

Data Format and Specifications for the Rhode Island Offshore/Ocean SAMP Project

The RI Ocean/Offshore SAMP project will generate a large amount of geospatial data from multiple disciplines and sources. The URI Environmental Data Center will catalog and maintain a project data clearinghouse for all of the geospatial information that is produced and make it accessible to researchers through the Narrbay.org website (http://www.narrbay.org/d_projects/oceansamp). To facilitate this process, some guidelines for submitting data have been established.

DATA GUIDELINES

All of the geospatial data developed for this project will reside in a single, master database with the following attributes:

Cartographic Projection and Coordinate System

Projection: RI State Plane Feet (RI SPF)

Horizontal Units: Feet

Vertical Units: Feet

Zone: FIPS 3800

Horizontal Datum: NAD 83

Vertical Datum: NGVD88

If using ESRI ArcGIS software, the proper projection will be listed as:

NAD_1983_StatePlane_Rhode_Island_FIPS_3800_Feet

NOTE: Though the official database will be in RI State Plane coordinates, researchers may submit project data in either the RI State Plane Feet, NAD83 or geographic (latitude/longitude), WGS84 coordinate systems. In addition, the EDC can provide data to the researchers in a variety of formats best suited to their needs. Please contact the EDC directly for specific data requests.

Storage Format

GIS-Ready Data: The preferred option is for data to be provided in an Environmental Systems Research Institute (ESRI) ArcGIS-ready format including shapefiles, coverages (in E00 interchange format), GRIDs, LATTICES, TINs, geodatabases (file or personal), or conventional georeferenced images (TIF, SID, JPG). For a complete list of supported direct-read data formats, refer to

http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Data_formats_supported_in_ArcGIS These types of data can be quickly assimilated and posted on the website.

If you are creating raster datasets and have the option of choosing a cell (pixel) size and do not know what to use, contact the EDC.

Importable GIS Data: If a direct-read data format is not available, it is possible convert other formats into ArcGIS format using an import utility (follow last link for additional data formats supported via importers).

Non-GIS Ready Data: Non-GIS data typically include Excel spreadsheets, text files, or lines drawn on hardcopy (paper) maps. These types of data can take significantly longer to process and need to meet some additional requirements:

Spreadsheets (point data):

- Each sampling location must have a unique ID.
- Spreadsheets require the following fields (columns), with each row of the table representing a separate sampling location or study area.
 - ID, X Coordinate, Y Coordinate, Z₁ . . . Z_n (where Z_{1-n} are meaningful variable names in the dataset).
- Coordinates can be either RI SPF feet or Geographic Projection WGS84 decimal degrees.

Spreadsheets (line or polygon/area data):

- 2 separate files are needed
 - Coordinate file – a text file that has a unique ID for each polygon and a listing of the coordinate pairs (X,Y) that make up the line or polygon. Coordinates can be either RI SPF values or Geographic WGS84 decimal degrees.
 - A spreadsheet file with the following fields.
 - ID, Z₁ . . . Z_n, where Z is the attribute of a given polygon. The ID value in this file corresponds to the ID value for the same feature in the file containing the geographic coordinates of the line or polygon.

Text files:

- Comma separated value (csv) format.
- Requires the same fields as spreadsheet data.

Hard-Copy Maps:

- Because of the significant level of processing that may be required, these data can only be worked on as time permits. Please contact the EDC directly to discuss.

Documentation:

All project data submitted for the archive **must** be accompanied by proper documentation (metadata) that outlines, for instance, what the data are, when and how they were collected, age and accuracy, what parameters were sampled, and who the contact person for the data is, etc. Metadata **must** be FGDC (Federal Geographic Data Committee) compliant. Researchers who use ESRI GIS products can generate the required metadata from within ArcCatalog using the FGDC template.

For non-GIS users, there are many public domain tools to create FGDC-compliant metadata and any of these should be able to produce a proper documentation file. The EDC recommendation for a free metadata editor is TKME distributed by the USGS. The EDC has generated a metadata template for use with TKME that is available to researchers. For more information on obtaining TKME, see: <http://geology.usgs.gov/tools/metadata/tools/doc/tkme.html>

QUESTIONS

Please direct any questions pertaining to data format or submissions to:

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