2017

Ecological Marine Units

DATA DICTIONARY

ESRI

EMU Point Mesh (AGOL) and EMU Master (Pro)

Field: pointid
DataType: Integer
Length: 4
AliasName: pointid
Description: Esri standard identifier for all points in point mesh with X,Y,Z
Notes:
Field (Pro): pointid
Example Value: 1390764

Field: temp
DataType: Single
Length: 4
AliasName: temp
Description: Temperature (°C)
Notes:
Field (Pro): temp
Example Value: 8.44619000000

Field: salinity
DataType: Single
Length: 4
AliasName: salinity
Description: Salinity (unitless)
Notes:
Field (Pro): Salinity
Example Value: 34.68000000000

Field: appO2ut
DataType: Single
Length: 4
AliasName: appO2ut
Description: Apparent Oxygen Utilization in (ml/l)
Notes:
Field (Pro): appO2ut
Example Value: 3.10273000000

Field: dissO2
DataType: Single
Length: 4
AliasName: dissO2
Description: Dissolved Oxygen (ml/l)
Notes:
Field (Pro): dissO2
Example Value: 3.61549000000

Field: Nitrate
DataType: Single
Length: 4
AliasName: Nitrate
Description: Nitrate (µmol/l)
Notes:
Field (Pro): Nitrate
Example Value: 27.44270000000

Field: percO2sat
DataType: Single
Length: 4
AliasName: percO2sat
Description: Percent Oxygen Saturation (%)
Notes:
Field (Pro): percO2sat
Example Value: 52.97270000000

Field: Phosphate
DataType: Single
Length: 4
AliasName: Phosphate
Description: Phosphate (µmol/l)
Notes:
Field (Pro): Phosphate
Example Value: 1.80121000000

Field: silicate
DataType: Single
Length: 4
AliasName: silicate
Description: Silicate (µmol/l)
Notes:
Field (Pro): silicate
Example Value: 15.78900000000

Field: srtm30
DataType: Integer
Length: 4
AliasName: srtm30
Description: Depth in meters based on SRTM Elevation Data
Notes:
Field (Pro): srtm30
Example Value: -5530

Field: depth_lvl
DataType: Double
Length: 8
AliasName: depth_lvl
Description: Depth Level (1-102) from NOAA World Ocean Atlas
Notes:
Field (Pro): depth_lvl
Example Value: 37.00000000000

Field: QtrDegreeID
DataType: Integer
Length: 4
AliasName: QtrDegreeID
Description: Unique Identifier for each quarter degree in water, horizontally
Notes: Unique identifier for each lat and log in the dataset.
Field (Pro): QtrDegreeI
Example Value: 221446

Field: UnitBottom
DataType: Integer
Length: 4
AliasName: UnitBottom (m)
Description:
Notes:
Field (Pro): UnitBottom
Example Value: -550

Field: UnitTop
DataType: Integer
Length: 4
AliasName: UnitTop (m)
Description:
Notes:
Field (Pro): UnitTop
Example Value: -475

Field: ThicknessNeg
DataType: Integer
Length: 4
AliasName: Thickness (m)
Description: Thickness measured as depth from top
Notes:
Field (Pro): ThicknessN
Example Value: -75

Field: ThicknessPos
DataType: Integer
Length: 4
AliasName: ThicknessPos (m)
Description: Thickness measured as height from bottom
Notes:
Field (Pro): ThicknessP
Example Value: 75

Field: xmeters
DataType: Integer
Length: 4
AliasName: xmeters
Description: width of cell's surface
Notes:
Field (Pro): xmeters
Example Value: 26343

Field: ymeters
DataType: Integer
Length: 4
AliasName: ymeters
Description: height of a cell's surface
Notes:
Field (Pro): ymeters
Example Value: 27673

Field: Cluster37
DataType: Integer
Length: 4
AliasName: Cluster37
Description: Cluster Number (0-37)
Notes: 21 Primary Ocean EMU's others are freshwater or heavily influenced by freshwater - use cautiously - not a part of the main EMU collection. Value 0 is unassigned EMU's.
Field (Pro): Cluster37
Example Value: 36

Field: DistFromCluster37
DataType: Double
Length: 8
AliasName: DistFromCluster37
Description: distance from the mean
Notes: any emu with a value over 2.5 should be suppressed (for mapping purposes) because they are an outlier that like in these cases heavily influenced by fresh water or did not have enough of the 6 variables with values to be a reliable EMU
Field (Pro): DistFromCl
Example Value: 1.18347647320

Field: UnitMiddle
DataType: Single
Length: 4
AliasName: UnitMiddle (m)
Description: median between the Unit top and Unit bottom vertically
Notes:
Field (Pro): UnitMidPoi
Example Value: -512.50000000000

Field: WaterVolume
DataType: Single
Length: 4
AliasName: WaterVolume
Description: volume (km3)
Notes: calculated from xmeters, ymeters, and ThicknessPos
Field (Pro): WaterVolum
Example Value: 54.67420000000

Field: SurfaceArea
DataType: Single
Length: 4
AliasName: SurfaceArea
Description: area (km2)
Notes: calculated from xmeters, ymeters
Field (Pro): SurfaceAre
Example Value: 728.99000000000

Field: GeomorphologyBase
DataType: String
Length: 100
AliasName: GeomorphologyBase
Description: Derived from World Seafloor Geomorphology
Notes: intersect with GeoMorph Base (main zones)
Field (Pro): Geomorphol
Example Value: Abyssal Hills

Field: GeomorphologyFeatures
DataType: String
Length: 100
AliasName: GeomorphologyFeatures
Description: Derived from World Seafloor Geomorphology
Notes: intersect with features or multiple features
Field (Pro): Geomorph_1
Example Value: Basins

Field: NameEMU
DataType: String
Length: 200
AliasName: Name EMU
Description: CMECS Name
Notes: Scientific name based on scientific standards (link to PDF NatureServe)
Field (Pro): NameEMU
Example Value: Bathypelagic, Very Cold, Euhaline, Oxic, Medium Nitrate, Low Phosphate, Low Silicate

Field: SpecialCases
DataType: String
Length: 20
AliasName: SpecialCases
Description: Top, bottom, both
Notes: Three different values for fast query of only the top or bottom clusters of the EMU's (special case in= Top, both)
Field (Pro): SpecialCas
Example Value:

Field: ChlorA_12yrAvg
DataType: Double
Length: 8
AliasName: ChlorA_12yrAvg
Description: Chlorophyll A
Notes:
Field (Pro): ChlorA_12y
Example Value: 0.04205300659

Field: GeneralName
DataType: String
Length: 200
AliasName: General Name
Description: Simplified non-scientific name
Notes:
Field (Pro): GeneralNam
Example Value: Deep, Very Cold, Normal Salinity, Moderate Oxygen, Medium Nitrate, Low Phosphate, Low Silicate

Field: OceanName
DataType: String
Length: 50
AliasName: OceanName
Description: ocean basins
Notes:
Field (Pro): OceanName
Example Value: South Atlantic

Field: POINT_X
DataType: Double
Length:
AliasName: POINT_X
Description:
Notes: Long for Quarter Degree Grid
Field (Pro): POINT_X
Example Value: -23.12500000000

Field: POINT_Y
DataType: Double
Length:
AliasName: POINT_Y
Description:
Notes: Lat for Quarter Degree Grid
Field (Pro): POINT_Y
Example Value: -18.87500000000

Field	DataType	Length	AliasName	Description	Notes	Field (Pro)	Example Values
pointid	Integer	4	pointid	Esri standard identifier for all points in point mesh with X,Y,Z		pointid	1390764
temp	Single	4	temp	Temperature (°C)		temp	8.44619000000
salinity	Single	4	salinity	Salinity (unitless)		salinity	34.68000000000
appO2ut	Single	4	appO2ut	Apparent Oxygen Utilization in (ml/l)		appO2ut	3.10273000000
dissO2	Single	4	dissO2	Dissolved Oxygen (ml/l)		dissO2	3.61549000000
nitrate	Single	4	nitrate	Nitrate (µmol/l)		nitrate	27.44270000000
percO2sat	Single	4	percO2sat	Percent Oxygen Saturation (%)		percO2sat	52.97270000000
phosphate	Single	4	phosphate	Phosphate (µmol/l)		phosphate	1.80121000000
silicate	Single	4	silicate	Silicate (µmol/l)		silicate	15.78900000000
srtm30	Integer	4	srtm30	Depth in meters based on SRTM Elevation Data		srtm30	-5530
depth_lvl	Double	8	depth_lvl	Depth Level (1-102) from NOAA World Ocean Atlas		depth_lvl	37.00000000000
QtrDegreeID	Integer	4	QtrDegreeID	Unique Identifier for each quarter degree in water, horizontally	Unique identifier for each lat and log in the dataset.	QtrDegreeI	221446
UnitBottom	Integer	4	UnitBottom (m)			UnitBottom	-550
UnitTop	Integer	4	UnitTop (m)			UnitTop	-475
ThicknessNeg	Integer	4	Thickness (m)	Thickness measured as depth from top		ThicknessN	-75
ThicknessPos	Integer	4	ThicknessPos (m)	Thickness measured as height from bottom		ThicknessP	75
xmeters	Integer	4	xmeters	width of cell's surface		xmeters	26343
ymeters	Integer	4	ymeters	height of a cell's surface		ymeters	27673
Cluster37	Integer	4	Cluster37	Cluster Number (0-37)	21 Primary Ocean EMU's others are freshwater or heavily influenced by freshwater - use cautiously - not a part of the main EMU collection. 0 are unassigned EMU's.	Cluster37	36
DistFromCluster37	Double	8	DistFromCluster37	distance from the mean	any emu with a value over 2.5 should be suppressed (for mapping purposes)because they are an outlier that like in these cases heavily influenced by fresh water or did not have enough of the 6 variables with values to be a reliable EMU	DistFromCl	1.18347647320
UnitMiddle	Single	4	UnitMiddle (m)	median between the Unit top and Unit bottom vertically		UnitMidPoi	54.67420000000
WaterVolume	Single	4	WaterVolume	volume (km3)	calculated from xmeters, ymeters, and ThicknessPos	WaterVolum	-512.50000000000
SurfaceArea	Single	4	SurfaceArea	area (km2)	calculated from xmeters, ymeters	SurfaceAre	728.99000000000
GeomorphologyBase	String	100	GeomorphologyBase		Derived from World Seafloor Geomorphology - intersect with GeoMorph Base (main zones)	Geomorphol	Abyssal Hills
GeomorphologyFeatures	String	100	GeomorphologyFeatures		Derived from World Seafloor Geomorphology - intersect with features or multiple features	Geomorph_1	Basins
NameEMU	String	200	Name EMU	CMECS Name	Scientific name based on scientific standards (link to PDF NatureServe)	NameEMU	Bathypelagic, Very Cold, Euhaline, Oxic, Medium Nitrate, Low Phosphate, Low Silicate
SpecialCases	String	20	SpecialCases	Top, bottom, both	Three different values for fast query of only the top or bottom clusters of the EMU's (special case in= Top, both)	SpecialCas	
ChlorA_12yrAvg	Double	8	ChlorA_12yrAvg	Chlorophyll A		ChlorA_12y	0.04205300659
GeneralName	String	200	General Name		Simplified non-scientific name	GeneralNam	Deep, Very Cold, Normal Salinity, Moderate Oxygen, Medium Nitrate, Low Phosphate, Low Silicate
OceanName	String	50	OceanName		ocean basins	OceanName	South Atlantic
POINT_X	Double				Long for Quarter Degree Grid	POINT_X	-23.12500000000
POINT_Y	Double				Lat for Quarter Degree Grid	POINT_Y	-18.87500000000