CHAPTER 17: REVIEW OF RESTORATION MONITORING PROGRAMS IN THE UNITED STATES

http://www.restoration.noaa.gov/

Amy Nickens, NOAA National Centers for Coastal Ocean Science[1]

INTRODUCTION

A database that indexes coastal monitoring programs in the United States (including the Great Lakes) and its territories has been created to support *Tools for Monitoring Coastal Habitats*, Volume Two of *Science-Based Restoration Monitoring of Coastal Habitats,* and will be available to the public in early 2005. Information on monitoring programs included in this index can be found by querying the database located on the NOAA Restoration Portal (website address provided above). Presented here is the description and purposes of the database, the selection criteria for monitoring programs included in the database, a comparison of what the database is and is not, and other tips on using the database.

DATABASE DESCRIPTION

The database is a review of current and significant coastal habitat monitoring programs in the United States (including the Great Lakes) and its territories. Information provided on each monitoring program in the database includes the name of monitoring program, coordinating entity, region in which monitoring takes place, status and duration of each program, habitat types monitored, contact person, program goals, key parameters measured, and other descriptive notes pertinent to each monitoring program. The database is searchable, allowing users to locate monitoring programs by region, habitat type, or parameter. The database is not meant to be comprehensive, but serves as a list of significant examples of restoration and ecological monitoring programs in the coastal United States. Information presented on each monitoring program is intended to give the general scope of the program. Contact information and URLs for each monitoring program are provided to allow the user to gather more detailed information as needed.

What the Database Is and Is Not

The following comparison of what the database is and is not provides additional insight into the description and goal of the database.

*The database **is**:*

- A reference for those interested in coordinating a monitoring program
- A work in progress to which updates and additions will be made regularly
- A list of significant monitoring programs in the United States (i.e., those programs that are well known among the scientific and non-scientific restoration and monitoring community in the US), and
- A starting point for users that provides appropriate contact information, websites, and references if further detail is needed

*The database is **not**:*

- A comprehensive list or a national repository of all monitoring programs in the US
- A list of only government organized monitoring programs
- A list of only National Oceanic and Atmospheric Administration organized monitoring programs, nor
- A site that holds the data collected by each monitoring program

PURPOSE

The database of monitoring programs allows coastal habitat restoration practitioners to locate regional monitoring programs that may serve as models for the establishment or improvement of

[1] 1305 East West Highway, Silver Spring, MD 20910.

their own efforts. Restoration practitioners may also find useful historical data on the condition of US coastal areas from the monitoring programs included in the database.

Possible Outcomes of Database

The database of coastal monitoring programs will provide several positive outcomes. Examples of monitoring activities provided by this database may allow coastal habitat restoration practitioners to locate and mimic successful regional monitoring programs, thus improving their own efforts. Lines of communication may be opened among restoration practitioners, generating collaboration and further improving monitoring efforts. This database may allow for more efficient access to resources such as methodologies and protocols, historical data, and monitoring plan design examples. This database may further highlight the importance of monitoring by organizing many monitoring programs nationwide into a centralized and searchable index.

MONITORING PROGRAM SELECTION CRITERIA

The following is a list of criteria used for selection of monitoring programs included in the database. A monitoring program must meet a majority of these criteria and must support the purpose of the database to be included.

- *Current* - Monitoring programs selected for inclusion in the database are currently ongoing or recently concluded (within 10 years). This insures that database users find a representative of the most modern data collection techniques, that the present conditions or health of an area are reflected, and that the program is continuously updated.
- *Easily accessible and well documented procedures and data* - Monitoring programs included in the database provide easily accessible and well-documented information such as site description, protocols, and data. In most cases, this refers to those monitoring programs that are described and documented via the Internet. Program information posted on the Internet may be easily updated by program personnel and quickly accessed by database users. Well documented procedures provide clear examples for restoration practitioners to follow or compare with there own efforts.
- *Extensive or long term* - Programs included in the database should be those that are well established and have been in operation for a significant period of time. These programs are most useful because they provide a wealth of historical information and are comprehensive examples for practitioners to follow when creating a monitoring program.
- *Governmental and non-governmental programs* - Programs included in the database are those coordinated by federal, state or local governments, non-governmental organizations, volunteer groups, educational groups or any combination of these.
- *Restoration and ecological monitoring* - Programs included in the database may fall under either or both of the following two categories. Programs included in the database may be specifically designed to monitor an area before, during, or after a restoration project or series of projects. Programs included in the database may also track the general health or ecological performance of a coastal environment. Data collected in a coastal area over a period of time, whether related directly to a restoration project or not, provide a wealth of information and may act as an example for others interested in creating a monitoring program. In addition, inventories of regional monitoring programs are included in the database.
- *US coastal areas* - Programs included in the database must monitor the condition of United States coastal habitat, including the Great Lakes and the US territories (Puerto Rico, Guam, US Virgin Islands, American Samoa, and the Northern Mariana Islands). Exceptions to this include water bodies (and their coastal habitats) that overlap with other countries. For example, some Canadian Great Lakes monitoring programs may be included in the database because activities in these waters and coasts may affect both Canada and the US
- *Parameters that measure coastal conditions* - Programs included in the database must monitor the condition of US coasts by measuring or tracking the following broad parameters (though programs are not limited to using only these parameters): water quality, contaminants, bacteria, plankton, vegetation, benthos, nekton, other animals (mammals, birds, reptiles, amphibians),

hydrology, sediments, geomorphology, air quality, or human uses or impacts.

Description of Database Website

The database is searchable via the NOAA Restoration Portal (www.restoration.noaa.gov). The database website includes several useful items to orient users to the database, such as the description of the database, the selection criteria for monitoring programs included in the database, and a link to the text of *Volumes One* and *Two* of *Science-Based Restoration Monitoring of Coastal Habitats*. This information is presented to orient the user to the database.

Users may navigate to a search page to query the database. The search page includes a description of the various methods of searching the database's monitoring programs. In addition, search hints give pointers on how to best use each method of searching. After a search is performed the search results are displayed. The results include a list of monitoring programs that fit the search criteria, links to each monitoring programs' primary URL, and the scope of each monitoring program.