Unified Florida Coral Reef Tract Map v2.0

Metadata also available as

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:
Citation:
Citation_Information:
Originator:
Florida Fish and Wildlife Conservation Commission-Fish and Wildlife Research Institute
Title: Unified Florida Coral Reef Tract Map v2.0
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Saint Petersburg, Fl
Publisher: FWRI
Online_Linkage: <http://myfwc.com/research/>
Online_Linkage:
Description:
Abstract:
The Unified Florida Reef Tract Map (Unified Reef Map) provides a consistent geospatial framework for management, monitoring, and characterization of the Florida reef tract from Martin County to the Dry Tortugas. The Unified Reef Map integrates existing benthic habitat maps of Martin, Palm Beach, Broward, and Miami Counties, Biscayne National Park, Florida Bay, and the Florida Keys, including the Dry Tortugas. This map of the seafloor uses a Unified Classification (UC) system to provide a common and consistent picture of the entire area while retaining the original detailed information specific to different source maps. The UC contains five levels of seafloor classification detail providing flexibility in the scope of analysis. UC Level 0 is the coarsest classification level that provides a consistent view of the entire area. UC Level 4 retains full seafloor description details from source maps which are not necessarily consistent for all areas. Where mapping projects spatially overlap, data are edited to create a seamless and consistent transition. Existing seafloor classification values are also cross-walked to the Coastal and Marine Ecological Classification Standard (CMECS).

Purpose:
The purpose of this map product is to provide a seamless spatial representation of the Florida Keys Reef Tract and surrounding area benthos with a classification system that unifies the various source classification schemes while retaining the original information. Individual source maps cross-walked to the unified classification without spatial edits (retaining overlap and unmatched seams) are also available. Please refer to the technical report accompanying this dataset for detailed information and dataset use recommendations.

Supplemental Information:
Prior to July 1, 2004, the Fish and Wildlife Research Institute (FWRI) was known as the Florida Marine Research Institute (FMRI). The institute name has not been changed in historical data sets or references to work completed by the Florida Marine Research Institute. The institute name has been changed in references to ongoing research, new research, and contact information.

Status:
Progress: Complete
Maintenance_and_Update_Frequency: Continually

Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -83.102217
East_Bounding_Coordinate: -80.052258
North_Bounding_Coordinate: 26.021202
South_Bounding_Coordinate: 24.316294

Keywords:
Theme:
Theme_Keyword_Thesaurus: EPA GIS Keyword Thesaurus
Theme_Keyword: Ecology
Theme:
Theme_Keyword_Thesaurus: FWRItheme
Theme_Keyword: mapping
Theme_Keyword: marine
Theme_Keyword: benthic
Theme_Keyword: habitat (rivers
Theme_Keyword: estuaries
Theme_Keyword: ecology
Theme_Keyword: hard bottom)
Theme_Keyword: coastal
Theme_Keyword: corals (reefs
Theme_Keyword: etc.)
Theme_Keyword: GIS
Theme_Keyword: marine vegetation (mangroves
Theme_Keyword: seagrasses
Theme_Keyword: seaweeds
Theme_Keyword: sea oats)
Theme:
Theme_Keyword_Thesaurus: ISO 19115 Topic Category
Theme_Keyword: biota
Available without restriction. All data must be verified by Principal Investigator or Group Database Analyst prior to release. It is strongly recommended that this data is directly acquired from FWC and not indirectly through other sources which may have changed the data in some way. FWC makes no claims as to the data's suitability for other purposes.

Use_Constraints:
Acknowledgement of the FWC-FWRI (Florida Fish and Wildlife Conservation Commission-Fish and Wildlife Research Institute) as the data source would be appreciated in any products developed from these data, and such acknowledgment as is standard for citation and legal practices for data source is expected by users of this data. Please cite the original metadata when using portions of the record to create a similar record of slightly altered data, such as reprojection. If any data are modified or adjusted, please share the edited information with FWC. Users should be aware that comparison with other data sets for the same area from other time periods may be inaccurate due to inconsistencies resulting from changes in mapping conventions, data collection, and
computer processes over time. FWC shall not be liable for improper or incorrect use of this data. These data are not legal documents and are not to be used as such. This is not a survey data set and should not be utilized as such. These data are not to be used for navigation.

**Point_of_Contact:**

**Contact Information:**

**Contact_Organization_Primary:**

**Contact_Organization:**

Florida Fish and Wildlife Conservation Commission-Fish and Wildlife Research Institute

**Contact_Person:** GISLibrarian@MyFWC.com

**Contact_Address:**

**Address_Type:** mailing and physical

**Address:**

Fish and Wildlife Research Institute 100 Eighth Avenue Southeast

**City:** St. Petersburg

**State_orProvince:** FL

**Postal_Code:** 33701

**Contact_Voice_Telephone:** 727-896-8626

**Security Information:**

**Security_Handling_Description:** Available without restriction

**Native_Data_Set_Environment:** ArcGIS Geodatabase 10.4

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**Data_Quality_Information:**

**Attribute_Accuracy:**

**Attribute_Accuracy_Report:**

All entities and attributes have been identified. A comparison between the 1:24,000-scale maps of the compiled data and the original delineated photos to determine the positional accuracy of polygonal shapes and attributes was part of the QC process (see process step).

**Logical_Consistency_Report:**

The data were verified for logical consistency between field values.

**Completeness_Report:** This is a versioned product that will be continually updated.

**Positional_Accuracy:**

**Horizontal_Positional_Accuracy:**

**Horizontal_Positional_Accuracy_Report:**

All spatial edits were performed using the best available imagery, in situ observation data, high resolution bathymetric data and earlier benthic maps. See source map metadata for positional accuracy reports specific to source data. Individual source map feature classes can be cross-referenced using the Source field.

**Lineage:**

**Source_Information:**

**Source_Citation:**

**Citation_Information:**

**Originator:** National Park Service

**Title:** Benthic Habitats Dry Tortugas Florida 2010

**Source_Scale_Denominator:** 0
This is a final draft of the Hawk Channel benthic map. Accuracy Assessment is planned to be completed next year. Benthic type was interpreted using side-scan sonar and LiDAR reflectance and relative depth data. WorldView-2 satellite imagery and aerial photography were also used to aid in classification. Polygons were heads up digitized into a Geodatabase using ArcMap 10.2. In situ observations were used to inform photo interpretation.
This is a final draft of the Boca Grande Channel benthic map. Accuracy Assessment is planned to be completed next year. Benthic type was interpreted using side-scan sonar and LiDAR reflectance and relative depth data. WorldView-2 satellite imagery and aerial photography were also used to aid in classification. Polygons were hands up digitized into
a Geodatabase using ArcMap 10.2. In situ observations were used to inform photo interpretation.

Online_Linkage: FWC Side-scan sonar 2012 and 2013
Online_Linkage: WorldView-2 satellite Imagery
Online_Linkage: NOAA LiDAR 2012
Source_Scale_Denominator: 0
Type_of_Source_Media: None
Source_Citation_Abbreviation: Boca Grande Channel
Source_Information:
Source_Citation:
Citation_Information:
Originator: FWC
Title: Benthic Habitats South Florida 1991 - 2001
Source_Scale_Denominator: 50000
Type_of_Source_Media: None
Source_Citation_Abbreviation: Benthic Habitats South Florida 1991 - 2001
Source_Contribution: Used to fill in a few minor data gaps
Source_Information:
Source_Citation:
Citation_Information:
Originator: FWC/National Park Service
Title: Benthic Habitats Biscayne Bay 2005 - 2008 (Biscayne Bay aquatic preserve - northern portion)
Source_Scale_Denominator: 0
Type_of_Source_Media: None
Source_Citation_Abbreviation: Benthic Habitats Biscayne Bay 2005 - 2008 (Biscayne Bay aquatic preserve - northern portion)
Source_Information:
Source_Citation:
Citation_Information:
Originator: FWC
Title: North Keys/Backcountry FWC
Publication_Information:
Publisher: FWC FWRI
Other_Citation_Details:
This is a final draft of the North Keys/Backcountry FWC benthic map. This map has not been assessed for accuracy. Benthic type was interpreted using the best available satellite and aerial imagery, LiDAR data, and in situ observations where available. WorldView-2 and Geo-Eye satellite imagery and aerial photography were also used to aid in classification. Polygons were heads up digitized into a Geodatabase using ArcMap 10.2.
Online_Linkage: NOAA LiDAR 2012
Online_Linkage: WorldView-2 satellite Imagery
Online_Linkage: GeoEye-1 satellite Imagery
The Unified Patch Reef Map was created by extracting patch reef features from several maps throughout the Keys including NOAA, Nova Southeastern University (NSU), National Park Service (NPS), and previous FWC mapping efforts resulting in a GIS layer consisting of 14,196 patch reefs identified using the best available imagery and a consistent minimum mapping unit (MMU=150sqm) and digitizing scale (1:3,000) throughout the Florida Keys Reef Tract. Where the Unified Patch Reef Map layer intersected the Unified Florida Reef Tract Map, numerous features were edited and updated using newer, higher resolution imagery. As a result, there will be considerable differences between the Unified Florida Reef Tract Map v1.3 and the Unified Florida Reef Tract Map v2.0.

Other_Citation_Details:
This shapefile is a combination of the most recent SE FL benthic habitat maps. The nearshore has been updated according to Walker and Klug 2014 (Hillsboro inlet to Fowey Rocks) and Cumming 2017 (Lake Worth inlet to Boynton inlet) combined with all previous mapping efforts. Cumming combined all hardbottom mapping from 2000 to present to obtain the total nearshore hardbottom extent. This habitat is variably exposed depending on temporal shifting sediment, beach nourishments, and large storm events. The Ecosystem regions were defined in Walker 2012 and Walker and Gilliam 2013. The SE FL nearshore benthic habitats were mapped using the same combined technique approach as described in Walker, Riegl, and Dodge (2008). Polygons were created by outlining and defining the features at a 1:1,000 scale and minimum mapping unit of 0.1 ha within recent aerial photography and high resolution bathymetric survey data.

Southeast Florida benthic habitat maps were produced by delineating seafloor features evident in multiple datasets including the GMR Aerial Surveys, Inc. dba Photo Scienceimagery collected for this purpose on March 8, 2013, 2008 Broward lidar, and 2009 NOAA bathymetry. This dataset built upon previous regional mapping efforts by Dr. Brian Walker at Nova Southeastern University. The habitats were classified according to established NOAA guidelines in coordination with the NOS Coral Mapping Program and use a similar classification scheme when possible.

Source_Scale_Denominator: 0
Source_Type_of_Source_Media: None
Source_Citation_Abbreviation: Southeast Florida Benthic Habitat Update 2015
Process_Step:
Process_Description: Version 1.0 published
Process_Step:
Process_Description: Version 1.1 - Data addition: Biscayne Bay Aquatic Preserve. Seams integrated with Biscayne Bay NPS data and SE Florida Data (at inlets). Edits have not yet be accuracy assessed. Zone information added for SE Florida and Marquesas.
Process_Step:
Process_Description: Version 1.2 - Data addition: Hawk Channel. Boca Grande Channel. Data surrounding these areas were edited at seams to match updates.
Process_Step:
Process_Description: Version 1.3 - Data addition: Northern Marquesas and Backcountry Areas. Data surrounding these areas were edited at seams to match updates and map topology errors throughout the map were corrected.
Process_Step:
Process_Description: Version 2.0 – Data additions : Unified Florida Patch Reef Map and the Southeast Florida Benthic Habitat Update. Southeast Florida Benthic Habitat data was edited to not overwrite NPS dataset overlap. Data surrounding these areas were edited at seams to match updates. . Data intersected by these additions were edited for geometry and classification.
Process_Step:
Process_Description:
Reclassification and geometry editing procedures are detailed in accompanying report

**Spatial_Data_Organization_Information:**
*Direct_Spatial_Reference_Method:* Vector

**Entity_and_Attribute_Information:**
*Detailed_Description:*  
*Entity_Type:*  
*Entity_Type_Label:* UnifiedFloridaReefMap  
*Entity_Type_Definition_Source:* Producer defined  
*Attribute:*  
*Attribute_Label:* OBJECTID_1  
*Attribute_Definition:* Internal feature number.  
*Attribute_Definition_Source:* Esri  
*Attribute_Domain_Values:*  
*Unrepresentable_Domain:* Sequential unique whole numbers that are automatically generated.  
*Attribute:*  
*Attribute_Label:* Shape  
*Attribute_Definition:* Feature geometry.  
*Attribute_Definition_Source:* Esri  
*Attribute_Domain_Values:*  
*Unrepresentable_Domain:* Coordinates defining the features.  
*Attribute:*  
*Attribute_Label:* ClassLv0  
*Attribute_Definition:* Unified Classification Level 0. This is the coarsest (most general) thematic level.  
*Attribute_Definition_Source:* FWC  
*Attribute:*  
*Attribute_Label:* ClassLv1  
*Attribute_Definition:* Unified Classification Level 1  
*Attribute_Definition_Source:* FWC  
*Attribute:*  
*Attribute_Label:* Source  
*Attribute_Definition:* Original mapping project reference  
*Attribute_Definition_Source:* FWC  
*Attribute:*  
*Attribute_Label:* Zone_  
*Attribute_Definition:* Reef Zone  
*Attribute:*  
*Attribute_Label:* GeoformDet  
*Attribute_Definition:* Geoform Detail: This field retains the original source data classification values  
*Attribute_Definition_Source:* Original source layer  
*Attribute:*  
*Attribute_Label:* GeoformD_1
Attribute:
Attribute_Label: GeoForm
Attribute_Definition:
GeoForm - This field retains the original source data classification values
Attribute_Definition_Source: Original source layer
Attribute:
Attribute_Label: BioCoverDe
Attribute_Definition:
Biological Cover Detail - This field retains the original source data classification values
Attribute_Definition_Source: Original source layer
Attribute:
Attribute_Label: PercentBio
Attribute_Definition:
Percent Biological Cover - This field retains the original source data classification values
Attribute_Definition_Source: Original source layer
Attribute:
Attribute_Label: PercentCor
Attribute_Definition:
Percent Coral Cover - No distinction is made between soft and stony coral. This field retains the original source data classification values
Attribute_Definition_Source: Original source layer
Attribute:
Attribute_Label: BioCover
Attribute_Definition:
Biological Cover - This field retains the original source data classification values
Attribute_Definition_Source: Original source layer
Attribute:
Attribute_Label: CMECS_Geo
Attribute_Definition: CMECS Geoform cross-walk
Attribute_Definition_Source: FWC
Attribute:
Attribute_Label: CMECS_Bio
Attribute_Definition: CMECS Biological Cover cross-walk
Attribute_Definition_Source: FWC
Attribute:
Attribute_Label: ClassLv2
Attribute_Definition: Unified Classification Level 2
Attribute_Definition_Source: FWC
Attribute:
Attribute_Label: ClassLv3
Attribute_Definition: Unified Classification Level 3
Attribute_Definition_Source: FWC
Attribute:
Attribute_Label: ClassLv4
Attribute_Definition:
Unified Classification Level 4. This is the most detailed thematic classification level.
As specified in the attribute definitions, some attribute fields represent the original source data classification information. Not all features will have information for these original source data fields.

**Overview_Description:**

As specified in the attribute definitions, some attribute fields represent the original source data classification information. Not all features will have information for these original source data fields.

**Distribution_Information:**

**Distributor:**
Contact Information:
Contact Organization Primary:
Contact Organization:
FWC-FWRI (Florida Fish and Wildlife Conservation Commission-Fish and Wildlife Research Institute)
Contact Person: GISLibrarian
Contact Position: GIS Data Librarian
Contact Address:
Address Type: mailing and physical
Address:
Fish and Wildlife Research Institute 100 Eighth Avenue Southeast
City: St. Petersburg
State or Province: Florida
Postal Code: 33701
Contact Voice Telephone: 727-896-8626
Contact Facsimile Telephone: 727-893-1679
Contact Electronic Mail Address: GISLibrarian@MyFWC.com
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Standard Order Process:
Digital Form:
Digital Transfer Information:
Format Name: SHP
Fees:
None. However, persons or organizations requesting information must provide transfer media if FTP is not available and must pay express shipping costs if express shipping is required.
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Contact GIS Librarian by e-mail, telephone, or letter explaining which products are needed and providing a brief description of how the products will be used. Also, provide name and address of the person or organization requesting the products.
Turnaround:
Usually within 10 business days, although, complex requests may take longer

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Metadata Review Date: 20071115
Metadata Contact:
Contact Information: