

Shoreline Inventory for the City of Portsmouth 2015: Shoreline structures

Shapefile



Tags

Virginia, Shoreline condition, James River, Elizabeth River, Craney Island

Summary

To inventory the City of Portsmouth 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. The City of Portsmouth was last inventoried in 2008.

Credits

There are no credits for this item.

Use limitations

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.

Extent

West -76.408454 **East** -76.291156
North 36.926450 **South** 36.796092

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, structure

*** CONTENT TYPE** Downloadable Data

EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

PLACE KEYWORDS James River, Elizabeth River, Southern Branch of the Elizabeth River, Eastern Branch of the Elizabeth River, Western Branch of the Elizabeth River

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

Citation

TITLE Shoreline Inventory for the City of Portsmouth 2015: Shoreline structures

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 City of Portsmouth Shoreline Inventory database: Portsmouth_lubc_2015, Portsmouth_sstru_2015, Portsmouth_astru_2015 and Portsmouth_tm_2015. Portsmouth_lubc_2015 (land use and bank cover for the City of Portsmouth) is a linear shapefile containing data about land use, tree fringe, bank height, bank cover, and beach status along the shoreline. Portsmouth_sstru_2015 (the City of Portsmouth 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). Portsmouth_astru_2015 (the City of Portsmouth County access structures) is a point shapefile with locations of docks, dilapidated docks, boathouses, and private and public boat ramps. Portsmouth_tm_2015 (the City of Portsmouth 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** Portsmouth_sstru_2015
* **SIZE** 0.362
* **LOCATION** *****
* **ACCESS PROTOCOL** Local Area Network

Extents

EXTENT
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT TYPE Extent used for searching
* **WEST LONGITUDE** -76.408454
* **EAST LONGITUDE** -76.291156
* **NORTH LATITUDE** 36.926450
* **SOUTH LATITUDE** 36.796092
* **EXTENT CONTAINS THE RESOURCE** Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM
* **WEST LONGITUDE** 374555.007144
* **EAST LONGITUDE** 384811.131968
* **SOUTH LATITUDE** 4073174.612554
* **NORTH LATITUDE** 4087494.395749
* **EXTENT CONTAINS THE RESOURCE** Yes

Resource Points of Contact

POINT OF 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

POINT OF CONTACT
INDIVIDUAL'S NAME Marcia Berman
ORGANIZATION'S NAME Comprehensive Coastal Inventory, Virginia Institute of Marine Science (VIMS)
CONTACT'S POSITION Director Comprehensive Coastal Inventory Program
CONTACT'S ROLE point of contact

Resource Maintenance

RESOURCE MAINTENANCE
UPDATE FREQUENCY not planned

Resource Constraints

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.

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 Portsmouth_sstru_2015

* OBJECT TYPE composite

* OBJECT COUNT 828

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME Portsmouth_sstru_2015

* FEATURE TYPE Simple

* GEOMETRY TYPE Polyline

* HAS TOPOLOGY FALSE

* FEATURE COUNT 828

* SPATIAL INDEX TRUE

* LINEAR REFERENCING FALSE

Data Quality

SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

Lineage

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-02-02 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.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2015-02-02 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 2015-02-02 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.

PROCESS STEP

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

DESCRIPTION The shoreline produced for the 2001 Stafford 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.

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

PRESENTATION FORMATS digital map

FGDC GEOSPATIAL PRESENTATION FORMAT vector digital data

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

Distribution

DISTRIBUTION FORMAT

* NAME Shapefile

VERSION Shapefile

TRANSFER OPTIONS

* TRANSFER SIZE 0.362

Fields

DETAILS FOR OBJECT Portsmouth_sstru_2015

* TYPE Feature Class

* ROW COUNT 828

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 SSTRU

* ALIAS SSTRU
* DATA TYPE String
* WIDTH 30
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Erosion control conditions at the shoreline: breakwater, bulkhead, dilapidated bulkhead, debris, groinfield, jetty, marina >50 slips, marina <50 slips, marsh toe revetment, riprap, unconventional and wharf.

DESCRIPTION SOURCE

Processor

BEGINNING DATE OF VALUES 2015-01-05

ENDING DATE OF VALUES 2015-02-27

FIELD Inv_update

* ALIAS Inv_update
* DATA TYPE String
* WIDTH 150
* PRECISION 0
* SCALE 0

FIELD Structure

* ALIAS Structure
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Erosion control conditions at the shoreline: breakwater, bulkhead, dilapidated bulkhead, debris, groinfield, jetty, marina >50 slips, marina <50 slips, marsh toe revetment, riprap, unconventional and wharf.

DESCRIPTION SOURCE

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

LIST OF VALUES

VALUE Bulkhead

DESCRIPTION Bulkheads are traditionally treated wood or steel "walls" constructed to offer protection from wave attack. More recently, plastics are being used in the construction. Bulkheads are vertical structures built slightly seaward of the problem area and backfilled with suitable fill material. They function like a retaining wall, as they are designed to retain upland soil, and prevent erosion of the bank from impinging waves.

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

VALUE Breakwater

DESCRIPTION Breakwaters are structures that sit offshore and generally occur in a parallel series along the shore. Some breakwaters are attached to the land and are referred to as headland breakwaters. Their purpose is to attenuate and deflect incoming wave energy, protecting the fastland behind and between the structures.

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

VALUE Debris

DESCRIPTION Debris represents nonconforming materials and rubble dumped along the shoreline in a haphazard manner. Debris can include tires, bricks, broken concrete rubble, and railroad ties as examples. The inventory maps Unconventional instead of Debris when the material is deliberately placed for shoreline protection in a manner similar to riprap, bulkhead, and other shoreline protection structures.

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

VALUE Dilapidated Bulkhead

DESCRIPTION Dilapidated Bulkhead – A bulkhead which has failed due to deterioration from age or storm damage is called a dilapidated bulkhead. In many cases the structure may not be able to perform erosion control functions any longer.

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

VALUE Groinfield

DESCRIPTION Groins are low profile structures that sit perpendicular to the shore. They can be constructed of rock, timber, or concrete. They are frequently set in a series known as a groinfield, which may extend along a stretch of shoreline for some distance. Unless only a single groin can be detected, this inventory does not delineate individual groins in a groinfield. The groinfield is mapped as one linear feature parallel to the shoreline running along the length of the groin series. When effective, groins will trap sediment moving alongshore

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

VALUE Jetty

DESCRIPTION A jetty is a structure generally constructed of stone which is perpendicular to the shoreline and generally located at the entrance of tidal creeks and tributaries or marina boat basins. The function of a jetty is to prevent sediment transported alongshore from accumulating in the inlet.

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

VALUE Marinas: < and > 50 slips

DESCRIPTION Marinas are denoted as line features in this survey. The infrastructure associated with the marina (e.g. bulkheading, docks, wharfs, etc) are not digitized individually. However, if a boat ramp is noted it will be surveyed separately and coded as private. Marinas are generally commercial operations. However, smaller scale community docks offering slips and launches for residences are becoming more popular. To distinguish these facilities from commercial marinas, the user could check the riparian land use delineation. If "residential" the marina is most likely a community facility. The survey estimates the number of slips within the marina and classifies marinas as those with less than 50 slips and those with more than 50 slips.

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

VALUE Marsh Toe Revetment

DESCRIPTION (aka Marsh sill) – A low revetment placed offshore from an existing marsh or new planted marsh is classified as marsh toe revetment. The structure may include tidal openings to allow for the easy exchange of free swimming organisms during tidal cycles. Marsh toe revetments are mapped as offshore linear features running along the length of the structure. Marsh toe revetments are distinguished from breakwaters by the linear placement and presence of a tidal marsh instead of a sand beach landward from the structure. The classification can include best professional judgment.

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

VALUE Riprap

DESCRIPTION (aka Revetments) - Sloped structures constructed with large, heavy stone or other materials placed against the upland bank for erosion protection are classified as riprap. Riprap is mapped as a linear feature along the shoreline. Riprap is also used next to failing bulkheads (bulkhead toe revetments). The inventory maps only riprap when this type of structure is co-located with bulkheads. A similar structure is used to protect the edge of eroding marshes. This use is mapped as marsh toe revetment, not riprap.

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

VALUE Unconventional

DESCRIPTION Unconventional features represent segments along the shore where alternative material has been deliberately placed for shoreline protection. Unconventional features may include unique materials placed in a similar manner as riprap or bulkheads, such as engineered pre-cast concrete products. It may also include unique placement or arrangement of conventional materials like riprap that does not fit other structure definitions. The inventory maps Debris instead of Unconventional when the material is haphazardly scattered and not providing any shoreline protection value.

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

VALUE Wharf

DESCRIPTION Typically describes a shore parallel structure where boats are tied. In this inventory, Wharf is generally associated with large industrial, public or commercial facilities.

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

BEGINNING DATE OF VALUES 2015-01-05

ENDING DATE OF VALUES 2015-02-27

Metadata Details

* METADATA LANGUAGE English (UNITED STATES)

* METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

METADATA IDENTIFIER 3A33DCF7-B207-4C88-AF84-A73CAE013527

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset

SCOPE NAME * dataset

* LAST UPDATE 2015-11-06

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 2015-06-11 16:29:44

LAST MODIFIED IN ARCGIS FOR THE ITEM 2015-11-06 14:27:23

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2015-11-06 14:27:23

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 Maintenance

MAINTENANCE

UPDATE FREQUENCY not planned

Metadata Constraints

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.

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