

# Shoreline Inventory for Gloucester County 2014: Land use, land cover

## Shapefile



## Tags

Shoreline conditions, Shoreline structures, Hardened structures, Access structures, Riparian land use, Shoreline Inventory

## Summary

To inventory Virginia's tidal shoreline conditions.

## Description

Shoreline Situation Reports (SSR) were first generated by VIMS in the 1970's 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 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 Shoreline Inventory report continues a process which updates and expands the earlier reports. Data collected reports conditions surveyed in the immediate riparian zone, the bank, and along the shoreline.

## 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** -76.706985    **East** -76.352032  
**North** 37.606942    **South** 37.242631

## 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, structure

\* 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   Land use, Shoreline Inventory, Bank cover, Shoreline Stability, Bank Height, Beach, Access Structures, Shoreline Structures

## Citation

TITLE   Shoreline Inventory for Gloucester County 2014: Land use, land cover

PUBLICATION DATE   2014-12-31 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 2014 Gloucester County Shoreline Inventory database: gloucester\_lubc\_2014, gloucester\_sstru\_2014, gloucester\_astru\_2014 and glou\_TMI2010\_2014. Gloucester\_lubc\_2014 (land use and bank cover for Gloucester County) is a linear shapefile containing data about land use, tree fringe, bank height, bank cover, bank stability and beach status along the shoreline. Gloucester\_sstru\_2014 (Gloucester 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). Gloucester\_astru\_2014 (Gloucester County access structures) is a point shapefile with locations of docks, dilapidated docks, boathouses, and private and public boat ramps. glou\_TMI2010\_2014 (Gloucester 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   gloucester\_lubc\_2014

- \* SIZE 3.648
- \* 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 -76.706985
- \* EAST LONGITUDE -76.352032
- \* NORTH LATITUDE 37.606942
- \* SOUTH LATITUDE 37.242631
- \* EXTENT CONTAINS THE RESOURCE Yes

#### EXTENT IN THE ITEM'S COORDINATE SYSTEM

- \* WEST LONGITUDE 349320.045100
- \* EAST LONGITUDE 380088.863600
- \* SOUTH LATITUDE 4123140.855800
- \* NORTH LATITUDE 4163073.481000
- \* 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

### LEGAL CONSTRAINTS

#### LIMITATIONS OF USE

The Comprehensive Coastal Inventory Program (CCI) at VIMS performs a service by distributing data generated by either CCI or public agencies which offer data without restriction or charge. CCI assumes no responsibility for data accuracy or precision, metadata completeness or correctness for digital information. CCI assumes no liability for misuse of any data which may arise as a result of any alteration, conversion, or combination with other data sources. As well, the timeliness and scale of these products must be considered when evaluating appropriate use.

## 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 gloucester\_lubc\_2014

\* OBJECT TYPE composite

\* OBJECT COUNT 2869

### ARCGIS FEATURE CLASS PROPERTIES



FEATURE CLASS NAME gloucester\_lubc\_2014

\* FEATURE TYPE Simple

\* GEOMETRY TYPE Polyline

\* HAS TOPOLOGY FALSE

\* FEATURE COUNT 2869

\* SPATIAL INDEX FALSE

\* LINEAR REFERENCING FALSE

## Data Quality

### SCOPE OF QUALITY INFORMATION

## Lineage

### PROCESS STEP



**DESCRIPTION** A small draft boat was used to collect data in the field. 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** 2014-03-01 00:00:00

**DESCRIPTION** A shoreline for Gloucester County was generated using the 2011 VBMP imagery and using ArcGis version 10.0. Bing and Google Earth online imagery was used to provide additional interpretive information to improve accuracy.

### PROCESS STEP



**WHEN THE PROCESS OCCURRED** 2014-05-01 00:00:00

**DESCRIPTION** All processing steps for the shoreline inventory were done using ArcGis version 10. Using the latest VBMP 2013 imagery as a background, conditions visible on shore were used to code a digital shoreline created using VBMP 2009 imagery. Conditions were also verified using Bing Birds Eye and aerial imagery. For the land use/bank cover shapefile arcs were split and coded for land use, bank height, bank cover, bank stability, 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, delapidated bulkhead, riprap, unconventional, debris, wharf, breakwater, groinfield, jetty, marsh toe revetment and marina >50 and <50 slips.

### PROCESS STEP



**WHEN THE PROCESS OCCURRED** 2014-10-01 00:00:00

**DESCRIPTION** This Red Hen data was used as part of the QAQC.

## Distribution

### DISTRIBUTION FORMAT

\* **NAME** Shapefile

**VERSION** Shapefile

#### TRANSFER OPTIONS

\* TRANSFER SIZE 3.648

## Fields

#### DETAILS FOR OBJECT GLOUCESTER\_LUBC\_2014

\* TYPE Feature Class

\* ROW COUNT 2869

#### DEFINITION

attributes of lines in cover

#### 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 Feature geometry.

#### 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 judgement when the infrastructure is setback on the parcel. Current land use: agriculture, commercial, detached marsh, forest, grass, industrial, marsh island, military, paved, residential, 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 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 Detached Marsh

DESCRIPTION Vegetated wetland surrounded by water but still in close proximity to mainland or other marshes. A marsh that is completely isolated from the mainland and found in open water is called marsh island.

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 Industrial**

**DESCRIPTION** Industrial operations are larger commercial businesses and can include areas where power plants, pulp mills, refineries, etc. are in operation along the coast.

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

**VALUE Marsh Island**

**DESCRIPTION** A marsh island is a vegetated wetland that is completely isolated from the mainland and found in open water. A marsh that is surrounded by water due to dissection from small tidal creeks is not a marsh island.

**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.

**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 Military**

**DESCRIPTION** A land use classification of Military marks the location of federal military reservations. This classification is generally reserved for the section of the base where active operations and infrastructure exist. Expansive military property adjacent to these areas which are unmanaged forest areas, for example, may be classified as forest land use.

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

**DESCRIPTION OF VALUES** agriculture, commercial, detached marsh, forest, grass, industrial, marsh island, military, paved, residential, and scrub-shrub

**FIELD EROSION**



\* **ALIAS** EROSION

\* **DATA TYPE** String

\* **WIDTH** 20

\* PRECISION 0

\* SCALE 0

#### FIELD DESCRIPTION

Bank stability is an observed estimate of how stable the bank is. It is not a true measure of erosion. Characteristics that would classify a bank as being unstable are exposed roots, bare soil, slumping, and falling trees. Characteristics of a stable bank would be one that is well vegetated and absent any signs of sediment slumping, scarps, and failing trees. If the bank condition can not be discerned from the observation point, the bank stability is classified as "unknown". Erosion is labelled one of the following: stable, unstable or unknown.

#### DESCRIPTION SOURCE

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

#### LIST OF VALUES

VALUE Stable

DESCRIPTION Characteristics of a stable bank would be one that is well vegetated and absent any signs of sediment slumping, scarps, and failing trees.

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

VALUE Unstable

DESCRIPTION Characteristics that would classify a bank as being unstable are exposed roots, bare soil, slumping, and failing trees.

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

VALUE Unknown

DESCRIPTION If the bank condition can not be discerned from the observation point, the bank stability is classified as "unknown".

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

DESCRIPTION OF VALUES stable, unstable or unknown

#### FIELD HEIGHT



\* ALIAS HEIGHT

\* DATA TYPE String

\* WIDTH 20

\* 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 labelled 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 high

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

DESCRIPTION OF VALUES 0-5 feet, 5-30 feet and >30 feet

#### FIELD COVER



\* ALIAS COVER

\* DATA TYPE String

\* WIDTH 20

\* 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 labelled 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 > 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

DESCRIPTION OF VALUES    Total, Partial or Bare

#### FIELD TREE\_FRING



\* ALIAS    Tree\_Fring

\* DATA TYPE    String

\* WIDTH    50

\* 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.

#### 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    No

DESCRIPTION    Tree fringe is not present

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

DESCRIPTION OF VALUES    Presence or Absence of tree fringe

#### FIELD BEACH



\* ALIAS    BEACH

\* DATA TYPE    String

\* WIDTH    10

\* PRECISION    0

\* SCALE    0

#### 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.

#### DESCRIPTION SOURCE

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

#### LIST OF VALUES

VALUE    Yes

DESCRIPTION    Beach is 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

DESCRIPTION OF VALUES Presence or absence of beach

#### FIELD SURVEY



\* ALIAS Survey

\* DATA TYPE String

\* WIDTH 150

\* PRECISION 0

\* SCALE 0

#### FIELD DESCRIPTION

Date of shoreline inventory processing or field survey date

#### DESCRIPTION SOURCE

Processor

DESCRIPTION OF VALUES Field survey date

#### FIELD SHAPE\_LEN



\* ALIAS Shape\_Leng

\* DATA TYPE Double

\* WIDTH 19

\* PRECISION 0

\* SCALE 0

#### FIELD DESCRIPTION

Length of arc

#### DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Length of arc

## 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 ISO 19139 Metadata Implementation Specification

STANDARD OR PROFILE USED TO EDIT METADATA ISO19139

CREATED IN ARCGIS FOR THE ITEM 2014-10-22 11:08:34

LAST MODIFIED IN ARCGIS FOR THE ITEM 2015-01-07 16:07:09

#### AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2015-01-07 16:07:09

## 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

#### CONTACT INFORMATION

##### PHONE

VOICE 804-684-7534

FAX 804-684-7179

##### ADDRESS

TYPE postal

DELIVERY POINT P.O.Box 1346

CITY Gloucester Point

ADMINISTRATIVE AREA Virginia

POSTAL CODE 23062

COUNTRY US

E-MAIL ADDRESS sharon@vims.edu

## Thumbnail and Enclosures

#### THUMBNAIL

THUMBNAIL TYPE JPG