESP	\$25,000
NJ DEP	2000 Teachers Institute	\$5,000
NJ DEP	2001 Teachers Institute	\$5,000
U.S. EPA Region II	Crosswicks Creek Minigrant Program	\$50,000
PA DEP Growing Greener	Clean Water Partners	\$72,283
Philadelphia Water Department	Educational Programming 2001	\$150,000
PA Coastal Zone Management	PA Coast Ecotourism Brochure	\$9,734
PA Coastal Zone Management	PA Coast Day 2002	\$19,349
PA Coastal Zone Management	Teachers Institute/Schoolyard Habitat	\$25,000
U.S. EPA Region II	Rte. 130 Smart Growth Index Pilot	\$12,500
Marmot Foundation	Schoolyard Habitat	\$10,000
Visteon Corporation	Sense of Place Habitat Projects	\$3,000
USFWS	Education and Habitat restoration	41,000
Connective	Teacher Institute	2,500

<b>TOTAL</b>	<b>\$1,339,239</b>
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**Requests Pending as of December 31, 2001**

ALICO	General Operating and Program Support	\$59,200
Delaware River Port Authority	General Operating and Program Support	\$229,127
U.S. EPA Headquarters	Municipal Stenciling	\$54,361
PSEG Services Corp.	2002 Teachers Institute	\$7,000
U.S. EPA Region II	Schoolyard Habitat	<u>\$23,026</u>

<b>TOTAL</b>	<b>\$372,714</b>
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**Proposals Not Funded between January 3, 2000 and December 31, 2001**

Chase Manhattan Bank	2000 Institute	\$5,000
Environmental Endowment for NJ	2000 Institute	\$10,000
Claneil Foundation	2000 Institute	\$12,205
USEPA Region II - Enviro. Ed. Grant		\$19,241
Beneficia Foundation	2000 Institute	\$10,000
DE Grant-in-Aid	General Operating and Program Support	\$81,200
Samuel S. Fels Fund	2000 Institute	\$5,000
USEPA Region III - RA Priority Program		\$50,000
NJDEP Sec. 319	NJ Lower Del. Enviro. Stewardship Pgm.	\$82,460
PA DEP Growing Greener	Website	\$9,929
DuPont	2001 Institute	\$5,000
U.S. EPA - Water Quality Agreement		\$19,647
Wilmington Trust Company	2001 Institute	\$3,000
Laffey-McHugh Foundation	General Operating and Program Support	\$20,000
Welfare Foundation	2002 Delaware Storm Drain Marking	\$63,445
The Prospect Hill Foundation	General Operating and Program Support	\$10,000
Arguild Foundation	2001 Institute	\$3,000
Greenfield Foundation	2001 Institute	\$5,000
Claneil Foundation	2001 Institute	\$5,000
Genuardi's Family Foundation	General Operating and Program Support	\$5,000
PG&E	Classroom Education	<u>\$4,164</u>

<b>TOTAL</b>	<b>\$428,291</b>
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**Appendix: 3**

**Pennsylvania Coastal Zone  
Management Program  
Projects Addressing DELEP  
Action Items**

**FFY 1999**

**Grant**

**July 1, 1996 To June 30, 1998**

**January 29,  
2002**

Project Tasks	Contr.	Title	Federal	DEP Match	Contract Match	Total Cost
No						
1	CCDC	Barry Site Expansion Study and Design	\$12,000.00	\$0.00	\$14,297.30	\$26,297.30
2	PANS	Educational Boat Tours	\$29,881.26	\$0.00	\$41,647.71	\$71,528.97
3	MVBBC	Flood Levee Improvements	\$17,373.50	\$0.00	\$17,737.50	\$35,111.00
4	BBBC	Riverfront Park Improvements	\$25,000.00	\$0.00	\$25,478.96	\$50,478.96
5	SRDC	Schuylkill Recreational Facility	\$15,000.00	\$0.00	\$22,112.00	\$37,112.00
6	PDE	Stormwater Stenciling Initiative	\$29,909.56	\$0.00	\$138,847.51	\$168,757.07
7	PADOT	CZs Wetland Mon Update - Aerial Photos	\$0.00	\$2,426.54	\$0.00	\$2,426.54
8	ALS	Restoration Video, Workshops & Planting Guide	\$51,000.00	\$0.00	\$0.00	\$51,000.00
9	HC	Riparian Buffer Assessment	\$68,000.00	\$0.00	\$0.00	\$68,000.00
10	DEP	CNPP - Stormwater Management	\$0.00	\$0.00	\$68,000.00	\$68,000.00
11	HC	Riparian Buffer Assessment	\$38,000.00	\$0.00	\$0.00	\$38,000.00
			<b>\$286,164.32</b>	<b>\$2,426.54</b>	<b>\$328,120.98</b>	<b>\$616,711.84</b>

**Pennsylvania Coastal Zone  
Management Program  
Projects Addressing DELEP  
Action Items**

**FFY 2000**

**Grant**

**January 29,  
2002**

**October 1, 2000 To March, 31,  
2002**

Project Tasks Contr. No	Title	Federal	DEP Match	Contract Match	Total Cost
12 MHBDC	Market Square Park Expansion Study	\$8,000.00	\$0.00	\$8,000.00	\$16,000.00
13 PDE	Corporate Stewardship Initiative	\$26,050.00	\$0.00	\$27,125.00	\$53,175.00
14 BBBC	Otter Creek Plan	\$15,000.00	\$0.00	\$15,000.00	\$30,000.00
15 PEC	Recreational Site and Wetland Identification Study	\$20,437.93	\$0.00	\$20,260.35	\$40,698.28
16 FPC	Bartam's Garden Dock Construction	\$50,000.00	\$0.00	\$210,000.00	\$260,000.00
17 PADOT	DECZ Monitoring Overflights	\$9,090.00	\$0.00	\$0.00	\$9,090.00
18 PADOT	CZs Wetland Mon Update - Aerial Photos	\$0.00	\$4,292.37	\$0.00	\$4,292.37
19 SER0	Fish Inventory Equipment	\$0.00	\$4,331.00	\$8,775.00	\$13,106.00
20 PH&MC	Pennsbury Manor Visitor Center Exhibit Plan	\$50,000.00	\$0.00	\$65,875.00	\$115,875.00
21 HC	Riparian Buffer Assessment	\$47,000.00	\$0.00	\$0.00	\$47,000.00
22 HC	Riparian Buffer Promotion	\$53,000.00	\$0.00	\$16,485.00	\$69,485.00
23 DEP	CNPCP - Stormwater Management	\$0.00	\$0.00	\$36,515.00	\$36,515.00
		<b>\$278,577.93</b>	<b>\$8,623.37</b>	<b>\$408,035.35</b>	<b>\$695,236.65</b>

**Pennsylvania Coastal Zone Management  
Program**

**Projects Addressing DELEP Action Items  
FFY 2001 Grant**

January 29,  
2002

**October 1, 2001 To March, 31, 2003**

Project Tasks			Federal	DEP Match	Contract Match	Total Cost
No.	Contr.	Title				
24	BBBC	Radcliffe Street Access Design	\$10,000.00	\$0.00	\$10,000.00	\$20,000.00
25	BCDPR	Silver Lake Observation Platform	\$25,000.00	\$0.00	\$28,000.00	\$53,000.00
26	PDE	Coastal Promotions	\$29,083.00	\$0.00	\$31,194.00	\$60,277.00
27	MHBDC	Market Square Park Improvements, Part 1	\$100,000.00	\$0.00	\$171,153.00	\$271,153.00
28	BCPC	Otter Creek Wetland Design	\$76,000.00	\$0.00	\$76,000.00	\$152,000.00
29	SRDV	Dock Study For Schuylkill River Park	\$30,000.00	\$0.00	\$45,000.00	\$75,000.00
30	PRPA	Coastal Waterway Freight Analysis	\$40,000.00	\$0.00	\$51,330.00	\$91,330.00
31	SERO	Regional Facility Survey	\$10,312.00	\$0.00	\$11,880.00	\$22,192.00
32	CZM	CZs Wetland Mon Update - Aerial Photos	\$0.00	\$5,000.00	\$0.00	\$5,000.00
33	PDE	Teachers Education Program	\$25,000.00	\$0.00	\$0.00	\$25,000.00
34	ALS	2002 Schuylkill Watershed Congress	\$10,000.00	\$0.00	\$10,000.00	\$20,000.00
35	DVC	Watershed Assessment and Restoration Plan	\$47,000.00	\$0.00	\$0.00	\$47,000.00
36	DRBC	PCB Characterization Study	\$186,000.00	\$0.00	\$186,000.00	\$372,000.00
37	HC	NPS Education For Municipal Officials	\$49,967.00	\$0.00	\$84,395.00	\$134,362.00
38	DVC	Watershed Sampling and Outreach	\$71,033.00	\$0.00	\$36,605.00	\$107,638.00
			<b>\$709,395.00</b>	<b>\$5,000.00</b>	<b>\$741,557.00</b>	<b>\$1,455,952.00</b>

<b>Grand Total DELEP Related Project 1999, 2000 and 2001</b>	<b>\$1,274,137.25</b>	<b>\$16,049.91</b>	<b>\$1,477,713.33</b>	<b>\$2,767,900.4</b>
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## **DELEP Implementation Streamline Report 2001**

### **ATTACHMENTS**

1. **MOA - Roles and Responsibilities**
2. **1999, 2000, 2001**  
**Work Plans**  
**Annual Reports**
3. **GPRAs 1996-2000 & 1/01 - 09/30/01**
4. **Flowing Towards The Future, 21<sup>st</sup> Century Visions and Direction for the Delaware River and its Watershed.**
5. **Indicators Report**
6. **DELEP 3 Year Plan**
7. **Monitoring Report**
8. **Monitoring Matrix**
9. **Samples of DELEP Tracking Database**

**A sampling of materials produced by The Partnership for the Delaware Estuary, Inc. has also been included for review.**

**MEMORANDUM OF AGREEMENT**  
**Regarding Roles and Responsibilities of the Parties listed below in the**  
**Delaware Estuary Program**

**THE STATE OF DELAWARE**  
**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL**  
**AND**  
**THE STATE OF NEW JERSEY**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**AND**  
**THE COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**AND**  
**THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**AND**  
**THE PARTNERSHIP FOR THE DELAWARE ESTUARY PROGRAM, INC.**  
**AND**  
**THE DELAWARE RIVER BASIN COMMISSION**

This Memorandum of Agreement entered into this 25<sup>th</sup> day of June 2001, by and among the states of Delaware, New Jersey, and the Commonwealth of Pennsylvania, along with the United States Environmental Protection Agency, the Partnership for the Delaware Estuary, Inc. and the Delaware River Basin Commission ("parties") shall outline the Roles and Responsibilities as part of the Delaware Estuary Program (DELEP).

The Establishment of clear Roles and Responsibilities is necessary due to the all encompassing nature of the Comprehensive Conservation Management Plan ("Plan") and the networked structure of DELEP.

The parties of this Memorandum of Agreement set forth the following as terms and conditions of their agreement:

**All Parties**

The Parties shall provide support toward the implementation of the Plan through participation and support of implementation efforts. These efforts shall include but not be limited to the following:

1. Serve as active members of the Steering Committee, the Estuary Implementation Committee (EIC) and the EIC Work Group.
2. Foster active partnerships among existing organizations to promote Plan implementation.
3. Coordinate responsibilities and seek resources to continue implementation and support efforts.
4. Streamline and identify priority action areas to achieve "on the ground" implementation to enhance the Estuary's resources.

## **Role and Responsibilities of the Lead State**

As stated in Chapter XI of the Plan, Implementing the CCMP, each State will serve as chair of the Steering Committee and the Estuary Implementation Committee (EIC) on an annual rotating basis.

## **Roles and Responsibilities of the Delaware Estuary Program Office**

The Delaware Estuary Program Office ("Program Office"), headed by a Program Director, shall direct and manage all aspects of DELEP on a daily basis. The Program Office reports directly to the Executive Director of the Delaware River Basin Commission (DRBC). Specific roles of the Program Office include:

1. Directs and has responsibility for overall progress on CCMP implementation within the available budgetary resources and tracks progress.
2. Develops annual and three-year priorities, budget and work plan in consultation with Implementation Teams and other identified implementing partners and recommends identified team priorities to the EIC for its consideration and recommendation to the Steering Committee.
3. Develops, in conjunction with the EIC, an annual program schedule for the EIC and Implementation Teams.
4. Prepares and submits the triennial review, the annual budget, work plan and grant application to EPA Region III with the concurrence of the EIC and approved by the Steering Committee.
5. Serves as the point of contact for the Delaware Estuary Program.
6. Composes letters and correspondence on behalf of DELEP.
7. Provides all logistical support (i.e. location, agendas, minutes) for the Steering Committee, EIC and EIC Work Group meetings.
8. Chairs the EIC Work Group.
9. Maintains an archive of all Program Documents.
10. Maintains the DELEP calendar and schedule on [delep.org](http://delep.org).
11. Identifies and pursues resources to implement the CCMP.
12. Prepares other documents requested from EPA headquarters (such as Government Performance Results Act requirements).
13. Prepares monthly program updates for EIC and Steering Committee.

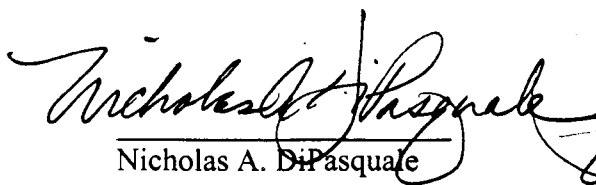
## **Roles and Responsibilities of the EIC Work Group**

The EIC Work Group is composed of representatives from the signatory Parties. The roles of the EIC Work Group shall include but not be limited to the following:

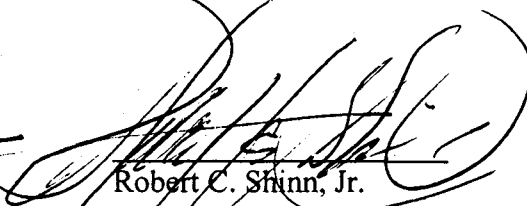
1. Assists Program Office in preparing an annual budget, an annual work plan, a triennial review and a three year budget and plan.
2. Assists Program Office in preparing other documents requested from EPA headquarters (such as Government Performance Results Act requirements).

7. Conduct an annual performance evaluation of the Program Director with input from the Steering Committee and the EIC.

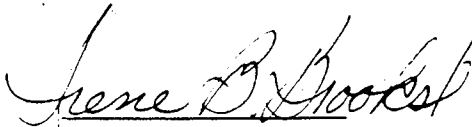
The parties hereby acknowledge the foregoing as the terms and conditions of this agreement.



Nicholas A. DiPasquale  
Secretary  
Delaware Department of Natural  
Resources and Environmental



Robert C. Shinn, Jr.  
Commissioner  
New Jersey Department of Environmental  
Protection



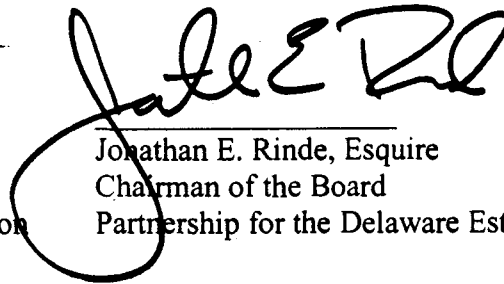
Irene Brooks  
Executive Director  
Office for River Basin Cooperation  
Commonwealth of Pennsylvania  
Department of Environmental Protection



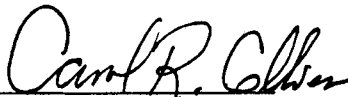
William J. Muszyński  
Acting Regional Administrator  
United States Environmental Protection  
Agency Region II



Thomas C. Voltaggio  
Acting Regional Administrator  
United States Environmental Protection  
Agency Region III



Jonathan E. Rinde, Esquire  
Chairman of the Board  
Partnership for the Delaware Estuary, Inc.



Carol R. Collier  
Executive Director  
Delaware River Basin Commission





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

Forsyth Kineon  
Delaware Estuary Program Director  
Delaware River Basin Commission  
P.O. Box 7360  
25 State Police Drive  
West Trenton, New Jersey 08628-0360

JUL 13 2001

Dear Ms. Kineon:

This letter is being sent to acknowledge the receipt of the Delaware Estuary Program (DELEP) work plan. I would like to thank you and the State of Delaware for taking the lead on the organization and submission of this plan. We will forward a copy to our Headquarters office for their files.

The summary of some of the past year's accomplishments demonstrates the progress being made toward the implementation of the action items in the DELEP Comprehensive Conservation and Management Plan (CCMP). The activities to be implemented in the upcoming year will continue the environmental gains being made by DELEP.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Voltaggio", is written over a horizontal line.

Thomas C. Voltaggio  
Acting Regional Administrator

cc: Darrel D. Brown, USEPA Headquarters  
William J. Muszynski, USEPA Region II  
Nicholas A. DiPasquale, DNREC  
Irene B. Brooks, PADEP  
Robert C. Shinn, Jr., NJDEP  
Jonathan Rinde, Partnership for the Delaware Estuary, Inc.



**FINAL**  
**FY02 WORK PLAN**  
**FOR THE**  
**DELAWARE ESTUARY PROGRAM (DELEP)**  
*June 29, 2001*

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## I. INTRODUCTION

The Delaware Estuary Program (DELEP) is in its fifth year of implementation. Through the collaborative efforts and coordinated authorities of its participants, DELEP continues to expand its role to implement the *Comprehensive Conservation and Management Plan for the Delaware Estuary (CCMP)*. In this role, DELEP acts as a forum, a source of information; a leader in providing a regional watershed focus; and a resource of incentives that encourage actions toward the implementation of the CCMP throughout the Delaware Estuary Region.

In 1989, during the development of the CCMP, five goals were established. These goals are as follows:

- *Provide for the restoration of living resources of the Delaware Estuary and protect their habitats and ecological relationships for future generations;*
- *Reduce and control point and nonpoint sources of pollution, particularly toxic pollution and nutrient enrichment, to attain the water quality conditions necessary to support abundant and diverse living resources in the Delaware Estuary;*
- *Manage water allocations within the Delaware Estuary to protect public water supplies and maintain ecological conditions in the Delaware Estuary for living resources;*
- *Manage economic growth of the Delaware Estuary in accordance with the goal of restoring and protecting the living resources of the Delaware Estuary; and*
- *Promote greater public understanding of the Delaware Estuary and greater participation in decisions and programs affecting the Delaware Estuary.*

Specifically, the CCMP consists of goals, objectives, and 77 Actions Items organized into the following seven program areas:

- Land Management (Actions L1-L18)
- Water Use Management (Actions W1-W12)
- Habitat and Living Resources (Actions H1-H10)
- Toxics (Actions T1-T6)
- Education and Involvement (Actions E1-E23)
- Monitoring (Actions M1-M6)
- Regional Information Management Service (Actions R1-R2)

The Action Items continue to be achieved through activities supported by DELEP's Implementation Teams and Advisory Committees and through a cooperative network of interagency-based programming. Through this collaborative effort, DELEP continues to implement the CCMP in support of the five DELEP goals.

In 1999, the Program prioritized several issues of central and crosscutting concern for

implementation by DELEP over a five-year period (FY00-05). The priorities are:

- Polychlorinated Byphenols (PCBs)
- Habitat Restoration
- Fish Consumption Advisories
- Horseshoe Crabs
- Watersheds
- Indicators

A three-year action plan to implement the CCMP action items associated with these priorities was accepted by the Steering Committee on February 2, 2001.

## **II. FY02 PLANS for CCMP IMPLEMENTATION**

The sections below include the FY02 Budget Summary, the FY02 Project Summaries (Funded Projects), and the FY02 Project Summaries (Unfunded Projects). The project descriptions in the Unfunded Projects section were included as examples to elaborate on the magnitude of the funding challenges facing DELEP.

### **A. FY02 Budget Summary**

#### **AVAILABLE FUNDING**

<b>USEPA 104(b)(3) Funds</b>	<b>\$ 330,000</b>
Base funding	\$ 300,000
EPA Supplemental funding	\$ 20,000
Travel	\$ 10,000
<b>Delaware River Basin Commission</b>	<b>\$ 466,265</b>
<b>States</b>	<b>\$ 1,071,500</b>
<b>Partnership</b>	<b>\$ 160,308</b>
<b>EPA</b>	<b>\$ 304,000</b>
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<b>Total Funds Available</b>	<b>\$ 2,332,073</b>

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<b>Non-federal Match Required</b>	<b>\$ 330,000</b>
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<b>Non-federal Match</b>	<b>\$ 344,871</b>
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**Notes: See DELEP Funding Allocations Spreadsheet for additional information.**

# FINAL DELEP BUDGET

(6/29/01)

## FUNDING ALLOCATIONS

FY2002

PROJECTS	Request	Remaining Needed	Sources of Funding									
			EPA	EPA	EPA II	EPA III	DRBC	Partner-	DE	NJ	PA	Total
			[NEP]	Travel & Supplemental				ship				Funds Available
<b>Program Office:</b>												
Program Lead	138,230	-	98,230				40,000				138,230	
Work Plans, Budgets and Program Reviews	43,830	-	43,830					-			43,830	
Special Projects	32,096	-	8,511	8,000			15,585				32,096	
Supervision	9,600	-					9,600				9,600	
Travel	4,000	-		4,000							4,000	
ANEP and CSO Dues	1,700	-					1,700				1,700	
Total	229,456	-	150,571	12,000	-	-	66,885	-	-	-	229,456	
<b>Education/Outreach</b>												
PPIT Lead	17,000	-	17,000								17,000	
800 Telephone Line	15,000	-	13,000					2,000			15,000	
DELEP Mailing List	6,600	-	6,600								6,600	
Estuary News	55,000	-	55,000								55,000	
Minigrants	59,982	-	35,000					24,982			59,982	
Education/Outreach for DELEP Goals	20,000	20,000									-	
Development and Communications	72,326	-	20,000					52,326			72,326	
Public Information Materials	16,000	13,171	2,829								2,829	
Teacher Training Institute	30,000	-							5,000	25,000	30,000	
NEP Travel Funds	5,000	-		5,000							5,000	
Total	296,908	33,171	149,429	5,000	-	-	-	79,308	-	5,000	25,000	263,737
<b>Environmental Indicators</b>												
Indicator Report Printing	6,000	-	-					6,000			6,000	
Indicator Report Advertising	15,000	-						15,000			15,000	
State of the Estuary Report	30,000	30,000									-	
Total	51,000	30,000	-		-	-	-	21,000	-	-	-	21,000
<b>SUB TOTAL</b>												
	577,364	63,171	300,000	17,000	-	-	66,885	100,308	-	5,000	25,000	514,193

# FINAL DELEP BUDGET

(6/29/01)

## FUNDING ALLOCATIONS

FY2002

PROJECTS	Request	Remaining Needed	Sources of Funding									
				EPA								Total
			EPA [NEP]	Travel & Supplemental	EPA II	EPA III	DRBC	Partner-ship	DE	NJ	PA	Funds Available
Information Management:												
Web Page	35,222	7,416		3,259	-	-	5,871	-	15,000	3,676		27,806
Tracking	11,741	5,000		6,741	-	-			-			6,741
Map Server	17,611	-			-		11,907	-	-	5,704	-	17,611
IMAC Support	17,611	-					17,611					17,611
GIS	11,741	-					11,741					11,741
Graphics	2,935	-					2,935					2,935
Special Projects	20,547	17,612	-		-		2,935	-	-		-	2,935
Supervision	15,464	-					15,464					15,464
Travel	1,000	-		1,000								1,000
Total	133,872	30,028	-	11,000	-	-	68,464	-	15,000	9,380	-	103,844
Monitoring:												
MAC Support	11,642	-					11,642					11,642
Coordination of Monitoring in the Estuary	40,745	-			-		40,745		-			40,745
Monitoring Report/ State of the Estuary	29,104	-					29,104					29,104
Special Projects	34,925	-			-		34,925		-		-	34,925
Special Monitoring	15,000	-			-		15,000	-	-		-	15,000
Boat Run Partial Expansion	16,620	-	-		6,000		-	-	-	10,620	-	16,620
Supervision and Committee Involvement	13,000	-	-		-		13,000		-		-	13,000
Pesticide Survey	27,700	27,700	-	-		-	-	-		g	-	-
Reproduce Scientific Characterization	7,000	-	-							7,000		7,000
Travel	3,500	-					3,500					3,500
Total	199,236	27,700	-		6,000	-	147,916	-	-	17,620	-	171,536
PCB Project*												
Monitor Concentrations of PCBs in Living Resource	163,500	-					17,000			146,500		163,500
Characterize and Assess Concentrations of PCBs	932,556	235,556				70,000	66,000		275,000	100,000	186,000	697,000
Determine Fate and Transport of PCBs	800,000	625,000				85,000	90,000					175,000
Develop an Implementation Plan to Reduce PCBs	285,000	128,000			10,000	100,000	10,000		5,000	10,000	22,000	157,000
Air Deposition Monitoring (3 stations)	216,000	-								216,000		216,000
Total	2,397,056	988,556	-	-	10,000	255,000	183,000	-	280,000	472,500	208,000	1,408,500
SUB TOTAL	2,730,164	1,046,284	-	11,000	16,000	255,000	399,380	-	295,000	499,500	208,000	1,683,880

# FINAL DELEP BUDGET

(6/29/01)

## FUNDING ALLOCATIONS

FY2002

PROJECTS		Request	Remaining Needed	Sources of Funding											Total Funds Available	
				EPA [NEP]	EPA Travel & Supplemental	EPA II	EPA III	DRBC	Partner-ship	DE	NJ	PA				
Habitat Projects																
Corporate Environmental Stewardship		85,000	-	-	-	-	-	60,000	-	-	25,000	-	-	-	-	85,000
Wetlands Habitat Identification Projects		44,000	-	-	-	-	33,000	-	-	11000	-	-	-	-	-	44,000
Oyster Management Plan		80,000	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Fish Ladders		200,000	200,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Phragmites Workshop		2,000	-	-	2,000	-	-	-	-	-	-	-	-	-	-	2,000
Total		411,000	280,000	-	2,000	-	33,000	-	60,000	11,000	25,000	-	-	-	-	131,000
Fish Consumption Advisories																
Field and Lab Studies		25,000	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		25,000	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Watersheds																
Technology Seminars		10,000	7,000	-	-	-	-	-	-	-	3,000	-	-	-	-	3,000
Total		10,000	7,000	-	-	-	-	-	-	-	3,000	-	-	-	-	3,000
Sub-Total (this page)																
Sub-Total (from 2nd page)		446,000	312,000	-	2,000	-	33,000	-	60,000	11,000	28,000	-	-	-	-	134,000
Sub-Total (from 1st page)		2,730,164	1,046,284	-	11,000	16,000	255,000	399,380	-	295,000	499,500	208,000	1,683,880	-	-	-
T O T A L		3,753,528	1,421,455	300,000	30,000	16,000	288,000	466,265	160,308	306,000	532,500	233,000	2,332,073	-	-	-

\* There are many partners in the PCB process who have obligated substantial funds and are exploring more funds. An assumption has been made that if most of these funds become available, the requested PCB projects will be funded. There is an application in for \$412,083 to PA Growing Greener, and \$225,000 to EPA Region II. This is a total of \$637,083.

## **B. FY02 Project Summary (Funded Projects)**

Below are summaries of the activities DELEP will fund in FY02 as outlined in the Funding Allocation. For FY02, NEP funds will be used in their entirety to support the first two items: the newly established Delaware Estuary Program Office, and outreach and education efforts. The Delaware River Basin Commission (DRBC), the States, the Environmental Protection Agency (EPA), the Partnership for the Delaware Estuary, Inc. (Partnership) and others will contribute to indicators, information management, monitoring, PCB efforts, habitat restoration projects, fish consumption advisories and watershed seminars.

### **1. PROGRAM OFFICE**

The Delaware Estuary Program Office ("Program Office") is composed of a Program Director an Assistant and a half-time secretary. The Office shall direct and manage all aspects of DELEP on a daily basis. The Program Office reports directly to the Executive Director of DRBC. The Program Office and its Director have responsibility for overall progress on CCMP implementation and tracking this progress.

Specific products include:

- Work plans
- Budgets
- Program Reviews
- Data input for tracking projects

Additionally, oversight of special projects directed toward implementation include:

- The Environmental Indicators Workshop
- The State of the Estuary Report
- The Oyster Blue Ribbon Panel and subsequent Oyster Management Plan
- The Pursuit of grants
- The Habitat Prioritization, and Habitat Projects Compilation
- The Habitat Management Plan
- The Estuary Virtual Tour

See attached "Roles and Responsibilities" paper for more specific roles of the Program Office.

### **2. OUTREACH AND EDUCATION**

The Partnership for the Delaware Estuary, Inc. continues to provide the following services:

- Leading the Public Participation Implementation Team (PPIT)
- Maintaining the DELEP 800 Number
- Expanding and Maintaining the DELEP's Mailing List – currently at 24,700 names
- Publishing the quarterly DELEP Newsletter, *Estuary News*
- Providing and Managing DELEP Minigrants

### Development and Communications Support

The Partnership will implement the following three initiatives to enhance the development and outreach efforts of DELEP:

- To distribute one public service announcement (PSA) per month, which will be sent to print and electronic media, to promote DELEP/Partnership publications, such as the Indicator's Report, HHW Study, ecotourism brochures, *Living Resources*, etc.
- To continue the PCB outreach effort with the DELEP partners by identifying funding sources and preparing a proposal to educate the public about PCBs, their risks, and steps to protect human health. Specifically, this proposal would target recreational and subsistence fishermen who appear to be at the greatest risk to PCBs.
- To determine the cost, content specifics, coordination of developing document, and method of distribution for publishing a *State of the Estuary Report*. Once this information is gathered, the Partnership will pursue the funding to produce this report. At the same time, the Partnership will attempt to obtain a commitment from newspapers such as the Philadelphia Inquirer, The News Journal, and the Courier Times to assist in its distribution.

In addition, the Partnership will continue its general fundraising efforts to implement Action Items in the CCMP. Funding support for this work is being provided by The William Penn Foundation and is part of the Partnership's match.

### DELEP Public Information Materials/Events

In FY02, the Partnership, on behalf of DELEP will, for the third year, work with the Philadelphia Water Department to plan a display for the Philadelphia Flower Show, which takes place annually in March. The Partnership will also participate in some high visibility environmental events and celebrations that are held across the region. In the past these have included Coast Day in Delaware, Earth Day in Philadelphia, and Bay Day in New Jersey.

### Teacher Institute

In July '02, the Partnership will hold the 6<sup>th</sup> annual Delaware Estuary Teacher Institute. During the Institute, 20 – 30 teachers, from across the Estuary region, participate in a week-long program. During the week, teachers travel to places in PA, NJ, and DE where they will participate in a mixture of classroom and field experiences. These experiences provide the participants with a greater understanding of the wide variety of resource use issues within the Estuary and the interconnections between human actions and Estuary ecosystems. Upon completion of the Institute, participants become part of a regional network of educators, who motivate and support each other to provide Estuary education.

## 3. INDICATORS

### Indicators Workshop

DELEP is planning a workshop to verify the initial set of Estuary Environmental Indicators and to develop new indicators that will either indicate trends in the Estuary or indicate progress towards measurable goals that will be developed by the EIC. In addition, there will be an opportunity to determine if any additional parameters should be measured and if DELEP can assist in pursuing any additional funding needs.

#### 4. INFORMATION MANAGEMENT

##### Web Page

The DELEP web site includes: information on scientific characteristics of the Estuary, the Delaware Estuary Program teams, ongoing events, downloadable newsletters, an interactive calendar, electronic versions of videos and photographs. Efforts will continue to expand the DELEP web page, and the PPIT and the Program Office will seek alternatives to find the best method to present information. It is planned to expand the number and content of the electronic versions of videos. Funding in FY02 for the web site is currently at 80% of what is needed, thus limiting the growth and expansion of estuary related information. Sufficient funds are available to cover web-hosting fees.

Some of the following work elements are also web related. The work products for most of these activities will proceed as planned.

##### Tracking/Compendium

The tracking database is designed to incorporate the CCMP with the Compendium of Estuary Activities. The Regional Information Management Service (RIMS) will continue to maintain the tracking database. The RIMS coordinator will provide additional fields as they are needed and facilitate how new data will be entered into the database. Further, the RIMS coordinator will work with the New Jersey Office of Information Technology to make sure that the format and method of reports meet the Program's needs. The goal is to provide a means to enter sufficient information into the database by the end of the fiscal year to demonstrate that progress can be tracked.

##### Interactive Mapping

The Interactive Mapping System incorporates geo-referenced information through a map based point and click system. The RIMS coordinator will actively improve and update the interactive mapping feature on the web site. The newly formed Information Management Advisory Committee (IMAC) could be coordinating this effort with a goal of having consistent base layers for the entire Basin. This effort requires coordination with a number of state and federal agencies, gathering the data and determining the best methods for posting this information. For more about interactive mapping see the following section on IMAC.

##### Information Management Advisory Committee

The RIMS Coordinator will provide staff support to the Information Management Advisory Committee (IMAC). IMAC coordinates with all members to gather a set of base layers to use on an Information Management System. At the same time, the IMAC will be looking to determine the best methods for presenting the data. Key to this is the location of the data and catering it to the needs of the Basin community. Each of the four states already has a clearinghouse for GIS data. The IMAC will consider the need for a unified clearinghouse of information and exactly how to distribute this information.

The RIMS Coordinator will maintain, create, distribute and post the minutes from the IMAC meetings, and from any sub-group meetings. The RIMS coordinator will also respond to the decisions of the IMAC committee, gathering information or data and addressing issues in response



to requests.

#### Geographic Information System

An integral part of the Internet Mapping Server is the ability to link data so it can be associated with a map. The RIMS Coordinator has the skills to prepare GIS maps for the IMS. In addition, he prepares maps for other uses such as the Partnership web page and for local governments and the public. The maps will be prepared as needed.

#### Graphic Support

Various outreach activities and the web sites require graphics to be prepared. Among these have been maps, brochures, reports, etc. It is expected that requests for this type of information will continue. This effort will only receive partial funding; thus some activities may be reduced or substantially curtailed. Graphics will be prepared as needed.

#### Special Projects

Special projects supported in the past included: assistance in the preparation of the Monitoring Report, newsletters, graphics for the Indicators Report, and brochures for PCB workshops and others. This effort will only receive partial funding. Thus, some activities may be reduced or substantially curtailed.

### 5. MONITORING

#### Monitoring Advisory Committee Support

The Monitoring Coordinator will provide staff support for the Monitoring Advisory Committee (MAC) including maintaining, creating, distributing and posting the minutes from the meetings, and from any sub-group meetings.

#### Coordination of Monitoring in the Estuary

The Monitoring Coordinator, based upon data availability, will continue to compile and evaluate data for all major tributaries into the Estuary during the grant year. Additionally, the Coordinator will:

- Compile an indicator map for fishable/swimmable uses.
- Evaluate data from the 1999 Maurice & Cohansey River REMAP Study (when available).
- Evaluate data from the Coastal 2000 Study.
- Prepare maps, in coordination with the respective state health officials, which present non-compliance areas for levels of total and fecal coliforms and enterococcus bacterial levels.
- Update the Basin Monitoring Matrix to include volunteer monitoring efforts.

#### State of the Estuary Report

The Monitoring Coordinator will work jointly with the PPIT and the MAC to develop a DELEP State of the Estuary Report. (See description of report on page 9)

#### Special Projects

Data will be provided to track measurable goals and indicators. Data will also be provided to satisfy information requests from the regulated community, advisory committees, government

entities, and the public. The EPA STORET database will be updated with DRBC data.

#### Special Monitoring

Water quality sampling will be conducted near Trenton, New Jersey and in the Lower Delaware Bay (4 additional stations will be sampled 7 times during 2001 and 2002).

#### Boat Run Partial Expansion

DRBC and Delaware's Department of Natural Resources and Environmental Control (DNREC) currently sample eighteen stations from Fieldsboro, New Jersey to Port Mahon Delaware for routine bacteria, heavy metals, nutrients, and conventional pollutants fifteen times per year. The minimal plan in the CCMP suggests the addition of four new stations; one upstream of Fieldsboro near Trenton, and three below Port Mahon to the mouth of the Delaware Bay. The three down bay stations were added on an interim basis for five periods in 1999. The remaining need is to implement these four stations at a frequency of fifteen times per year. As part of this work plan, there will be a partial expansion which will include lab samples plus the use of EPA Region II's helicopter.

#### Reproduce Scientific Characterization

The Scientific Characterization of the Delaware Estuary was last published in limited quantities in 1996. In response to strong demand, 500 copies will be made.

### 6. PCB EFFORTS

The PCB effort is being undertaken to support DELEP's goal to achieve water quality standards and to eliminate fish advisories in the Delaware Estuary. The DRBC has taken the lead on development of PCB TMDLs on behalf of the Estuary states. This is in response to the court ordered settlement with a completion date of 2003. The effort is a multi-year, multi-phased project that involves monitoring, inventories, mapping, modeling, a plan for reducing loadings, a TMDL, and public workshops. DELEP's role is to aid DRBC in the timely completion of the TMDL and to facilitate implementation of reductions in PCB pollution through public education.

The attached draft PCB Strategy (Appendix C.) gives more insight as to specific activities and long-term budget needs. All of the activities outlined in the strategy will be important to achieve the TMDL target date and the reduction or elimination of fish advisories. Therefore, funding will be sought for the remaining needs.

### 7. HABITAT PROJECTS

#### Corporate Environmental Stewardship Program

The Partnership will take the lead in continuing to strengthen corporate and business participation and commitment to habitat protection through the Corporate Environmental Stewardship Program, which is a voluntary habitat enhancement programs for industrial and commercial private property.

## 8. WATERSHEDS

### Technology Seminars

One seminar will be funded to educate the public on a means to control non-point source pollution. New Jersey Department of Environmental Protection (NJEDP) is taking the lead on and funding this project. The initial theme selected is fecal coliform impacts from geese populations. It has been shown that public outreach on the issue of non-point source pollution is crucial to alleviating the problem.

### **C. FY02 Project Summary (Unfunded Projects)**

The following projects have not yet received funding in FY02 due to the prioritization of other projects.

#### 1. EDUCATION and OUTREACH

##### Education and Outreach for DELEP Goals

Materials produced and distributed in support of Implementation of DELEP Goals. These materials are produced by the PPIT to participate in opportunities to promote/educate the public on their portions of the Program's priority action items.

##### Public Information Materials

Develop new outreach and educational materials to make people aware of the Delaware Estuary, its resources, how we impact water quality and efforts to restore the Estuary.

This item also funds the Partnership to represent the Program at events.

#### 2. ENVIRONMENTAL INDICATORS

##### State of the Estuary Report

The Partnership is looking for funds to print and distribute a 20-page report on the health of the Estuary targeted toward the general public and natural resource managers.

#### 3. MONITORING

##### Pesticide Survey

The occurrence of estrogenic pesticides is only recently beginning to be reported in the aquatic environment. Many can be persistent, bioaccumulative and toxic to aquatic organisms. Action T5.2 of the CCMP for the Delaware Estuary calls for additional monitoring to fill data gaps. At the present time, we have no information regarding these pesticides in the aquatic environment of the Delaware Estuary. The proposal is to provide for the initial collection and analysis of twelve water samples collected coincident with the current DRBC Chronic Toxicity Survey Program. These samples are to be collected consistent with previous toxicity testing performed by the Delaware River Basin Commission.

#### 4. PCB PROJECTS

As mentioned above, please see the attached PCB Strategy (Appendix C.) for specific information on remaining needs for the PCB effort. These numbers are continually changing due to funds being allocated by various organizations at different times.

#### 5. HABITAT PROJECTS

##### Oyster Management Plan

Create and compile an oyster management plan based upon the recommendations of the Oyster Blue Ribbon Panel.

##### Fish Ladders

Anadromous fish populations are a fraction of historic levels and can benefit from increased access to breeding and nursery habitat. An objective of the Program is to remove at least two barriers to anadromous fish passage annually.

#### 6. FISH CONSUMPTION ADVISORIES

##### Field and Lab Studies

Procedures will be developed for uniform and comparable collection and analysis methods to assure adequate analysis and quality control (QA/QC) as agreed upon by the Implementation Team. Procedures will be peer reviewed. Field and Lab studies will be a portion of this exercise.

#### 7. WATERSHEDS

##### Technology Seminars

Two seminars in addition to the seminar described earlier, to educate the public on means to control non-point source pollution. One potential theme is transportation and development of road systems.

### **III. FY01 CCMP IMPLEMENTATION**

CCMP implementation reflects the dedication of the agencies and residents in the Basin to incorporate protection of the Delaware Estuary into actions at all levels, from the education of children to the actions of federal, state, and local governments to those of business and industry.

#### **A. FY01-FY02 DELEP Priorities:**

In 1999, through a managers retreat to focus the Program's resources, the Estuary Implementation Committee prioritized several issues of central and crosscutting concern for implementation by DELEP over 5 years (FY00-05). The Priorities to be addressed are:

- Polychlorinated Byphenols (PCBs) in the Estuary
- Habitat restoration

- Fish consumption advisories
- Horseshoe crabs
- Watersheds
- Indicators

A 3-year action plan for implementing the CCMP action items associated with these priorities was accepted by the Steering Committee on February 2, 2001.

Below are the background, objectives and goals associated with each of the priorities.

### *1. PCBs: ACTION T5*

**Background:** The lack of comprehensive and reliable information concerning the sources of PCBs to the Estuary and the associated transport pathways has hampered mitigation of the problem. A study conducted by DRBC in 1996-1997 focused on two classes of potential sources to the Delaware Estuary; namely, wastewater treatment plants and tributaries. The results of separate dry weather and wet weather sampling events indicated that wastewater treatment plants and tributaries discharging to the tidal Delaware River are active and significant sources of PCBs to the system.

**Goal:** To achieve the water quality standards and eliminate fish consumption advisories for PCBs for Zones 2, 3, 4 and 5 of the tidal Delaware River ("The Delaware Estuary") specified by DRBC. Achieving the PCB standards will eliminate the necessity for advisories limiting consumption of fish and shellfish caught in the Estuary, and protect the health of humans and the living resources using the Estuary.

**Objectives:** Determine the water quality targets for the TMDLs; Characterize PCB concentrations in the Estuary ecosystem; Identify and quantify sources and pathways of PCBs; Determine transport and fate of PCB loads within the Delaware Estuary; Establish TMDLs & allocations for sources (point and non-point); Develop an Implementation plan to reduce PCBs entering the Estuary; Increase environmental awareness of toxicity issues in the Estuary; Monitor long-term concentrations of PCBs in air, water and sediments of the Estuary; and Monitor long-term concentrations and impacts to living resources of the Estuary.

### *2. HABITAT RESTORATION: ACTION H3*

**Background:** Habitat restoration, protection and enhancement are of extreme importance within the Delaware Estuary.

**Goal:** To determine target areas for habitat restoration and partner with citizens, business and industry, and government agencies to complete restorations.

**Objectives:** Develop priority areas to target for restorations; map priority habitat areas for restoration; work with state programs to preserve and restore targeted areas; partner with business and industry through the Corporate Environmental Stewardship Program; work with

local governments and private organizations through mini-grant programs; enhance aquatic habitats through creating fish passages, removing dams and restoring oyster beds.

### 3. FISH CONSUMPTION ADVISORIES: ACTION T6

Background: Currently, different collection, analysis methods and risk assessment procedures are used by the Estuary states in establishing fish consumption advisories. The DRBC and DNREC have initiated a project to assemble chemical contamination data since 1990 for the Delaware Estuary and identify obstacles toward making fish advisory information more consistent for interstate waters. This project will be completed and a report will be issued by fall, 2001.

Goal: To establish uniform or compatible fish collection and analysis procedures, and compatible fish assessment and reporting for the Delaware Estuary.

Objectives: Development of a procedure for uniform or comparable collection and analysis method; discussion of health risk procedures and recommended options for consumption advisories; assessments of health risk; and coordination of risk communications.

### 4. HORSESHOE CRABS: ACTIONS H1, H2, H9

Background: The horseshoe crab is part of the delicate web of life in the Estuary. Its presence is not only important as part of the food chain, but, also as a bio-medical resource and a tourist attraction.

Goal: To maintain a healthy and abundant population of horseshoe crabs in the Delaware Estuary.

Objectives: Support of Horseshoe Crab monitoring and habitat enhancement.

### 5. WATERSHEDS:

Background: The Delaware Estuary is home to dozens of local watershed organizations that are working hard to improve the environment. One observation heard at the Flowing Toward the Future workshops and conference held in 1999 was that local watershed organizations would benefit from better communication between watershed groups. The Watershed Implementation Team (WIT) was created in response to this workshop the Delaware Estuary Program's desire to coordinate state and federal agency watershed planning efforts.

Goal: To provide helpful information to watershed communities on Best Management Practices related to watershed problems, such as eutrophication.

Objectives: The WIT will focus on providing a technology seminar series to the DELEP watershed communities. The seminars will be on specific topics of interest to local governments and watershed organizations. In addition to presentations on the selected topics, seminar participants will receive fact sheets, guidance materials and other information necessary for them

to immediately take action. The results of interest surveys of seminar participants will determine future seminar topics.

## 6. INDICATORS:

Background: The DELEP partners and specific implementation teams have discussed the need for environmental indicators for several years. In the past year, there was a stronger push to communicate the available DELEP information to the public. Indicators and a State of the Estuary Report are both good avenues for communicating this information.

Goal: To provide scientifically credible and user-friendly indicators for communication of the status and trends towards measurable goals in the Estuary.

Objectives: Produce environmental indicators; hold an indicators workshop; produce a State of the Estuary Report.

## B. FY01 DELEP Highlights

Throughout FY01, DELEP has exhibited strong programmatic leadership through various activities. Details of these accomplishments are provided below.

### 1. INDICATORS

The first Delaware Estuary Environmental Indicators Report is now available. This report was produced through the cooperation of several federal, state, local and non-profit agencies. The purpose of this report is to inform the public and environmental managers about the health of the Estuary. This report contains information on indicators for which data was readily available. Over the next year, DELEP will improve and update current indicators, and identify new indicators to assess the environmental health of the Estuary. The next step will be an Estuary Indicators Workshop that will be held within the year.

### 2. MONITORING

#### Coastal 2000 Activity in Delaware Bay

Sampling of water, sediment and fish tissue at 38 locations in the Bay and tributaries commenced in August of 2000 and will continue for 38 additional stations during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of FY01. Analysis of the field and laboratory data will begin as this information is received.

#### Monitoring Matrix

The Monitoring Matrix includes a listing of environmental studies in the Delaware River Basin. The monitoring matrix has continued to undergo development to incorporate information on volunteer monitoring efforts, new government initiatives and the identification of ways to create a more consistent methodology of analytical methods.

### Monitoring Advisory Committee

The MAC was formed this year. A key agenda item for the MAC has been the next monitoring report. The committee will review Basin monitoring activities related to water resource management, develop recommendations for improved monitoring, enhance coordination between monitoring parties, and assist in the implementation of a comprehensive monitoring plan for the Basin. Current activities include exploring how to make the EPA STORET data collection system function better, reviewing EPA nutrient criteria, and recommending monitoring data that needs to be collected to manage nutrients.

### Data Collection/Evaluation

Bacteriological data for all major tributaries into the Estuary continued to be compiled during the FY01 to compile an indicator that maps fishable/swimmable uses.

Nutrient data from a number of sources continued to be identified and evaluated during FY01. The nutrient data for the period 1990 - 2000 has been evaluated and a discussion of this information will be included in the next monitoring report if recommended by the MAC. This is an identified Clean Water Action Plan (CWAP) priority item.

In the 4<sup>th</sup> quarter of FY01 the Monitoring Coordinator anticipates (subject to data availability) to evaluate data from the 1999 Maurice & Cohansey River REMAP Study, as well as preliminary data from the Coastal 2000 Study. During the 1<sup>st</sup> quarter of FY01 the Monitoring Coordinator has piggybacked additional analysis for 81 PCB Congeners in 27 finfish samples collected in the Delaware Estuary under Coastal 2000 resulting in substantial savings to the Program.

### Monitoring Report

The Monitoring Report was released as a final Report in July 2000. The report synthesized and integrated data received prior to 1999, in addition to responding to comments from the EIC.

Before the end of the 1<sup>st</sup> quarter of FY01, this report was made available in a downloadable file on both the DRBC and DELEP websites.

The previous report period proposed moving toward a Monitoring Report prepared in a two-year (biannual) cycle to provide for greater data synthesis and evaluation over the current yearly time frame. This new cycle would also provide for an enhanced ability to coordinate with State programs, and reduce redundancy.

### Special Monitoring Opportunities

The FY2001 Special Monitoring Opportunities budget of \$15,000 were used for sampling the Lower Delaware Bay to the mouth and near Trenton, NJ (four additional stations sampled seven times during 2001).

### Public Health

The following activities are ongoing public health related activities being pursued in 2001:

- Coordinate the development of systematic shellfish closure information for the Bay;
- Complete updates in FY01 as appropriate;



- Present mapping based upon shellfish and fishing closure areas on DELEP and DRBC web pages;
- Identify and prepare appropriate mapping materials, in coordination with the respective State health officials, which present non-compliance areas within the Delaware River Basin for levels of total and fecal coliforms and enterococcus bacterial levels;
- Facilitate the dissemination of information supporting the above activities; and
- Develop acceptable levels for bacteria and nutrients in the Delaware River Basin for use in criteria development.

### 3. HABITAT AND LIVING RESOURCES

#### Habitat and Living Resources Implementation Team

See section entitled "Organizational Changes" on page 19, Section 6 for an update on the Habitat and Living Resources Implementation Team

#### Delaware Estuary Program Wetlands Program Improvements

The purpose of this project is to enhance the Delaware Estuary Program wetland's program and the wetlands themselves. The following deliverables are being developed:

- A process by which wetlands and other habitat can be evaluated and prioritized;
- A database matching projects, funds and funding sources for wetlands; and
- A process by which to monitor losses and gains to critical wetlands habitat.

These products could be inputs to an Estuary Habitat Restoration Plan. The grant participants are seeking a contractor to complete the work.

#### On the Ground Activities

During the past year, the Partnership for the Delaware Estuary, Inc. has coordinated the following programs that have involved the implementation of habitat and living resources implementation Action Items:

- Delaware Estuary Corporate Environmental Stewardship Program (CESP) -The Partnership has hired a staff person to coordinate their habitat enhancement initiatives. Since that time, the CESP has been successful in identifying many corporate partners across the region.
  - A. To date, the CESP has made commitments to three wetlands and habitat enhancement demonstration projects. These sites are Williams-Transco in Frazer, PA; the Philadelphia Water Department's Southwest Sewage Treatment Plant in Philadelphia, PA; and DuPont, Edgemoor in Wilmington, DE. These three projects will each receive \$5,000 in demonstration grants that the companies will match at a minimum of 25%. Many of the corporations mentioned above will be moving into the demonstration phase over the next several months. The goal of the three-year CESP is to implement nine demonstration projects. Several other potential demonstration sites have been identified and are being explored, including PSE&G in New Jersey and AstraZeneca in Delaware.
  - B. As part of the CESP, the Partnership along with the Philadelphia Water Department and

the U.S. Fish and Wildlife Service's Delaware Estuary Office sponsored exhibits at the 2000 and 2001 Philadelphia Flower Shows. (Note: DELEP contributed funding toward the printing of the exhibit's brochure and was credited on this publication.) The exhibits entitled "Habitat Can Be Anywhere" and "You Too Can Be A Great Gardener" featured the demonstration project at the Southwest Sewage Treatment Plant and conservation landscaping practices. More than 300,000 people visit the Flower Show each year.

- C. The Partnership has also been actively working to raise additional dollars to establish CESP as an ongoing initiative. They are in the process of working with the Wildlife Habitat Council to develop a strategic plan to identify long-term funding mechanisms CESP. Thus far, the Partnership has secured a \$50,000 Pennsylvania Growing Greener Grant to support CESP activities in the Estuary region of the Commonwealth over the next year. Two workshops were held to identify corporations in Pennsylvania that are interested in participating in CESP.
- In January 2001, DELEP awarded a new round of minigrants that included several habitat enhancement projects. Descriptions of these projects are provided under "Education" in Appendix B.
- Maurice/Cohansey Minigrant Program - Under this minigrant program, funding was provided for the following three habitat enhancement projects:
  - A. New Jersey Oyster Project where 4,000 bushels of oysters were used to re-establish oyster stocks in Back Creek and Nantuxent Creek.
  - B. The Aquaculture Development Corporation used readily available Delaware Bay seed oyster resources to restore seedbeds in the Cohansey River.
  - C. Natural Lands Trust assisted Down Township Elementary School, Lakeside Middle School, and Myron Powell Elementary School in the creation of wildsites on their school properties.
- Sense of Place Project - Based on the Sense of Place minigrant project that was coordinated by the Natural Lands Trust as described above, the Partnership has received a Pennsylvania Coastal Zone Management grant to work with schools and other institutions to develop habitat awareness and enhancement projects on their properties. Working closely with the US Fish and Wildlife Service and several other partners, three workshops were held to get people thinking about how they can better manage their land and to identify a minimum of five demonstration projects. Technical assistance and demonstration dollars will be available to support these projects.

#### 4. TOXICS/WATER QUALITY

Chlorinated organic compounds, such as PCBs, chlordane and DDT have been found in the tissue of fish and shellfish in the Delaware Estuary. This problem has resulted in fish

consumption advisories for the entire Delaware Estuary. In addition to the human health risks posed to individuals who consume contaminated fish, PCBs also represent an ecological risk to wildlife and aquatic biota in the Estuary, particularly sediment-dwelling organisms. Elevated levels of PCBs, DDT and its metabolites, and chlordane have been detected in peregrine falcon eggs from the Delaware Estuary (Jarman et al., 1993). Chlorinated pesticides appear to adversely affect populations of birds of prey (raptors) in the Delaware Estuary. Although more study is needed, there is evidence that eggshell thinning due to toxic substances is continuing to affect the stability of raptor populations.

#### The PCB Strategy

In order to address the issue of PCBs in the Estuary, the Delaware Estuary Program has drafted a PCB Strategy. The goal of this strategy is to ensure that the DRBC water quality standards for Total PCBs for Zones 2, 3, 4 and 5 of the tidal Delaware River ("the Delaware Estuary") are achieved. Achieving these standards will ensure that the health of humans and living resources using the Estuary are protected and eliminate the necessity for advisories limiting consumption of fish and shellfish caught Estuary. This strategy includes six major elements designed to establish Total Maximum Daily Loads (TMDLs) for Total PCBs including allocations for point and non-point sources, and a margin of safety by September 30, 2003. (For more information on each of these activities, see the attached PCB Strategy. A general description is provided below.)

#### Status of Expert Panel

An expert panel has been formed as a first step toward formulation and development of a PCB model for the Delaware Estuary. These six individuals are national/international experts on various aspects of PCB modeling such as sediment and atmospheric deposition. The panel has met several times to begin working on the design of the model.

The PCB model will be used to establish the maximum acceptable loading of PCBs to the various segments of the Estuary and allocate this loading to point and non-point sources. It will also be used to assess a range of PCB control alternatives in order to evaluate their effectiveness in achieving water quality standards that protect human health and aquatic life, and eliminate the Fish Consumption Advisories.

#### Status of PCB trackdown pilot study in selected municipal sewage collection systems

Although much additional work is needed to identify and quantify all sources of PCBs to the Estuary, it was proposed that the Program immediately initiate efforts to reduce the PCB loadings from the major sewage treatment plants while the comprehensive loading information and a comprehensive PCB strategy is being finalized. The study will identify potential/actual sources of PCBs entering the sewer system and begin to implement load reduction measures using a variety of approaches including education/outreach, pollution prevention and regulation. The results and techniques developed in this pilot study will be shared with the other major STPs to assist in their load reduction activities. The cities of Camden, Philadelphia and Wilmington have agreed to develop preliminary work plans outlining how they will conduct the track downs in their systems.

### Status of Air Deposition Research

The Toxics Advisory Committee (TAC) is currently investigating various sources of PCBs to the Estuary. Steven Eisenreich of Rutgers University made a presentation on air deposition of PCBs at the 12/13/00 TAC meeting. Dr. Eisenreich has made several conclusions based on his data, including the fact that the majority of the PCBs in the atmosphere are coming from local sources.

Three public workshops were held to explore the sources, risks, unknowns, and potential actions to address PCBs in the Delaware Estuary. A panel of experts will address the risks to human health, the impacts on fish and wildlife, the regulatory steps, and the strategies being used to reduce PCBs in the environment. These workshops were designed to educate the public about the toxic nature of PCBs and what is being done to reduce and eliminate their impact.

The workshops were offered in all three states in the Estuary. Total attendance from all three workshops was approximately 200.

## 5. INFORMATION MANAGEMENT

The DELEP website continues to be maintained and updated. This includes updates to ongoing events, downloadable newsletters, and an interactive calendar. The website has been completely redesigned to be more user friendly, and geared to the Internet user. One of the most recent improvements to the Estuary publications list includes links to available electronic publications.

### Interactive Mapping

Two new projects were added to the interactive map server this year, one is a watershed information network, and the other real time stream flows. The watershed information network map allows users to click on a specific sub-Basin within their area (which is linked to EPA's enviro-mapper) and then get a variety of information about that sub-Basin. The other IMS project gives the user real time stream flows at USGS gage stations across the Delaware River Basin. The newly formed IMAC will be coordinating other geographical data that can be added to the IMS.

### Tracking/Compendium

The tracking database continues to be fine-tuned. The newest item added to the tracking database is a reporting feature that allows users to create customized reports. There are four methods to produce a report; by action item, by project or management plans, by lead agency, or by a global search on the database.

### Graphics Support

During FY01 the Information Services Technician produced two information sheets; one on PCB's and the other on TMDL's. Both information sheets were used at the PCB public meetings and are currently displayed on the DRBC's kiosk.

## 6. ORGANIZATIONAL CHANGES

Several organizational changes have occurred within DELEP over the past year. A short

description of each change follows.

#### Program Office

On February 2, 2001 the Steering Committee agreed that a Program Office be created on July 1, 2001, or before. A Program Director, an Assistant, and a shared secretary will staff this Program Office. The Assistant will be taking over the administrative functions presently performed by the Lead State. Such tasks include minutes from meetings, compiling inputs for work plans, the annual budget and the triennial review. Other tasks will be assigned as needed and time permitting.

#### Monitoring Advisory Committee

The Monitoring Implementation Team was replaced by the MAC. It was felt that an advisory committee with official appointees would garner more support and participation from the partners and operate more effectively. The MAC is advisory to both DRBC and DELEP. This change was made with the idea of reinvigorating the monitoring component of the Estuary by creating a more formal structure. The first meeting on the MAC was in September of 2000.

The MAC includes one member from each of the four Delaware River Basin states (DE, NJ, NY, PA) and one member from each of the following: US Environmental Protection Agency (EPA); USGS; US Army Corps of Engineers (Corps); NOAA; National Park Service; Academia; Agriculture (NRCS) / Forest Service; Delaware River Basin Fish & Wildlife Cooperative; Volunteer Monitoring; Regulated Community; and the Land Use Planning Community.

Activities of the MAC include: review of Basin monitoring activities related to water resource management; development of recommendations for improved monitoring; enhancement of coordination between monitoring parties; assistance in the implementation of a comprehensive monitoring plan for the Basin and the development of a monitoring report.

#### Information Management Advisory Committee

The Regional Information Management Service Implementation Team was replaced by the IMAC. IMAC was created by a combination of: recommendations that RIMS expand Basin-wide as outlined in the CCMP (action R2), the *Flowing Toward the Future* recommendations, and by a recommendation of the Team Leader for RIMS. IMAC will explore many areas of information management including creating similar data sets across state boundaries and a Basin-wide clearinghouse. The IMAC is advisory to both the DRBC and DELEP.

#### The Habitat and Living Resources Team

The Habitat and Living Resources Team is seeking a new team leader due to personnel changes at the US Fish and Wildlife Service.

#### Watershed Implementation Team

DELEP has reorganized the Watershed Implementation Team. This team was created to increase outreach to local watershed organizations and to provide them with the tools and resources the need to effectively implement elements of the CCMP at the local level. The team is now focused on providing technical support via workshops for watershed organizations, non-governmental

entities and local governments.

## 7. FLOWING TOWARD THE FUTURE (FtF)

In 1999, the Delaware Estuary Program and others convened *Flowing Toward the Future*, a visioning and direction-setting process for the entire 13,539 square mile Delaware River Basin. The three-step process consisted of 1) stakeholder workshops; 2) a Governor's Summit; and 3) a watershed-wide conference. Among the products of *Flowing Toward the Future* were the report *A 21st Century Vision and Directions for the Delaware River and its Watersheds* and a compilation of the 28 existing regional plans covering the Delaware River. The process also resulted in a mandate from the Basin governors and three federal agencies for the Delaware River Basin Commission to develop a Basin-wide Regional Information Management Service and a new Basin-wide comprehensive water resources plan. A Watershed Advisory Council (Council) was develop to assist in the comprehensive water resources plan. The Council, including members from a broad spectrum of stakeholder interests, held its inaugural meeting in January 2001. Over the next two-and-one-half years, the Council will work closely with the Commission's advisory committees and new ad hoc committees to study water supply, flow needs and other issues and to identify water management goals and recommend a course for attaining them. Further information about this FTTF process can be found at: ([http://www.state.nj.us/drbc/flowing\\_future.htm](http://www.state.nj.us/drbc/flowing_future.htm)), (<http://www.state.nj.us/drbc/Res99-23.htm>) and (<http://www.state.nj.us/drbc/Res2000-6.htm>).

## 8. EDUCATION/OUTREACH

The Partnership for the Delaware Estuary, Inc. continues to both promote the Delaware Estuary as a regional resource through public outreach and education and to identify external sources of funding for DELEP. In FY01, the following projects were led or implemented by the Partnership.

### Development and Communications

In January 2000, the Partnership hired its first Development and Communications Director. The objectives of this position are to develop a public relations strategy and outreach materials, to assist in establishing relationships with organizations across the Estuary, to raise programmatic and unrestricted funding from a variety of sources, and to provide support for existing and planned activities on behalf of the Partnership for the Delaware Estuary, Inc.

Over the past year, the following was accomplished:

- 32 proposals were submitted to corporations, foundations, and government agencies requesting programming and operational support
- 21 proposals were funded, totaling \$549,420
- 7 are pending, totaling \$58,927

Several additional grant opportunities will be pursued in Spring, 2001

Other Selected Outreach highlights included:

- Experience the Estuary Event 2000, 2001
- Partnership for the Delaware Estuary Activity Report
- the DELEP Brochure and DELEP folder
- Cohansey Watershed Ecotourism Brochure
- Stenciling tip cards and other printed materials
- Delaware Estuary Video
- Member of Steering Committee for Delaware River Sojourn 2000, 2001
- Sojourn 2001 – organizing Cohansey and Maurice River Trips
- Coordinated Cohansey River Trip to kick-off the ecotourism brochure
- Philadelphia Storm Drain Stenciling Activities (orientation and supply distribution)
- 2000 Teachers Institute
- Poster Contest Selection and Awards Ceremony

### Minigrants

In January 2001, \$35,000 in minigrants were awarded to 12 organizations. These minigrants are supporting projects listed in Appendix B:

In addition to the \$20,000 allocated by DELEP to fund minigrants, the Partnership was successful in raising an additional \$15,000 of minigrant funds through a grant from The William Penn Foundation. This grant will also increase the funds available for the DELEP FY '02 minigrant program by \$15,000. The Partnership has also received funding from William Penn to identify other sources of funding that will enable us to continue expanding the dollars available for distribution through the minigrant program.

### Newsletter

The Partnership continues to publish and mail four issues (per year) of the DELEP newsletter, Estuary News. Currently, the Estuary News is distributed to 27,000 interested parties throughout the Delaware Estuary including DELEP's mailing list of over 24,500 individuals. Over the past six months the newsletter has expanded in size from 12 to 16 pages. The Partnership's staff works with the PPIT on editorial content, layout, design, and distribution. This activity supports implementation of Action E1.

## **C. FY01 Lessons Learned**

In order for the Program to become more successful, DELEP has identified the following Program areas that could receive increased attention, based upon the EPA response letter to the Biennial Review. Below is a summary of the actions taken in these areas for the past fiscal year and anticipated actions for the upcoming fiscal year.

### **1. STAKEHOLDER INVOLVEMENT**

DELEP's stakeholder involvement has traditionally included outreach mechanisms such as the annual coordinating conferences, Implementation Teams, and other meetings (which are open to the public) and the efforts of the Public Participation Implementation Team (PPIT), which

provides outreach and education to the public.

DELEP will always focus its efforts on the Estuary but Basin-wide coordination and outreach is needed for the future health of the Estuary.

DELEP has engaged in the following activities, which have increased its visibility and outreach capacity:

PCB workshops:

(See description under highlights)

Flowing Toward the Future:

DELEP has a continuing association with the Flowing Toward the Future (FttF) consortium. It is envisioned that DELEP will participate in a follow-up watershed-wide conference in two to three years with the FttF consortium. In the meantime, DELEP continues to coordinate with the FttF consortium on issues such as Basin-wide planning (WAC), sustainability, Basin-wide GIS coverage (IMAC) and environmental education.

Monitoring/Indicators Workshop:

It was anticipated that DELEP would organize and host a "Good Science" symposium by Fall of 2000 or early Spring of 2001. Due to other pressing concerns and to the development of Environmental Indicators for the Delaware Estuary, it was subsequently decided by the Program that a Monitoring/Indicators' workshop would be more effective at a later time. DELEP is currently coordinating with Battelle (EPA's contractor) to organize this conference, which is tentatively scheduled for Fall 2001. The audience for and participants in this workshop are still being decided upon. (See Indicators Section below).

Watershed Implementation Team:

Focus on Watersheds is one of the Program's priorities. By focusing on the efforts of watershed organizations actively involved with preserving and protecting the Delaware River Estuary and Basin, and striving to empower their progress, many more stakeholders will be involved and partnerships developed. It is at this level of development that DELEP intends to garner and maintain active local citizen involvement and participation in the goals and visions of the Program. The activity of the WIT will add a much-needed breadth and dimension to the DELEP's current level of stakeholder involvement.

Partnership's Director of Development

Additionally, DELEP funding for the Partnership for the Delaware Estuary's Director of Development has increased the Partnership's ability to do outreach and education. (See Section 8 of FY01 Highlights.)

## 2. LAND USE

Land use issues were identified in the DELEP CCMP as important throughout the Estuary, and were repeatedly identified as very important throughout the Basin by participants engaged in the



FTTF process. Regulations and approaches to land use differ in every locality making a consolidated estuary or watershed-wide effort an extremely difficult task. Therefore, it is believed that activities which produce even small steps toward the eventual coordination of land use issues across the Basin are helpful are the best course of action. Therefore, DELEP sees the following activities as supporting the call for better and more coordinated land use Basin-wide.

#### Watershed Advisory Council

DRBC, with DELEP participation, has formed a Watershed Advisory Council, which will address, among other things, watershed management policies and recommendations for the enhancement of environmentally sound economic development as well as the new Basin comprehensive water resources plan. Both of these issues are intricately tied to land use issues.

The eventual coordination of land use efforts across the Basin depends heavily on understanding the terrain. Therefore, GIS coverage for the Basin (not just the Estuary) is essential. Easy access to GIS information from a centralized location to facilitate communication and mutual understanding was a goal of the DELEP-funded expansion of RIMS.

#### Information Management Advisory Committee

This year, based on recommendations contained in the Flowing Toward the Future Directions Report, "Recommended Actions" and based on the "unfinished agenda" recommendations for outreach to the upper watershed in the CCMP, the Delaware River Basin Commission passed a resolution on March 7, 2000 to set up an Information Management Advisory Council. This Council was created to handle a variety of technical issues, one of which is to standardize geographical information across the four-state region. The Council's first meeting was on February 1, 2001. The Council realized that there is a significant variety of geographical data with an equal amount of ways the data are kept. The coordination of data in a simplified method would enable users across the Estuary, Basin, nation or world to download and analyze for use in a variety of applications. GIS data shared on a Basin-wide scale is essential for viewing the impacts of growth and development, degradation of natural resources and improvements in habitats, etc. The creation of a shared understanding of what is happening in the watershed among its inhabitants is essential to the formation of coordinated action on land use.

#### [www.delep.org](http://www.delep.org)

This year, more funding is being given to the expansion of the website. Interactive mapping tools and other web-based relational databases have been added to the website to fill gaps in existing state and federal electronic resources. Links to groups and projects related to uses and stewardship of the Delaware Estuary and river Basin, all searchable using a "point-and-click" and/or key word entry on the Internet are included on this developing website. This is an integral part of the watershed approach.

#### Flowing Toward The Future(FtF)

The FtF Consortium continues to work together to identify areas where common specific concerns regarding land use planning can bring entities in the Basin together in order to galvanize action.

#### Smart Growth Index Computer Model

DELEP is participating with the Delaware Valley Regional Planning Commission (DVRPC) and the New Jersey Office of State Planning in planning efforts surrounding the revitalization of the Route 130 corridor between Trenton and Camden, NJ. The Smart Growth Index computer model (SGI), which was provided by EPA, is being utilized in four communities in the Corridor to enable focused planning for transit-oriented development (TOD) and the promotion of neo-traditional design around the proposed station sites. This is land-use planning at the grass-roots level.

#### Corporate Environmental Stewardship Program

The Partnership has garnered significant funds for the implementation of CESP, which promotes corporate, business, and industry participation in the restoration, enhancement, and/or conservation of wetlands and associated wildlife and native plant habitats and corridors on their lands. By the end of 2001, this project will have provided demonstration grants to maximum of nine wetland and associated habitat restoration projects, totaling approximately 150 acres.

### 3. FUNDING

DELEP is aware of the lack of long-term and dependable funding for the Program other than the NEP funds and certainly recognizes that the existing and future Program suffers because of this funding shortfall.

In response to this, DELEP has developed a three-year plan identifying funding needs for priority issues in an effort to help the Program identify upcoming funding opportunities. The EIC is currently engaged in discussions that are aimed at trying to identify all possible sources for this funding. It continues to be an ongoing challenge for the DELEP.

DELEP is making some progress towards the goal of raising non-NEP funding for the implementation of the CCMP. The Partnership, in addition to performing much of DELEP's outreach and education, continues to raise funds for DELEP initiatives not funded through this work plan. In FY '00 DELEP funded the hiring of a Director of Development for the Partnership. This was done in order to free up time for the other staff members to devote to fundraising. The strategy has worked. The Partnership's budget for calendar year 2001 is over \$1 million. That is a three-fold increase in their annual operating budget since 1999.

Specifically, in 1999, the Partnership's total revenue was \$293,650. For calendar year 2000, total revenue was \$635,949 and for 2001, total revenue is projected to be \$826,399. This increase comes from a combination of funding sources including foundations, corporate and individual donations, and other non-NEP federal dollars. The Partnership reports that their approach to fundraising is more strategic than it was in the past.

### 4. INDICATORS

DELEP has long recognized the value and the need for understandable and scientifically-based indicators that would translate the vast amount of scientific data available on the Estuary into a



user-friendly format. Therefore, the Steering Committee charged DELEP with developing Indicators. At the August 1999 Retreat, the EIC chose to incorporate the development of Indicators into its list of six Priorities. Since that time, 9 Indicators have been developed and placed on the [www.delep.org](http://www.delep.org) website and published in a booklet.

The results of the tracking of these Indicators over time will show trends and will, therefore, be useful to DELEP in the formulation of future priorities. They will be instructive in sustainable resources management and in the conservation of biodiversity. These Indicators will point out existing stresses to the environment and we may be able to use them to link back to their impacts on biodiversity. They can be utilized as a planning tool for better targeting of efforts toward natural resource management and will help the Program demonstrate environmental results.

DELEP, as part of its education and outreach efforts, believes that these Indicators will not only inform the public, but, will help to generate more interest in the Estuary and the environment and will increase understanding of the impact that human activity has on the Estuary. (See Priorities section on page 10.)

## 5. TRACKING

DELEP has provided money for the development of an Internet-based database for compiling information on activities from throughout the Watershed in support of a "tracking system". This Internet-based tracking system is now functional. The system was designed to track the progress toward completion of the action items in the Comprehensive Conservation and Management Plan (CCMP). An Internet-based search routine allows users to search on projects related to specific action items. For example, a user may search on projects relating to Habitat and Living Resources, Toxics or Monitoring. The user interface to this process was simplified so users do not have to know a great deal about using a database to get some information. A function of the tracking system allows key personnel to update the database. Since early 2001 a reporting feature has been available to track the progress of projects over time. Refinements to the system are still under way.

## 6. PRIORITIZATION

Prioritization was addressed in the previous fiscal year with the identification of 6 Priorities to be acted upon over the next 5 years. (See Priorities section, page 11, for more discussion).

The development of the previously mentioned 3-Year Plan (see Funding under this Section) was based on these identified Priorities. It also addresses Infrastructure and Education/Outreach activity needs. This 3-Year Plan is a planning tool which is being used to help DELEP develop its annual work plan and budget and garner future and longer-term funding for the identified priority activities. It will be updated on an on-going basis and has been used for the first time this year in the development of the annual work plan and budget.

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## IV. APPENDICES

### A. Expenditure of FY00 Travel Funds

<u>Date</u>	<u>Meeting-Related Expenses</u>	<u>Name</u>	<u>Amount</u>
3/7/00	ANEP Mtg. Hotel	Jonathan Rinde	\$ 211.83
3/7/00	ANEP Mtg. Train	Jonathan Rinde	\$ 189.00
3/7/00	ANEP Trip Expenses	Jonathan Rinde	\$ 53.21
3/17/00	Bridge Tolls	Joe Matassino	\$ 2.00
3/17/00	Mileage to Mtg. w/Minigrant Recip.	Joe Matassino	\$ 21.96
3/17/00	ANEP Mtg. Expenses	Forsyth Kineon	\$ 57.25
3/20/00	Train to/from Workgroup Mtg.	Kathy Klein	\$ 9.00
3/20/00	Mileage to/from Train Station	Kathy Klein	\$ 2.56
3/20/00	Mileage DE Sojourn Mtg.	Joe Matassino	\$ 64.96
3/20/00	Parking DE Sojourn Mtg.	Joe Matassino	\$ 5.00
3/20/00	Tolls to Sojourn Mtg.	Joe Matassino	\$ 2.90
3/21/00	Parking for FTTF Mtg.	Joe Matassino	\$ 15.00
4/7/00	Train from Phila. Steering Comm.	Kathy Klein	\$ 4.50
4/7/00	Mileage to/from train station " "	Kathy Klein	\$ 2.56
4/7/00	Parking Steering Committee Mtg.	Jonathan Rinde	\$ 14.00
4/11/00	Mtg. at Stroud	Kathy Klein	\$ 20.47
4/11/00	Watershed Curric. Mtg. Tolls	Lisa Wool	\$ 1.00
4/11/00	Mileage Watershed Curric. Mtg.	Lisa Wool	\$ 36.80
4/14/00	Mileage to AstraXeneca Earth Day	Kathy Klein	\$ 3.90
4/18/00	Mileage to Phila. Earth Day Event	Kathy Klein	\$ 22.75
4/25/00	PEC Dinner Mileage	Lisa Wool	\$ 16.64
4/26/00	Mileage DE Sojourn Mtg.	Joe Matassino	\$ 64.96
4/26/00	Parking DE Sojourn Mtg.	Joe Matassino	\$ 5.00
4/26/00	Tolls to Sojourn Mtg.	Joe Matassino	\$ 2.90
4/29/00	Mileage to Minigrant Event	Joe Matassino	\$ 20.80
5/4/00	Mileage to Minigrant Event	Joe Matassino	\$ 22.40
5/8/00	Press Conf. Mileage	Joe Matassino	\$ 24.00
5/8/00	Press Conf. Tolls	Joe Matassino	\$ 3.00
5/9/00	EIC Mtg. Expenses	Joe Matassino	\$ 38.75
5/10/00	Mileage to Env. Career Day Mileage	Lisa Wool	\$ 21.12
5/18-20/00	NEP Finance Workshop Expenses	Joe Matassino	\$ 97.43
5/15/00	Parking PPIT Meeting	Kathy Klein	\$ 14.00
5/17/00	Horseshoe Crab Trip	Lisa Wool	\$ 48.52
5/19/00	NEP Finance Workshop	Joe Matassino	\$ 91.80
5/23/00	PADEP Workshop	Joe Matassino	\$ 55.38
5/26/00	NEP Workshop Expenses	Forsyth Kineon	\$ 260.60
5/26/00	" "	Dave Pollison	\$ 120.00
5/31/00	Train to Indicators Mtg.	Kathy Klein	\$ 9.00
5/31/00	Mileage to/from train station	Kathy Klein	\$ 2.56
6/1/00	Mileage/Tolls to DE Water Fest	Kathy Klein	\$ 40.80

6/6/00	DE Sojourn Mtg.	Joe Matassino	\$ 37.12
6/8/00	WPNJ Mtg. Mileage	Joe Matassino	\$ 48.00
6/8/00	WPNJ Mtg. Tolls	Joe Matassino	\$ 3.00
6/9/00	PPIT Retreat Mileage	Joe Matassino	\$ 33.60
6/9/00	Tolls PPIT Retreat	Joe Matassino	\$ 1.20
6/9/00	PPIT Retreat Expenses	Kathy Klein	\$ 39.98
6/15/00	WREN Workshop	Joe Matassino	\$ 50.00
6/19/00	Train to Trenton DEP Mtg.	Kathy Klein	\$ 36.00
6/21/00	Tolls to Dover Invasive Meeting	Kathy Klein	\$ 3.00
6/29/00	DNREC Mtg., Mileage & Tolls	Lisa Wool	\$ 34.60
7/6/00	Train to EIC Mtg.	Kathy Klein	\$ 8.25
7/6/00	Mileage to train station	Kathy Klein	\$ 2.56
7/7/00	PSE&G Restoration Site Visit	Kathy Klein	\$ 26.04
7/13/00	Mileage Sojourn Mtg.	Joe Matassino	\$ 37.12
7/13/00	Tolls Sojourn Mtg.	Joe Matassino	\$ 2.90
7/13/00	Parking Sojourn Mtg.	Joe Matassino	\$ 12.00
7/17/00	Institute Mileage	Kathy Klein	\$ 31.36
7/17/00	Institute Tolls	Kathy Klein	\$ 3.00
7/18/00	Parking for Institute	Kathy Klein	\$ 6.00
7/19-20/00	Institute Mileage	Kathy Klein	\$ 117.00
7/19/00	Ferry for the Institute	Kathy Klein	\$ 107.00
7/21/00	Mileage & Tolls Institute	Lisa Wool	\$ 34.36
7/21/00	Mileage, Tolls, Parking for Institute	Joe Matassino	\$ 173.92
8/1/00	Parking Tourism Mtg.	Joe Matassino	\$ 9.00
8/1/00	Tolls “ “	Joe Matassino	\$ 3.00
8/1/00	Mileage to “ “	Joe Matassino	\$ 37.12
8/2/00	Mileage to Workgroup Mtg.	Joe Matassino	\$ 37.12
8/2/00	Tolls “ “	Joe Matassino	\$ 3.00
8/29/00	Mileage Watershed Imp. Meeting	Joe Matassino	\$ 44.16
9/00	Mileage to Futures Mtg.	Joe Matassino	\$ 74.24
9/00	Tolls “ “	Joe Matassino	\$ 3.00
9/10/00	Parking PPIT Mtg.	Lisa Wool	\$ 16.00
9/10/00	Mileage PPIT Mtg.	Lisa Wool	\$ 17.28
9/11/00	Sea Grant Mtg.	Forsyth P. Kineon	\$ 16.00
9/28/00	DRBC Meeting	Ed Santoro	\$ 3.90
9/28/00	Mileage to CZM Mtg.	Kathy Klein	\$ 20.16
9/28/00	Mileage to NLT Mtg.	Kathy Klein	\$ 10.56
10/00	Mileage to Work on DELEP \$	Kathy Klein	\$ 27.20
10/00	Tolls “ “	Kathy Klein	\$ 3.00
10/00	Train to Work on DELEP Finances	Kathy Klein	\$ 9.00
10/00	Mileage to/from Train Station “ “	Kathy Klein	\$ 2.56
10/00	Train from EIC Mtg.	Kathy Klein	\$ 6.50
10/99-8/00	PPIT Travel	Partnership Staff	\$ 123.70
10/99-8/00	Estuary News Travel	Partnership Staff	\$ 4.80
10/99- 8/00	Ed. & Outreach Travel	Partnership Staff	\$ 206.32

10/3-13/00	Land Use Build Out & EIC	Forsyth P. Kineon	\$ 18.80
10/4/00	Meals Coast Day	Joe Matassino	\$ 28.00
10/4/00	Accommodations " "	Joe Matassino	\$ 85.32
10/4/00	Mileage for Coast Day	Joe Matassino	\$ 86.08
10/4/00	Tolls " "	Joe Matassino	\$ 3.40
10/11/00	Meals NEP Conf.	DRBC	\$ 45.00
10/11/00	Hotel " "	DRBC	\$ 756.00
10/11/00	Phone " "	DRBC	\$ 2.00
10/11/00	Mileage " "	DRBC	\$ 270.00
10/11/00	Tolls " "	DRBC	\$ 23.10
10/11/00	MAIA Mtg.	Ed Santoro	\$ 27.30
11/1/00	PPIT	Karl Heinicke	\$ 18.75
10/30-11/2/00	Sampling, RTAG Mtg.	Ed Santoro	\$ 53.40
11/00	Hotel Growing Greener Conf.	Joe Matassino	\$ 203.30
11/00	Car Rental " "	Joe Matassino	\$ 129.09
11/00	Gas " "	Joe Matassino	\$ 31.61
11/00	Tolls " "	Joe Matassino	\$ 1.75
11/00	Mileage Academy Mtg.	Joe Matassino	\$ 20.80
11/00	Parking " "	Joe Matassino	\$ 16.00
11/00	Mileage PPIT Mtg.	Joe Matassino	\$ 20.80
11/00	Parking " "	Joe Matassino	\$ 13.00
11/00	Mileage PPIT Mtg.	Lisa Wool	\$ 17.28
11/00	Mileage to Habitat Conf.	Jenn Porter	\$ 22.40
11/00	Mileage to NJ Press Event	Joe Matassino	\$ 38.40
11/00	Tolls " "	Joe Matassino	\$ 3.00
11/1-9/00	PPIT, CAC, Part. Board Mtg.	Forsyth P. Kineon	\$ 223.43
11/3/00	Mileage to/from train station	Kathy Klein	\$ 2.56
11/3/00	Regis. Fee for Stormwater Workshop	Kathy Klein	\$ 60.00
11/6/00	Regis. Ecotourism Workshop	Joe Matassino	\$ 72.50
11/6/00	Meals " "	Joe Matassino	\$ 58.33
11/6/00	Hotel " "	Joe Matassino	\$ 441.30
11/6/00	Car Rental " "	Joe Matassino	\$ 241.19
11/6/00	Gas " "	Joe Matassino	\$ 68.06
11/12/00	Steering Committee Mtg.	Forsyth P. Kineon	\$ 15.70
11/28-12/6/00	EIC, CESP, Mon. Rpt.	Forsyth P. Kineon	\$ 28.85
11/28-12/6/00	EIC, MR	Ed Santoro	\$ 44.80
12/14-15/00	Mini-grant review	Forsyth P. Kineon	\$ 27.25
12/20/00	Del. Tourism Mtg.	Joe Matassino	\$ 21.12
12/20/00	Sojourn Mtg.	Joe Matassino	\$ 147.32
12/28/00	Partnership and DRBC Roles Mtg.	Kathy Klein	\$ 20.56
1/9-12/01	PPIT, EIC	Karl Heinicke	\$ 24.00
1/8-1/12/01	PPIT, EIC	Forsyth P. Kineon	\$ 22.00
1/13/01	EIC Mtg., (telephone)	Ed Santoro	\$ 15.00
1/17/01	Annual ANEP Mtg	Kathy Klein	\$ 175.00
1/25/01	PPIT Meeting	Kathy Klein	\$ 7.06

1/26/01	Bob Knecht Reception	Forsyth P. Kineon	\$ 4.00
1/30/01	EIC Meeting	Joe Matassino	\$ 40.80
1/30/01	DNEER Ceremony	Joe Matassino	\$ 41.60
1/30/01	Delaware Sojourn Mtg.	Joe Matassino	\$ 37.12
2/4-2/16/01	Oyster Meeting, EIC Work Grp	Forsyth P. Kineon	\$ 31.00
2/16/01	Partnership, USFWL Mtg.	Kathy Klein	\$ 2.00
2/16/01	Oyster Mtg.	Kathy Klein	\$ 42.68
2/16/01	Work Group Mtg.	Kathy Klein	\$ 11.56
2/23/01	Biodiversity Conference	Joe Matassino	\$ 33.92
2/23/01	Steering Committee Mtg.	Joe Matassino	\$ 37.12
2/23/01	Ecotourism Conference	Joe Matassino	\$ 6.95
2/23/01	Ecotourism Conference-tolls	Joe Matassino	\$ 6.60
2/20-3/2/01	Biodiversity, Habitat RFP, EIC Mtg	Forsyth P. Kineon	\$ 86.00
3/3/01	Schulkill Monitoring Congress	Ed Santoro	\$ 35.00
3/2-3/01	Ursinus College	Ed Santoro	\$ 148.35
3/8/01	Philadelphia Flower Show	Lisa Wool	\$ 25.25
3/10-16/01	Washington-NEP meeting	Forsyth P. Kineon	\$1,017.30
3/11-15/01	NEP Conference	Forsyth P. Kineon	\$ 175.00
3/12/01	Philadelphia Flower Show	Jennifer Porter	\$ 16.00
3/13/01	Philadelphia Flower Show	Joe Matassino	\$ 33.80
3/15/01	NYC Nutrient RTAG meeting	Ed Santoro	\$ 49.30
3/20/01	Phila-Work Group	Forsyth P. Kineon	\$ 18.00
3/26/01	ANEP Meeting	Kathy Klein	\$ 787.38
3/26/01	EIC Work Group Mtg.	Kathy Klein	\$ 4.50
3/26/01	PPIT Mtg.	Lisa Wool	\$ 37.80
3/30/01	Development Mtg.	Joe Matassino	\$ 40.32
3/30/01	PCB Workshop	Joe Matassino	\$ 20.80
3/30/01	Sojourn Research	Joe Matassino	\$ 43.20
3/30/01	PCB Workshop	Joe Matassino	\$ 7.00
3/30/01	Palmyra Cove Newsletter Research	Joe Matassino	\$ 2.00
4/24-27/01	EMAP Conference	Ed Santoro	\$ 100.00
5/23-24/01	GIS Conference	Karl Heinicke	\$ 140.00
7/16-19/01	Coastal Zone 01 Conf.	Forsyth P. Kineon	\$ 350.00

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**Total \$10,308.90**



## **B. DELEP Minigrants:**

1. Lower Makefield Township was awarded \$1,500 to support their Earth Day 2001 project that will involve the purchase of native tree seedlings and preparation and printing of educational brochures to be distributed at township-wide Earth Day activities and for promotional advertising of Earth Day activities.
2. Perkiomen Watershed Conservancy was awarded \$1,500 to support their 2001 Annual Stream Cleanup of 60 miles of streambank along the Swamp, East Branch Perkiomen, Towamencin, and Perkiomen Creeks through use of 250 volunteers. They will also be creating a written inventory of stream conditions and other point and nonpoint source pollutants.
3. Old Pine Farm Natural Lands Trust was awarded \$2,800 to support their Big Timber Creek Meadow and Creek Bank Restoration Project for the restoration of 400-feet of creek bank and two acres of meadow adjacent to that site. They will enhance "Watchable Wildlife" by improving habitat and food sources and removing invasive plants that are destroying much of the native habitat in the area.
4. Ecological Research & Development Group was awarded \$5,000 to create a Web-based Interactive Time-Line dating back to the formation of the Delaware Bay, focusing exclusively on the development of the horseshoe crab spawning habitat and shallow water nurseries.
5. The Peopling of Philadelphia Collaborative was awarded \$2,860 to fund two, three-day teacher workshops addressing the environmental consequences of population growth and technological advancement in the Delaware Estuary.
6. Schuylkill Riverkeeper was awarded \$1,832 to provide technical training and to raise citizens' awareness through the 4th Annual Schuylkill Watershed Conference. The event will foster cooperation and networking with over 150 participants including individual citizens, government officials, and the private sector representatives.
7. Philadelphia Department of Recreation was awarded \$3,055 to upgrade a recreational fishing program for urban children at the Philadelphia Department of Recreation's Fish Hatchery, located in Pleasant Park on the banks of the Delaware River in Northeast Philadelphia.
8. NetworkArts was awarded \$5,000 to create an education and mosaic-making project at Penn Treaty Middle School. NetworkArts will work with the entire seventh grade to study water quality and its effect on wildlife in the Delaware Estuary. They will then create a mosaic mural depicting what they learned.
9. Berkana Center for Media and Education was awarded \$1,875 to conduct three curriculum development workshops to develop a multi-disciplinary ecosystem-based curriculum to use with public middle school students that will focus on science, conservation, and public policy issues related to the horseshoe crabs and shorebirds on the Delaware Bay.

10. Building Environmental Education Solutions (BEES) was awarded \$1,500 to design and implement a workshop that will provide training and activities for using the Hamilton-Trenton Marsh as an outdoor classroom.
11. Stroud Water Research Center was awarded \$3,078 to create classroom programs, a stormwater activity guide, and a stenciling project that will address the issue of nonpoint source pollution in the Chester-Ridley-Crum Watershed. Volunteers and students will be made aware of the connection between the storm drain and the stream, and will share this information with the community.
12. Monmouth County Planning Board was awarded \$5,000 for the placement of stream and watershed identification signs at Monmouth County-owned bridges and publication of a companion "Eco-Tips" brochure to encourage homeowners to protect stream corridors and decrease nonpoint source pollution.

## **C. Delaware Estuary PCB Strategy**

### **Problem Statement**

Polychlorinated biphenyls (PCBs) are a class of man-made compounds that were manufactured and used extensively in electrical equipment such as transformers and capacitors, paints, printing inks, pesticides, hydraulic fluids and lubricants. Although their manufacture and use was generally banned by federal regulations in the late 1970s, existing uses in electrical equipment and certain exceptions to the ban were allowed. In addition, PCBs may also be created as a by-product in certain manufacturing processes such as dye production. PCBs are hydrophobic, sorbing to organic particles such as soils and sediments and concentrating in the tissues of aquatic biota either directly or indirectly through the food chain.

PCBs are classified as a probable human carcinogen by the U.S. Environmental Protection Agency, and have also been shown to have reproductive effects, suppress the immune system, and are a possible endocrine disruption in higher animals. Starting in the late 1980s, the States of Delaware, New Jersey and Pennsylvania began issuing consumption advisories for portions of the Delaware Estuary for PCBs due to the level of PCBs observed in the tissues of resident and anadromous fish species. Advisories are currently in effect for the entire estuary from the head of tide at Trenton, NJ to the mouth of Delaware Bay. The advisories range from a no consumption recommendation for all species taken between the C&D Canal and the DE-PA border to consumption of no more than one meal per month of striped bass or white perch in Zones 2 through 4.

Section 303(d) of the federal Clean Water Act requires states to identify waters that will not meet water quality standards following implementation of technology-based controls, rank these waters in priority order, and establish Total Maximum Daily Loads or TMDLs for these waters. Each of the states have listed the Delaware Estuary as impaired by PCBs and have agreed to develop TMDLs by specified dates. The earliest date for establishing TMDLs for the Delaware Estuary is September 2003.

### **Goal**

The goal of this strategy is to achieve the water quality standards for PCBs for Zones 2, 3, 4 and 5 of the tidal Delaware River ("the Delaware Estuary") specified by the Delaware River Basin Commission (DRBC). These narrative and numerical standards are based upon the protection of human health, aquatic life or wildlife. Achieving the PCB standards will eliminate the necessity for advisories limiting consumption of fish and shellfish caught in the estuary, and protect the health of humans and the living resources using the estuary. In addition, other water quality targets such as less stringent fish consumption advisories, and sediment criteria for the beneficial use of dredged material may also be established by the Commission as interim or final targets.

### **Summary**

This strategy includes nine major elements designed to establish Total Maximum Daily Loads or TMDLs for Total PCBs including allocations for point and non-point sources, and a margin of safety by September 30, 2003, and initiate a process to identify efficient and effective programs to reduce the loadings of PCBs to the estuary to achieve the TMDLs.

TMDLs will be established for individual or combinations of zones since the water quality standards vary in the different zones of the river. The Delaware River Basin Commission will be the lead agency in this effort with advice provided by the Commission's Toxic Advisory Committee. This committee consists of