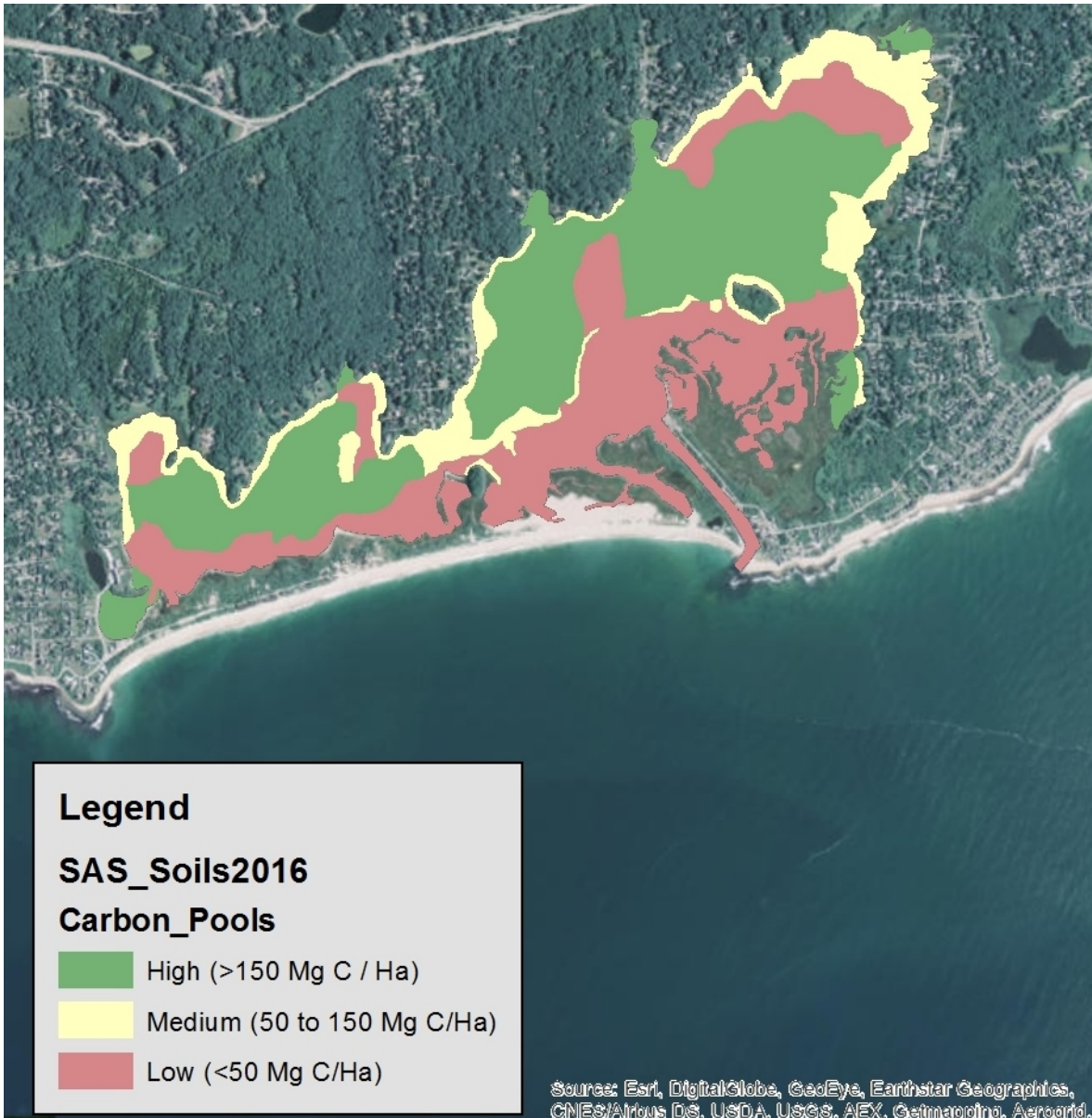


## 2017 Rhode Island Coastal Zone Soil Survey Data Subset



This subset of the 2017 RIGIS Soils data (survey area version 16, spatial version 11 Sept. 14, 2017) is a selection of the estuarine (not freshwater) subaqueous soils mapped during the Coastal Zone Soil Survey of Rhode Island and special RIGIS attribute information. The attribute interpretations do not match with the ones on the Web Soil Survey. This data can be useful for folks working the coastal areas of RI. Additional soils information for dunes, marshes, and beaches can be found on the 2017 RIGIS soils coverage. A point file showing the locations of field observations and data is also included in this zip file.

For more information on subaqueous soils visit: [www.nesoil.com/sas](http://www.nesoil.com/sas) or contact [jim.turenne@ri.usda.gov](mailto:jim.turenne@ri.usda.gov)

# **2017 RIGIS Subaqueous Soil Subset Information**

(December, 2017)

**Prepared by: Rhode Island USDA- Natural Resources Conservation Service**

**Contact: Jim Turenne, Assistant State Soil Scientist**

401-822-8830 or [jim.turenne@ri.usda.gov](mailto:jim.turenne@ri.usda.gov)

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/ri/soils/>

**The following Shape Files are included with the subaqueous soils subset data:**

**Soils17\_SAS.shp** – Query of the 2017 RIGIS Soils for estuarine subaqueous soils (freshwater subaqueous soils are excluded) with attribute information.

**SAS\_Point\_Data.shp** – Location of soil observations and information collected during the subaqueous soil mapping.

**2017\_SAS\_interps\_Master.xlsx** – Spread sheet with join tables with interpretations contained in the Soils12\_SAS shape file, an information sheet describes the interpretations.

## **Background:**

In 2004 the RI NRCS along with the University of Rhode Island College of Environmental Life Sciences formed the Mapping Partnership for Coastal Soils and Sediment which consisted of about 15 partners involved with mapping the shallow-subtidal (<15 meter water depth) coastal zone in RI. In 2010 the first coastal zone soil survey was published. Mapping continued until 2016 but additional areas are added each year. This data subset contains the subaqueous soil portion of the coastal zone soil survey along with attribute data for various applications.

A complete description of the MapCoast mapping protocol can be found at:

[http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1005&context=nrs\\_facpubs](http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1005&context=nrs_facpubs)

Visit: [www.nesoil.com/sas](http://www.nesoil.com/sas) for more information.

## **Methodology:**

A query to select just the estuarine subaqueous soils from the 2017 RIGIS soils was made and the selected soils were exported to the Soils17\_SAS.shp file. The 2017\_SAS\_interps\_Master.xlsx spread sheet was then joined to the coverage to provide interpretations for various uses. Layer files were made for some of the interpretations.

The following are explanations of each of the attribute fields contained in the Subaqueous Soils RIGIS soils data shape. For more information contact the RI Soil Survey Program at 401-828-1300 or [jim.turenne@ri.usda.gov](mailto:jim.turenne@ri.usda.gov).

## Soils17\_SAS RIGIS Soil polygon Attribute Fields (NOTE: Aliases are in parenthesis)

**Field:** MUSYM (Map Unit Name)

**Source:** New

**Description:** The soil map unit symbol used in the published Soil Survey of Rhode Island.

**Field:** Mukey

**Source:** SSURGO

**Description:** The Map Unit Key field is a unique identifier of the SSURGO soils data that allows the spatial data to be linked with the tabular data when using the Soil Data Viewer program ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2\\_053620](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053620)) or the access tabular data.

**Field:** MUNAME (Map Unit Name)

**Source:** New

**Description:** The soil map unit name used in the published Soil Survey of Rhode Island.

**Field:** PARENT\_M (Soil Parent Material (Geologic))

**Description:** Refer to the Glossary of Geologic Terms:

[http://www.nrcs.usda.gov/wps/PA\\_NRCSCConsumption/download?cid=nrcs142p2\\_053182&ext=pdf](http://www.nrcs.usda.gov/wps/PA_NRCSCConsumption/download?cid=nrcs142p2_053182&ext=pdf)

Each soil map unit is assigned a parent material based on the soil classification and map phase (eg. Dredged) - these may differ from the SSURGO parent material choices.

**Field:** URL

**Description:** This field contains the Uniform Resource Locator (internet URL) which links the soil polygon to map unit description provided in the published soil survey. This field works as a “Hot Link” field for linking the soil polygons to the map unit.

**Field:** LAND\_UNIT (Landscape Unit)

**Description:** Each map unit is assigned a landscape term based on the map unit phase and soil series.

Provides information on the landscape unit of the soil - see the glossary of subaqueous landscape terms:

<http://nesoil.com/sas/Glossary-Subaqueous%20Soils.pdf>

**Field:** Onland\_Dre (Onland Dredge Disposal)

**Description:** Hazard of acid sulfate weathering (rapid pH drop) from on-land disposal of dredge material. A standard rating of slight (low probability of acid sulfate weathering), moderate, or severe (high probability of acid sulfate weathering - very low pH upon oxidation).

**Field:** Oyster\_Hab (Oyster Habitat Natural Beds)

**Description:** Suitability of the soil map unit for native oyster beds (natural beds). A standard rating of good to poor suitability for oysters - other factors also need to be examined such as salinity, pH, etc.

**Field:** Oyster\_Res (Oyster Reef Restoration)

**Description:** Potential of the soil map unit for oyster restoration, namely the building of artificial reefs by adding shell and cultch. A standard rating of good to poor potential for restoration sites - other components need to be assessed such as salinity, pH, freshwater inputs, etc.

**Field:** Eelgrass\_R (Eelgrass Restoration)

**Description:** Potential of the soil map unit for seagrass restoration. A standard rating of good to poor potential for restoration sites - other components need to be assessed.

**Field:** Bottom\_Typ (Bottom Type)

**Description:** Type of bottom associated with each map unit. Standard bottom type values such as sandy, fluid silt (mud), etc. Field excludes SAV coverage, refer to SAV maps for that information.

**Field:** Aquacult (Aquaculture Suitability for Bottom Gear)

**Description:** Suitability of the soil for bottom gear aquaculture (mainly oyster). Standard ratings of good to poor with descriptors of the limiting properties.

**Field:** SAV\_Occurr (SAV Occurrence 2012)

**Description:** The occurrence of SAV for each soil map unit (percent of the map units with SAV mapped). Numeric percentages of occurrence of SAV based on the 2012 eelgrass mapping.

**Field:** Caron\_Poo (Coastal Blue Carbon Pools)

**Description:** Rating of the soil organic carbon pools. Ratings are from high to low, high rating typically has SOC pools greater than 150 Mg C per hectare, Medium typically range from 50 to 150 Mg C per hectare and low typically have less than 50 Mg C per hectare.

**Field:** Mooring\_Ty (Mooring Type)

**Description:** Type of moorings typically used for each of the units. Refer to:

[http://nesoil.com/sas/SSH\\_Winter\\_07\\_moorings.pdf](http://nesoil.com/sas/SSH_Winter_07_moorings.pdf)

**CMECS Substrate Ratings:** See CMECS V. 4 <https://www.cmeccatalog.org/cmecc/>

**SAS\_Point\_Data** Shape File – This file shows the location of point observations made during the coastal zone soil survey of RI. A KMZ file of this data can be downloaded at:

<http://googleearthcommunity.proboards.com/thread/4363/rhode-island-subaqueous-soil-point>

**Field:** Soil\_name

**Description:** The soil series determined for the point (this may not match the soil map unit if the point is an inclusion for the map unit).

**Field:** Soil\_name

**Description:**

**Field:** Lat/Lon

**Description:** The latitude and longitude of the point as recorded by the GPS.

**Field:** Notes

**Description:** General information about the site such as pond name, SAV present, and other site info.

**Field:** Date

**Description:** The date the observation was made.

**Field:** Data\_Type

**Description:** The type of data collected and purpose such as a field description, full Vibracore pedon, thesis study, etc.

**Field:** Land\_Unit

**Description:** The landscape unit associated with the point observation. Refer to:  
<http://nesoil.com/sas/Glossary-Subaqueous%20Soils.pdf>

**Field:** DESCDEPTH\_C

**Description:** The total length in centimeters of the soil description. For example: 160 means the soil was described to a depth of 160 cm.

**Field:** SURF\_TEXT

**Description:** The USDA soil texture of the top soil horizon and fluidity class if present.

**Field:** O\_Depth\_CM

**Description:** The depth in centimeters to a buried organic horizon if present, these are usually buried wood peat layers (freshwater sapric material) a depth of 9999 is a null value meaning the soil does not have a buried organic layer. A depth of 0 means the organic layer is at the soil surface.

**Field:** Water\_dpth

**Description:** The depth of water recorded at the time of the observation in feet, not adjusted to MSL or NAVD-88 0 elevation. A value of 9999 means no water depth was recorded.

**Field:** Subgroup

**Description:** The soil taxonomic subgroup classified for the observation point. Refer to Soil Taxonomy for more information: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/class/>

**Field:** Gr\_group

**Description:** The soil taxonomic Great Group classified for the observation point. Refer to Soil Taxonomy for more information: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/class/>

**Field:** Data\_Link

**Description:** A URL link to the data sheet or full data if collected for the site, some rows are blank. Additional information may be available for the point contact the NRCS office.

**Field:** Descript

**Description:** A brief description of the soil or site, for explanation of the description contact the NRCS office.