

Gloucester County Tidal Marsh Inventory 2010/2014

Shapefile



Tags

Tidal marsh, Inventory, Watershed, Marsh Community Type

Summary

To maintain and update an inventory of the distribution of tidal marshes for the Commonwealth of Virginia.

Description

The Virginia Institute of Marine Science published the first Tidal marsh Inventories for Virginia in the 1970s. Using high resolution color infra-red imagery from 2009 a new Tidal Marsh Inventory has been developed for the York River Watershed in 2010. The remaining tidal shoreline of Gloucester County was developed using color infra-red imagery from 2011. Marsh boundaries were generated using heads-up digitizing techniques at a scale of 1:1,000. Each marsh polygon was classified by morphologic type: fringe, extensive, embayed, or marsh island. Marshes were ground-truthed in the field where a community type index was assigned to each marsh based on plant community make-up. Each marsh was also coded with a marsh number which corresponds to the original 1970s delineation. This will provide an opportunity to review changes that have occurred in the marshes over time.

Credits

There are no credits for this item.

Use limitations

The boundaries should not be used for jurisdictional determinations.

Extent

West -76.706259 **East** -76.351944

North 37.575133 **South** 37.243577

Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata

Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE biota, boundaries, environment

* CONTENT TYPE Downloadable Data

EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

PLACE KEYWORDS Aberdeen Creek, Adams Creek, Carter Creek, Cedarbush Creek, Mobjack Bay, North River, Perrin River, Piankatank River, Poropotank River, Sarah Creek, Severn River, Timberneck Creek, Ware River, York River

THEME KEYWORDS Tidal Marsh, Wetland Plant Identification, Wetland Community Type

THESAURUS

TITLE Gloucester County Tidal Marsh Inventory 2014

PUBLICATION DATE 2014-12-31 00:00:00

Citation

TITLE Gloucester County Tidal Marsh Inventory 2010/2014

PUBLICATION DATE 2014-12-31 00:00:00

PRESENTATION FORMATS * digital map

Resource Details

DATASET LANGUAGES * English (UNITED STATES)

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.0.3035

ARCGIS ITEM PROPERTIES

* NAME glou_TMI2010_2014

* SIZE 9.554

* LOCATION <http://ccrm.vims.edu/ccrmp/index.html>

* ACCESS PROTOCOL Comprehensive Coastal Resource Management Portal

Extents

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -76.706259

* EAST LONGITUDE -76.351944

* NORTH LATITUDE 37.575133
* SOUTH LATITUDE 37.243577
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE 349320.045094
* EAST LONGITUDE 380098.216785
* SOUTH LATITUDE 4123245.940263
* NORTH LATITUDE 4159543.361523
* EXTENT CONTAINS THE RESOURCE Yes

Resource Constraints

CONSTRAINTS

LIMITATIONS OF USE

The boundaries should not be used for jurisdictional determinations.

Spatial Reference

ARCGIS COORDINATE SYSTEM

* TYPE Projected
* GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983
* PROJECTION NAD_1983_UTM_Zone_18N
* COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 26918

X ORIGIN -5120900
Y ORIGIN -9998100
XY SCALE 450445547.3910538
Z ORIGIN -100000
Z SCALE 10000
M ORIGIN -100000
M SCALE 10000
XY TOLERANCE 0.001
Z TOLERANCE 0.001
M TOLERANCE 0.001
HIGH PRECISION true
LATESTWKID 26918

WELL-KNOWN TEXT

PROJCS["NAD_1983_UTM_Zone_18N",GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Transverse_Mercator"],PARAMETER["False_Easting",500000.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",-75.0],PARAMETER["Scale_Factor",0.9996],PARAMETER["Latitude_Of_Origin",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",26918]]

REFERENCE SYSTEM IDENTIFIER

* VALUE 26918
* CODESPACE EPSG
* VERSION 7.9.4

Spatial Data Properties

VECTOR

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME glou_TMI2010_2014

* OBJECT TYPE composite

* OBJECT COUNT 2311

ARCGIS FEATURE CLASS PROPERTIES



FEATURE CLASS NAME glou_TMI2010_2014

* FEATURE TYPE Simple

* GEOMETRY TYPE Polygon

* HAS TOPOLOGY FALSE

* FEATURE COUNT 2311

* SPATIAL INDEX FALSE

* LINEAR REFERENCING FALSE

Data Quality

SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

Lineage

PROCESS STEP



WHEN THE PROCESS OCCURRED 2014-03-01 00:00:00

DESCRIPTION Tidal marshes were delineated from 2011 VBMP imagery using onscreen digitizing techniques at a scale of 1:1,000. Bing and Google Earth online imagery was used to provide additional interpretive information to improve the accuracy of marsh boundaries. Marsh polygons were coded by shape and physiographic setting based on a classification system applied in the first Gloucester County Inventory in Gloucester County (in 1976). Quality assurance and control measures were performed prior to generation of maps for fieldwork.

PROCESS STEP



WHEN THE PROCESS OCCURRED 2014-03-01 00:00:00

DESCRIPTION VBMP imagery, with the marsh polygon layer overlay, was printed for use in field surveys of the marshes.

PROCESS STEP



WHEN THE PROCESS OCCURRED 2014-06-01 00:00:00

DESCRIPTION Field collection of marsh data was performed primarily from a small shallow-draft vessel, navigating at slow speeds parallel to the shoreline. Surveys extended as far upstream as depth and field conditions allowed. Some additional data collection was performed by land where marshes were easily accessible from public lands. During surveys, marsh boundaries were verified, and wetland plant species observed within each marsh polygon were recorded along with relative cover estimates to determine marsh community types.

PROCESS STEP



WHEN THE PROCESS OCCURRED 2014-09-01 00:00:00

DESCRIPTION Corrections were made to the digital data back at the lab using ArcGis Version 10.0

Distribution

DISTRIBUTION FORMAT

* **NAME** Shapefile

VERSION Shapefile

TRANSFER OPTIONS

* **TRANSFER SIZE** 9.554

Fields

DETAILS FOR OBJECT GLOU_TMI2010_2014

* **TYPE** Feature Class

* **ROW COUNT** 2311

DEFINITION

Polygon

DEFINITION SOURCE

ESRI

FIELD FID



* **ALIAS** FID

* **DATA TYPE** OID

* **WIDTH** 4

* **PRECISION** 0

* **SCALE** 0

* **FIELD DESCRIPTION**

Internal feature number.

* **DESCRIPTION SOURCE**

ESRI

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

FIELD SHAPE



* ALIAS Shape
* DATA TYPE Geometry
* WIDTH 0
* PRECISION 0
* SCALE 0
* FIELD DESCRIPTION
Feature geometry.

* DESCRIPTION SOURCE
ESRI

* DESCRIPTION OF VALUES Coordinates defining the features.

FIELD ID



* ALIAS ID
* DATA TYPE Integer
* WIDTH 6
* PRECISION 6
* SCALE 0
* FIELD DESCRIPTION
number

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES ID #

FIELD AREA



* ALIAS AREA
* DATA TYPE Double
* WIDTH 19
* PRECISION 18
* SCALE 11
* FIELD DESCRIPTION
The area of the polygon in meters squared

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES The area of the polygon in meters squared

FIELD NEW_ID



* ALIAS NEW_ID
* DATA TYPE Double
* WIDTH 12

* PRECISION 12
* SCALE 0
FIELD DESCRIPTION
2010 marsh number

DESCRIPTION SOURCE
Processor

DESCRIPTION OF VALUES 2010 marsh number

FIELD TMI_NO



* ALIAS TMI_NO
* DATA TYPE Double
* WIDTH 11
* PRECISION 11
* SCALE 0

FIELD DESCRIPTION
original tidal marsh number

DESCRIPTION SOURCE
Processor

DESCRIPTION OF VALUES original tidal marsh number

FIELD MFIPS



* ALIAS MFIPS
* DATA TYPE Double
* WIDTH 16
* PRECISION 16
* SCALE 0

FIELD DESCRIPTION
county code and original tmi number

DESCRIPTION SOURCE
Processor

DESCRIPTION OF VALUES county code and original tmi number

FIELD TMI_TYPE



* ALIAS TMI_TYPE
* DATA TYPE Double
* WIDTH 10
* PRECISION 10
* SCALE 0

FIELD DESCRIPTION
marsh classification type from original TMI

DESCRIPTION SOURCE
Original Processor

DESCRIPTION OF VALUES marsh classification type from original TMI

FIELD COMMENTS



* ALIAS COMMENTS

* DATA TYPE String

* WIDTH 28

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

any unusual sightings etc.

DESCRIPTION SOURCE

Processor or Field Personel

DESCRIPTION OF VALUES any unusual sightings etc.

FIELD MARSHCLASS



* ALIAS marshclass

* DATA TYPE String

* WIDTH 30

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Marsh Community Type from current inventory. Marsh type:

DESCRIPTION SOURCE

Tidal Marsh Inventories – Community Types & Field Codes

DESCRIPTION OF VALUES Embayed, Extensive, Marsh Island and Marsh Fringe <5 feet, 5-30 feet and >30 feet

FIELD MARSH_Type



* ALIAS Marsh_Type

* DATA TYPE String

* WIDTH 50

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Tidal marshes take on several different morphologies. They can be embayed features that are set into the landscape with upland areas along the marsh edges. They can also be large extensive features that extend into the open water and have water on two or three sides. Fringe marshes grow nearly parallel to the shoreline and can be wide or narrow. An isolated marsh surrounded on all sides by open water; interior portions of the marsh may contain trees scattered at highest elevations. In all cases, wetland vegetation must be relatively well established, although not necessarily healthy.

DESCRIPTION SOURCE

Marsh type: Embayed, Extensive, Marsh Island and Marsh Fringe <5 feet, 5-30 feet and >30 feet.

DESCRIPTION OF VALUES Embayed, Extensive, Marsh Island and Marsh Fringe <5 feet, 5-30 feet and >30 feet.

BEGINNING DATE OF VALUES 2014-04-01

FIELD NUMBER



* ALIAS Number
* DATA TYPE Integer
* WIDTH 9
* PRECISION 9
* SCALE 0

FIELD DESCRIPTION

Final marsh number for current inventory

DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES Final marsh number for current inventory

FIELD FIELD2014



* ALIAS Field2014
* DATA TYPE String
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Field work done during June 2014. Y = field checked in 2014 and N = not field checked

DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES Field work done during June 2014. Y = field checked in 2014 and N = not field checked

BEGINNING DATE OF VALUES 2014-08-01

FIELD FIELD2010



* ALIAS Field2010
* DATA TYPE String
* WIDTH 5
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Seen during field work of 2010.

DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES Seen during field work of 2010

FIELD COUNTY



* ALIAS County
* DATA TYPE String
* WIDTH 5
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
 Gloucester

DESCRIPTION SOURCE
 Processor

DESCRIPTION OF VALUES County name

FIELD 10FIELD14



* ALIAS 10Field14
* DATA TYPE String
* WIDTH 5
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
 Y = marsh checked in either 2010 or 2014, N = not seen in either year

DESCRIPTION SOURCE
 Field Personel

DESCRIPTION OF VALUES Y = marsh checked in either 2010 or 2014, N = not seen in either year

BEGINNING DATE OF VALUES 2014-06-01

FIELD MARSHNo



* ALIAS MarshNo
* DATA TYPE Double
* WIDTH 19
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
 Final marsh number for current inventory. Same as "Number"

DESCRIPTION SOURCE
 Processor

DESCRIPTION OF VALUES Final marsh number for current inventory. Same as "Number"

FIELD CMTYTYPE



* ALIAS CmtyType
* DATA TYPE String
* WIDTH 254
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Marsh Community Type: I = Saltmarsh Cordgrass/low marsh, II = Saltmeadow/high marsh, III = Black Needlerush, IV = Saltbush, V = Big Cordgrass, VI = Cattail, VII = Arrow Arum, VIII = Reedgrass, IX = Yellow Pond Lily, X = Saltwort, XI = Freshwater mix, XII = Brackish mix

DESCRIPTION SOURCE

Field Personel

DESCRIPTION OF VALUES I = Saltmarsh Cordgrass/low marsh, II = Saltmeadow/high marsh, III = Black Needlerush, IV = Saltbush, V = Big Cordgrass, VI = Cattail, VII = Arrow Arum, VIII = Reedgrass, IX = Yellow Pond Lily, X = Saltwort, XI = Freshwater mix, XII = Brackish mix

BEGINNING DATE OF VALUES 2014-06-01

FIELD REEDGRASS



* ALIAS Reedgrass
* DATA TYPE String
* WIDTH 254
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

D = Marsh 51-100% Phragmites

X = Marsh 1-50% Phragmites

T = Marsh < 1% Phragmites

DESCRIPTION SOURCE

Field Personel

DESCRIPTION OF VALUES Percentage of Phragmites in marsh

BEGINNING DATE OF VALUES 2014-06-01

FIELD PRCNTPHRAG



* ALIAS PrcntPhrag
* DATA TYPE String
* WIDTH 8
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

% cover of Phragmites in marsh

DESCRIPTION SOURCE

Field Personel

DESCRIPTION OF VALUES % cover of Phragmites in marsh

BEGINNING DATE OF VALUES 2014-06-01

FIELD FIELDDATE



* ALIAS FieldDate

* DATA TYPE Date

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Date on which marsh was surveyed, null if not seen in field

DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES Date of Marsh Survey

BEGINNING DATE OF VALUES 2014-09-01

FIELD OBSERVER



* ALIAS Observer

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Name of field personel

DESCRIPTION SOURCE

processor

DESCRIPTION OF VALUES Name of Field Personal

BEGINNING DATE OF VALUES 2014-09-01

FIELD COMMENT



* ALIAS Comment

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

any observances in field

DESCRIPTION SOURCE

Field Personel

DESCRIPTION OF VALUES Any observations noted in field

BEGINNING DATE OF VALUES 2014-06-01

FIELD COMMUNTYPE



* ALIAS CommunType

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Type I: Predominately Saltmarsh Cordgrass / low marsh

Type II: Predominately Saltmeadow / high marsh

Type III: Predominately Black Needlerush

Type IV: Predominately Saltbush

Type V: Predominately Big Cordgrass

Type VI: Predominately Cattail

Type VII: Predominately Arrow Arum - Pickerelweed

Type VIII: Predominately Reed Grass

Type IX: Predominately Yellow Pond Lily

Type X: Predominately Saltwort

Type XI: Freshwater mix - no dominant species

Type XII: Brackish mix - no dominant specie

DESCRIPTION SOURCE

Tidal Marsh Inventories – Community Types & Field Codes

DESCRIPTION OF VALUES Marsh Community Type from current TMI

BEGINNING DATE OF VALUES 2014-06-01

FIELD DOMINANT_P



* ALIAS Dominant_P

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Dominant plant species

DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES Dominant plant species

BEGINNING DATE OF VALUES 2014-09-01

FIELD ACRES



* ALIAS acres

* DATA TYPE Double

* WIDTH 13

* PRECISION 12

* SCALE 2

FIELD DESCRIPTION

Polygon area in acres

DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES The area of the polygon in acres.

BEGINNING DATE OF VALUES 2014-09-01

Metadata Details

* METADATA LANGUAGE English (UNITED STATES)

* METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset

SCOPE NAME * dataset

* LAST UPDATE 2015-01-07

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

METADATA STYLE FGDC CSDGM Metadata

STANDARD OR PROFILE USED TO EDIT METADATA ISO19139

CREATED IN ARCGIS FOR THE ITEM 2014-09-03 16:04:33

LAST MODIFIED IN ARCGIS FOR THE ITEM 2015-01-07 16:15:49

AUTOMATIC UPDATES
HAVE BEEN PERFORMED Yes
LAST UPDATE 2015-01-07 16:15:49

Metadata Contacts

METADATA CONTACT
INDIVIDUAL'S NAME Marcia Berman
ORGANIZATION'S NAME Comprehensive Coastal Inventory Program, Virginia Institute of Marine Science
CONTACT'S POSITION Director of Comprehensive Coastal Inventory Program
CONTACT'S ROLE point of contact

CONTACT INFORMATION

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ADMINISTRATIVE AREA Virginia
POSTAL CODE 23062
COUNTRY US
E-MAIL ADDRESS marcia@vims.edu

Thumbnail and Enclosures

THUMBNAIL
THUMBNAIL TYPE JPG