New England Aquarium: Southern New England - Aerial Surveys 2011-2024

Type   Enterprise Geodatabase Feature Class

Tags   RWSC, New England Aquarium, Southern New England, Marine Mammals, Aerial Surveys, whales

Summary

This layer represents transects from the New England Aquarium's aerial surveys conducted from 2011-2024 in the area south of Massachusetts. These lines show only the planned routes for the aerial surveys and are displayed for planning and research coordination purposes.

Description

This layer depicts transects from the New England Aquarium's aerial surveys conducted from 2011-2024 in the area south of Massachusetts. These surveys focused on all marine megafauna visible from a plane (excluding birds) and show that many species of marine megafauna use the study area in high numbers. The most recent surveys show an increased presence of right whales in all seasons and a decrease in the presence of other large whales, such as humpbacks. There also appears to be a shift in presence of all large whales towards the eastern side of the survey area. Continued surveys are needed to determine the consistency of these patterns. Continuing this 10+ year time series of consistent aerial survey data also represents a unique opportunity to detect potential short-term effects of turbine construction on US marine species and develop solutions for mitigating these effects.

The surveys have been funded by the Massachusetts Clean Energy Center (MassCEC) and the Bureau of Ocean Energy Management (BOEM). In some years, surveys were coordinated with partners that conducted boat-based oceanographic sampling to assess the physical and biological characteristics of the study area.

The southern New England surveys are conducted from March through December and often coordinate with boat-based surveys for biopsies and fecal samples. The surveys use line-transect but if right whale aggregations are detected visually or acoustically, directed surveys will be conducted to photograph the whales which to allow for demographics studies.

The survey process is described in detail here: https://www.masscec.com/resources/marine-mammal-and-sea-turtle-surveys

For more information visit the project site: https://coastalstudies.org/our-work/right-whale-research/population-monitoring/ ; and the RWSC database project page: https://database.rwsc.org/details?recordId=recGfijPbg4Y8zIV7

These shapefiles display just the planned routes, to view the realized routes from all completed surveys visit: https://whalemap.org/#map

Credits

Jessica Redfern, New England Aquarium,jredfern@neaq.org

Use limitations

These data will be used by RWSC and its expert Subcommittees, partners, and other participants to implement the Science Plan, including to understand the extent of ongoing and planned data collection activities, and to coordinate and plan future data collection and research activities with respect to offshore wind. The data will be displayed via online mapping platforms.

Extent

West   -71.333330   East   -69.866660
North 41.333333   South 40.550000

Scale Range

Maximum (zoomed in)   1:5,000
Minimum (zoomed out) 1:150,000,000

Topics and Keywords ▶

　　Themes or categories of the resource   Biota, Oceans

　　Content type   ⇔ Downloadable Data
　　　　Export to FGDC CSDGM XML format as Resource Description   No

Citation ▶

　　Title   New England Aquarium: Southern New England - Aerial Surveys 2011-2024
　　Publication date   2024-07-12   00:00:00

　　Presentation formats   ⇔ digital map

Citation Contacts ▶

　　Responsible party - point of contact
　　　　Individual's name   Jessica Redfern
　　　　Organization's name   New England Aquarium

　　　　Contact information ▶
　　　　　　Phone
　　　　　　　　Voice   NA
　　　　　　Address
　　　　　　　　Type   postal
　　　　　　　　City   NA
　　　　　　　　Administrative area   NA
　　　　　　　　Postal code   NA
　　　　　　　　e-mail address   jredfern@neaq.org

Responsible party - originator
   Individual's name   Debbie Brill
   Organization's name   Regional Wildlife Science Collaborative for Offshore Wind
   Contact's position   Marine Mammals Subcommittee Lead

      Contact information ►
        Phone
          Voice   NA
        Address
          Type   postal
          City   NA
          Administrative area   NA
          Postal code   NA
          e-mail address   Deborah.brill@duke.edu

Resource Details ►
   Dataset languages   ⇔ English (UNITED STATES)
   Dataset character set   utf8 - 8 bit UCS Transfer Format

   Status   on-going
   Spatial representation type   ⇔ vector

   Processing environment   ⇔ Microsoft Windows 10 Version 10.0 (Build 22631) ; Esri ArcGIS 13.2.2.49743

   Credits
   Jessica Redfern, New England Aquarium,jredfern@neaq.org

   ArcGIS item properties
     Name   ⇔ rpt.rpt.NEAq_SNE_AerialSurveys
     Size   ⇔ 0.000
     Location   ⇔ Server=rwsc-db-pg15.env.duke.edu; Service=sde:postgresql:rwsc-db-pg15.env.duke.edu; Database=rpt; User=rpt; Version=sde.DEFAULT
       Access protocol   ⇔ ArcSDE Connection

Extents ►
   Extent
     Description
     Aerial Surveys Conducted from 2011 - 2024

     Geographic extent
       Bounding rectangle
         Extent type
       Extent used for searching
         West longitude   -71.333330
         East longitude   -69.866660
         North latitude   41.333333
         South latitude   40.550000
         Extent contains the resource   Yes

     Temporal extent
       Beginning date   2011-01-01   00:00:00
       Ending date   2024-12-31   00:00:00

   Extent in the item's coordinate system
     westBL   ⇔ -71.333330
     eastBL   ⇔ -69.866660
     southBL   ⇔ 40.550000
     northBL   ⇔ 41.333333
     exTypeCode   ⇔ Yes

Resource Points of Contact ►
   Point of contact - point of contact
     Individual's name   Jessica Redfern
     Organization's name   New England Aquarium

       Contact information ►
         Phone
           Voice   NA
         Address
           Type   postal
           City   NA
           Administrative area   NA
           Postal code   NA
           e-mail address   jredfern@neaq.org

Resource Maintenance ►
   Resource maintenance
     Update frequency   as needed

Resource Constraints ►
   Constraints

Limitations of use
These data will be used by RWSC and its expert Subcommittees, partners, and other participants to implement the Science Plan, including to understand the extent of ongoing and planned data collection activities, and to coordinate and plan future data collection and research activities with respect to offshore wind. The data will be displayed via online mapping platforms.

Spatial Reference ▶

ArcGIS coordinate system
   Type ⇔ Geographic
   Geographic coordinate reference ⇔ GCS_WGS_1984
   Coordinate reference details ⇔
      GeographicCoordinateSystem
        WKID 4326
        XOrigin -400
        YOrigin -400
        XYScale 1111948722.2222219
        ZOrigin 0
        ZScale 1
        MOrigin 0
        MScale 1
        XYTolerance 8.983152841195215e-09
        ZTolerance 0.001
        MTolerance 0.001
        HighPrecision true
        LeftLongitude -180
        LatestWKID 4326
        WKT
        GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433],AUTHORIT

Reference system identifier
   Value ⇔ 4326
   Codespace ⇔ EPSG
   Version ⇔ 6.2(3.0.1)

Spatial Data Properties ▶

Vector ▶
   Level of topology for this dataset ⇔ geometry only

   Geometric objects
      Feature class name rpt.rpt.NEAq_SNE_AerialSurveys
      Object type ⇔ composite
      Object count ⇔ 0

   ArcGIS Feature Class Properties ▶
      Feature class name rpt.rpt.NEAq_SNE_AerialSurveys
      Feature type ⇔ Simple
      Geometry type ⇔ Polyline
      Has topology ⇔ FALSE
      Feature count ⇔ 0
      Spatial index ⇔ TRUE
      Linear referencing ⇔ FALSE

Data Quality ▶

Data quality report - Conceptual consistency ▶
   Data quality measure reference
      Measure description
      Polyline shapefiles depicting aerial survey transect positions

Data quality report - Completeness omission ▶
   Data quality measure reference
      Measure description
      This dataset reflects ongoing aerial survey paths, and is complete as of 7/12/24. May be updated as needed.

Lineage ▶

Lineage statement
Received shapefiles directly from contacts

Process step ▶
   When the process occurred 2024-07-10 00:00:00
   Description
   1. Data imported into GIS

Process step ▶
   When the process occurred 2024-07-10 00:00:00
   Description

2. All features merged into single feature

Process step ►
   When the process occurred   2024-07-10   00:00:00
   Description
   3. Field names added and filled in

Distribution ►

Distribution format
   Name   ⇔ Enterprise Geodatabase Feature Class

Transfer options
   Transfer size   ⇔ 0.000

Fields ►

Details for object rpt.rpt.NEAq_SNE_AerialSurveys ►
   Type   ⇔ Feature Class
   Row count   ⇔ 0
   Definition
   Attribute table prepared by RWSC

   Definition source
   RWSC

Field OBJECTID ►
   Alias   ⇔ OBJECTID
   Data type   ⇔ OID
   Width   ⇔ 4
   Precision   ⇔ 10
   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   ⇔ 8
   Precision   ⇔ 0
   Scale   ⇔ 0

   Field description   ⇔
   Feature geometry.

   Description source   ⇔
   Esri

   Description of values   ⇔
   Coordinates defining the features.

Field OPERATOR ►
   Alias   ⇔ OPERATOR
   Data type   ⇔ String
   Width   ⇔ 254
   Precision   ⇔ 0
   Scale   ⇔ 0

   Field description
   The primary affiliation for the operator of the device

   Description source
   RWSC

   Description of values
   Unique name affiliation.

Field POC_EMAIL ►
   Alias   ⇔ POC_EMAIL
   Data type   ⇔ String
   Width   ⇔ 254

Precision ⇔ 0
Scale ⇔ 0

Field description
Email for the primary point of contact

Description source
RWSC

Description of values
Unique email addresses.

Field PROJECT_NAME ▶
    Alias   PROJECT_NAME
    Data type ⇔ String
    Width   ⇔ 254
    Precision ⇔ 0
    Scale   ⇔ 0

    Field description
    Name of the project

    Description source
    RWSC

    Description of values
    Unique project name.

Field PATH_NAME ▶
    Alias   ⇔ PATH_NAME
    Data type ⇔ String
    Width   ⇔ 254
    Precision ⇔ 0
    Scale   ⇔ 0

    Field description
    The route ID.

    Description source
    RWSC

    Description of values
    Unique path identification.

Field START_YEAR ▶
    Alias   ⇔ START_YEAR
    Data type ⇔ Integer
    Width   ⇔ 4
    Precision ⇔ 10
    Scale   ⇔ 0

    Field description
    The start year in the YYYY format for the start of usable data for that path (i.e. the surveys are conducted in structured survey form).

    Description source
    RWSC

    Description of values
    Year in YYYY format.

Field END_YEAR ▶
    Alias   ⇔ END_YEAR
    Data type ⇔ Integer
    Width   ⇔ 4
    Precision ⇔ 10
    Scale   ⇔ 0

    Field description
    The end year in the YYYY format for the end of usable data for that path (i.e. the surveys are conducted in structured survey form). (*Default set to 2050 if no available end year)

    Description source
    RWSC

    Description of values
    Year in YYYY format.

Field START_DATE ▶
    Alias   ⇔ START_DATE
    Data type ⇔ String

Width ⇔ 254
Precision ⇔ 0
Scale ⇔ 0

Field description
The start date in the D-Month format for the start of the typical survey season. (*NOT an actual date field, keeping it as text so that it doesn't add a default year)

Description source
RWSC

Description of values
Text start date for season.

Field END_DATE ►
Alias ⇔ END_DATE
Data type ⇔ String
Width ⇔ 254
Precision ⇔ 0
Scale ⇔ 0

Field description
The end date in the D-Month format for the end of the typical survey season. (*NOT an actual date field, keeping it as text so that it doesn't add a default year)

Description source
RWSC

Description of values
Text end date for season.

Field FREQUENCY ►
Alias ⇔ FREQUENCY
Data type ⇔ String
Width ⇔ 254
Precision ⇔ 0
Scale ⇔ 0

Field description
Proposed/approximate frequency of surveys throughout the survey season

Description source
RWSC

Description of values
Unique frequency measure.

Field PROJECT_LINK ►
Alias PROJECT_LINK
Data type ⇔ String
Width ⇔ 254
Precision ⇔ 0
Scale ⇔ 0

Field description
Link to the project entry in the RWSC database if applicable

Description source
RWSC

Description of values
Unique link address.

Field DATE_SUBMITTED ►
Alias DATE_SUBMITTED
Data type ⇔ Date
Width ⇔ 8
Precision ⇔ 0
Scale ⇔ 0

Field description
The date the shapefiles were sent to the RWSC

Description source
RWSC

Description of values
Date field.

Field DATE_ADDED ►
Alias ⇔ DATE_ADDED

Data type ⇔ Date
Width ⇔ 8
Precision ⇔ 0
Scale ⇔ 0

Field description
The date the entries were added to map

Description source
RWSC

Description of values
Date field.

Field LABEL ▶
Alias ⇔ LABEL
Data type ⇔ String
Width ⇔ 254
Precision ⇔ 0
Scale ⇔ 0

Field description
The proposed layer name to appear in the table of contents

Description source
RWSC

Description of values
Unique label for use in symbology.

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 ⇔ 2024-09-24

ArcGIS metadata properties
Metadata format   ArcGIS 1.0
Standard or profile used to edit metadata   FGDC

Created in ArcGIS for the item   2024-01-24   12:31:40
Last modified in ArcGIS for the item   2024-09-24   16:27:40

Automatic updates
Have been performed   Yes
Last update   2024-07-14   22:29:27
Item location history
Item copied or moved   2024-01-24   12:31:40
From   C:\Users\jozog\OneDrive - HDR, Inc\GIS\HDR_NARW_Aerial_Tracklines
To   \\DZ7YXT3\C$\Users\jozog\OneDrive - HDR, Inc\GIS\Aerial_for_Jackie\HDR_NARW_Aerial_Tracklines

Metadata Contacts ▶

Metadata contact - originator
Individual's name   Debbie Brill
Organization's name   Regional Wildlife Science Collaborative for Offshore Wind
Contact's position   Marine Mammals Subcommittee Lead

Contact information ▶
Phone
Voice   NA
Address
Type   postal
City   NA
Administrative area   NA
Postal code   NA
e-mail address   Deborah.brill@duke.edu

Metadata Maintenance ▶

Maintenance
Update frequency   as needed