

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

Type File Geodatabase Feature Class

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

Summary

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. For more information visit: <https://www.masscec.com/resources/marine-mammal-and-sea-turtle-surveys>

Description

This layer shows the route the New England Aquarium runs their Southern New England aerial surveys. The survey process is described in detail here: <https://www.masscec.com/resources/marine-mammal-and-sea-turtle-surveys>

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.

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 ⇌ NEAq_SNE_Surveys
Size ⇌ 0.000
Location ⇌ file://\DESKTOP-CUHUDPJ\D\$\Contracting\RWSC\GIS_Work\MM_Aerial_Surveys\MM_Aerial_Surveys\Default.gdb
Access protocol ⇌ Local Area Network

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 1111948722.2222221

ZOrigin -100000

ZScale 10000

MOrigin -100000

MScale 10000

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 NEAq_SNE_Surveys

Object type ⇌ composite

Object count ⇌ 1

ArcGIS Feature Class Properties ▶

Feature class name NEAq_SNE_Surveys

Feature type ⇌ Simple

Geometry type ⇌ Polyline

Has topology ⇌ FALSE

Feature count ⇌ 1

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 ⇔ File Geodatabase Feature Class

Transfer options

Transfer size ⇔ 0.000

Fields ▶

Details for object NEAq_SNE_Surveys ▶

Type ⇔ Feature Class

Row count ⇔ 1

Definition

Attribute table prepared by RWSC

Definition source

RWSC

Field OBJECTID ▶

Alias ⇔ OBJECTID

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 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 ⇔ 0
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 ⇔ 0
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.

Field Shape_Length ▶

Alias ↔ Shape_Length
Data type ↔ Double
Width ↔ 8
Precision ↔ 0
Scale ↔ 0

Field description ↔
Length of feature in internal units.

Description source ↔
Esri

Description of values ↔
Positive real numbers that are automatically generated.

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 ↔ 2024-07-14

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 2024-07-14 22:26:56

Automatic updates

Have been performed Yes
Last update 2024-07-14 22:26:56

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