

eCoastal compliant

One of the benefits of developing an enterprise-level GIS is the ability to effectively coordinate and collaborate with your community of practice. Within this community, which can be members from a single organization, or an interagency team, members can announce and share spatial data holdings. Employing standardized enterprise GIS technology and providing data access are two staples of the eCoastal program.

The USACE requires that all Districts create and store spatial data assets in an enterprise-level GIS, where the geodatabase is compliant with the SDSFIE. When other organizations are assisting USACE Districts in data mining or organization missions, it is requested that to be compliant with USACE geospatial requirements, and in turn eCoastal, that all supplied datasets be formatted per the rules defined in SDSFIE.

The eCoastal program also strives to expand its existing capabilities with those produced by other organizations to save the program and its participants' time and money on additional data management applications. If an organization develops a data model and/or custom-related application, and the eCoastal program is aware of its existence, it will be distributed to program participants through the eCoastal website.

<http://ecoastal.usace.army.mil>

Be an eCoastal user

- ✓ If your organization assembles spatial datasets that currently are not in standardized format, the SDSFIE template can be applied.
- ✓ If an enterprise GIS database already exists, allow web or metadata services to be employed to allow easy access and distribution of datasets.
- ✓ Become an active member of the eCoastal community and supply feedback to the program, using the eCoastal website.
- ✓ Educate non-GIS users on available eCoastal tools.

Mobile District
Spatial Data Branch
251.694.3721

Clint.Padgett@usace.army.mil
<http://spatialdata.sam.usace.army.mil>

eCoastal
Program Overview



The eCoastal program provides a foundation for a data management plan designed to function as an enterprise GIS. It was developed to concentrate on the specific needs of the coastal engineer. eCoastal is an architecture developed by the U.S. Army Corps of Engineers that addresses spatial data standards, geodatabase structure, and custom coastal GIS applications.

One focus of an enterprise GIS is to allow access to data from users inside or outside an organization. Technology enables data to easily be accessible and distributable in a variety of formats. The eCoastal program offers support in understanding the available technologies, such as metadata clearinghouses or web mapping services, and provides additional guidance on system configuration to bring concepts to fruition. In the case of USACE organizations, eCoastal also provides system design and documentation that is compliant with all Army IT regulations.

In addition to the technology components, the eCoastal program is a compilation of lessons learned and recommendations for managing a variety of coastal related datasets in a geodatabase environment. eCoastal provides training to users on the default tools of ArcGIS and custom tools of the eCoastal toolbars to educate coastal engineers in data analysis procedures performed in a GIS environment.

The SDSFIE eCoastal Database Filter

The SDSFIE data model contains a wide variety of structure to store a vast amount of different types of data. Using the eCoastal filter, the data model becomes focused on coastal-related data types. This provides users with a manageable set of standards to contain coastal data.

SDSFIE compliant geodatabase populated with an organization's spatial data holdings

eCoastal does not supply data, rather it supplies a structure to store data, and techniques for accessing and distributing data.

Data management techniques for maintaining compliancy to SDSFIE

The eCoastal engineer manual outlines recommended methods of populating the SDSFIE geodatabase. Populating the geodatabase will require that the content and format of data be examined up front in order to efficiently migrate data into the eCoastal schema and SDSFIE structure.

eCoastal Tools (ArcGIS Desktop Toolboxes and Web Applications)

The eCoastal program frequently surveys the coastal engineering community to determine what other technologies, models, and applications engineers are integrating into their data analysis procedures. Applications that require little configuration can be downloaded from the eCoastal website. Literature is provided for more complex tools that require additional configuration, i.e. database design, lookup tables, or web services.

eCoastal Data Model

In lieu of using a proprietary data model, the eCoastal database structure is an excerpt from the SDSFIE (Spatial Data Standard for Facilities, Infrastructure, and Environment) database model. Under the eCoastal program, a database filter is distributed which extracts only the coastal and basemap related features in the SDSFIE database model. This provides users with a manageable set of features to begin geodatabase development and population.

If a user already has an SDSFIE compliant geodatabase in place, the eCoastal geodatabase simply refers to the coastal-related features contained in the system. If the enterprise GIS is initially deployed to only manage coastal data, eCoastal then also assumes the role as the enterprise GIS for the organization. As this type of enterprise GIS program progresses and grows, and begins to include various other themes of data, such as environmental, then eCoastal migrates to become a subset of the organization's enterprise GIS program.