

Physical Oceanographic Model Products Metadata: Temperatures and Salinities

METADATA

Dataset Originator: Grant McCardell, James O'Donnell, *University of Connecticut*

Publication Date: *October, 2021*

Dataset Title: *Monthly Mean Near-bottom Temperatures and Salinities*

Online Linkage: *<http://www.marine-geo.org/portals/lis/>*

Abstract: *The FVCOM computer model was initialized and run using conditions for 2017. The model was used to produce maps of:*

- 1. The bottom temperature distributions throughout the study area for each month*
- 2. The bottom salinity distributions throughout the study area for each month*

Dataset purpose: *We report the results of a numerical model to estimate the distributions of ecologically relevant characteristics of the near bottom environment. We present this information as GIS-format map products with information that spans the study-area domain.*

Time period of content: *Jan 2017-Dec 2017 by month*

Dataset Status: *complete*

Update Frequency: *none planned*

Theme Keywords: *Ecologically relevant physical characteristics of the near-bottom environment*

Access Constraints: *none*

Use Constraints: *Data and metadata are licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License](https://creativecommons.org/licenses/by-nc-sa/3.0/). Appropriate acknowledgment with a byline/credit/link **must** be given to both the original scientists/data contributors by reference to their relevant publications and to the Marine Geoscience Data System (www.marine-geo.org). Where citation information has been provided to us by scientists it is included with the relevant database entries, and should be acknowledged when data are used. You may browse freely, but you may not circulate or publish materials you obtained from this site if you do not accept the terms of providing adequate citation.*

Data are provided with the express understanding that they will not be sold to third parties or included in commercial databases.

Users are strongly encouraged to contact the original investigators responsible for data made available on this site. Where appropriate, researchers are also encouraged to consider collaboration and/or co-authorship with original investigators.

Data should not be used for navigation purposes.

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Dataset Credit: *Grant McCardell, James O'Donnell, University of Connecticut*

Data Quality Considerations: *A limited measurement program was executed to acquire salinity, temperature, and current distributions so that the performance of the model in describing the small scale spatial variations and the seasonal scale evolution of the variables could be critically assessed. In the study region, model temperatures were generally well within $\pm 1^\circ\text{C}$ of measured values. Salinities are generally within ± 1 ppt.*

Attribute accuracy: *In the study region, model temperatures are generally well within $\pm 1^\circ\text{C}$ of measured values. Salinities are generally within ± 1 ppt.*

Completeness: *100%*

Positional accuracy: *56 m*

Process Steps: *FVCOM model output for the near-bottom layer was averaged over monthly periods for 2017. These results were then interpolated onto a 989 x 410 rectangular grid using Matlab with a nearest-neighbor methodology. The gridded data was input into ArcGIS and used to create both geo-referenced GEOTIFF raster files and geo-referenced ESRI SHAPE files with contour information. For information on the model initialization and forcing, see Section 6.2 in the LISMaRC Phase II Final Report: <https://lismap.uconn.edu/wp-content/uploads/sites/2333/2022/04/LISMaRC-Phase-II-Final-Report.pdf>*

Attributes:

*Temperature: degrees Celsius [°C]
Salinity: parts per thousand [PPT]
Spatial_Reference: NAD_1983_UTM_Zone_18N
Linear_Unit: Meter (1.000000)
Angular_Unit: Degree (0.017453292519943295)
False_Easting: 500000
False_Northing: 0
Central_Meridian: 75
Scale_Factor: 0.9996
Latitude_Of_Origin: 0
Datum: D_North_American_1983*

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