

Marine Data Model

Data Model User Group

Join the [data model user group](#) if you are an existing ArcGIS customer and want to learn more about design and architecture of personal or enterprise Geodatabase and become a part of Esri's growing data model community.

The Marine Data Model, also known as "Arc Marine," is the result of a collaboration involving researchers from Oregon State University, Duke, NOAA, The Danish Hydraulic Institute (DHI) and an extended review team. The result is the development of an ESRI data model created to support the needs of the Marine GIS community.

Arc Marine represents a new approach to spatial modeling using improved integration of many important features of the ocean realm, both natural and manmade. The model considers how marine and coastal data can be most effectively integrated in 3 and 4D space and time and includes an approach towards a volumetric model to represent the multidimensional and dynamic nature of ocean data and processes. The goal is to provide a more accurate representation of location and spatial extent, along with a means for conducting more complex spatial analysis of marine and coastal data by capturing the behavior of real-world objects in the geodatabase.

Arc Marine development can be followed at the [Arc Marine Workgroup Site](#). There is also a document to help you to implement the model called the [Arc Marine Tutorial](#). Thanks to Dawn Wright and Oregon State University for hosting the site.

Most recent Arc Marine Documents can be found at [Oregon State University](#) Webworks.

User Forums

Visit the [Esri data model discussion forum](#) to share your ideas, thoughts, and questions with other users.

Downloads - Case Studies

These Case Studies are a good starting point to learn about best practices for this discipline. These project examples include sample geodatabases, map documents, and documentation.

- [El Nino ArcGlobe animation of SST rasters](#) avi file exported from ArcGlobe - zip format, 46007 kb
- [Shark Time Series Animation](#) Avi and text file of permissions - zip format, 38935 kb
- [Arc Marine Poster](#) .pdf - zip format, 31349 kb

Downloads - Design Templates

The Design Templates are the result of the community-based design process. The general concepts and terms for this discipline are described here. Tools and examples to create a template data model are also included for advanced users.

- [Arc Marine Data Model](#) .vsd, .xml, .ldb, .mdb, and .dtd files - zip format, 3056 kb

- [Marine Globestack](#) .ai - zip format, 5745 kb
- [Bathy Globestack](#) .pdf - zip format, 13107 kb

Downloads - Tools

These tools have been developed together with the data models to provide new ways to leverage each industry specific model. They are designed to work with the data model templates and case studies, and can be used with the model, or with other data sets. These tools can be found on ArcScripts, and are not supported Esri software.

- [3D Interpolator Tool for ArcGIS 9.1](#) olb, exe. dll files - zip format, 118 kb
- [San Diego Pilot Study](#) .mdb, .sxd, and .txt - zip format, 14652 kb

User Community

To download the UML diagrams and other case studies visit [Marine Data Model templates](#).

To see the Arc Marine Data model with an XML schema view please visit [The University of Washington School of Oceanography](#).

To see the Arc Marine data as an ontology in OWL or GML/XML please visit [The Coastal and Marine Resource Centre, Cork, Ireland](#).