

Shoreline Inventory For Middlesex County 2015: Land Use Land Cover

Shapefile



Tags

Shoreline structures, Access structures, Land use, Land cover

Summary

To inventory the Middlesex County tidal shoreline conditions.

Description

Shoreline Situation Reports (SSR) were first generated by VIMS in the 1970s to report the condition and status of the shore lands. The SSR series were published in hardcopy on a county by county basis for each of the Tidewater Virginia localities. The reports were intended to assist planners, managers, and regulators in decisions pertaining to management of coastal areas and natural resources therein. This report continues the process which updates and expands earlier reports. Data collected describes conditions in the immediate riparian zone, the bank, and along the shore. Middlesex County was last inventoried in 2000.

Credits

There are no credits for this item.

Use limitations

These data should not be used for jurisdictional permit determinations beyond providing general shoreline condition or status information. These data have not been surveyed to property boundaries

Extent

West -76.683535 **East** -76.297231
North 37.775545 **South** 37.509709

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 farming, boundaries, environment, inlandWaters, location, structure

*** 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 Shoreline condition, Shoreline structures, Land use, Shoreline Inventory, Bank cover, Shoreline stability, Bank height, Beach, Access structures

Citation

TITLE Shoreline Inventory For Middlesex County 2015: Land Use Land Cover
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_lubc_2015
* SIZE 1.177
* LOCATION *****
* ACCESS PROTOCOL Local Area Network

Extents

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -76.683535
* EAST LONGITUDE -76.297231
* NORTH LATITUDE 37.775545
* SOUTH LATITUDE 37.509709
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE 351725.705270
* EAST LONGITUDE 385357.318731
* SOUTH LATITUDE 4152740.510345
* NORTH LATITUDE 4181709.641609
* EXTENT CONTAINS THE RESOURCE Yes

Resource Constraints

CONSTRAINTS

LIMITATIONS OF USE

These data should not be used for jurisdictional permit determinations beyond providing general shoreline condition or status information. These data have not been surveyed to property boundaries

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
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_lubc_2015

* OBJECT TYPE composite

* OBJECT COUNT 3558

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME Middlesex_lubc_2015

* FEATURE TYPE Simple

* GEOMETRY TYPE Polyline

* HAS TOPOLOGY FALSE

* FEATURE COUNT 3558

* SPATIAL INDEX TRUE

* LINEAR REFERENCING FALSE

Data Quality

SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

Lineage

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-01-15 00:00:00

DESCRIPTION The shoreline produced for the 2000 Middlesex County Shoreline Inventory Report was copied and corrected to the new 2013 VBMP imagery. Other resources, such as Google Earth and Bing Maps, were used when shoreline visibility was obscured.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-06-01 00:00:00

DESCRIPTION A small draft boat was used to collect tidal marsh inventory data in the field. A video camera is set up and collects imagery of the coastline as it passes by the camera lens. Data is logged using a geo-referenced video camera. The Red Hen System provides hardware and software to collect geo-referenced video and photo data in the field. A standard video camera (sony ACC-HDV7) is interfaced with a GPS antennae via the Red Hen hardware device - VMS 300. VMS 300 converts GPS data into audio signals, which are sent to a video camera through its microphone input connector. As the video is recorded, GPS data are transmitted once per second to the video camera by VMS 300. Each GPS location is linked with a time code on the video. Therefore, the survey is a set of videos containing geographically referenced shoreline data.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-09-01 00:00:00

DESCRIPTION All processing steps for the shoreline inventory were generated using ArcGIS - ArcMap v10.2.2 while viewing conditions observed in 2015 Bing high resolution oblique imagery and 2013 imagery from the Virginia Base Mapping Program (VBMP). Using the latest VBMP 2013 imagery as a background, conditions visible on shore were used to code a digital shoreline created using VBMP 2013 imagery at a scale of 1:1000. Conditions were also verified using Bing Birds Eye, VBMP 2011, and VBMP 2009 imagery. For the land use/bank cover shapefile arcs were split and coded for land use, bank height, bank cover, tree fringe and presence or absence of beach, for the access structure shapefile arcs were coded for dock, dilapidated dock, boathouse, and public and private ramps, for the shoreline structure shapefile arcs were coded for bulkhead, dilapidated bulkhead, riprap, unconventional, debris, wharf, breakwater, groinfield, jetty, marsh toe revetment and marina >50 and <50 slips.

SOURCE DATA

DESCRIPTION Provided the latest 2013 imagery used to produce a new digital shoreline coverage that serves as the base shoreline for shoreline conditions. Used to accurately position land use and land cover data.

SOURCE CITATION

TITLE Virginia Base Map Program Imagery and Hydrology

ALTERNATE TITLES VBMP

COLLECTION TITLE Geographic Network Division of its Department of Technology Planning (VGIN)

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-10-01 00:00:00

DESCRIPTION The first step in the QAQC process involves complete checks of shoreline coding by a GIS Programmer/Analyst and a Marine Scientist

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-10-29 00:00:00

DESCRIPTION The second and third step in the QAQC process involves complete checks of shoreline coding by a GIS Programmer/Analyst and a Marine Scientist. This involves using the Red Hen as part of QAQC.

Distribution

DISTRIBUTION FORMAT

* NAME Shapefile

VERSION Shapefile

TRANSFER OPTIONS

* TRANSFER SIZE 1.177

Fields

DETAILS FOR OBJECT [Middlesex_lubc_2015](#)

* TYPE Feature Class

* ROW COUNT 3558

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 LENGTH

- * ALIAS LENGTH
- * DATA TYPE Double
- * WIDTH 19
- * PRECISION 18
- * SCALE 5

FIELD UPLAND

- * ALIAS UPLAND
- * DATA TYPE SmallInteger
- * WIDTH 1
- * PRECISION 1
- * SCALE 0

FIELD FEATURE

- * ALIAS Feature
- * DATA TYPE String
- * WIDTH 50
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Feature refers to a combination of land use in the immediate riparian area within 100 feet of the adjacent shoreline and best professional judgment when the infrastructure is setback on the parcel. Feature is labeled one of the following: agriculture, bare, commercial, forested, grass, industrial, military, paved, residential, timbered and scrub-shrub.

DESCRIPTION SOURCE

Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

LIST OF VALUES

VALUE Agriculture

DESCRIPTION Land use defined as agricultural includes farm tracts that are cultivated and crop producing. This designation is not applicable for pastureland, which is coded as grass.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Bare

DESCRIPTION Land use defined as bare includes areas void of any vegetation or obvious land use. Bare areas include those that have been cleared for construction.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Commercial

DESCRIPTION Commercial is a land use classification denoting small commercial operations such as shops, restaurants, as well as campgrounds. These operations are not necessarily water dependent businesses.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Forested

DESCRIPTION Forest cover includes deciduous, evergreen, and mixed forest stands. of trees. The land use is classified as Forest if there is a dense cover of trees and no other land use category is apparent close to the shoreline, e.g. residential, commercial, industrial, agriculture, etc.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Grass

DESCRIPTION Grasslands include large unmanaged fields, managed grasslands adjacent to large estates, agriculture tracts reserved for pasture, and grazing. While a general rule of thumb will classify a tract as "grass" if a home sits behind a large tract of grass, a designation of "residential" may be made if there are similar tracts adjacent to each other. This designation can be determined using best professional judgment.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Paved

DESCRIPTION Paved areas represent roads which run along the shore and generally are located at the top of the banks. Paved also includes parking areas such as parking at boat landing, or commercial facilities.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Residential

DESCRIPTION Residential land use includes single and multi-family dwellings located near the shoreline.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Scrub-Shrub

DESCRIPTION Scrub-shrub is a land use class that includes small trees, shrubs, and bushy plants. This land use is easily distinguished during remote sensing compared to Forest and Grass.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Timbered

DESCRIPTION Land that is clear cut with downed trees.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD HEIGHT

* ALIAS height

* DATA TYPE String

* WIDTH 10

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Bank height is a visual inspection of the height of the bank from the base to the top. We estimate height from imagery, field inspection, videography or a combination of all three data sources. Bank height is labeled on of the following: 0-5 feet, 5-30 feet and >30 feet.

DESCRIPTION SOURCE

Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

LIST OF VALUES

VALUE 0-5

DESCRIPTION Bank is 0-5 feet high

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE 5-30

DESCRIPTION Bank is 5-30 feet high

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE <30

DESCRIPTION Bank is greater than 30 feet

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD BEACH

* ALIAS Beach

* DATA TYPE String

* WIDTH 5

* PRECISION 0

* SCALE 0

DESCRIPTION SOURCE

Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD DESCRIPTION

Beaches are sandy shores that are visible during high tides. These features can be wide and persistent, or very thin lenses of sand.

LIST OF VALUES

VALUE Yes

DESCRIPTION Beach present

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE No

DESCRIPTION Beach is not present

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD Spit

* ALIAS Spit

* DATA TYPE String

* WIDTH 5

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

A narrow coastal landform tied to the upland shoreline at one end resulting from the deposition of sand moved by tides and currents. Spit features are generally sandy and may be dominated by beach, dune, and/or marsh habitats. For inventory purposes, this definition does not include spit features that are developed or have developable upland.

DESCRIPTION SOURCE

Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

LIST OF VALUES

VALUE Yes

DESCRIPTION Land is spit

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE No

DESCRIPTION Land is not spit

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD Tree_Fring

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

FIELD DESCRIPTION

When the dominant riparian land use is not forested but a line of trees is maintained along the bank edge, the land use is noted to include a tree fringe. When the tree fringe is between 100 and 100 feet it is considered a wide tree fringe. Over 1000 feet and it would have Forested as the land use.

DESCRIPTION SOURCE

Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

LIST OF VALUES

VALUE Yes

DESCRIPTION Tree fringe is present

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Yes w

DESCRIPTION Tree fringe is between 100 and 1000 feet wide

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD Cover

* ALIAS Cover
* DATA TYPE String
* WIDTH 10
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Bank cover is a classification based on a visual inspection of the bank. "Cover" can include either vegetative or structural cover and is labeled one of the following: total, partial or bare.

DESCRIPTION SOURCE

Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

LIST OF VALUES

VALUE Bare

DESCRIPTION bare < 25% vegetative/structural cover

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Partial

DESCRIPTION partial 25-75% vegetative/structural cover
ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Total

DESCRIPTION total > 75% vegetative/structural cover

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

FIELD Inv_Update

* ALIAS Inv_Update

* DATA TYPE String

* WIDTH 150

* PRECISION 0

* SCALE 0

Metadata Details

* METADATA LANGUAGE English (UNITED STATES)

* METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

METADATA IDENTIFIER 2B02F32C-4F73-4225-9743-FB644D311750

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 North American Profile of ISO19115 2003

STANDARD OR PROFILE USED TO EDIT METADATA NAP

CREATED IN ARCGIS FOR THE ITEM 2015-06-12 10:31:04

LAST MODIFIED IN ARCGIS FOR THE ITEM 2015-12-14 10:48:52

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2015-12-14 10:48:52

Metadata Contacts

METADATA CONTACT

INDIVIDUAL'S NAME Sharon Killeen

ORGANIZATION'S NAME Comprehensive Coastal Inventory, Virginia Institute of Marine Science (VIMS)

CONTACT'S POSITION GIS Programmer/Analyst

CONTACT'S ROLE point of contact

Metadata Constraints

CONSTRAINTS

LIMITATIONS OF USE

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LIMITATIONS OF USE

These data should not be used for jurisdictional permit determinations beyond providing general shoreline condition or status information. These data have not been surveyed to property boundaries