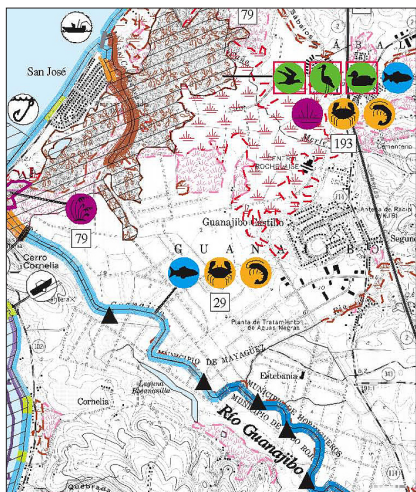


Environmental Sensitivity Index Mapping

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 reduces environmental consequences of the spill and cleanup efforts.



Sensitive environment mapping must be an integral component of overall spill planning. Sensitivity maps are not an end in themselves; rather, they are a starting point for prevention, planning, and response actions. The resource definitions in NOAA's sensitivity maps provide guidance for local organizations developing spill plans. Manuals such as the Mechanical Protection Guidelines, the Shoreline Assessment Manual, and the Shoreline Assessment Job Aid are examples where the ESI definitions are the basis for effective, site-specific planning.

ESI Data Formats

Hard Copy Maps ESI data are published as 11"x17" laminated maps, bound in an atlas that covers a logical geographic region. Due to production costs and the cumbersome nature of this format, these atlases have a fairly limited distribution. However, individual maps can be ordered from the Office of Response & Restoration, or printed from the PDFs described below.

Portable Document Format Maps ESI maps are also available on CD/DVD in portable document format (PDF), allowing users to print multiple copies of an area of interest or individual map

pages at varying scales. In addition, the PDFs include links that allow users to navigate from the index page to the area of interest and from there to the "back of the map," where seasonality and species details are listed. The atlas also includes introduction pages containing representative photos with shoreline descriptions and response considerations.

Free ESI Viewer The ESI Viewer is a freeware mapping and database engine that allows viewing, printing, and simple queries of the ESI data. The Viewer runs on Windows or Macintosh platforms and allows users without access to other mapping software an opportunity to explore the digital vector ESI data. It is simple to install and is accompanied by a guided tour on each CD.

ArcView 3.x Project An ArcView 3.x ESI project and shape files are also available. Each major data element corresponds to a theme with links to a comprehensive flat file data structure. As with the ESI Viewer, layers are color coded to match the standard ESI data format. The shape files may be used with this project in order to take advantage of the preset database links, or they can be imported into other projects or software that support the shape file format.

MOSS Formatted Files All ESI data layers are also provided in a MOSS file format. This is a simple ASCII format that can be imported directly into a MOSS GIS system or is suitable for writing translators to bring the data into other mapping software.

.E00 Files ESI data are provided in their native, double-precision ESRI format as .e00 files. These files, along with the relational database files provided, are used to produce the hard copy atlas.

Geodatabase The ESI data are published in a geodatabase format along with an .mxd file that displays the data in ArcMap 9.x using standardized ESI colors and symbology. Links to the data tables are established within the .mxd. A number of ESI tools have been developed to ease searches and queries on the tables by attribute and/or by geography. These tools are provided on the ESI CD/DVD. Additional tools and changes will be posted on the ORR Web site.

The table on the reverse side shows locations where ESI maps are available and the formats in which they are published.

How to Get ESI Data

For additional information about ESI data:
<http://response.restoration.noaa.gov/esi>
 orr.esi@noaa.gov
 (206) 526-6317

Order forms for ESI CDs and hard copy maps are available at
<http://response.restoration.noaa.gov/orderesi>

Status of Our ESI Atlases

Atlas/Paper Map Release Date	PDF	Arc Export	MOSS	ArcView	ESI-Viewer	Paper	Geo-database
Alabama/1996	•	•	•	•	•	•	
Alaska:							
Aleurian Islands/2002	•	•	•	•	•	•	
Bristol Bay/2004	•	•	•	•	•	•	
No. Bristol Bay/1982						•	
So. Bristol Bay/1982						•	
Cook Inlet/Kenai Peninsula/2002	•	•	•	•	•	•	
Kodiak Island & Shelikof Strait/1997	•	•	•	•	•	•	
Norton Sound & Pribilof Is./1983						•	
Prince William Sound/2000	•	•	•	•	•	•	
Shelikof Strait/1983						•	
SE Alaska/1992/2001	•	•	•	•	•	•	
No. Slope/1999	•	•	•	•	•	•	
No. Slope/Chukchi/2005	•	•	•	•	•	•	
NW Arctic/2002	•	•	•	•	•	•	
Western Alaska/2003	•	•	•	•	•	•	
American Samoa/2004	•	•	•	•	•	•	
California:							
No. California/1994	•	•	•	•	•	•	
So. California/1995	•	•	•	•	•	•	
Central California/2006	•	•	•	•	•	•	•
San Francisco Bay/1998	•	•	•	•	•	•	
Connecticut/1984/2001	•	•	•	•	•	•	
Delaware, New Jersey*, Pennsylvania/1996	•	•	•	•	•	•	
Florida:							
Apalachicola River/1984						•	
East Florida/1996	•					•	
South Florida/1996	•					•	
St. Johns River/1997	•					•	
West Florida/1995	•					•	
West Peninsular - 1/1996	•					•	
West Peninsular - 2/1996	•					•	
Georgia/1997	•	•	•	•	•	•	
Great Lakes:							
Lake Erie System/1985	•					•	
Lake Huron/1994	•					•	
Lake Michigan, Eastern Shore/1985	•					•	
North Lake Michigan/1994	•					•	
South Lake Michigan/1994	•					•	
West Lake Michigan/1994	•					•	
Lake Ontario/1993	•					•	
Lake Superior/1994	•					•	
St. Lawrence River/1985	•					•	
Guam - CNMI/2006	•	•	•	•	•	•	•
Hawaii/1986/2001	•	•	•	•	•	•	
Honduras/2000	•	•	•	•	•	•	
Louisiana/2003	•	•	•	•	•	•	
Maine:							
Downeast Maine/1985						•	
Mid-coast Maine/1985						•	
So. Maine & New Hampshire/1983						•	
Maryland/1984						•	
Massachusetts/1999	•	•	•	•	•	•	
Mississippi/1995	•	•	•	•	•	•	
New Hampshire:							
New Hampshire/2004	•	•	•	•	•	•	
So. Maine & New Hampshire/1983						•	
New Jersey:							
Delaware, New Jersey*, Pennsylvania/1996	•	•	•	•	•	•	
New York-New Jersey Metropolitan Area/2001	•	•	•	•	•	•	
New York:							
Hudson River/2006	•	•	•	•	•	•	•
Long Island/1985						•	
New York-New Jersey Metropolitan Area/2001	•	•	•	•	•	•	
St. Lawrence River/1983						•	
St. Marys River/1986						•	
Nicaragua/2000	•	•	•	•	•	•	
North Carolina/1996	•	•	•	•	•	•	
Oregon:							
Columbia River/2004	•	•	•	•	•	•	
Oregon & Washington/1986						•	
Pennsylvania:							
Delaware, New Jersey*, Pennsylvania/1996	•	•	•	•	•	•	
Puerto Rico/2000	•	•	•	•	•	•	
Rhode Island/1983/2001	•	•	•	•	•	•	
South Carolina/1996	•	•	•	•	•	•	
Texas - Upper Coast/1995	•	•	•	•	•	•	
U.S. and British Virgin Islands/2000	•	•	•	•	•	•	
Virginia/2005	•	•	•	•	•	•	•
Washington:							
Columbia River/2004	•	•	•	•	•	•	
Oregon and Washington/1986						•	
Puget Sound and Strait of Juan de Fuca/2006	•	•	•	•	•	•	•

* New Jersey south of Barnegat Inlet.

NOAA's Office of Response & Restoration—Protecting our Coastal Environment

For further information about NOAA's Office of Response and Restoration,
please visit our Web site at

<http://response.restoration.noaa.gov> or call (301) 713-2989.

