CHANNEL ISLANDS NATIONAL PARK INVENTORY AND MONITORING PROGRAM DATA MANAGEMENT PLAN AND WEB SITE DEMONSTRATION/TEACHING MODEL

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The Channel Islands National Park (CINP) Inventory and Monitoring (I&M) Program is a long term monitoring system developed to achieve the objectives of resource inventory and increased ecological understanding upon which to base future resource management decisions. This ecological monitoring program was designed to provide park managers with regular assessments of ecosystem health by determining limits of natural variation, diagnosing abnormal conditions, identifying potential agents of change, and prescribing remedial treatments.

The Resource Management Division at Channel Islands National Park manages the park Inventory and Monitoring Prototype Kelp Forest, Tidepool, Seabird, Landbird, Land Vegetation, Terrestrial Vertebrates, Beach Debris, Beach Lagoon, and Weather program databases. The data is organized in an integrated structure to facilitate analysis of the programs (Figure 1).

Channel Islands National Park (CINP) has created a web site that describes the CINP Inventory & Monitoring (I&M) program. The purpose of the web site is to share information and lessons the I&M staff has learned throughout the process of designing, reviewing and updating monitoring protocols, preparation of a Database Management Plan, integration of databases, creation of data entry forms with error checking, development of metadata, and automation of annual reports. The web site is designed to be graphical and to provide templates and examples that will assist other resource managers in the process of developing monitoring programs. Components of the information management section of the website are: a description of the process to integrate data across monitoring protocols, a graphical depiction of the relationships between databases, a sample program database with associated Access queries, data entry forms, and automated reports, a description of the metadata system with examples from the Dataset Catalog, and a pilot project to create a species database using marine fish species that will be compatible both with the CINP I&M integrated data system and the NPS nationwide NPS species database.

A link to the recently completed Data Management Plan which describes the program data management history, goals, status, procedures and protocols will be provided. The Data Management Plan website address is http://aqsun.aqd.nps.gov:82/CHISDATA/chis.htm. Download of the plan will also be available. Updated sections of the DMP sections on the website include the Executive Summary, Background, Purpose, Goals and Vision, History, Current Status, and Data Management Philosophy. A link will be provided to the Data Handling Protocols section of the plan and the Kelp Forest Monitoring Program Sampling and Data Handling Protocols Handbook will be available on the website. These handbooks provide a good example of a detailed step by step procedures manual.

The Data Management System section of the website provides graphic representations of the database integrated structure (Figure 1) and defines the basic steps to create a DM system. The basic steps to create a Data Management System are as follows (not in order): inventory, evaluate and clean-up historical datasets; establish quality control for all new data and its management; optimize computer resources associated with data management; provide data security and accessibility; create a data management structure that provides for data integration; and provide for needs of users and assist users in the use of the system.

A subset of the Vegetation database will be available to use online and may also be downloaded. A data relationships graphic (Figure 1) will demonstrate the structure of the database. Important aspects of the database of use to resource managers include data entry forms with incorporated error checking (picklists, ranges), numerous queries to examine the data, automated reports, and charts that perform statistics on the data and are ready to be incorporated into annual reports.

A pilot marine fish Species List database will be available online and to download. The intent of this database is that it will contain all park species and be shared by all programs. The fields are as follows: Species Code, NOAACode, USDACode, Taxon, Common Name, Kingdom, Phylum/Division/SubPhylum, Class/Subclass, Order, Family, Genus, Trivial Name, Community, Comments/Synonyms/ Status, and Program Code. The database will be set up to be used to upload to the nationwide NP Species database and a link to that database will be provided (password required – creation of the nationwide species database is in process).

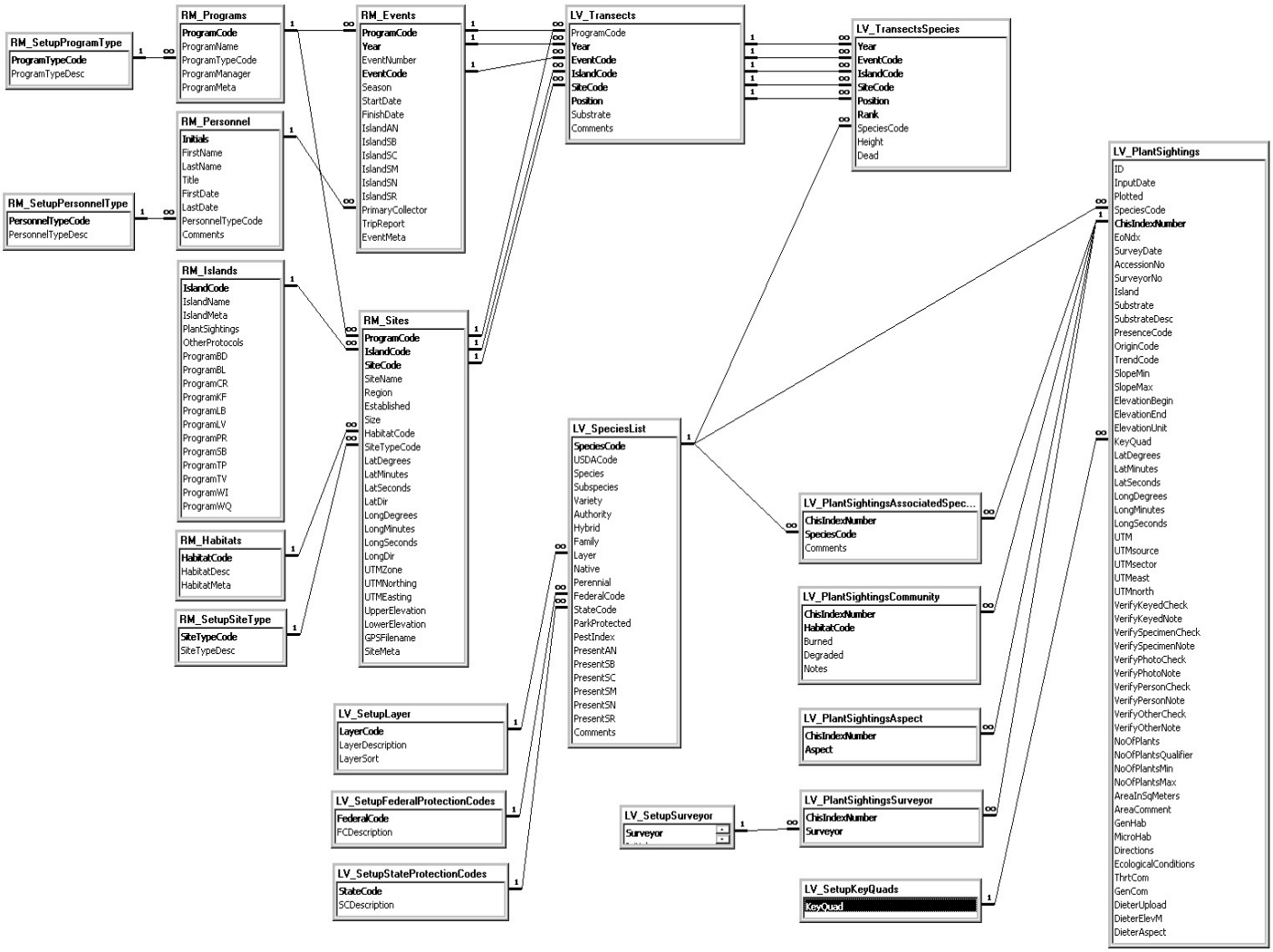

Figure 1. Vegetation database relationships.

An example of a Vegetation database table Data Catalog entry will be provided and a link to that database will be available (password required). The on-line Data Catalog is a one page document providing basic information about each database. Each table in the Channel Islands database will be one record in the Dataset Catalog. These records will provide the basic Channel Islands non-spatial data metadata. Additional metadata is recorded in the database tables and will be available as trip reports linked to the tables in the database. Trip reports provide descriptions of essential details about each sampling event.

The last section of the website includes Information Management and GIS annual reports.

A report describing the CINP I&M Program and annual report abstracts are maintained on the National Park Service website at http://www.nature.nps.gov/nrid/im/chis/chis.htm.