Seafloor Geology

Tags

U.S. Geological Survey, USGS, Coastal and Marine Geology Program, CMGP, Woods Hole Science Center, WHSC, ArcView Shapefile, Surficial Sediment, Polygons, Sediment Type, Grain Size, Sediment Textural Trends, Sediment Distribution, Oceans and Estuaries, Boundaries, Geoscientific Information

Summary

The purpose of the CONMAPSG sediment layer is to show the sediment grain size distributions. The maps depicted in this series are old and do not accurately depict small-scale sediment distributions or sea-floor variability. This data layer is supplied primarily as a gross overview and to show general textural trends.

Description

Sediments off the eastern United States vary markedly in texture - the size, shape, and arrangement of their grains. However, for descriptive purposes, it is typically most useful to classify these sediments according to their grain-size distributions. Starting in 1962, the U.S. Geological Survey (USGS) and the Woods Hole Oceanographic Institution (WHOI) began a joint program to study the marine geology of the continental margin off the Atlantic coast of the United States. As part of this program and numerous subsequent projects, thousands of sediment samples were collected and analyzed for particle size. The sediment map of the Continental Margin Mapping Program (CONMAP) series is a compilation of grain-size data produced in the sedimentation laboratory of the Woods Hole Science Center (WHSC) of the Coastal and Marine Geology Program (CMGP) of the U.S. Geological Survey (USGS) and from both published and unpublished studies. Sediment was classified using the Wentworth (1929) grain-size scale and the Shepard (1954) scheme of sediment classification. Certain grain-size categories are combined because of the paucity of some sediment textures; blank parts of the maps indicate areas where data are insufficient to infer sediment type. Bathymetry is used as a guide in placing some of the contacts between different sediment types. However, because the true boundaries between sediment types are probably highly irregular or gradational, because the extreme textural variability that characterizes some areas does not appear at this scale, and because the accuracy of the navigational systems used during the earlier studies is limited, all contacts should be considered to be inferred. The sediment classification for any given polygon (i.e. area) reflects the dominant surficial sediment type for that polygon. It does not mean that other sediment types are not present within the polygon, only that the dominant sediment type is the one that is most common.

Credits

There are no credits for this item.

Use limitations

Extent

There is no extent for this item.

Scale Range

There is no scale range for this item.

ArcGIS Metadata

Citation

* TITLE conmapsg

PRESENTATION FORMATS * digital map

Resource Details

DATASET LANGUAGES * English

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.0.0.535

CREDITS

Extents

Resource Constraints

CONSTRAINTS

LIMITATIONS OF USE

Public domain data from the U.S. Government are freely redistributable with proper metadata and source attribution. Please recognize the U.S. Geological Survey (USGS) as the source of this information.

Spatial Reference

REFERENCE SYSTEM IDENTIFIER

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Spatial Data Properties

VECTOR

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME conmapsg

* OBJECT TYPE complex

* OBJECT COUNT 376

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME conmapsg

* FEATURE TYPE Simple

* GEOMETRY TYPE Polygon

* HAS TOPOLOGY FALSE

* FEATURE COUNT 376

* SPATIAL INDEX FALSE

* LINEAR REFERENCING FALSE

Distribution

DISTRIBUTOR

AVAILABLE FORMAT

* NAME Shapefile

TRANSFER OPTIONS
* TRANSFER SIZE 14.007

ONLINE SOURCE
* LOCATION
* ACCESS PROTOCOL Local Area Network
* DESCRIPTION Downloadable Data

Fields

DETAILS FOR OBJECT conmapsg
* TYPE Feature Class
* ROW COUNT 376
DEFINITION
Shapefile Attribute Table

DEFINITION SOURCE
ESRI

FIELD FID
FIELD DESCRIPTION
Internal feature number.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

FIELD Shape
FIELD DESCRIPTION
Feature geometry.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES Coordinates defining the features.

FIELD AREA
* DATA TYPE Number
* WIDTH 12
* NUMBER OF DECIMALS 3
FIELD DESCRIPTION
Area of polygon in native units

DESCRIPTION SOURCE
Software Computed

FIELD PERIMETER
* DATA TYPE Number
* WIDTH 12
* NUMBER OF DECIMALS 3
FIELD DESCRIPTION
Length of polygon perimeter in native units

DESCRIPTION SOURCE
Software Computed

FIELD SEDIMENT
* DATA TYPE String
* WIDTH 12
FIELD DESCRIPTION
Assigned code describing sediment.

DESCRIPTION SOURCE
U.S. Geological Survey

LIST OF VALUES
VALUE br
DESCRIPTION bedrock
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE gr
DESCRIPTION gravel
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE gr-sd
DESCRIPTION gravel-sand
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE sd
DESCRIPTION sand
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE cl-st/sd
DESCRIPTION clay-silt/sand
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE sd/st/cl
DESCRIPTION sand/silt/clay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE sd-cl/st
DESCRIPTION sand-clay/silt
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE sd-st/cl
DESCRIPTION sand-silt/clay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

VALUE cl
DESCRIPTION clay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE U.S. Geological Survey

DESCRIPTION OF VALUES Character String

FIELD SEDNUM
* DATA TYPE Number
* WIDTH 11
FIELD DESCRIPTION
Assigned code describing sediment

DESCRIPTION SOURCE
U.S. Geological Survey

LIST OF VALUES
VALUE 1
DESCRIPTION bedrock
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 2
DESCRIPTION gravel
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 3
DESCRIPTION gravel-sand
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 4
DESCRIPTION sand
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 5
DESCRIPTION clay-silt/sand
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 6
DESCRIPTION sand-clay/silt
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 7
DESCRIPTION clay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 8
DESCRIPTION sand-silt/clay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

VALUE 9
DESCRIPTION sand/silt/clay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE USGS

RANGE OF VALUES
MINIMUM VALUE 1
MAXIMUM VALUE 9
UNITS OF MEASURE 1
MEASUREMENT RESOLUTION integer count

OVERVIEW DESCRIPTION

Metadata Details

* METADATA LANGUAGE English
* METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset
SCOPE NAME * dataset

* LAST UPDATE 2005-08-17

ARCGIS METADATA PROPERTIES
METADATA FORMAT ESRI-ISO

LAST MODIFIED IN ARCGIS FOR THE ITEM 2005-08-17 09:23:24

AUTOMATIC UPDATES
LAST UPDATE 2005-08-17 08:57:18