

Middlesex County, Virginia 2015 Tidal Marsh Inventory

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. The first tidal marsh inventory for Middlesex County was published in 1981 using data collected in the early seventies. Using high resolution color infra-red imagery from 2013 a new Tidal Marsh Inventory has been developed for Middlesex County. 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 -76.683310 **East** -76.299961
North 37.775515 **South** 37.508846

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 Virginia, Rappahannock River, Lagrange Creek, Urbana Creek, Piankatank River, Wilton Creek, Fishing Bay, Stingray Point

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

Citation

TITLE Middlesex County, Virginia 2015 Tidal Marsh Inventory

PUBLICATION DATE 2015-12-31 00:00:00

PRESENTATION FORMATS * digital map

Resource Details

DATASET LANGUAGES * English (UNITED STATES)

DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE * vector

SUPPLEMENTAL INFORMATION

There are four shapefiles that are part of the 2015 Middlesex County Shoreline Inventory database: Middlesex_lubc_2015, Middlesex_sstru_2015, Middlesex_astru_2015 and Middlesex_tm_2015. Middlesex_lubc_2015 (land use and bank cover for Middlesex County) is a linear shapefile containing data about land use, tree fringe, bank height, bank cover, and beach status along the shoreline. Middlesex_sstru_2015 (Middlesex County shoreline structures) is a linear shapefile delineating hard structures in place at the shoreline (bulkhead, dilapidated bulkhead, riprap, wharf, unconventional, debris, marina < 50 slips, marina > 50 slips, jetty, marsh toe revetment, groinfield and breakwaters). Middlesex_astru_2015 (Middlesex County access structures) is a point shapefile with locations of docks, dilapidated docks, boathouses, and private and public boat ramps. Middlesex_tm_2015 (Middlesex County tidal marshes) shows the location, size, species and type of tidal marshes. The attributes of these four shapefiles are explained in the Entity and Attribute Information section below.

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

ARCGIS ITEM PROPERTIES

*** NAME** Middlesex_TMI_2015

* SIZE 1.526
* LOCATION *****
* ACCESS PROTOCOL Local Area Network

Extents

EXTENT
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT TYPE Extent used for searching
* WEST LONGITUDE -76.683310
* EAST LONGITUDE -76.299961
* NORTH LATITUDE 37.775515
* SOUTH LATITUDE 37.508846
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM
* WEST LONGITUDE 351745.566956
* EAST LONGITUDE 385114.600453
* SOUTH LATITUDE 4152644.349220
* NORTH LATITUDE 4181709.641609
* 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_No
rth_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenw

ich",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

DIMENSION horizontal

* 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 Middlesex_TMI_2015

* OBJECT TYPE composite

* OBJECT COUNT 1845

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME Middlesex_TMI_2015

* FEATURE TYPE Simple

* GEOMETRY TYPE Polygon

* HAS TOPOLOGY FALSE

* FEATURE COUNT 1845

* SPATIAL INDEX FALSE

* LINEAR REFERENCING FALSE

Data Quality

SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

Lineage

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-02-01 00:00:00

DESCRIPTION Tidal marshes were delineated from 2013 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 Middlesex County Inventory in Middlesex County (in 1981). Quality assurance and control measures were performed prior to generation of maps for fieldwork.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-03-03 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 2015-06-01 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 2015-07-01 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 1.526

Fields

DETAILS FOR OBJECT Middlesex_TMI_2015

- * TYPE Feature Class
- * ROW COUNT 1845

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 MarshFinal

- * ALIAS MarshFinal
- * DATA TYPE String
- * WIDTH 50
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION
Marsh = polygon is marsh

Marsh island = polygon is marsh island

NoMarsh_forest = polygon is forest

NoMarsh_ScrubShrub = polygon is scrub shrub

DESCRIPTION SOURCE

Processor

FIELD Number

- * ALIAS Number
- * DATA TYPE String
- * WIDTH 20
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Final marsh number for current inventory

DESCRIPTION SOURCE

Processor

FIELD Field

- * ALIAS Field
- * DATA TYPE String
- * WIDTH 5
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Observed in the field or not

DESCRIPTION SOURCE

Field Personnel

FIELD MarshNo

- * ALIAS MarshNo
- * DATA TYPE Integer
- * WIDTH 9
- * PRECISION 9
- * SCALE 0

FIELD DESCRIPTION

Fips code and marsh number

DESCRIPTION SOURCE

Processor

FIELD CmtyType

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

FIELD DESCRIPTION

FW = Freshwater

Cyno = Spartina cynosuroides

Cat = Cattail

YPL = Yellow pond Lily

Phrag = Phragmites australis

AAP = Arrow Arum and Pickerel Weed

DESCRIPTION SOURCE

Tidal Marsh Inventories – Community Types & Field Codes

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 Personnel

FIELD PrcntPhrag

* ALIAS PrcntPhrag

* DATA TYPE String

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

% cover of Phragmites in marsh

DESCRIPTION SOURCE

Field Personnel

FIELD FieldDate

* ALIAS FieldDate

* DATA TYPE Date

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Field dates: 6-30-2015, 7-1-2015, 7-7 through 7-10-2015

DESCRIPTION SOURCE

Processor

FIELD Observer

* ALIAS Observer

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Field personnel making the observations.

DESCRIPTION SOURCE

Processor

FIELD Comments

* ALIAS Comments

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Any notable observations

DESCRIPTION SOURCE

Field Personnel

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

FIELD Dominant_P

* ALIAS Dominant_P

* DATA TYPE String

* WIDTH 254

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Dominant plant species

DESCRIPTION SOURCE

Processor

FIELD Acres

* ALIAS Acres

* DATA TYPE Double

* WIDTH 13

* PRECISION 12

* SCALE 2

FIELD DESCRIPTION

Polygon area in acres

DESCRIPTION SOURCE

Processor

FIELD PhragPres

* ALIAS PhragPres

* DATA TYPE String

* WIDTH 50

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Presence or absence of Phragmites australis

DESCRIPTION SOURCE

Processor

FIELD area_sqm

* ALIAS area_sqm
* DATA TYPE Double
* WIDTH 19
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Polygon area in meters squared

DESCRIPTION SOURCE
Processor

Metadata Details

* METADATA LANGUAGE English (UNITED STATES)
* METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

METADATA IDENTIFIER 81CA10CF-96C6-45D4-A45F-265AE438DF4B

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

* LAST UPDATE 2015-12-14

ARCGIS METADATA PROPERTIES
METADATA FORMAT ArcGIS 1.0
METADATA STYLE ISO 19139 Metadata Implementation Specification
STANDARD OR PROFILE USED TO EDIT METADATA NAP

CREATED IN ARCGIS FOR THE ITEM 2015-11-03 11:07:07
LAST MODIFIED IN ARCGIS FOR THE ITEM 2015-12-14 11:38:34

AUTOMATIC UPDATES
HAVE BEEN PERFORMED Yes
LAST UPDATE 2015-12-14 11:38:34

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

METADATA CONTACT

INDIVIDUAL'S NAME Sharon Killeen

ORGANIZATION'S NAME Comprehensive Coastal Inventory Program, Virginia Institute of Marine Science

CONTACT'S POSITION GIS Programmer/Analyst

CONTACT'S ROLE point of contact

CONTACT INFORMATION

ADDRESS

TYPE

E-MAIL ADDRESS sharon@vims.edu