Other Vessel Transit Counts from - 2019 AIS
Northeast and Mid-Atlantic United States

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Prepared for:
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1. INTRODUCTION

Automatic Identification Systems (AIS) are a navigation safety device that transmits and monitors the location and characteristics of many vessels in U.S. and international waters. Vessel records are reported as a series of points during transit or dwell-times when within range of a receiving station. This dataset represents a subset of AIS records for other vessels. Individual vessel positions have been processed into tracks and then summarized at a 100 x 100 meter (10,000 m^2) cell resolution to characterize intensity of use.

2. PURPOSE

To support coastal and ocean planning by the Northeast Regional Ocean Council (NROC).

3. SOURCES

- Atlantic vessel tracks 2019, Marine Cadastre, 2020
- MarineCadastre.gov, http://marinecadastre.gov/ais/
- Nationwide Automatic Identification System, United States Coast Guard
- Northeast Regional Ocean Planning White Paper Update: Overview of the Maritime Commerce Sector in the Northeastern United States – Appendix A, neoceanplanning.org http://neoceanplanning.org/wp-content/uploads/2015/07/Maritime-Commerce-Overview-July-2015.pdf

4. DATABASE DESIGN AND CONTENT

Native storage format: ArcGIS File Geodatabase Raster
Columns and Rows: 16699, 17808
Number of Bands: 1
Cell Size: 100 meters

Source Type: generic
Pixel Type: floating point
Pixel Depth: 32 Bit
Statistics:
     Minimum: 1
     Maximum: 28004
     Mean: 5.15
     Standard Deviation: 74.42

Dataset Name: OtherVesselTransitCounts2019

Dataset Status: Complete

5. SPATIAL REPRESENTATION

Reference System: WGS 1984 Web Mercator Auxiliary Sphere
Horizontal Datum: WGS 1984
Linear Unit: Meter (1.0)
Angular Unit: Degree (0.0174532925199433)
False Easting: 0.0
False Northing: 0.0
Central Meridian: 0.0

Geographic extent: -8794333.1873 to -7124433.1873, 3895278.3933 to 5676078.3933

IS0 19115 Topic Category: environment, oceans, transportation

Place Names:
     Atlantic Ocean, Cape Cod Bay, Cape May, Chesapeake Bay, Connecticut, Delaware,
     Delaware Bay, Georges Bank, Gulf of Maine, Hudson River, Long Island Sound, Maine,
     Maryland, Massachusetts, Massachusetts Bay, New Hampshire, New Jersey, New York,
     North Carolina, Pennsylvania, Rhode Island, Rhode Island Sound, United States, Virginia

Recommended Cartographic Properties:

Classification, 8 classes, color mode: HSV

Range	Color	HSV
1 – 10:	blue	(222-91-48)
10 – 20:	blue-green	(187-82-63)
20 – 40:	green	(126-97-83)
40 – 60:	light green	(89-100-93)
60 – 100:	yellow	(60-100-100)

100 – 200: orange   (40-100-100)
    200 – 500: orange-red   (20-100-100)
    > 500:   red   (0-100-90)

    Scale range: Optimal at 1:2,000,000 to 1:500,000

6. DATA PROCESSING

Processing environment: ArcGIS Pro 2.1.3, Windows Server 2012 R2, Intel Xeon CPU

	Process Steps
1	CLIP 2019 Atlantic vessel tracklines from the Marine Cadastre Project to the extent of the Northeast and Mid-Atlantic U.S.
2	SELECT to extract trackline features where the VesselGroup field value is equal to 'Other'
3	Run the Marine Cadastre Track Counter Tool with a 100 x 100 m cell size

7. QUALITY PROCESS

Logical Consistency: No testing was performed on the source trackline data. Data were visually inspected to confirm that the results of the density analysis were reasonable.

Completeness: Data are complete based on all known U.S. Coast Guard Nationwide Automatic Identification System records from 2019. Source data were created using the Marine Cadastre TrackBuilder Tool with filter settings of 30 minutes and 1 mile. The gridded raster identifies vessel transit counts based on the results of that analysis.

Positional Accuracy: Horizontal accuracy is dependent on the location of the transmitted AIS locations from GPS and includes errors associated with this technology.

Timeliness: 2019

Use restrictions: NOT FOR NAVIGATION.

Distribution Liability: Data are provided as is. NROC and RPS Group Inc. are not liable for any interpretations, assumptions, or conclusions based on these data.