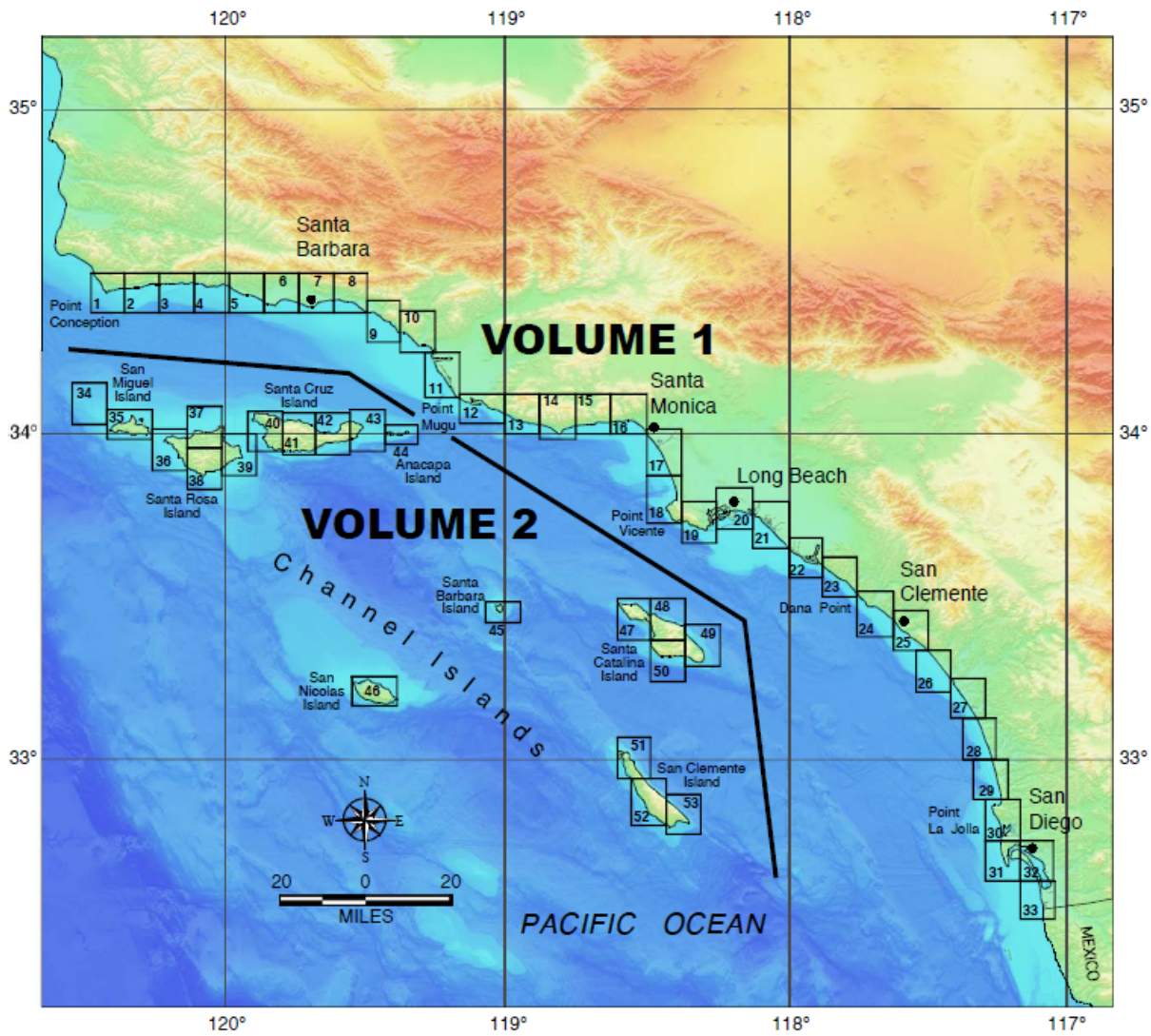
Office of Response and Restoration, Emergency Response Division

Southern California - 2010

Environmental Sensitivity Index Maps

Introduction

The most widely used approach to sensitive environment mapping in the United States is NOAA's Environmental Sensitivity Index (ESI). This approach systematically compiles information in standard formats for coastal shoreline sensitivity, biological resources, and human-use resources. ESI maps are useful for identifying sensitive resources before a spill occurs so that protection priorities can be established and cleanup strategies designed in advance. Using ESIs in spill response and planning can reduce the environmental consequences of the spill and cleanup efforts.



NOAA is undertaking a wide-ranging program to promote open ESI standards and to develop digital ESI databases for high-priority coastal areas in partnerships with states and other Federal agencies. NOAA has developed guidelines for ESI data users that facilitate data exchange, provide a mechanism for evaluating data quality, and allow development of computer applications for displaying and reproducing ESI maps. ESI guidelines, data, and maps help users in both government and the private sector develop applications for coastal management activities that go beyond traditional spill response.

Your ESI DVD contains the following files and directories:

READ1.PDF is an electronic version of this document in Portable Document Format (pdf).

AVPROJ contains an ArcView® 3.x project and the supporting shape and dbf files. The subdirectory AVPROJ contains the project file, southernCaliforniaESI.apr with documentation and software for installation.

DBFILES is broken down into two subdirectories, DESKTOP and RELFILES. The DESKTOP directory contains a simplified flat file format that permits data queries without establishing the complex links needed for the relational files. Supporting data tables allow more complex queries of the breeding and source items. These are the tables that are used in the geodatabase, the ArcView project and with the ESI viewer.

The RELFILES directory contains the relational data tables that were used during the ESI data collection. These are a set of normalized, relational tables that will maintain the integrity of the data during updates.

DOCUMENT contains atlas-specific metadata that should be referenced for entity and attribute information as well as data lineage. The metadata for the Southern California ESI are provided in html, xml, text and pdf formats. GUIDE.PDF is also in the document directory. This gives general information about how ESI data are collected and GIS/database considerations.

ESI_VIEW contains Macintosh and Windows installers for a standalone ESI data viewer. This viewer provides a means for users without access to commercial GIS software to view and query the pre-symbolized ESI vector, data layers. The Macintosh version requires a post 10.3 version of Mac OS X be installed. The Windows version requires a minimum of Windows 2000 - service pack 4, Windows XP - service pack 2 or Vista.

GEODATABASE contains the ESI data in a geodatabase format for use in ArcGIS 9.3. To use, copy the entire subdirectory, SouthernCalifornia (found in the geodatabase folder), on to your hard drive. SouthernCaliforniaESI.mxd can be launched by double-clicking or by opening from within ArcGIS. Relates to supporting tables and the standard ESI symbolization have been saved to the mxd. Layer files are also provided. These can be used with the geodatabase if you wish to create your own .mxd or if you want to use the ESI files with other data you have already symbolized. The layer files have the ESI symbolization saved as well as the links to the data tables. The geodatabase tables *biofile*, *breed_dt*, *sources* and *soc_dat* should be added to any project where you are using the ESI layer files.

A number of ESI tools have been developed to ease the use of the data. They are provided on the top level of this DVD in the directory titled GDB Tools. Tools can also be downloaded from: *http://response.restoration.noaa.gov/esitoolkit*. This site should be checked on occasion for possible new tools and updates or bug fixes to existing tools. The tools can be used with the layer files as long as the data tables have been loaded into the current .mxd.

MOSS contains the ESI geographic data in MOSS file format. This simple text format makes it easy to write translators to other GIS software. Users of these files should use the lookup tables provided in this directory rather than those in the DBFILES directory.

SOURCE contains the ESI geographic data in uncompressed, double-precision, Arc export file format. These data (as are all of the Southern California ESI data) are provided in geographic coordinates, NAD 83.

SYMBOLS contains the ESI symbology and lookup tables for use with ARCEDIT™ and ARCPLOT software A readme.txt file tells where these files should be installed and how they work.

PDFS contains electronic versions of the Southern California ESI maps. The document GUIDE.PDF describes how to use the navigable pdf software, for example, to link from the index to the appropriate atlas page then to the back of the map. The pdfs may be used on-line or are excellent for printing out individual atlas pages.

How to get ESI Data

Order ESI CDs, DVDs and hard copy maps at:
http://response.restoration.noaa.gov/esi_getesi

They may also be downloaded from the NOS Data Explorer site. Detailed instructions for download are available at the above link, or proceed directly to the Data Explorer site at http://nosdataexplorer.noaa.gov/

For additional information about ESI data go to:
http://response.restoration.noaa.gov/esi
or write:
orr.esi@noaa.gov