CHAPTER 10
Data Management
Plan

All streams flow into the sea,
yet the sea is never full.
To the place the streams come from,
there they return again.

—Ecclesiastes 1:7

10.1 DATA MANAGEMENT

Residents and visitors to Barnegat Bay represent many diverse interests, each of which have different information needs. These groups include but are not limited to:

- Homeowners;
- Local elected officials;
- Federal, state, and local watershed managers;
- Academia;
- Pre-college educators and students;
- Visitors and vacationers;
- Special-interest groups; and
- Business and industry.

Although substantial information exists on the ecology and resources of Barnegat Bay, much of this information is scattered, exists in many diverse forms or formats, and is not generally accessible to the groups listed above. The objective of the Data Management Action Plan for Barnegat Bay is to archive diverse data sets and make these data available in easily accessed computer format via the Internet and the Ocean County library system.

This data management system will be used to inform, guide, and improve local decision making, foster stewardship of the bay, raise environmental awareness, enrich educational programs, support the public outreach effort, and implement the Barnegat Bay CCMP. Where possible, the data management system will build upon the existing capacities of large-scale data management programs and will include historical, cultural, and socioeconomic information, as well as data on the estuary's physical and biological resources. As funding permits, the data management system will include an interactive multimedia component that enables users to access frequently updated information from remote sites.

10.2 DATA MANAGEMENT GOALS

As a result of a needs assessment, five goals for a suitable data management system for Barnegat Bay have been identified. They are:

- Develop a comprehensive database that enables user groups to readily access information that can be used to support BBNEP management goals and objectives.

- Link information management with the BBNEP public outreach effort to promote interaction among bay user groups and to disseminate information broadly.

- Manage and classify information from many sources and formats.

- Identify the equipment needs, delivery systems, personnel requirements, and a dedicated funding source that ensures broad public dissemination of Barnegat Bay information.

- Support an environmental monitoring program for assessing water quality and living resources of the bay.

10.3 SYSTEM ELEMENTS

This data management system is designed to put different types of relevant information into an accessible location for many users and, where appropriate, present users with information that describes the quality or utility of the data.

A key feature of the Barnegat Bay Information System and Resource Guide will be its capacity to provide data spatially and temporally from disparate data sets. The data system will include a data server connected to the Internet with World Wide Web access, file transfer protocol (FTP), e-mail, and bulletin boards. Local storage of data sets and programs also must be accommodated and is described in more detail on the following page:

- **World Wide Web access for the public** – The site will have links to data sets stored on a BBNEP server and to non-local data sets. The site will also have links to sites at the NJDEP, USEPA, Grant Walton Center for Remote Sensing and Spatial Analysis at Rutgers University, USGS, and Ocean County. Multimedia capacity will allow use of a full range of data visualization for both technical and non-technical users. Hot links also will be available to relevant sites, such as the BBNEP homepage.

- **Computer bulletin boards to foster information exchange** – Bulletin boards will be organized by topic, and will enable users to electronically disseminate their work on the estuary and watershed.

- **FTP** – Establishment of File Transfer Protocol (FTP) capabilities will enable easy transfer of documents and files between Internet users.

- **E-mail** – E-mail capability will permit the convenient exchange of information among users who will be able to interface with the Web site in order to communicate with the Web manager and other data sources.

- **On-line data sets and information files** – Where necessary, data sets developed during the BBNEP characterization and synthesis phase will be stored on-line.

- **Information sources index and index of on-line and off-line files** – This index will provide brief descriptions of estuary and watershed data, including the temporal and spatial ranges of data sets, information on how to obtain files, data sources, and metadata.

- **Geographic Information System (GIS)** – Geographic information on land use, land cover, water resources, and living resources will be presented in a GIS format.

- **Distributed Data System** – A distributed data system will be constructed to access data sets that have various formats and are at various locations, eliminating the need to modify the disparate formats.

10.4 NEXT STEPS

Following the completion of the final Monitoring Plan, the BBNEP STAC will hold a data management workshop to evaluate options for a long-term data management strategy. The purpose of the workshop is to gather technical input and recommendations from stakeholders. The results of the workshop will ultimately be used to fully develop and implement the data management plan, which will be contingent on appropriate funding to maintain the system.