

Appendix A

Description of individual survey datasets analyzed

List of Datasets

AMAPPS_FWS_Aerial_Fall2012	1
AMAPPS_FWS_Aerial_Fall2013	2
AMAPPS_FWS_Aerial_Fall2014	3
AMAPPS_FWS_Aerial_Preliminary_Summer2010	4
AMAPPS_FWS_Aerial_Spring2012	5
AMAPPS_FWS_Aerial_Summer2011	6
AMAPPS_FWS_Aerial_Winter2010-2011	7
AMAPPS_FWS_Aerial_Winter2014	8
AMAPPS_NOAA/NMFS_NEFSCBoat2011	9
AMAPPS_NOAA/NMFS_NEFSCBoat2013	10
AMAPPS_NOAA/NMFS_NEFSCBoat2014	11
AMAPPS_NOAA/NMFS_NEFSCBoat2015	12
AMAPPS_NOAA/NMFS_SEFSCBoat2011	13
AMAPPS_NOAA/NMFS_SEFSCBoat2013	14
BarHarborWW05	15
BarHarborWW06	16
CapeHatteras0405	17
CapeWindAerial	18
CapeWindBoat	19
CDASMidAtlantic	20
CSAP	21
DOEBRIAerial2012	22
DOEBRIAerial2013	23
DOEBRIAerial2014	24
DOEBRIBoatApr2014	25
DOEBRIBoatApril2012	26
DOEBRIBoatAug2012	27
DOEBRIBoatAug2013	28
DOEBRIBoatDec2012	29
DOEBRIBoatDec2013	30
DOEBRIBoatJan2013	31
DOEBRIBoatJan2014	32
DOEBRIBoatJune2012	33
DOEBRIBoatJune2013	34
DOEBRIBoatMar2013	35
DOEBRIBoatMay2013	36
DOEBRIBoatNov2012	37
DOEBRIBoatOct2013	38
DOEBRIBoatSep2012	39
DOEBRIBoatSep2013	40
DominionVirginia_VOWTAP	41
EcoMonAug08	42
EcoMonAug09	43

EcoMonAug10.....	44
EcoMonAug2012.....	45
EcoMonFeb10.....	46
EcoMonFeb2012.....	47
EcoMonFeb2013.....	48
EcoMonJan09.....	49
EcoMonJun2012.....	50
EcoMonMay07.....	51
EcoMonMay09.....	52
EcoMonMay10.....	53
EcoMonNov09.....	54
EcoMonNov10.....	55
EcoMonNov2011.....	56
EcoMonOct2012.....	57
ECSAS.....	58
FLPowerLongIsland_Aerial.....	59
FLPowerLongIsland_Boat.....	60
FWS_MidAtlanticDetection_Spring2012.....	61
FWS_SouthernBLSC_Winter2012.....	62
FWSAtlanticWinterSeaduck2008.....	63
GeorgiaPelagic.....	64
HatterasEddyCruise2004.....	65
HerringAcoustic06.....	66
HerringAcoustic07.....	67
HerringAcoustic08.....	68
HerringAcoustic09Leg1.....	69
HerringAcoustic09Leg2.....	70
HerringAcoustic09Leg3.....	71
HerringAcoustic2010.....	72
HerringAcoustic2011.....	73
HerringAcoustic2012.....	74
MassAudNanAerial.....	75
MassCEC2011-2012.....	76
MassCEC2013.....	77
MassCEC2014.....	78
NewEnglandSeamount06.....	79
NJDEP2009.....	80
NOAA/NMFS_NEFSCBoat2004.....	81
NOAA/NMFS_NEFSCBoat2007.....	82
NOAAMBO7880.....	83
PlattsBankAerial.....	84
RISAMPAerial.....	85
RISAMPBoat.....	86
SEFSC1992.....	87
SEFSC1998.....	88
SEFSC1999.....	89
StatoilMaine.....	90

WHOJuly2010.....	91
WHOSept2010.....	92

Dataset

AMAPPS_FWS_Aerial_Fall2012

Dates

September – October 2012

Platform

Aerial

Survey protocol

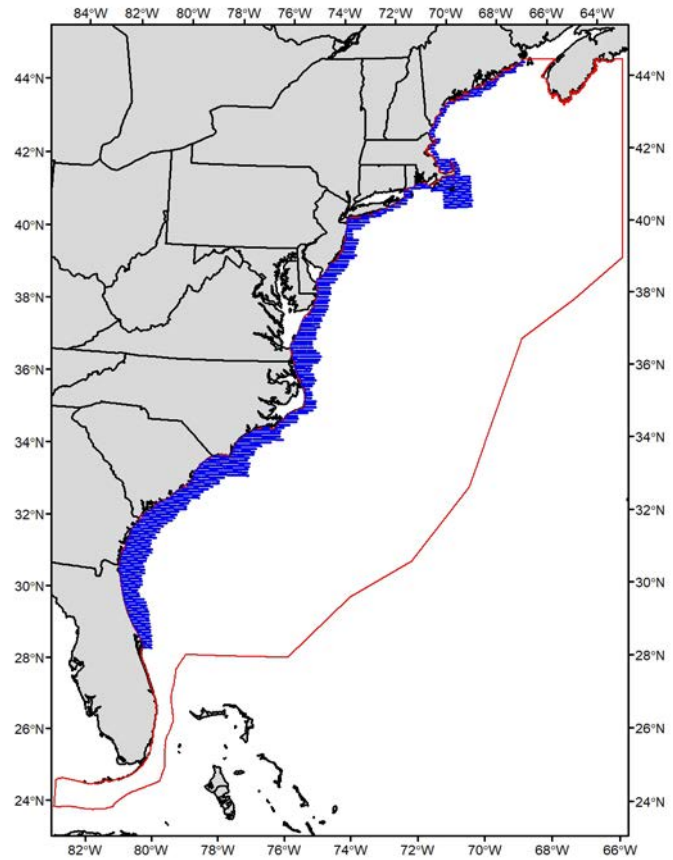
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

2986

Total survey area analyzed

4765 km²



Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab

Dataset

AMAPPS_FWS_Aerial_Fall2013

Dates

September 2013

Platform

Aerial

Survey protocol

400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

4629

Total survey area analyzed

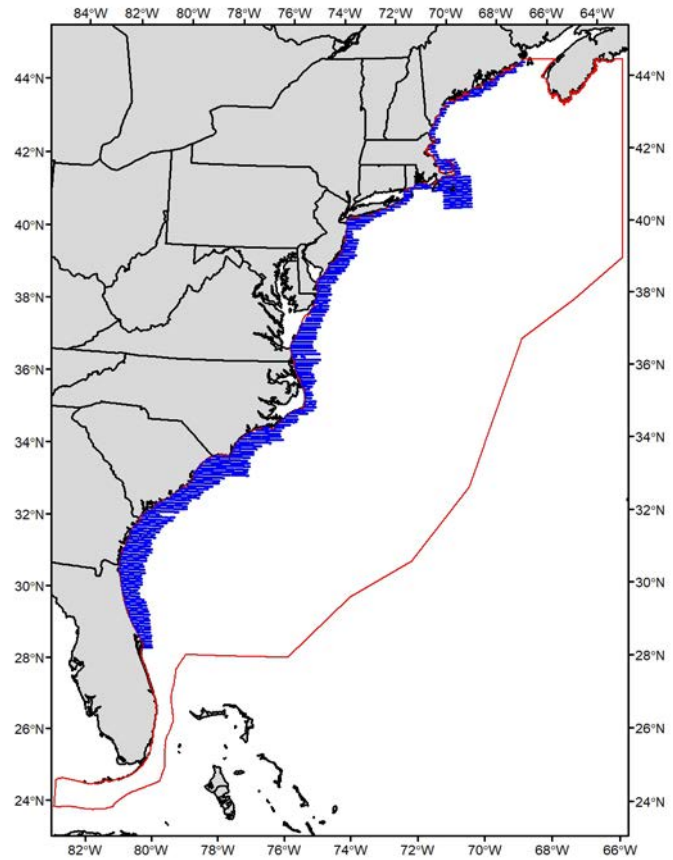
7395 km²

Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab



Dataset

AMAPPS_FWS_Aerial_Fall2014

Dates

October 2014

Platform

Aerial

Survey protocol

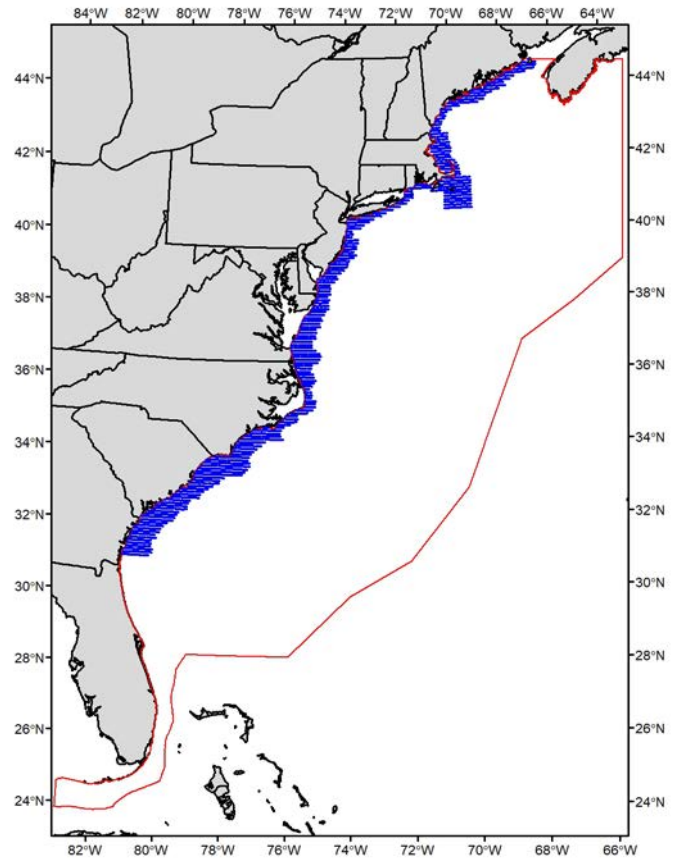
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

2876

Total survey area analyzed

4608 km²



Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab

Dataset

AMAPPS_FWS_Aerial_Preliminary_Summer2010

Dates

August 2010

Platform

Aerial

Survey protocol

400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

1131

Total survey area analyzed

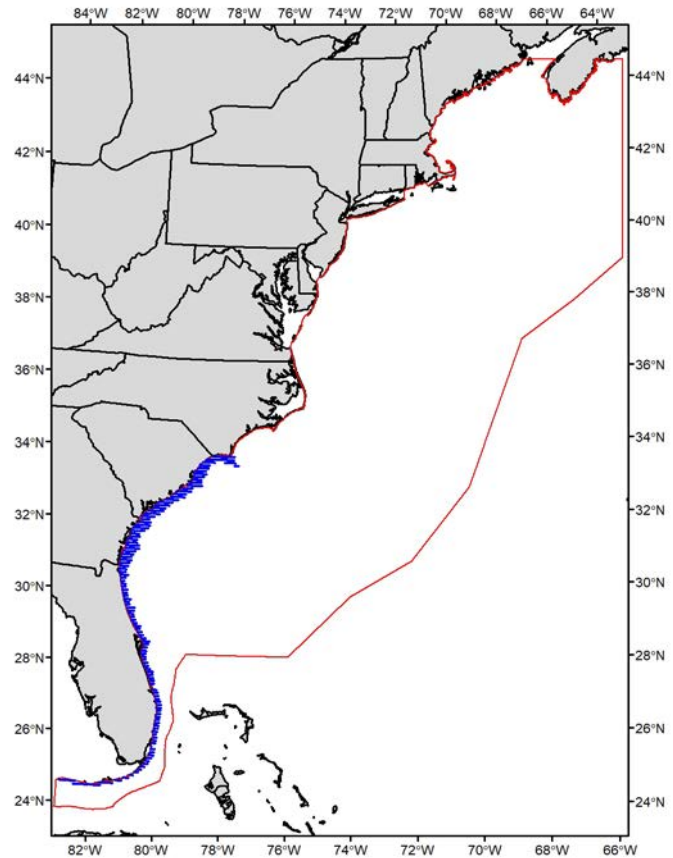
1802 km²

Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab



Dataset

AMAPPS_FWS_Aerial_Spring2012

Dates

March 2012

Platform

Aerial

Survey protocol

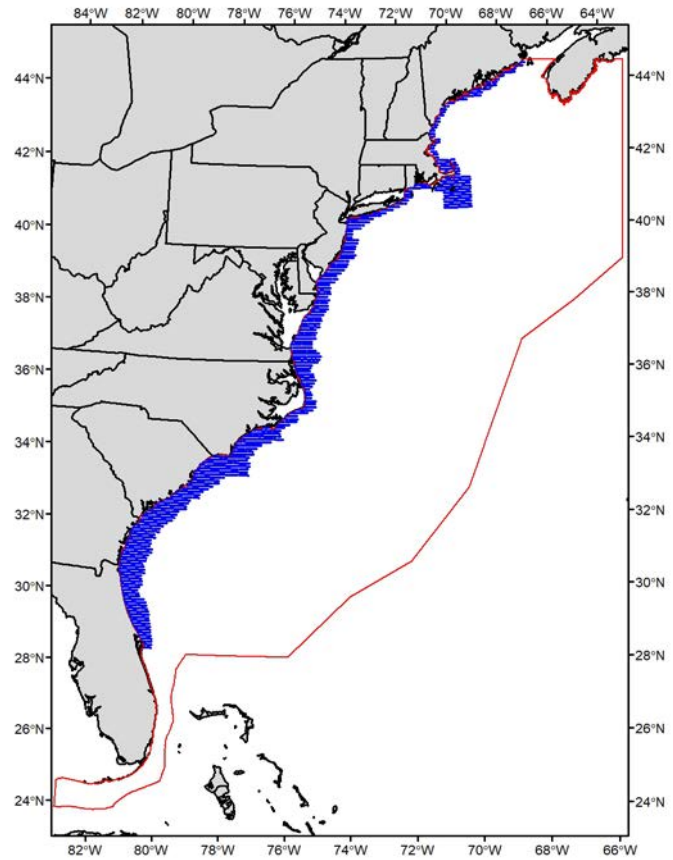
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

2962

Total survey area analyzed

4739 km²



Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab

Dataset

AMAPPS_FWS_Summer2011

Dates

July – August 2011

Platform

Aerial

Survey protocol

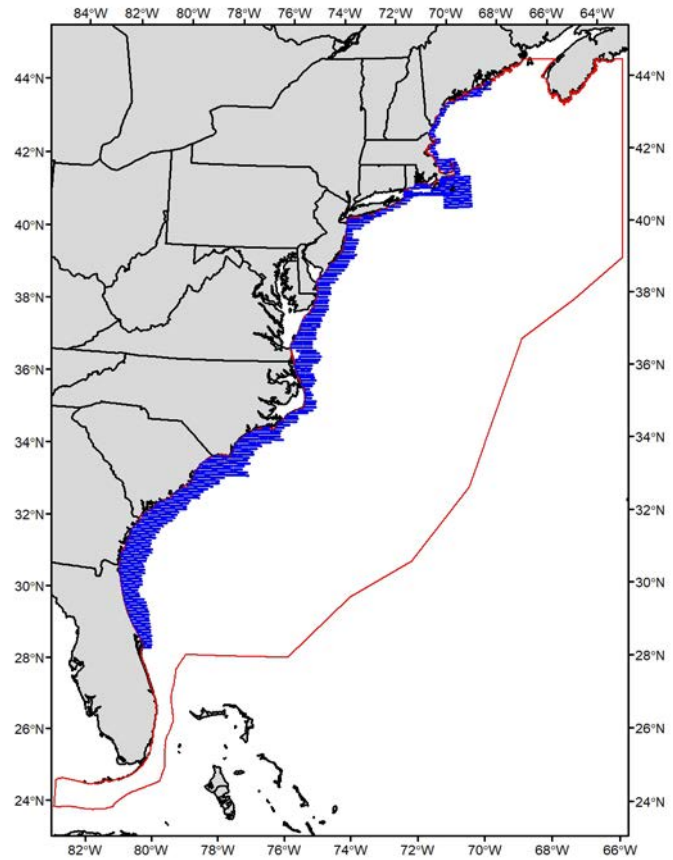
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

3442

Total survey area analyzed

5502 km²



Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab

Dataset

AMAPPS_FWS_Aerial_Winter2010-2011

Dates

December 2010 – January 2011

Platform

Aerial

Survey protocol

400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

513

Total survey area analyzed

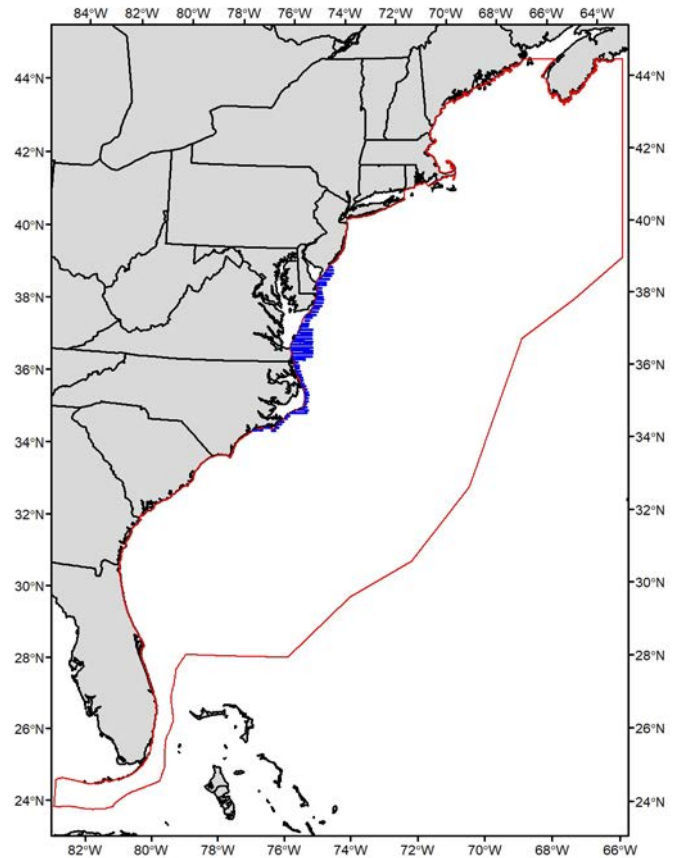
823 km²

Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab



Dataset

AMAPPS_FWS_Aerial_Winter2014

Dates

January – February 2014

Platform

Aerial

Survey protocol

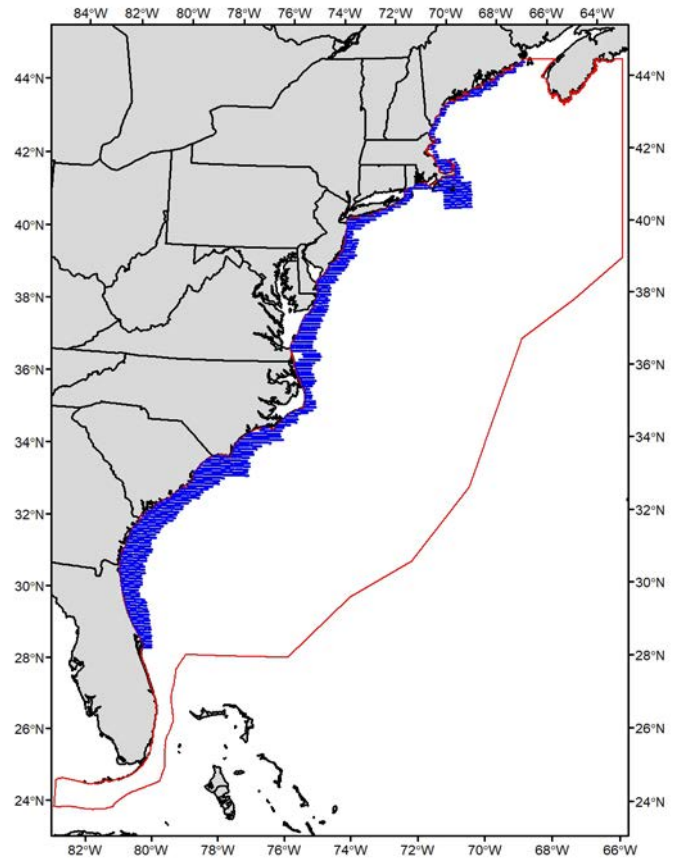
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

3073

Total survey area analyzed

4914 km²



Description

U.S. Fish and Wildlife Service (USFWS) aerial survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Tim Jones, USFWS Nelson Lab

Dataset

AMAPPS_NOAA/NMFS_NEFSCBoat2011

Dates

June – July 2011

Platform

Boat

Survey protocol

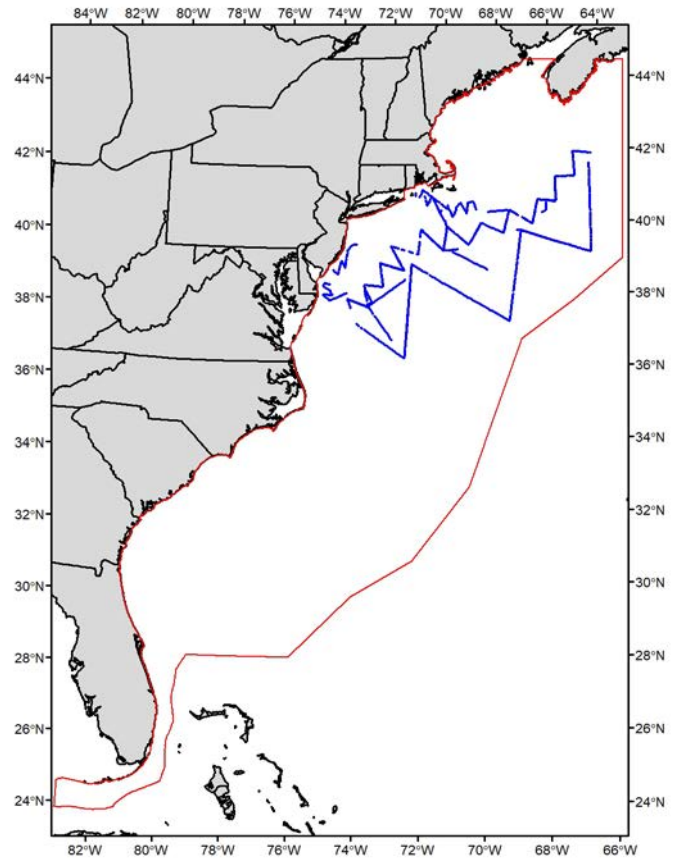
300-m strip transect, continuous data recording

Number of transect segments analyzed

1537

Total survey area analyzed

1794 km²



Description

NOAA Northeast Fisheries Science Center (NEFSC) shipboard survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Mike Simpkins, NOAA NEFSC

Dataset

AMAPPS_NOAA/NMFS_NEFSCBoat2013

Dates

July – August 2013

Platform

Boat

Survey protocol

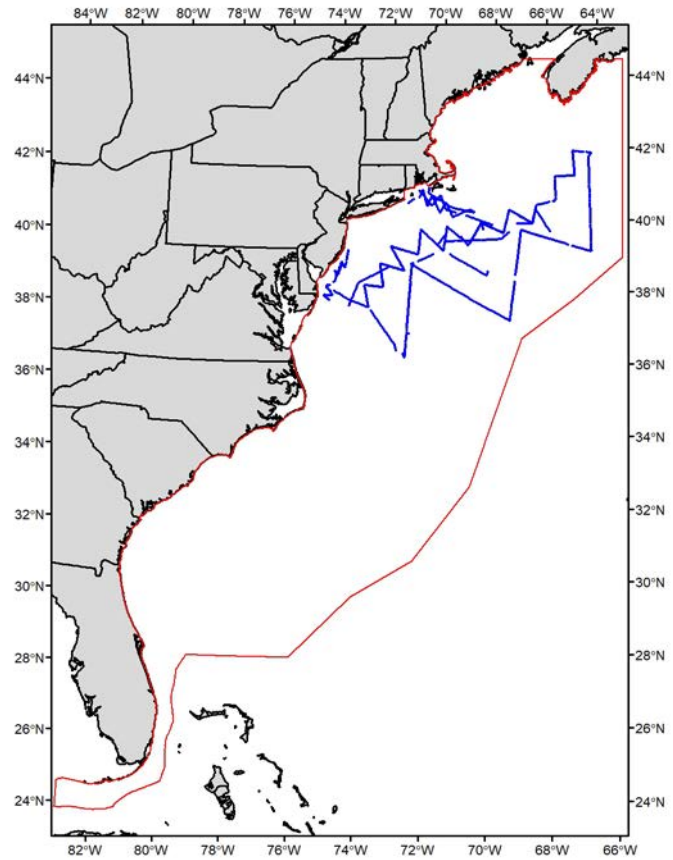
300-m strip transect, continuous data recording

Number of transect segments analyzed

1577

Total survey area analyzed

1853 km²



Description

NOAA Northeast Fisheries Science Center (NEFSC) shipboard survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Mike Simpkins, NOAA NEFSC

Dataset

AMAPPS_NOAA/NMFS_NEFSCBoat2014

Dates

March – April 2014

Platform

Boat

Survey protocol

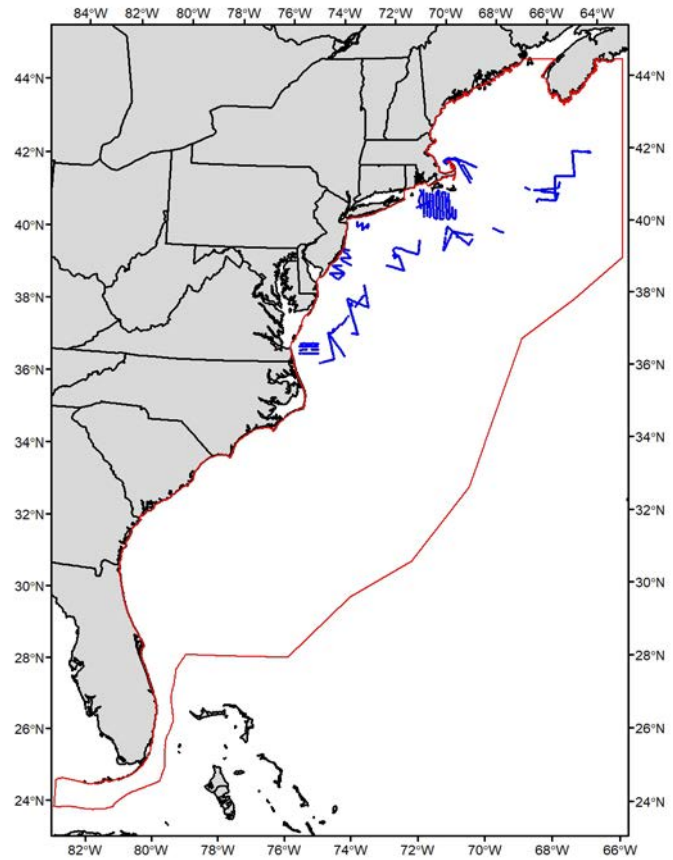
300-m strip transect, continuous data recording

Number of transect segments analyzed

1023

Total survey area analyzed

1219 km²



Description

NOAA Northeast Fisheries Science Center (NEFSC) shipboard survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Elizabeth Josephson, NOAA NEFSC

Dataset

AMAPPS_NOAA/NMFS_NEFSCBoat2015

Dates

June 2015

Platform

Boat

Survey protocol

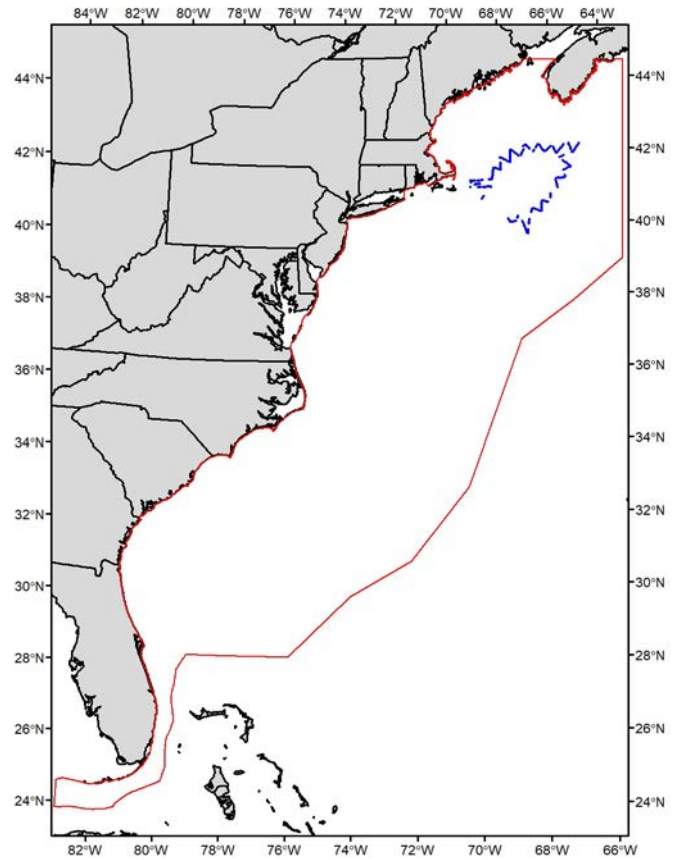
300-m strip transect, continuous data recording

Number of transect segments analyzed

261

Total survey area analyzed

308 km²



Description

NOAA Northeast Fisheries Science Center (NEFSC) shipboard survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Elizabeth Josephson, NOAA NEFSC

Dataset

AMAPPS_NOAA/NMFS_SEFSCBoat2011

Dates

June – July 2011

Platform

Boat

Survey protocol

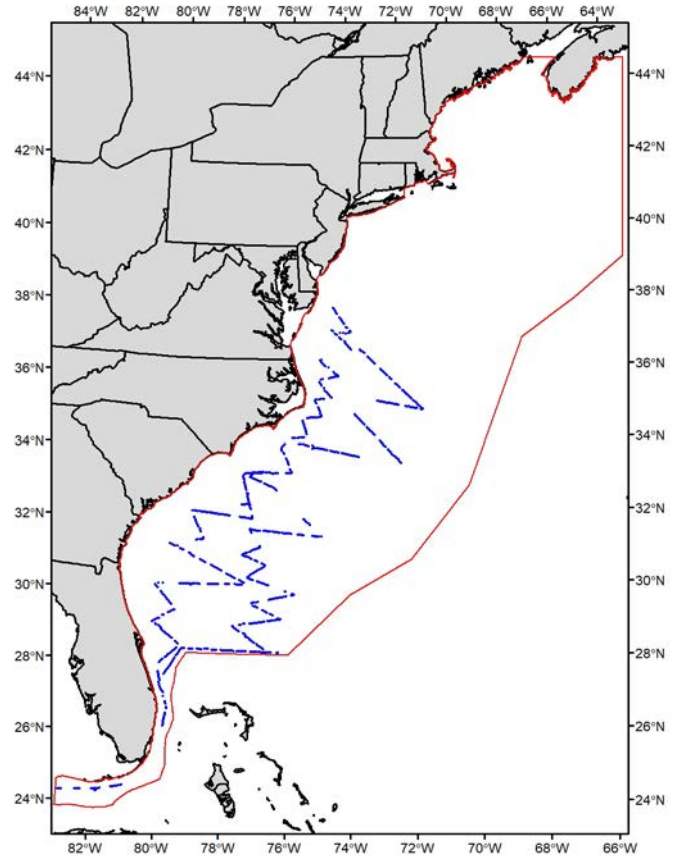
300-m strip transect, continuous data recording

Number of transect segments analyzed

982

Total survey area analyzed

1155 km²



Description

NOAA Southeast Fisheries Science Center (SEFSC) shipboard survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Mike Simpkins, NOAA NEFSC

Dataset

AMAPPS_NOAA/NMFS_SEFSCBoat2013

Dates

July – September 2013

Platform

Boat

Survey protocol

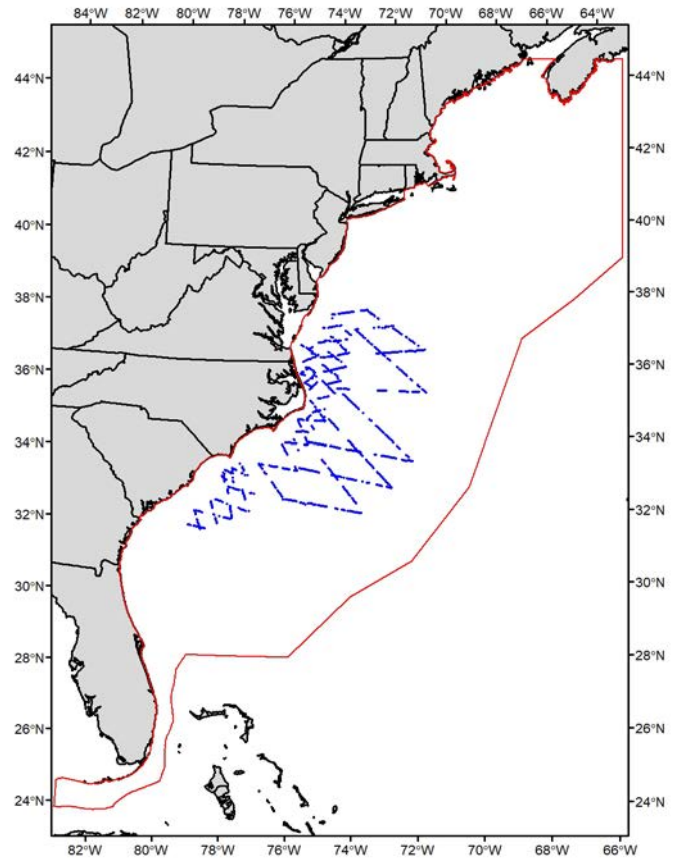
300-m strip transect, continuous data recording

Number of transect segments analyzed

978

Total survey area analyzed

1149 km²



Description

NOAA Southeast Fisheries Science Center (SEFSC) shipboard survey component of the multi-agency Atlantic Marine Assessment Program for Marine Species (AMAPPS)

Contact

Mike Simpkins, NOAA NEFSC

Dataset

BarHarborWW05

Dates

June – October 2005

Platform

Boat

Survey protocol

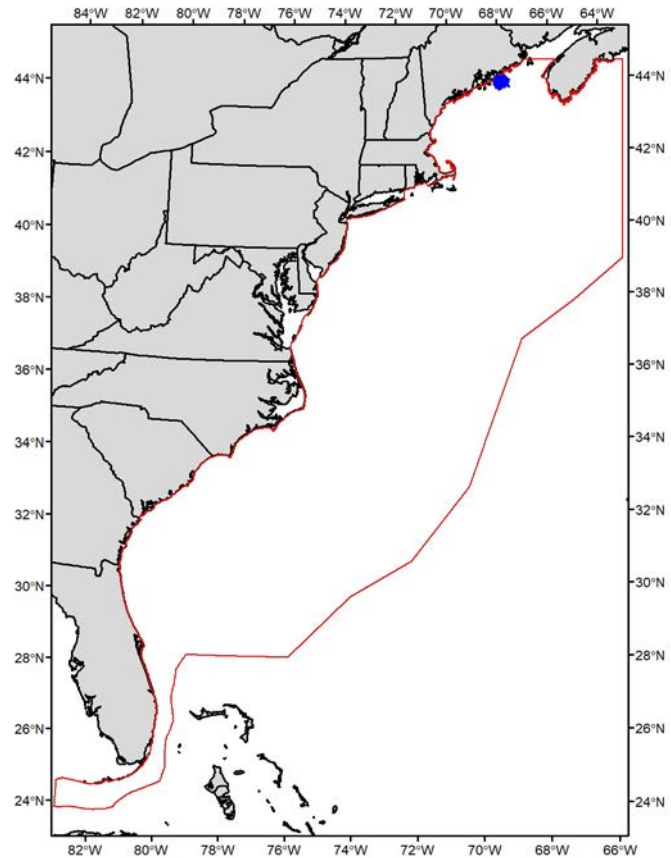
300-m strip transect, continuous data recording

Number of transect segments analyzed

1057

Total survey area analyzed

1265 km²

**Description**

Surveys conducted aboard the Bar Harbor Whale Watch vessel Friendship during transit around Mount Desert Island, Maine. Seabirds were surveyed using standardized techniques. Marine mammal surveys were also conducted. Distribution of survey effort possibly biased toward locations of whales.

Contact

Linda Welch, U.S. Fish and Wildlife Service Maine Coastal Islands National Wildlife Refuge

Dataset

BarHarborWW06

Dates

June – October 2006

Platform

Boat

Survey protocol

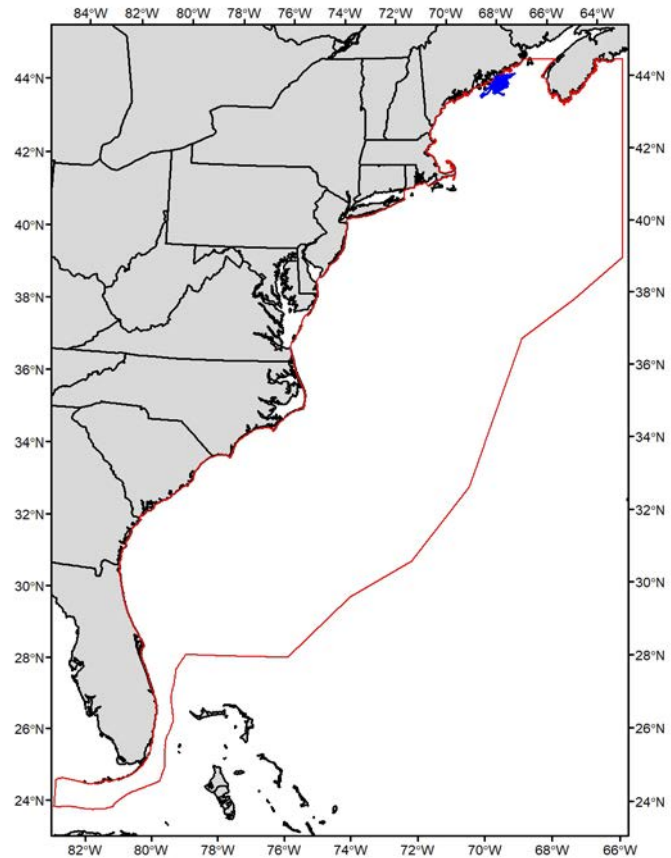
300-m strip transect, continuous data recording

Number of transect segments analyzed

1152

Total survey area analyzed

1393 km²

**Description**

Surveys conducted aboard the Bar Harbor Whale Watch vessel Friendship during transit around Mount Desert Island, Maine; seabirds were surveyed using standardized techniques; marine mammal surveys were also conducted; distribution of survey effort possibly biased toward locations of whales

Contact

Linda Welch, U. S. Fish and Wildlife Service Maine Coastal Islands National Wildlife Refuge

Dataset

CapeHatteras0405

Dates

August 2004 – February 2005

Platform

Boat

Survey protocol

300-m strip transect, continuous data recording

Number of transect segments analyzed

363

Total survey area analyzed

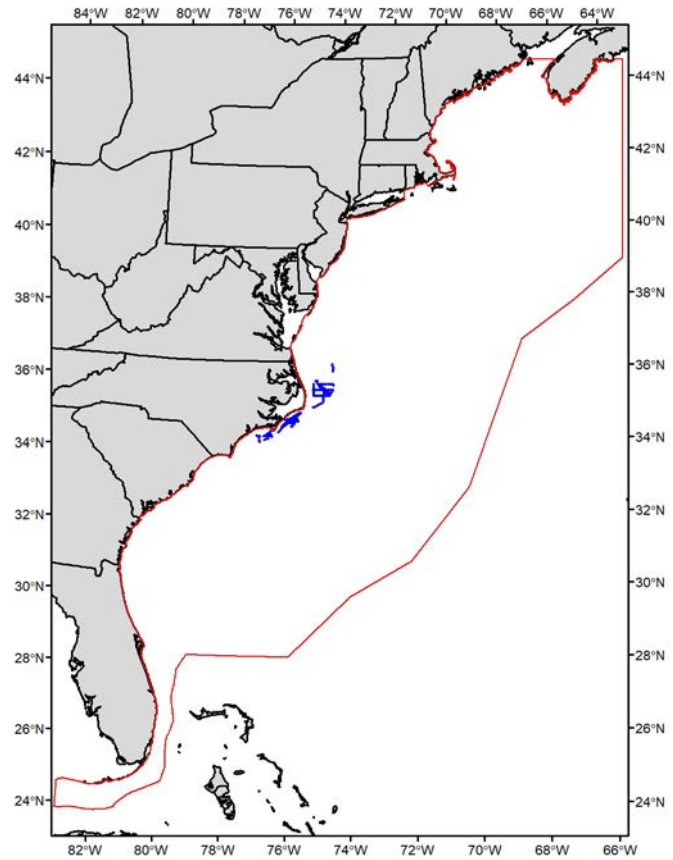
374 km²

Description

Surveys of mammals, seabirds, and turtles off of Cape Hatteras, North Carolina

Contact

Erin LaBrecque, Duke University Nicholas School of the Environment and Earth Sciences



Dataset

CapeWindAerial*

Dates

March 2002 – February 2004

Platform

Aerial

Survey protocol

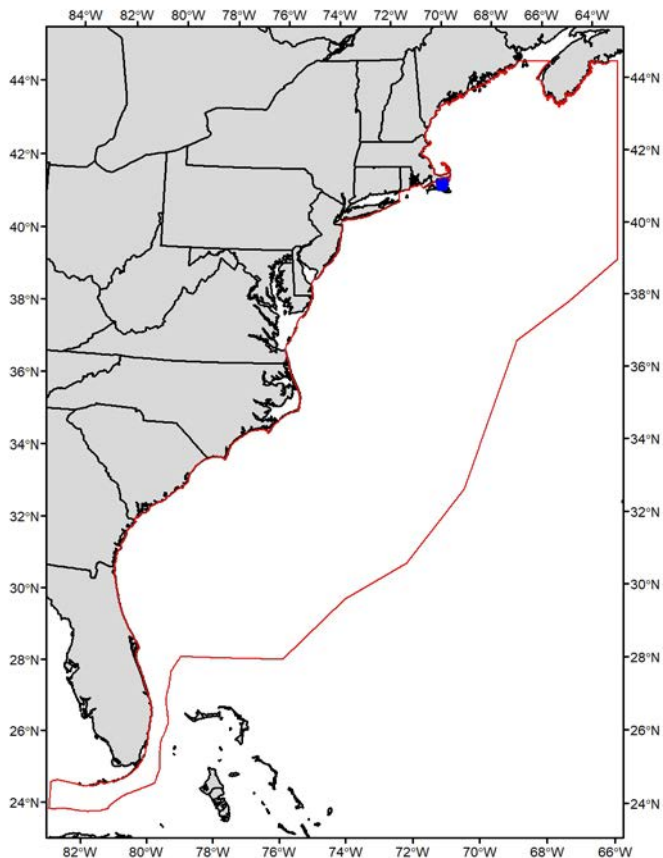
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

4676

Total survey area analyzed

7492 km²



Description

Aerial seabird surveys conducted to provide data for an environmental assessment of the proposed Cape Wind Project (offshore wind energy project on Horseshoe Shoal in Nantucket Sound, Massachusetts); high flight altitude may have limited the ability to detect smaller species

Contact

Terry Orr, ESS Group Inc.

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

CapeWindBoat*

Dates

April 2002 – September 2003

Platform

Boat

Survey protocol

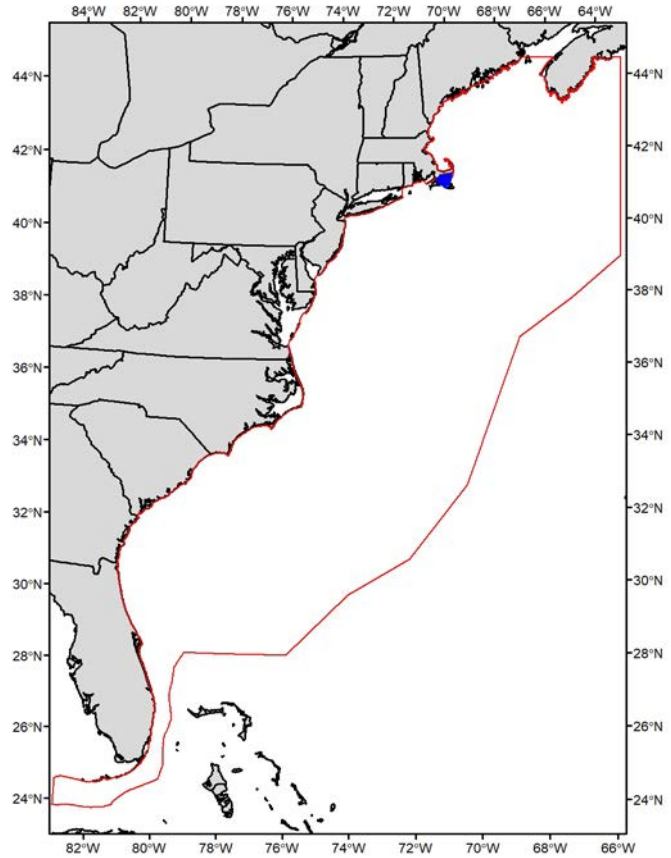
1609-m strip transect (0.5 miles on either side of the trackline), continuous data recording

Number of transect segments analyzed

255

Total survey area analyzed

1644 km²



Description

Boat-based seabird surveys conducted to provide data for an environmental assessment of the proposed Cape Wind Project (offshore wind energy project on Horseshoe Shoal in Nantucket Sound, Massachusetts)

Contact

Terry Orr, ESS Group Inc.

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

CDASMidAtlantic

Dates

December 2001 – March 2003

Platform

Aerial

Survey protocol

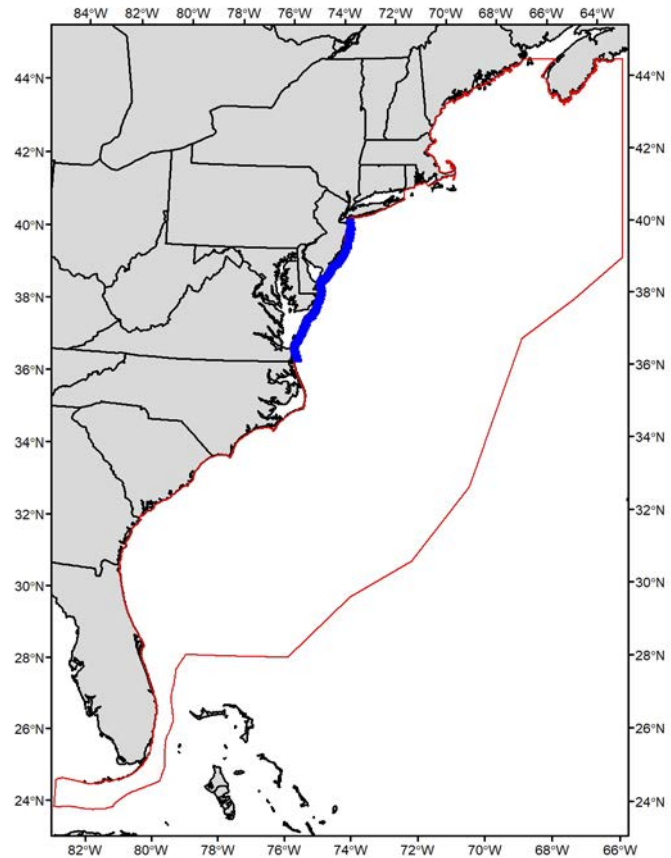
120-m strip transect (60 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

1604

Total survey area analyzed

766 km²

**Description**

Seabird surveys conducted by the U. S. Fish and Wildlife Service (USFWS) for the former Minerals Management Service in the mouth of the Chesapeake Bay, in Delaware Bay, and in waters to at least 12 nautical miles offshore between northern New Jersey and the Virginia/North Carolina border

Contact

Doug Forsell, USFWS Chesapeake Bay Field Office

Dataset

CSAP

Dates

April 1980 – October 1988

Platform

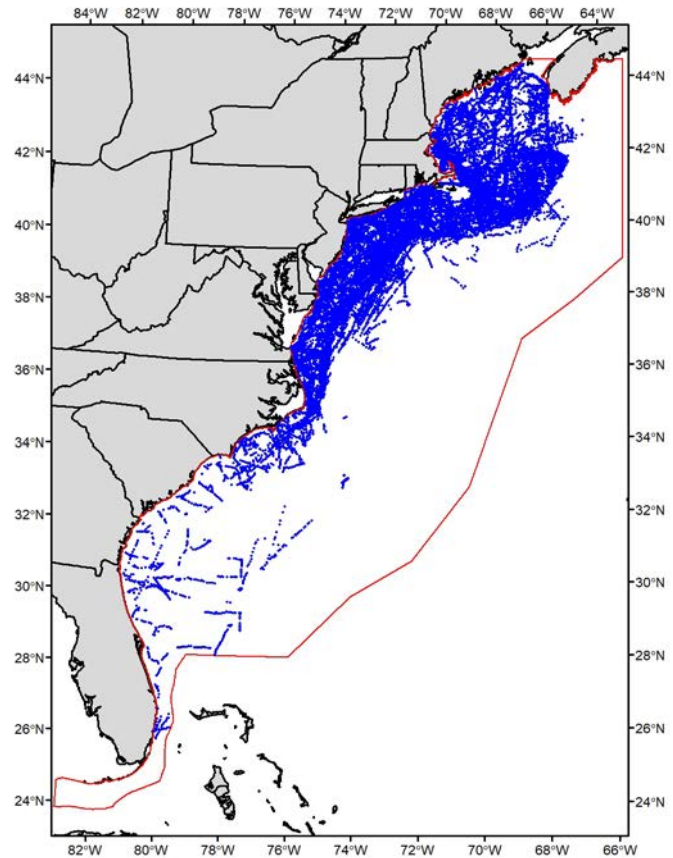
Boat

Survey protocol

300-m strip transect, binned data recording (discrete)

Number of transect segments analyzed

26125

Total survey area analyzed33545 km²**Description**

Cetacean and Seabird Assessment Program (CSAP) surveys of seabirds, marine mammals, and sea turtles conducted by the Manomet Bird Observatory for the NOAA Northeast Fisheries Science Center

Contact

Stephanie Schmidt, Manomet Center for Conservation Sciences

Dataset

DOEBRIAerial2012*

Dates

March – December 2012

Platform

Aerial hi-resolution digital video

Survey protocol

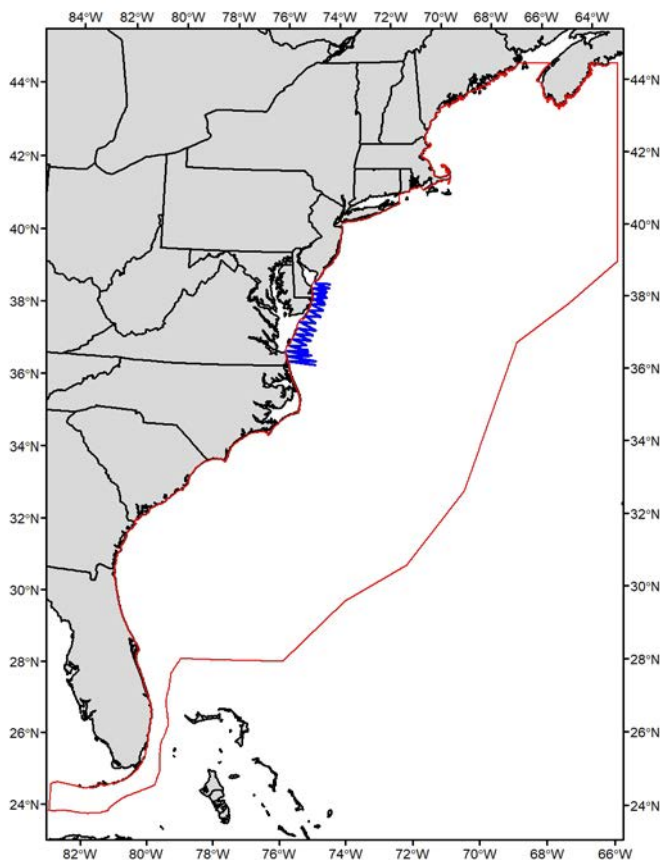
200-m strip transect, continuous data recording

Number of transect segments analyzed

4596

Total survey area analyzed

3669 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIAerial2013*

Dates

February – December 2013

Platform

Aerial hi-resolution digital video

Survey protocol

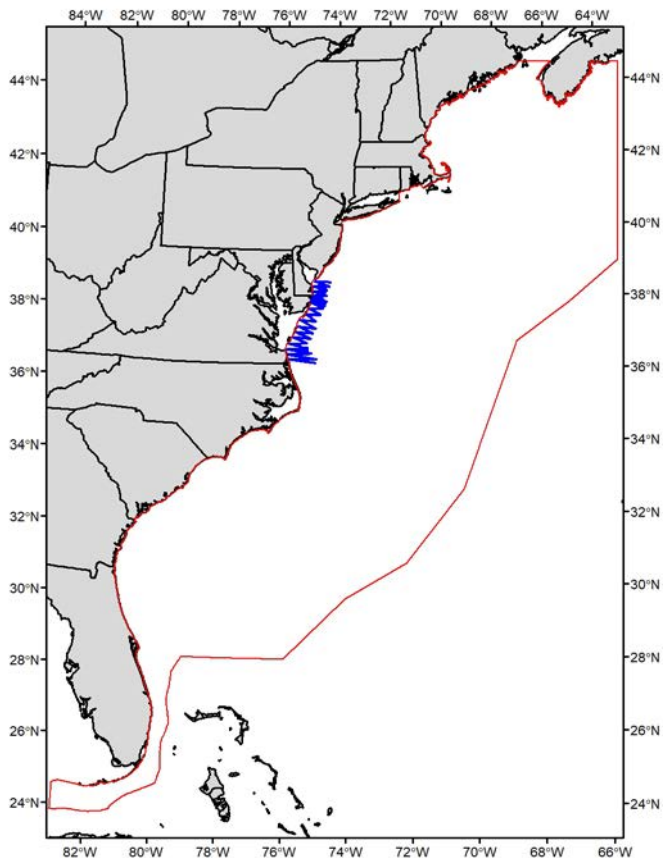
200-m strip transect, continuous data recording

Number of transect segments analyzed

5300

Total survey area analyzed

4250 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIAerial2014*

Dates

January – May 2014

Platform

Aerial hi-resolution digital video

Survey protocol

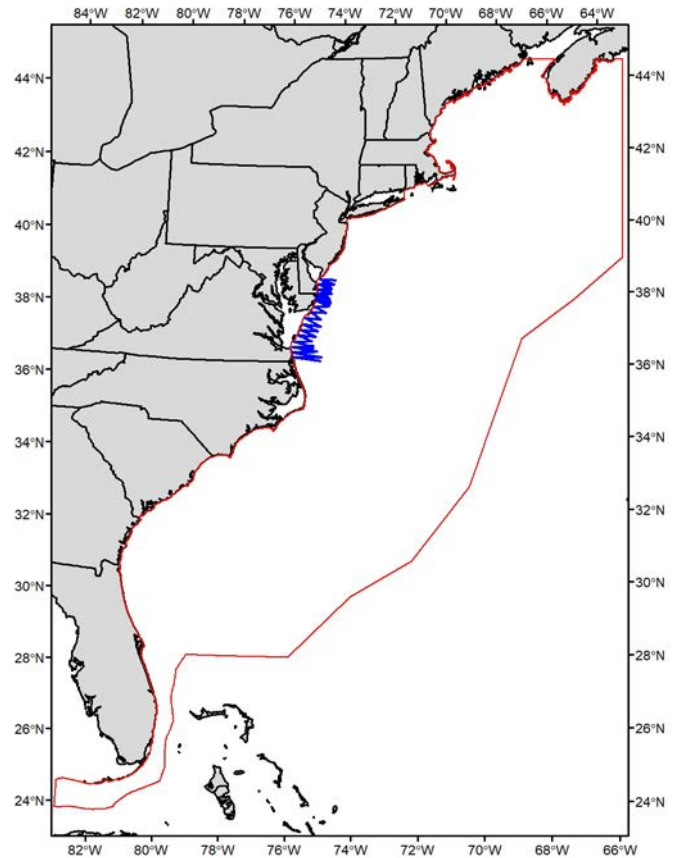
200-m strip transect, continuous data recording

Number of transect segments analyzed

2370

Total survey area analyzed

1896 km²

**Description**

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatApr2014*

Dates

April 2014

Platform

Boat

Survey protocol

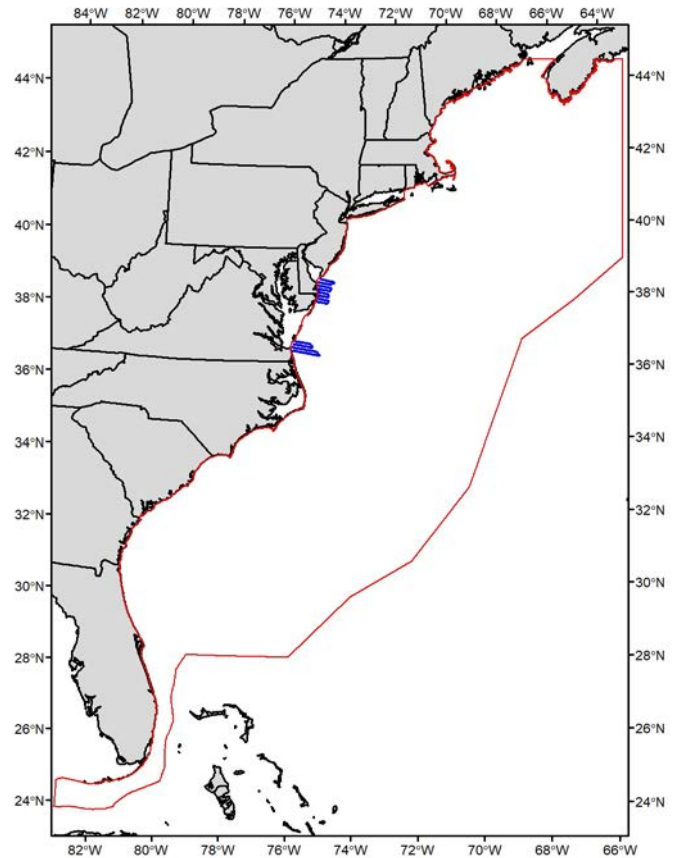
300-m strip transect, continuous data recording

Number of transect segments analyzed

164

Total survey area analyzed

195 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatApril2012*

Dates

April 2012

Platform

Boat

Survey protocol

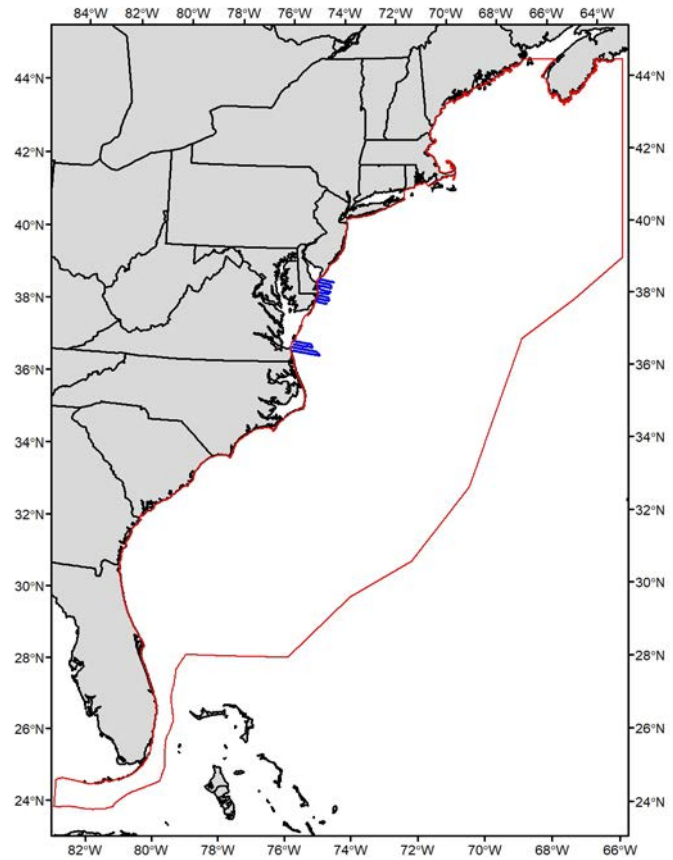
300-m strip transect, continuous data recording

Number of transect segments analyzed

165

Total survey area analyzed

197 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatAug2012*

Dates

August 2012

Platform

Boat

Survey protocol

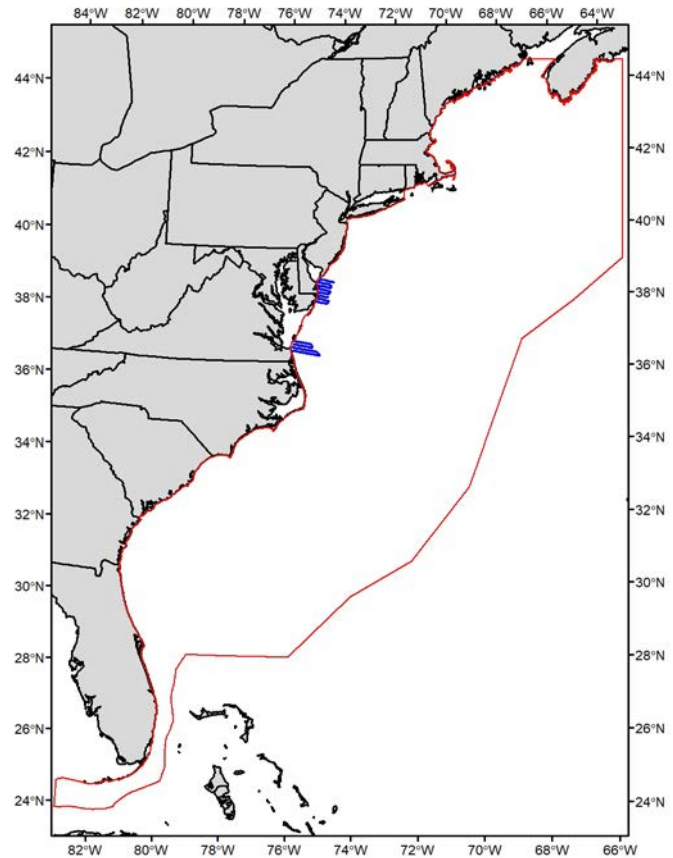
300-m strip transect, continuous data recording

Number of transect segments analyzed

164

Total survey area analyzed

197 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatAug2013*

Dates

July – August 2013

Platform

Boat

Survey protocol

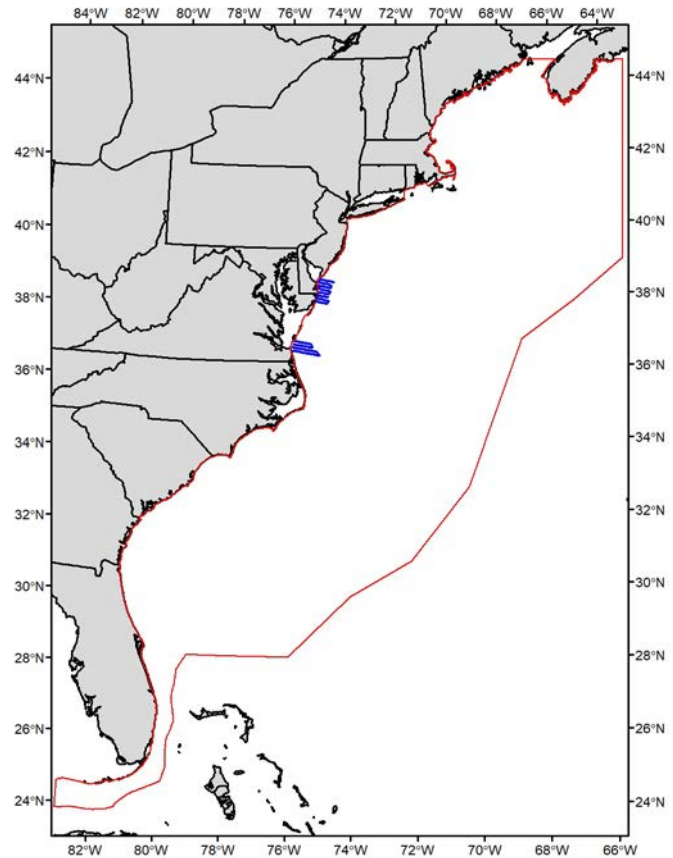
300-m strip transect, continuous data recording

Number of transect segments analyzed

166

Total survey area analyzed

199 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatDec2012*

Dates

December 2012 – January 2013

Platform

Boat

Survey protocol

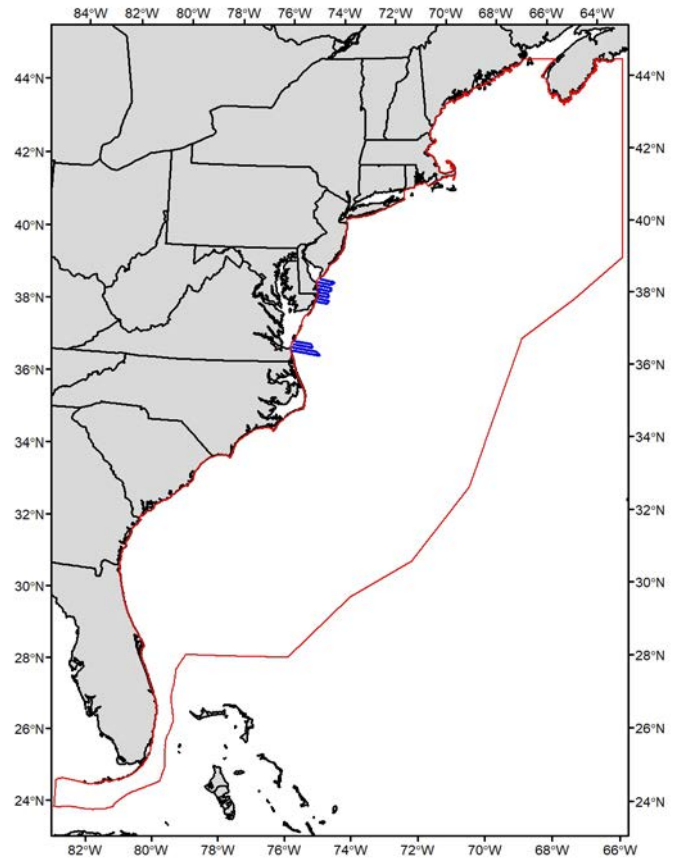
300-m strip transect, continuous data recording

Number of transect segments analyzed

162

Total survey area analyzed

194 km²

**Description**

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatDec2013*

Dates

December 2013

Platform

Boat

Survey protocol

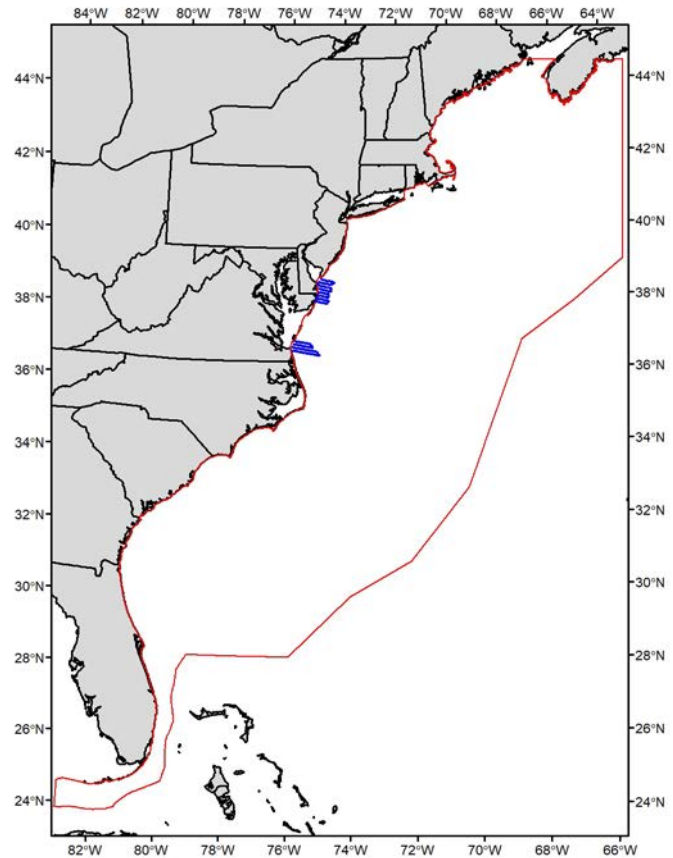
300-m strip transect, continuous data recording

Number of transect segments analyzed

170

Total survey area analyzed

202 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatJan2013*

Dates

January – February 2013

Platform

Boat

Survey protocol

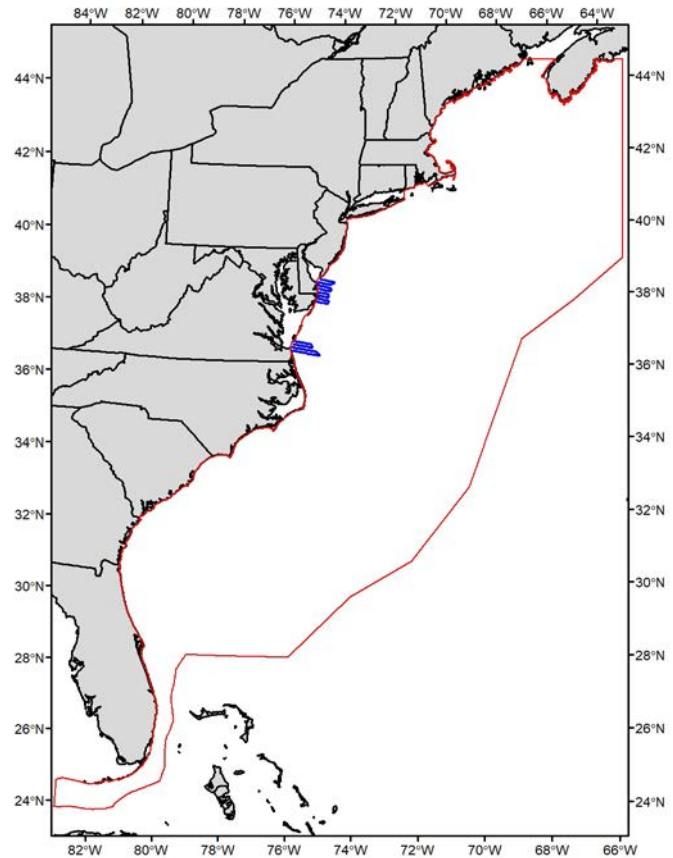
300-m strip transect, continuous data recording

Number of transect segments analyzed

164

Total survey area analyzed

198 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatJan2014*

Dates

January – February 2014

Platform

Boat

Survey protocol

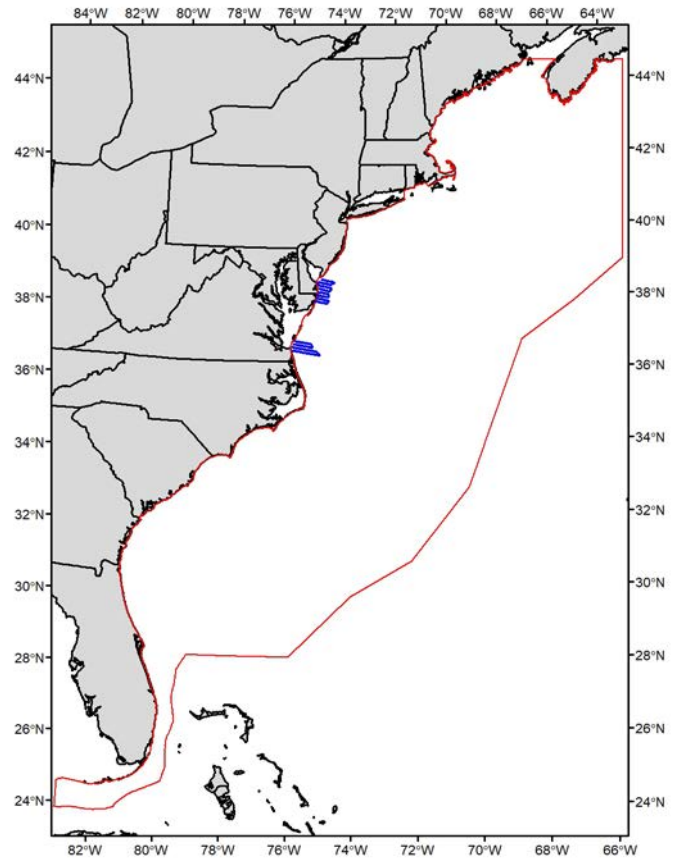
300-m strip transect, continuous data recording

Number of transect segments analyzed

164

Total survey area analyzed

197 km²

**Description**

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatJune2012*

Dates

June 2012

Platform

Boat

Survey protocol

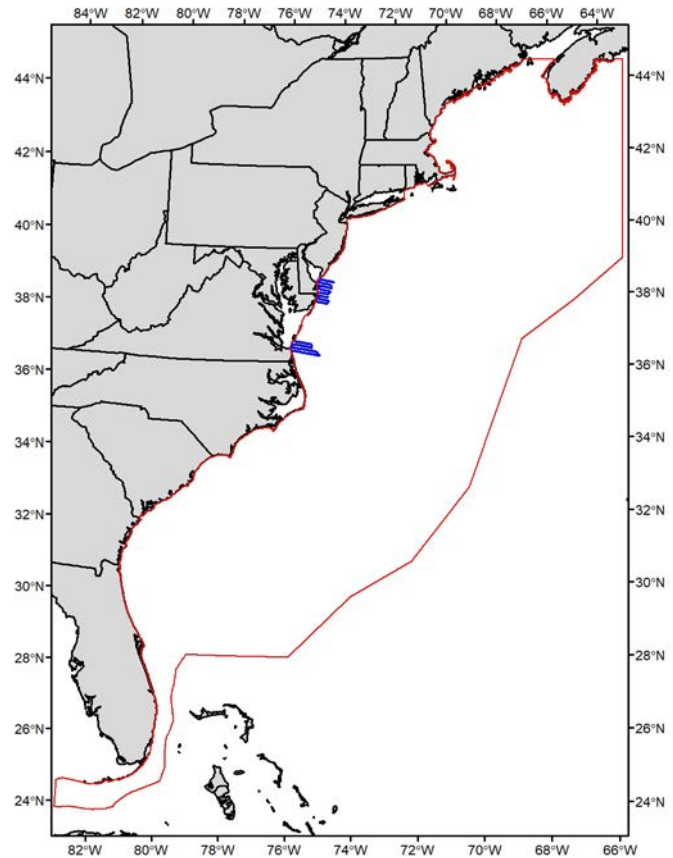
300-m strip transect, continuous data recording

Number of transect segments analyzed

166

Total survey area analyzed

200 km²

**Description**

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatJune2013*

Dates

June 2013

Platform

Boat

Survey protocol

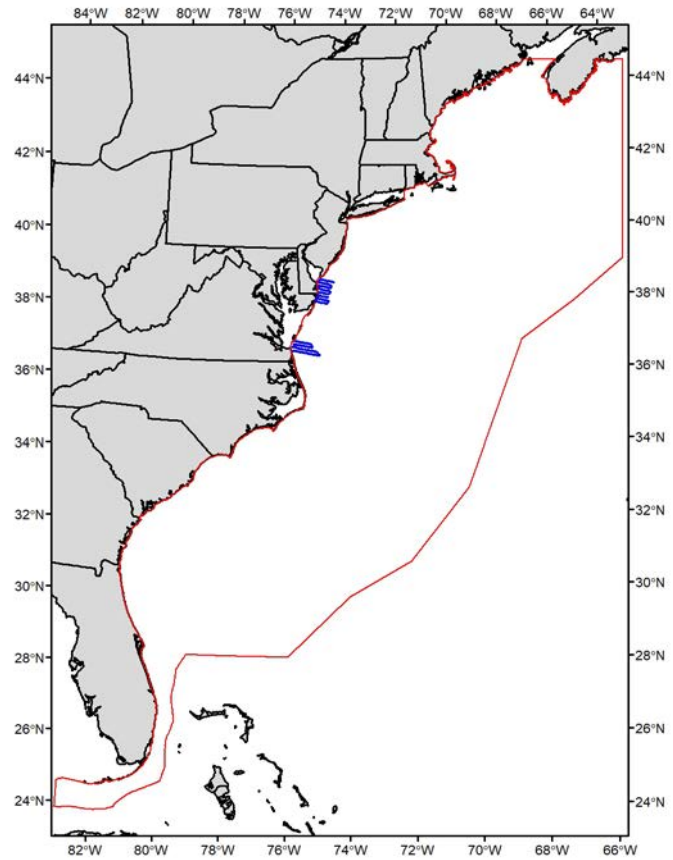
300-m strip transect, continuous data recording

Number of transect segments analyzed

168

Total survey area analyzed

200 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatMar2013*

Dates

March 2013

Platform

Boat

Survey protocol

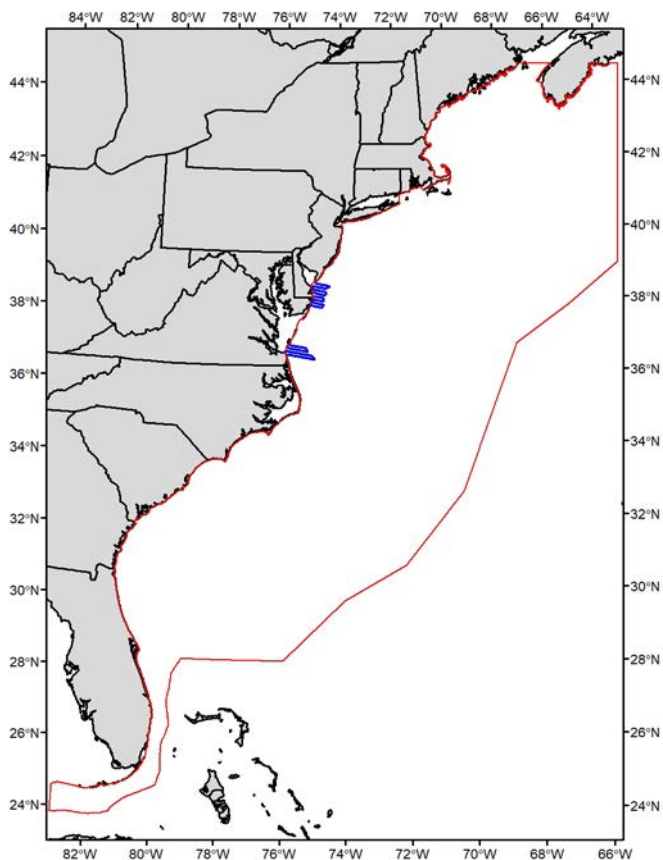
300-m strip transect, continuous data recording

Number of transect segments analyzed

166

Total survey area analyzed

201 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatMay2013*

Dates

May 2013

Platform

Boat

Survey protocol

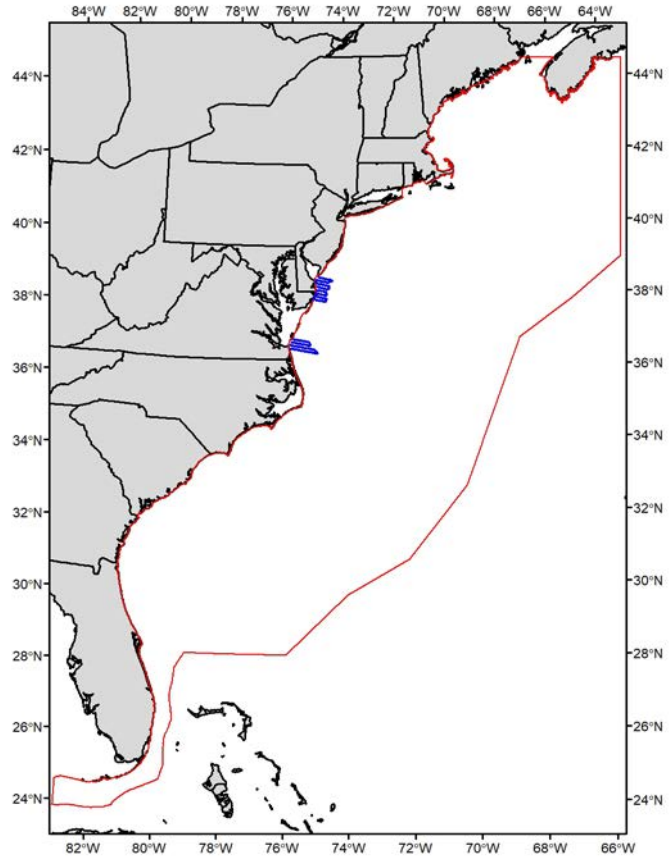
300-m strip transect, continuous data recording

Number of transect segments analyzed

168

Total survey area analyzed

201 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatNov2012*

Dates

November 2012

Platform

Boat

Survey protocol

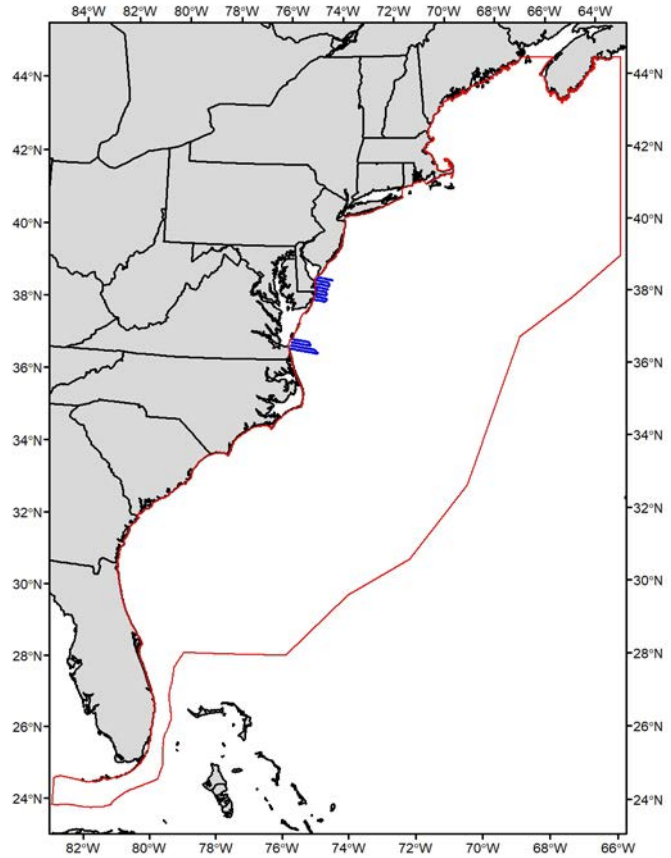
300-m strip transect, continuous data recording

Number of transect segments analyzed

165

Total survey area analyzed

197 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatOct2013*

Dates

October 2013

Platform

Boat

Survey protocol

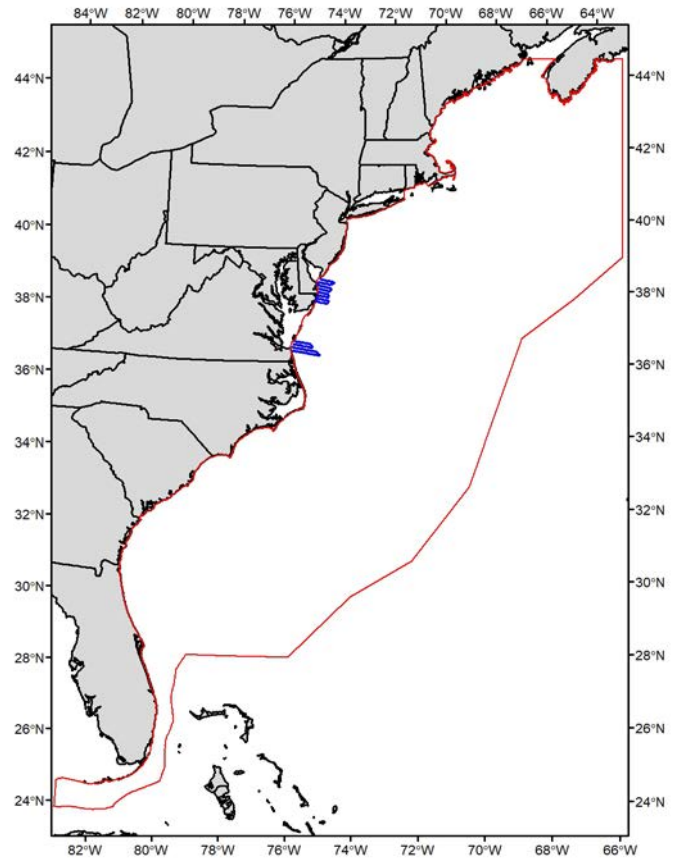
300-m strip transect, continuous data recording

Number of transect segments analyzed

170

Total survey area analyzed

201 km²

**Description**

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatSep2012*

Dates

September 2012

Platform

Boat

Survey protocol

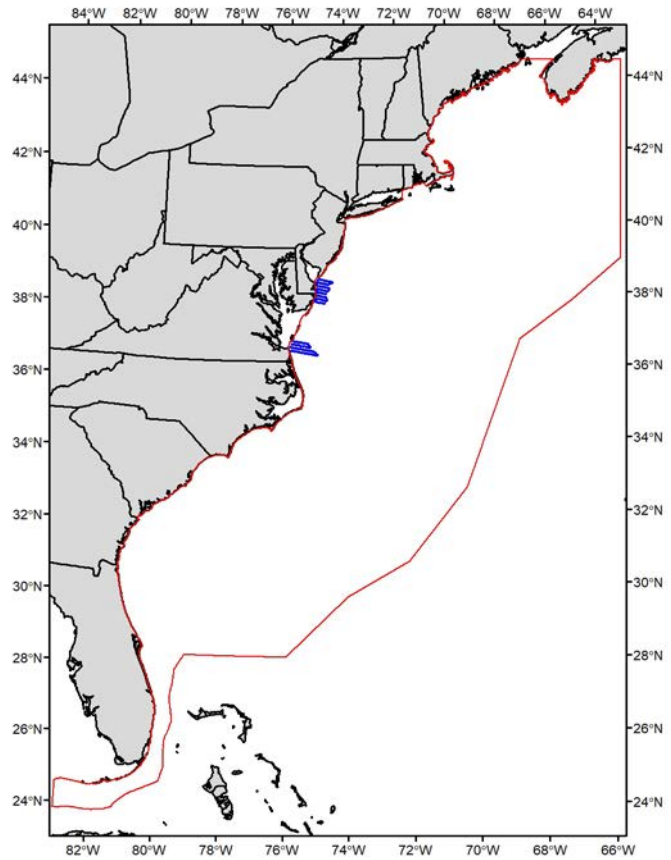
300-m strip transect, continuous data recording

Number of transect segments analyzed

168

Total survey area analyzed

201 km²



Description

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DOEBRIBoatSep2013*

Dates

September 2013

Platform

Boat

Survey protocol

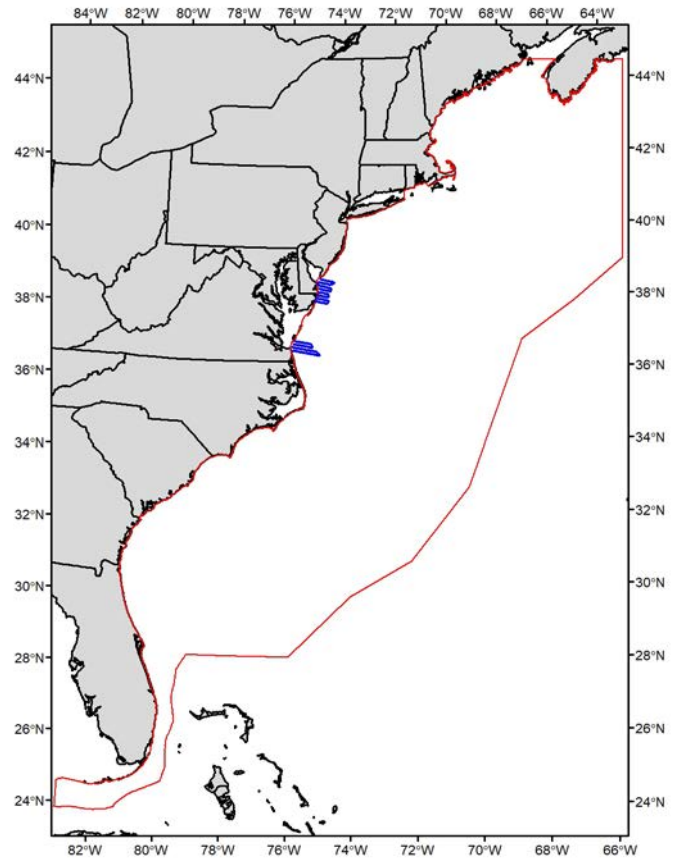
300-m strip transect, continuous data recording

Number of transect segments analyzed

168

Total survey area analyzed

201 km²

**Description**

U.S. Department of Energy (DOE)/Biodiversity Research Institute (BRI) mid-Atlantic surveys to collect baseline data that can inform siting and permitting of future offshore wind energy development

Contact

Andrew Gilbert, BRI

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

DominionVirginia_VOWTAP

Dates

May 2013 – April 2014

Platform

Boat

Survey protocol

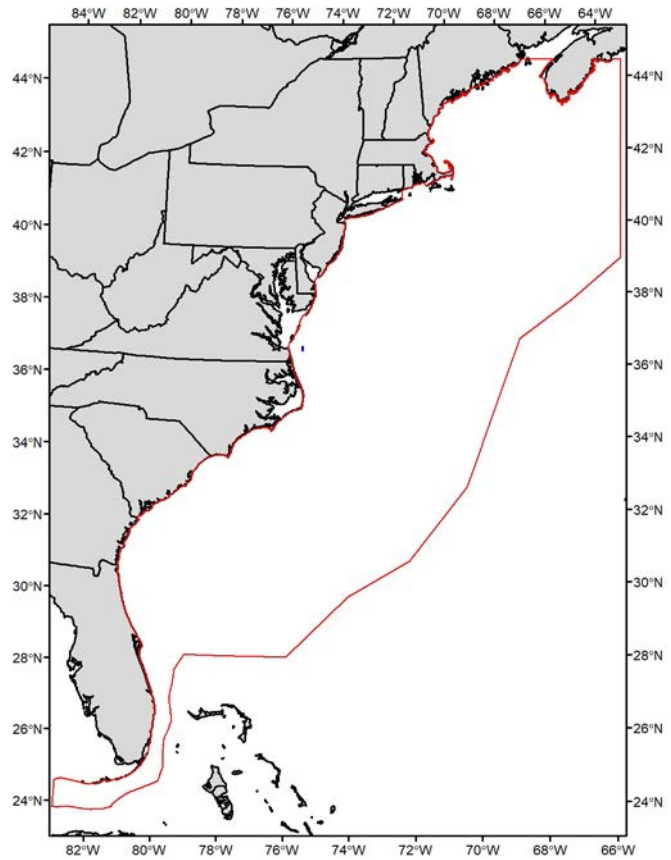
600-m strip transect (300 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

78

Total survey area analyzed

250 km²



Description

Avian surveys conducted by Tetra Tech, Inc. (contracted by Dominion Resources, Inc.) in support of the Virginia Offshore Wind Technology Advancement Project (VOWTAP)

Contact

David Bigger, Bureau of Ocean Energy Management

Dataset

EcoMonAug08

Dates

August 2008

Platform

Boat

Survey protocol

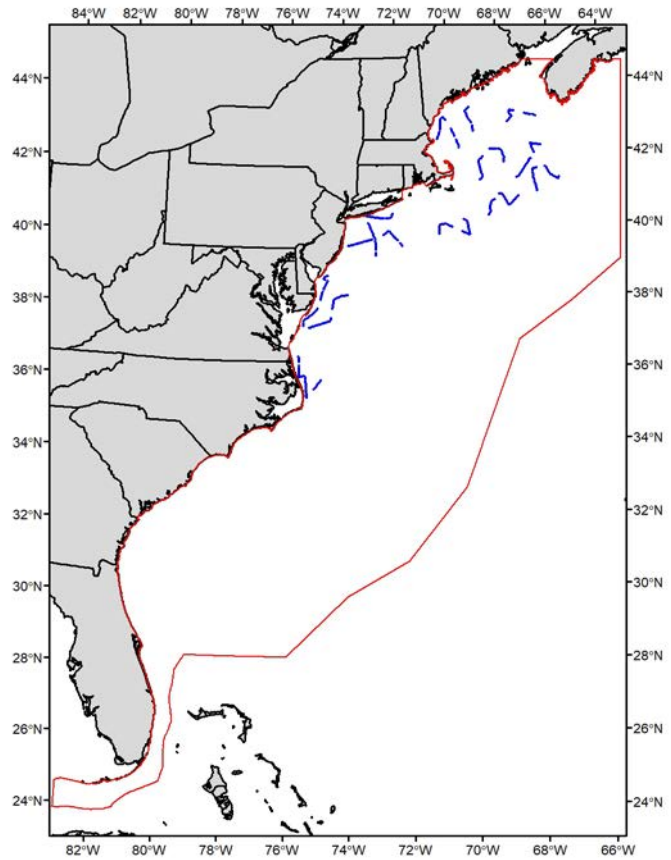
300-m strip transect, continuous data recording

Number of transect segments analyzed

480

Total survey area analyzed

575 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonAug09

Dates

August 2009

Platform

Boat

Survey protocol

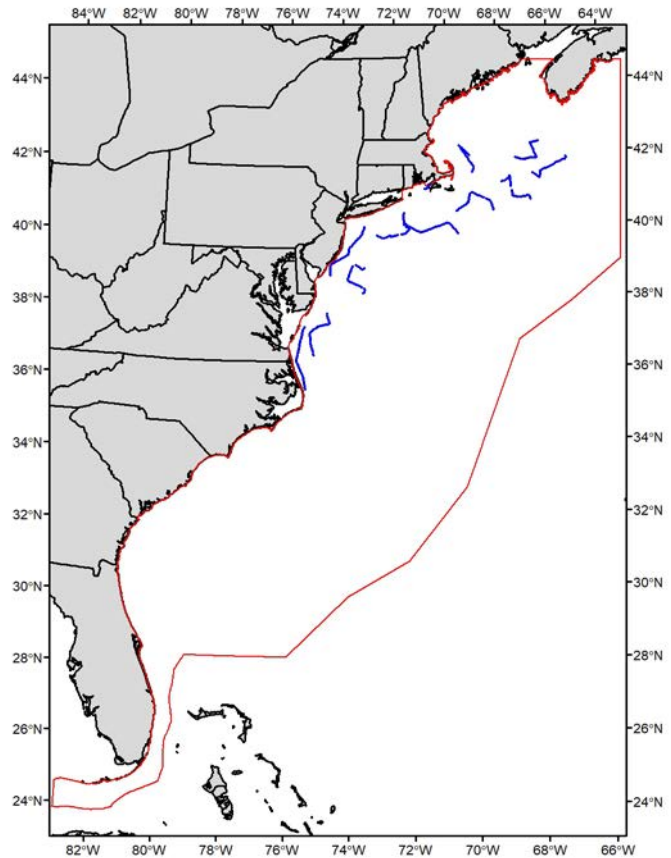
300-m strip transect, continuous data recording

Number of transect segments analyzed

458

Total survey area analyzed

547 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonAug10

Dates

August – September 2010

Platform

Boat

Survey protocol

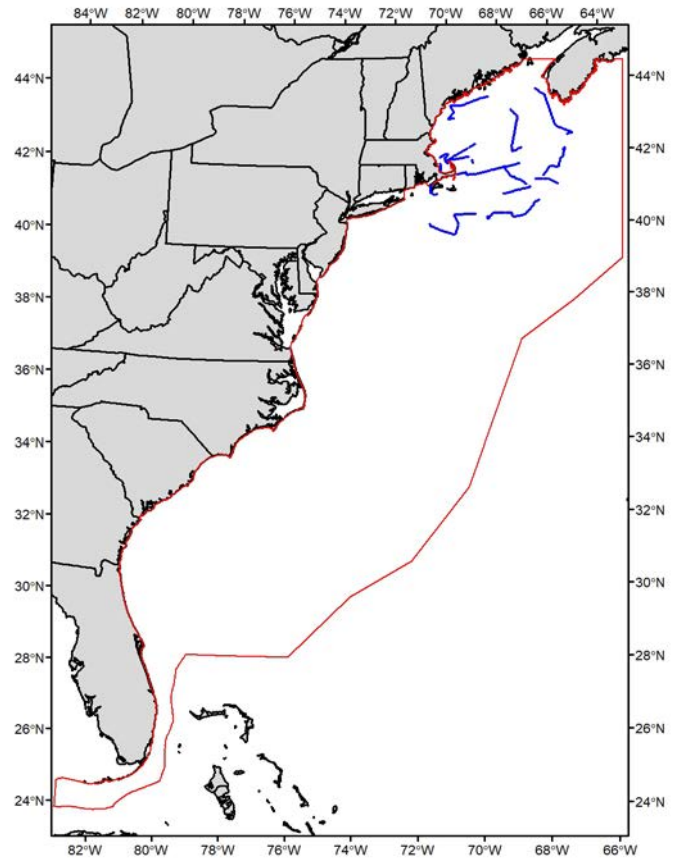
300-m strip transect, continuous data recording

Number of transect segments analyzed

492

Total survey area analyzed

588 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonAug2012

Dates

August 2012

Platform

Boat

Survey protocol

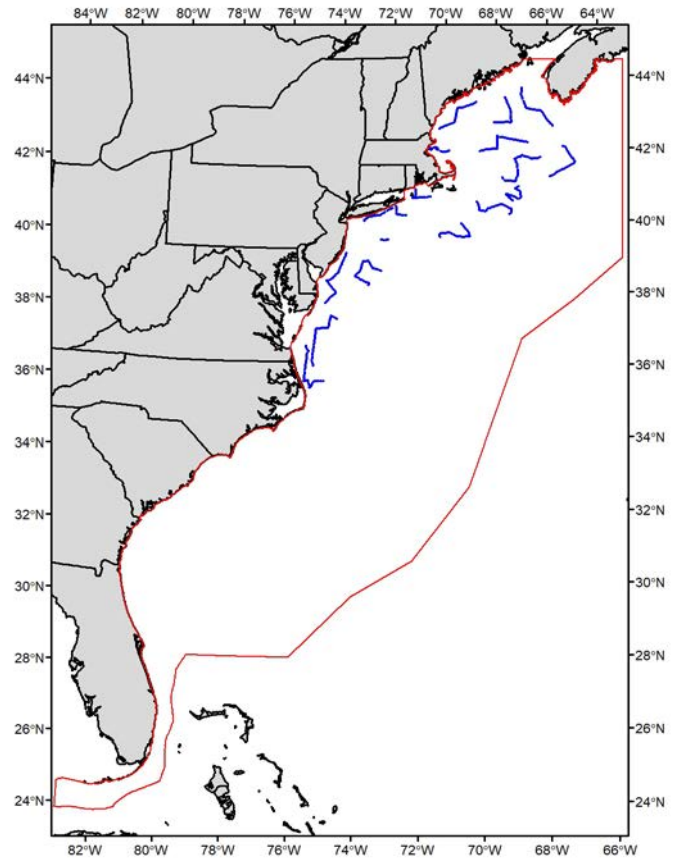
300-m strip transect, continuous data recording

Number of transect segments analyzed

656

Total survey area analyzed

782 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

EcoMonFeb10

Dates

February 2010

Platform

Boat

Survey protocol

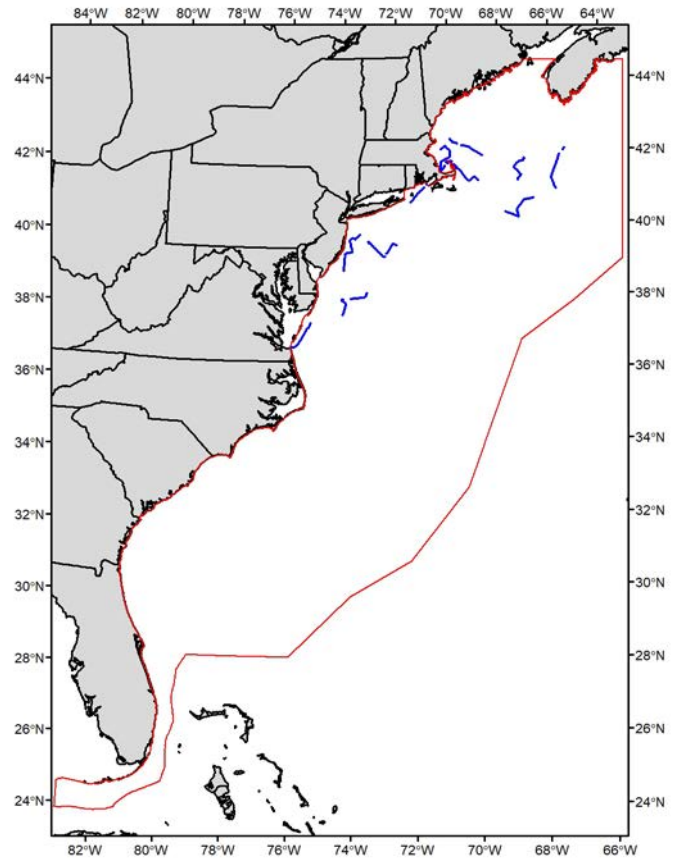
300-m strip transect, continuous data recording

Number of transect segments analyzed

334

Total survey area analyzed

398 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonFeb2012

Dates

February 2012

Platform

Boat

Survey protocol

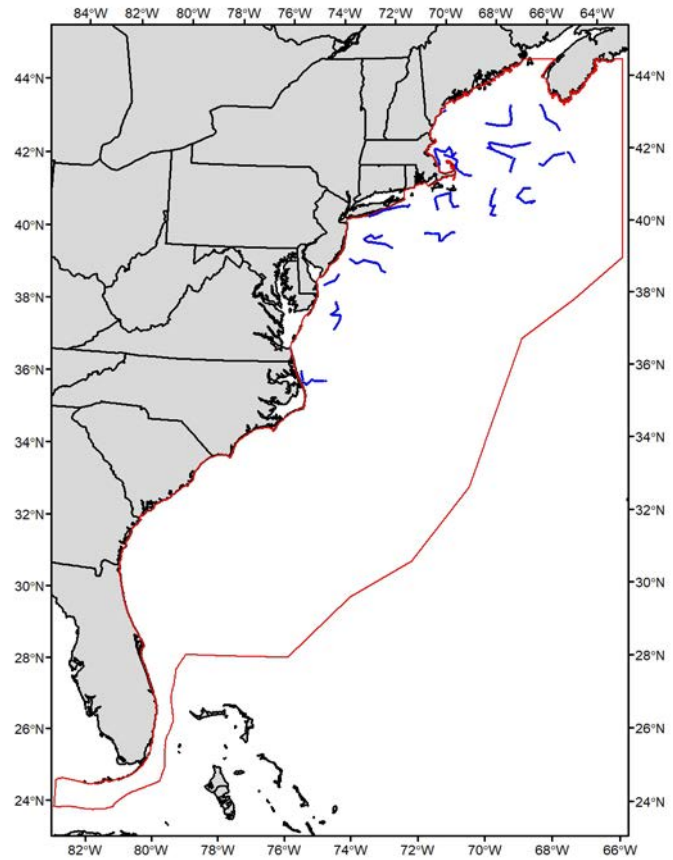
300-m strip transect, continuous data recording

Number of transect segments analyzed

549

Total survey area analyzed

661 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

EcoMonFeb2013

Dates

February 2013

Platform

Boat

Survey protocol

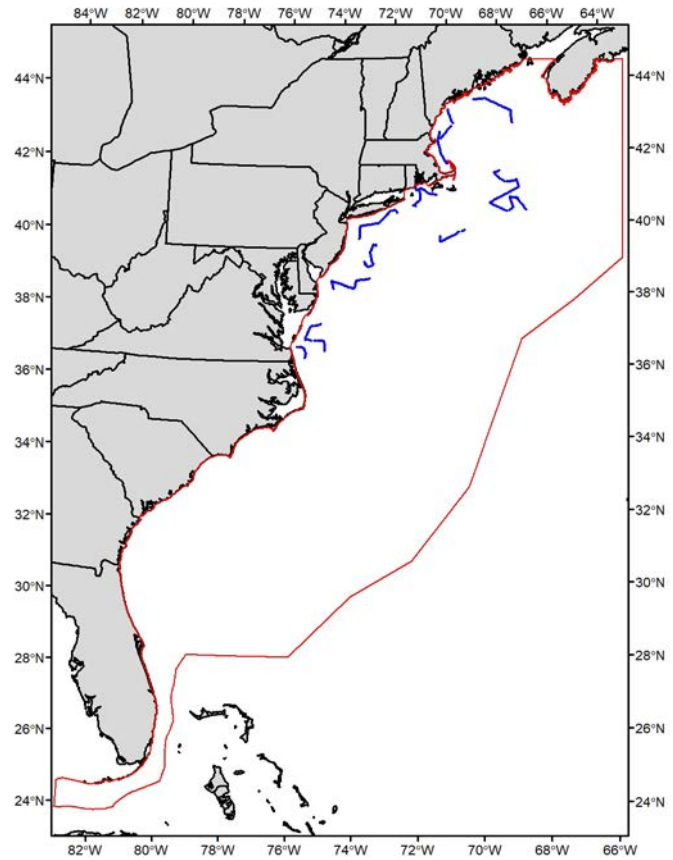
300-m strip transect, continuous data recording

Number of transect segments analyzed

521

Total survey area analyzed

620 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

EcoMonJan09

Dates

January – February 2009

Platform

Boat

Survey protocol

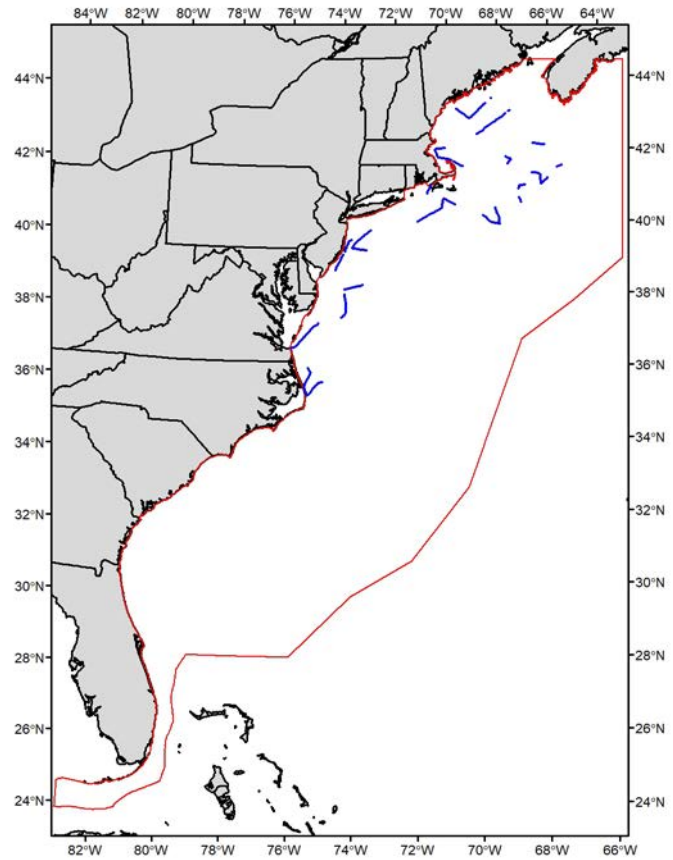
300-m strip transect, continuous data recording

Number of transect segments analyzed

391

Total survey area analyzed

474 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonJun2012

Dates

May – June 2012

Platform

Boat

Survey protocol

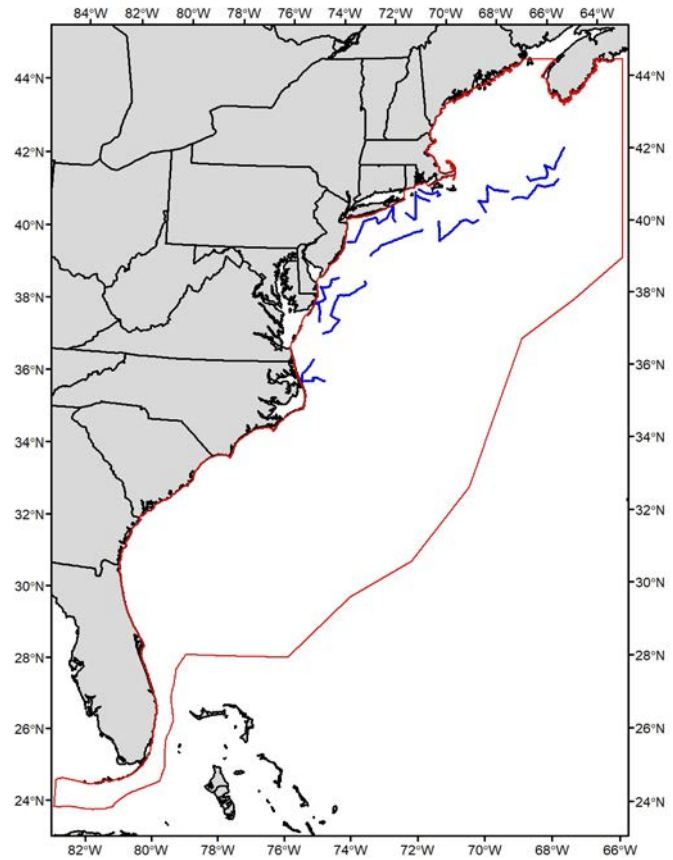
300-m strip transect, continuous data recording

Number of transect segments analyzed

544

Total survey area analyzed

651 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

EcoMonMay07

Dates

May – June 2007

Platform

Boat

Survey protocol

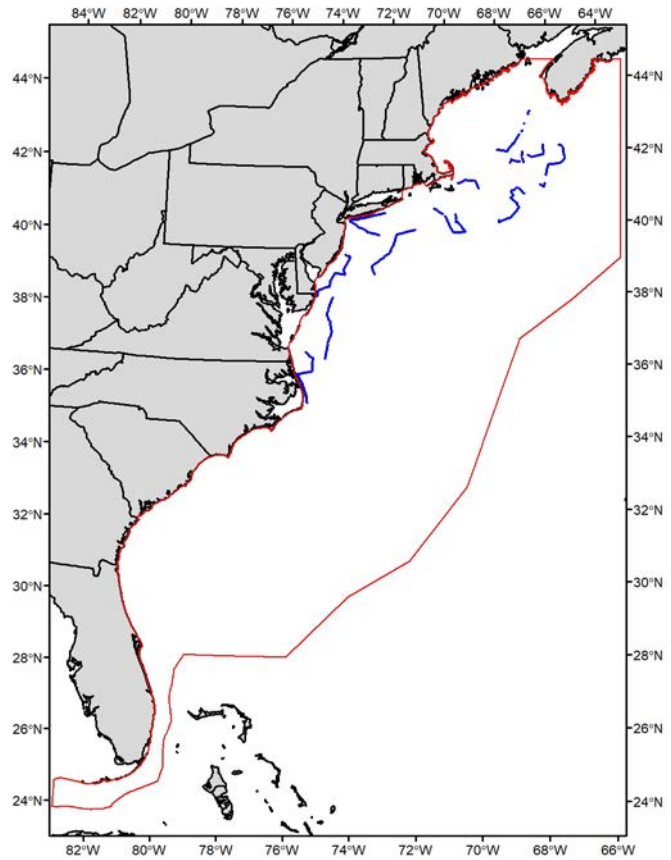
300-m strip transect, continuous data recording

Number of transect segments analyzed

505

Total survey area analyzed

606 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonMay09

Dates

May – June 2009

Platform

Boat

Survey protocol

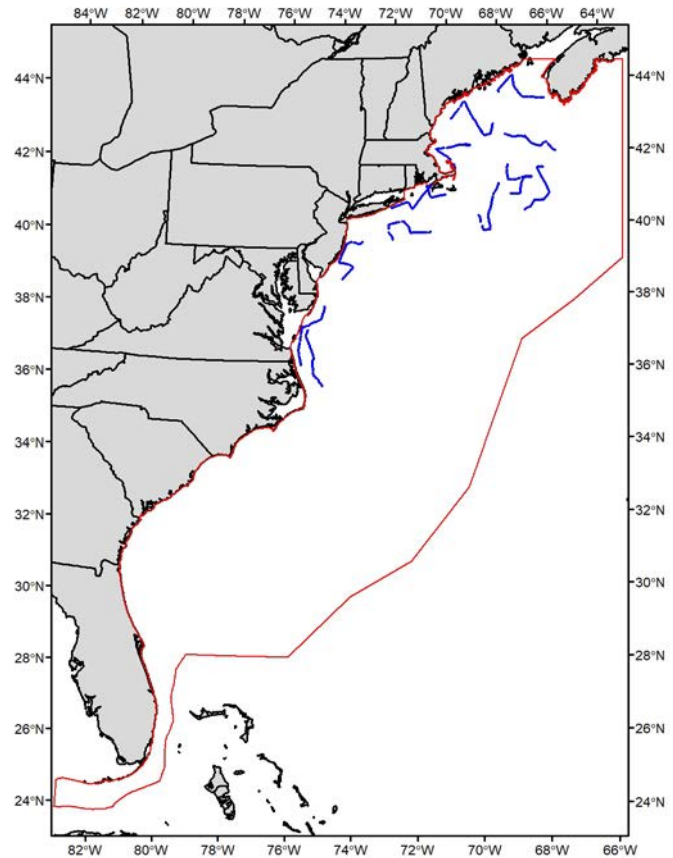
300-m strip transect, continuous data recording

Number of transect segments analyzed

621

Total survey area analyzed

746 km²

**Description**

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonMay10

Dates

May – June 2010

Platform

Boat

Survey protocol

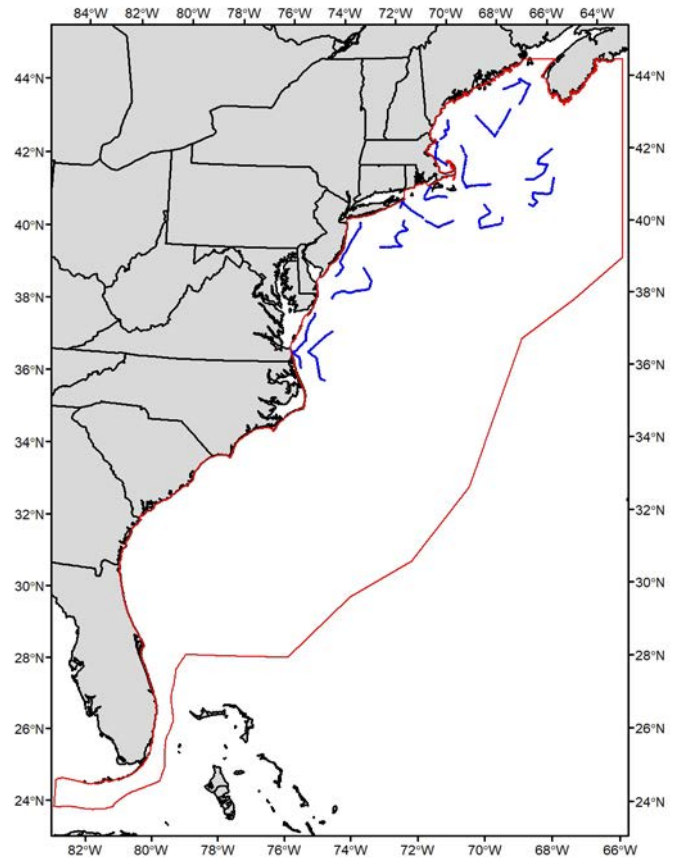
300-m strip transect, continuous data recording

Number of transect segments analyzed

644

Total survey area analyzed

770 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonNov09

Dates

November 2009

Platform

Boat

Survey protocol

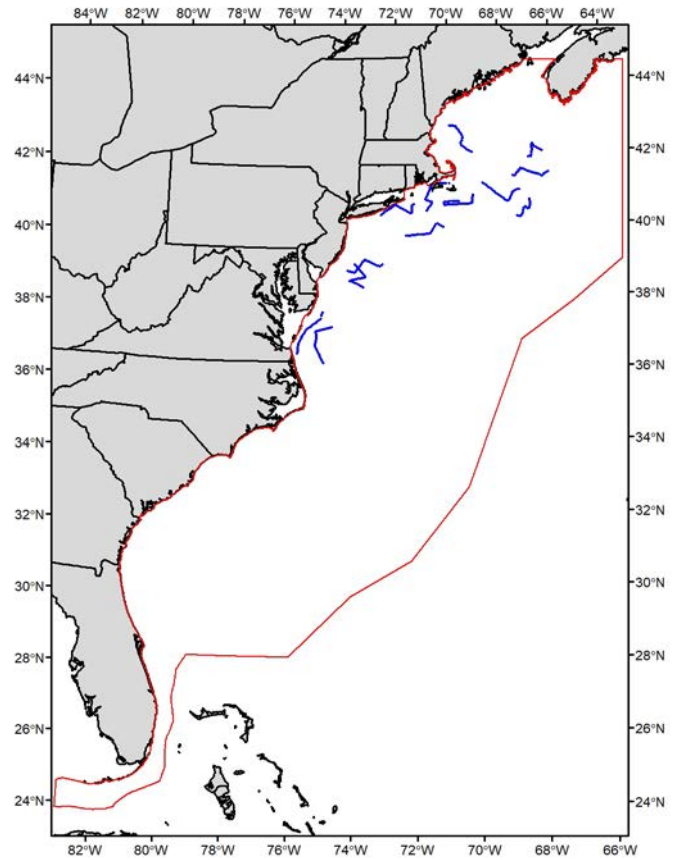
300-m strip transect, continuous data recording

Number of transect segments analyzed

441

Total survey area analyzed

528 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonNov10

Dates

November 2010

Platform

Boat

Survey protocol

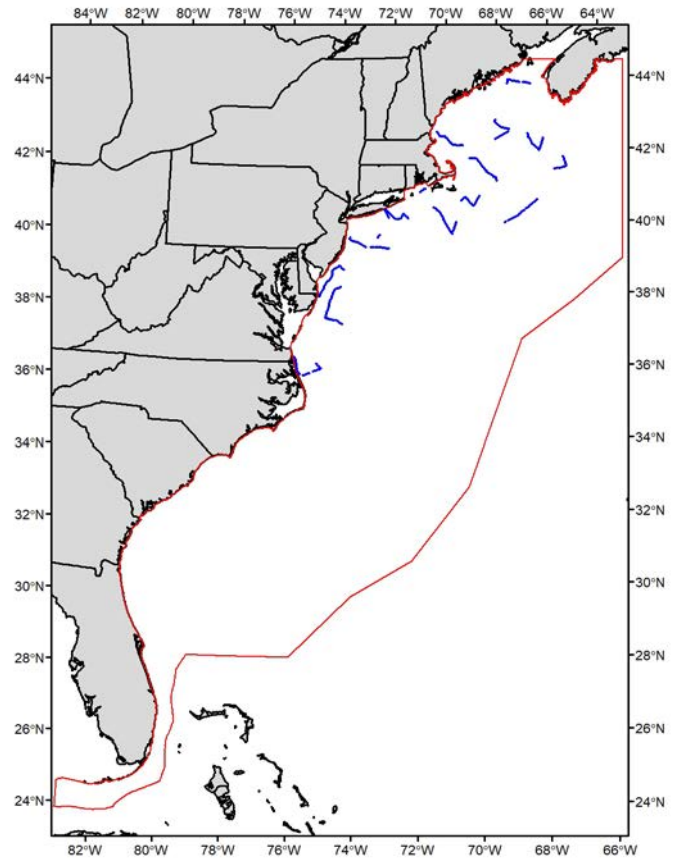
300-m strip transect, continuous data recording

Number of transect segments analyzed

418

Total survey area analyzed

500 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

EcoMonNov2011

Dates

October – November 2011

Platform

Boat

Survey protocol

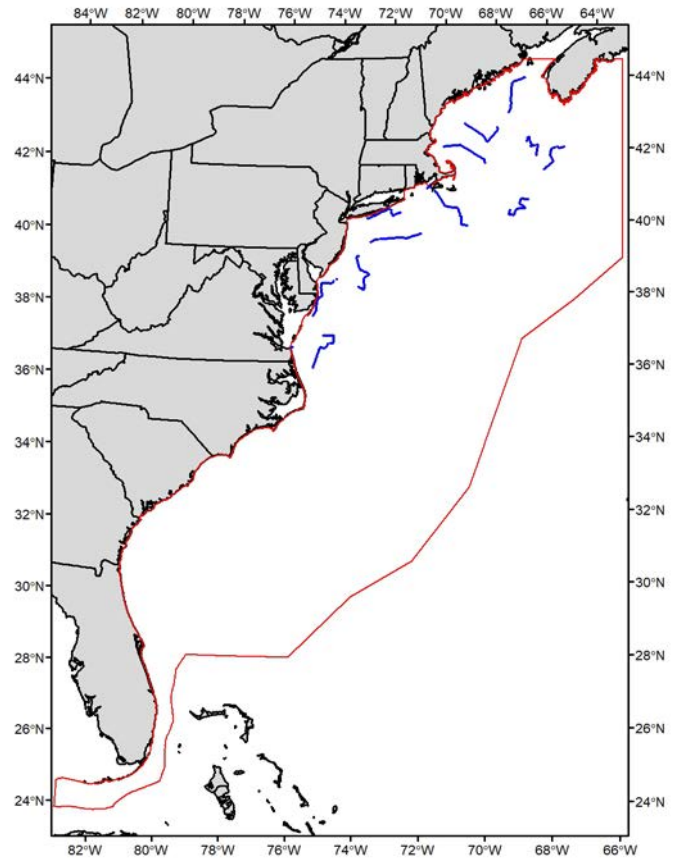
300-m strip transect, continuous data recording

Number of transect segments analyzed

454

Total survey area analyzed

542 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

EcoMonOct2012

Dates

October – November 2012

Platform

Boat

Survey protocol

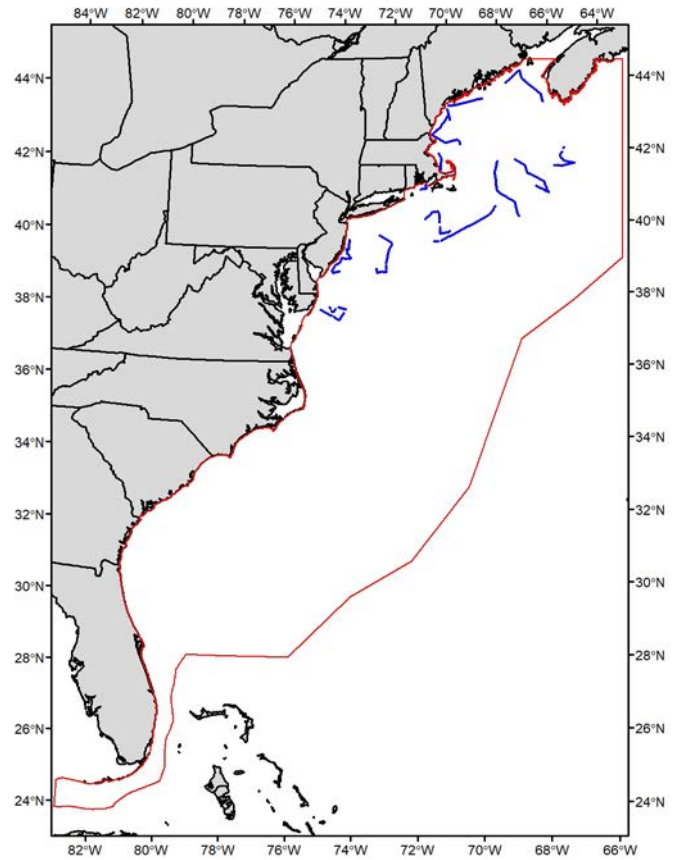
300-m strip transect, continuous data recording

Number of transect segments analyzed

498

Total survey area analyzed

598 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research vessels on Ecosystem Monitoring (EcoMon) cruises

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

ECSAS

Dates

March 2006 – October 2016

Platform

Boat

Survey protocol

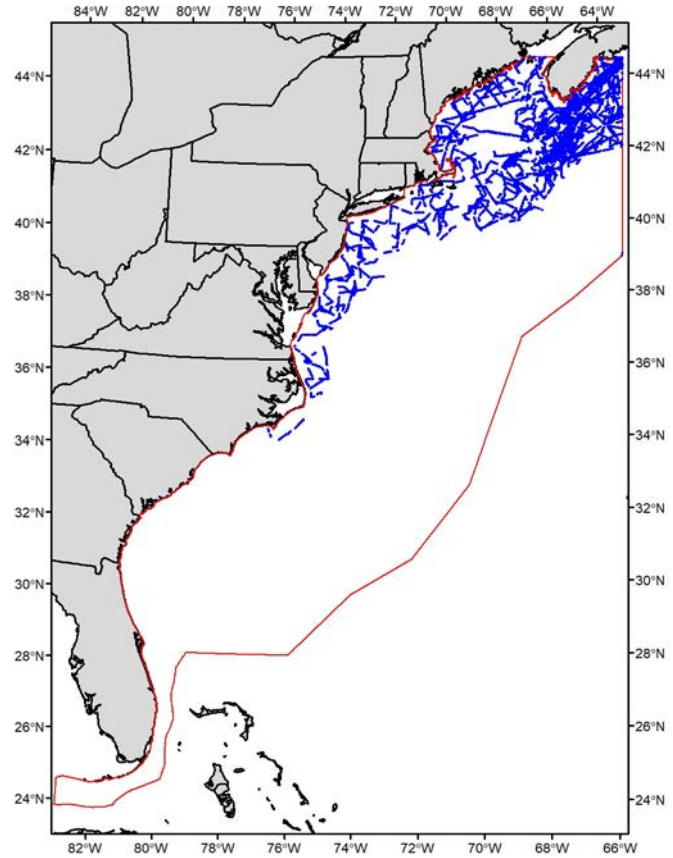
300-m strip transect, binned data recording (discrete)

Number of transect segments analyzed

13016

Total survey area analyzed

6727 km²



Description

Eastern Canada Seabirds at Sea (ECSAS) surveys conducted aboard ships of opportunity by the Canadian Wildlife Service, Environment and Climate Change Canada

Contact

Carina Gjerdrum, Canadian Wildlife Service, Environment and Climate Change Canada

Dataset

FLPowerLongIsland_Aerial

Dates

October 2004 – March 2006

Platform

Aerial

Survey protocol

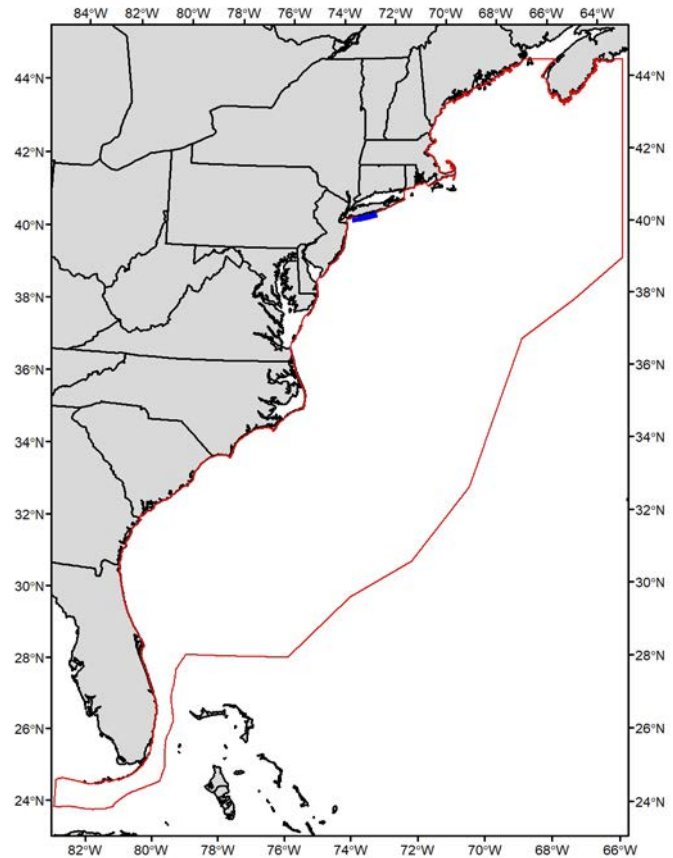
400-m strip transect, continuous data recording

Number of transect segments analyzed

311

Total survey area analyzed

466 km²



Description

Avian surveys conducted by Western Ecosystems Technology, Inc. in the general Long Island Offshore Wind Park project area (FPL Energy)

Contact

David Bigger, Bureau of Ocean Energy Management

Dataset

FLPowerLongIsland_Boat

Dates

April 2004 – June 2006

Platform

Boat

Survey protocol

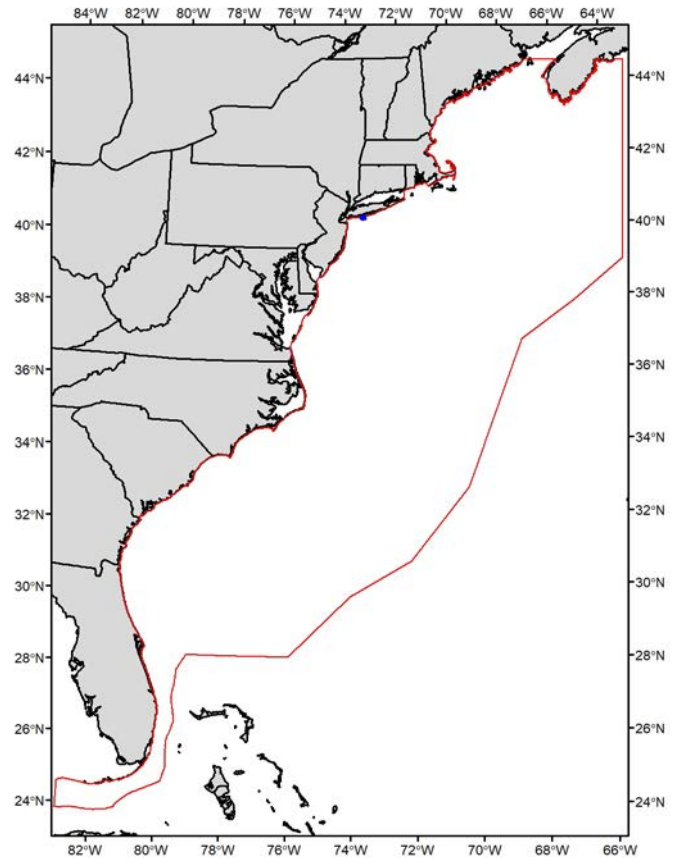
300-m strip transect, continuous data recording

Number of transect segments analyzed

1213

Total survey area analyzed

1374 km²



Description

Avian surveys conducted by Western Ecosystems Technology, Inc. in the general Long Island Offshore Wind Park project area (FPL Energy)

Contact

David Bigger, Bureau of Ocean Energy Management

Dataset

FWS_MidAtlanticDetection_Spring2012

Dates

March 2012

Platform

Aerial

Survey protocol

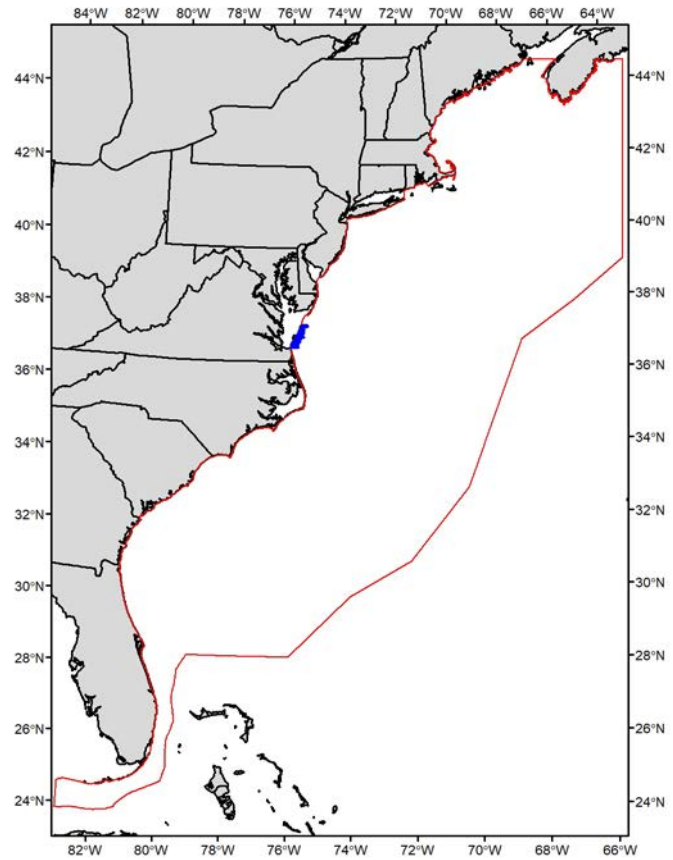
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

177

Total survey area analyzed

283 km²



Description

U.S. Fish and Wildlife Service (USFWS) aerial surveys to monitor the abundance and distribution of marine bird populations along the Atlantic and Gulf coasts with an emphasis on sea ducks

Contact

Jeffery Leirness, USFWS

Dataset

FWS_SouthernBLSC_Winter2012

Dates

February 2012

Platform

Aerial

Survey protocol

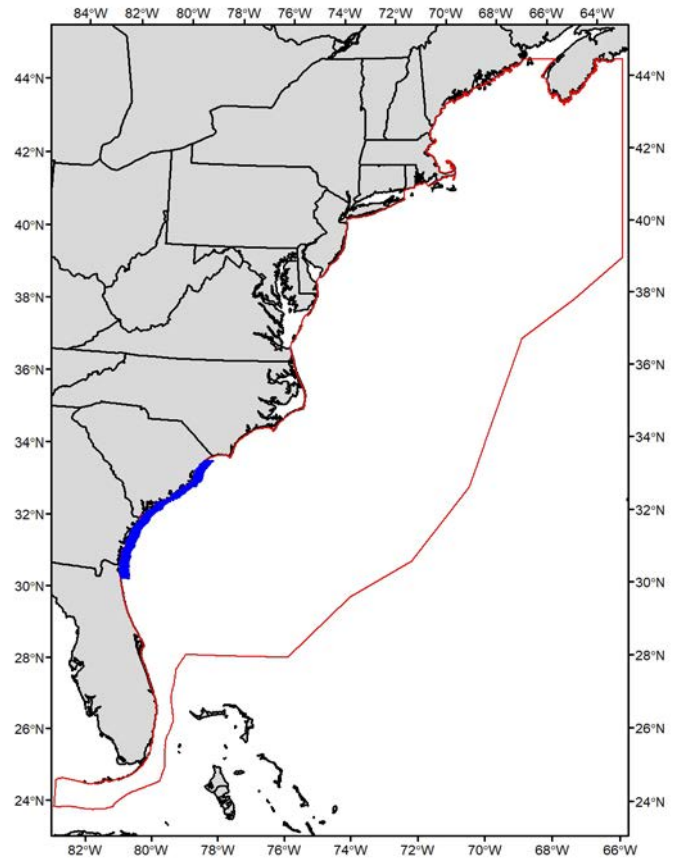
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

904

Total survey area analyzed

1500 km²

**Description**

U.S. Fish and Wildlife Service (USFWS) aerial surveys to monitor the abundance and distribution of marine bird populations along the Atlantic and Gulf coasts with an emphasis on sea ducks

Contact

Jeffery Leirness, USFWS

Dataset

FWSAtlanticWinterSeaduck2008

Dates

February 2008 – February 2011

Platform

Aerial

Survey protocol

400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

8389

Total survey area analyzed

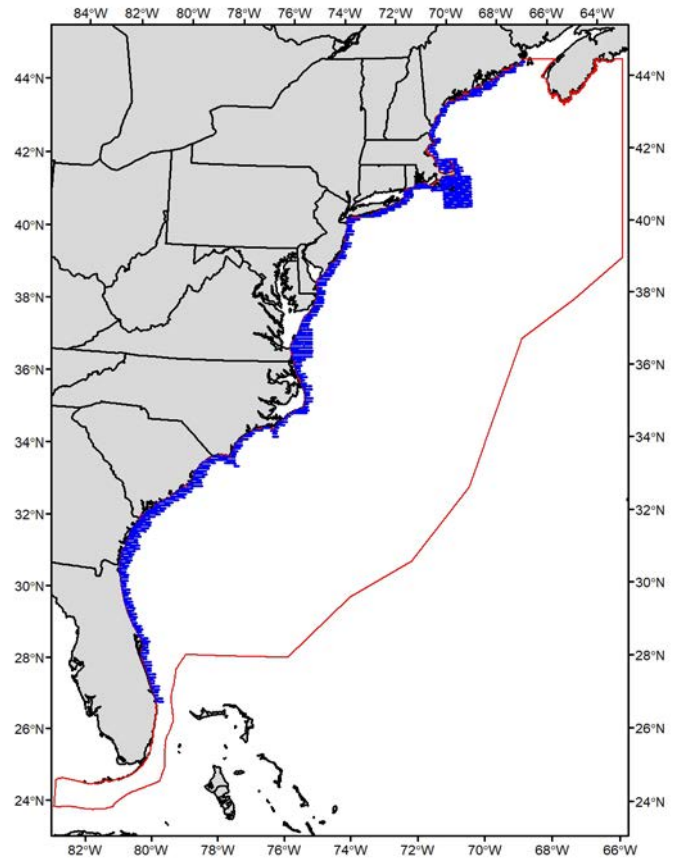
13419 km²

Description

U.S. Fish and Wildlife Service (USFWS) aerial surveys to monitor the abundance and distribution of marine bird populations along the Atlantic and Gulf coasts with an emphasis on sea ducks

Contact

Emily Silverman, USFWS Merriam Lab



Dataset

GeorgiaPelagic

Dates

November 1982 – June 1985

Platform

Boat

Survey protocol

300-m strip transect, binned data recording (discrete)

Number of transect segments analyzed

2186

Total survey area analyzed

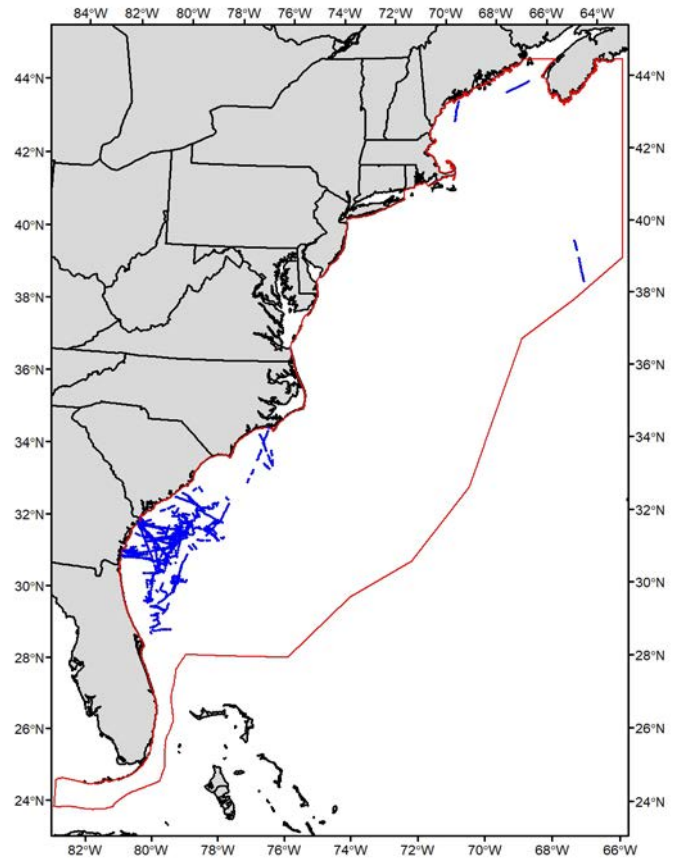
2569 km²

Description

Pelagic seabird (and marine mammal) surveys

Contact

J. Christopher Haney, Defenders of Wildlife



Dataset

HatterasEddyCruise2004

Dates

August 2004

Platform

Boat

Survey protocol

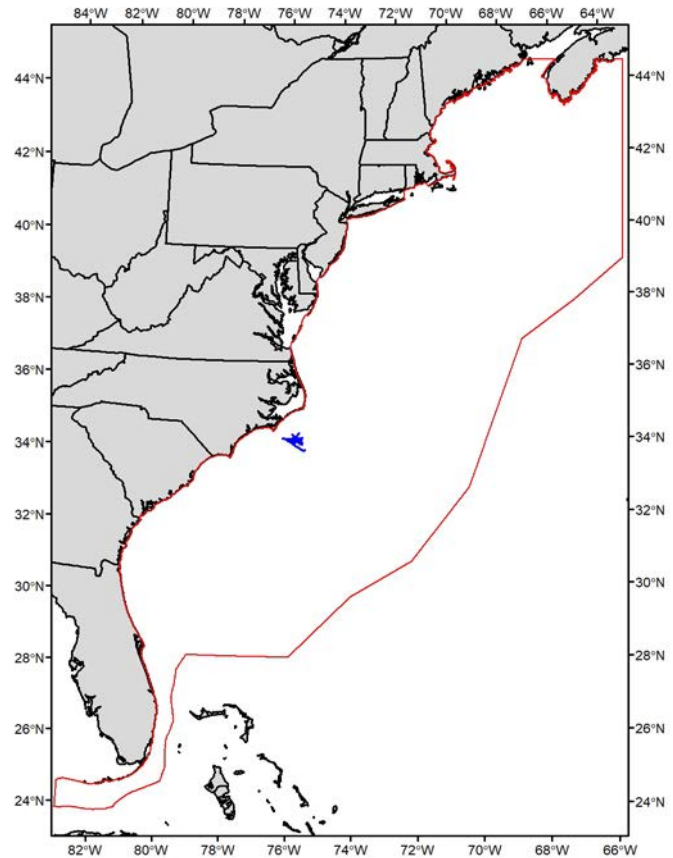
300-m strip transect, continuous data recording

Number of transect segments analyzed

131

Total survey area analyzed

117 km²

**Description**

Seabird (and marine mammal) survey conducted by the Duke University-University of North Carolina Oceanographic Consortium focusing on the shelf slope and cold-core eddies forming along the inner edge of the Gulf Stream off North Carolina

Contact

K. David Hyrenbach, Duke University Nicholas School of the Environment

Dataset

HerringAcoustic06

Dates

September 2006

Platform

Boat

Survey protocol

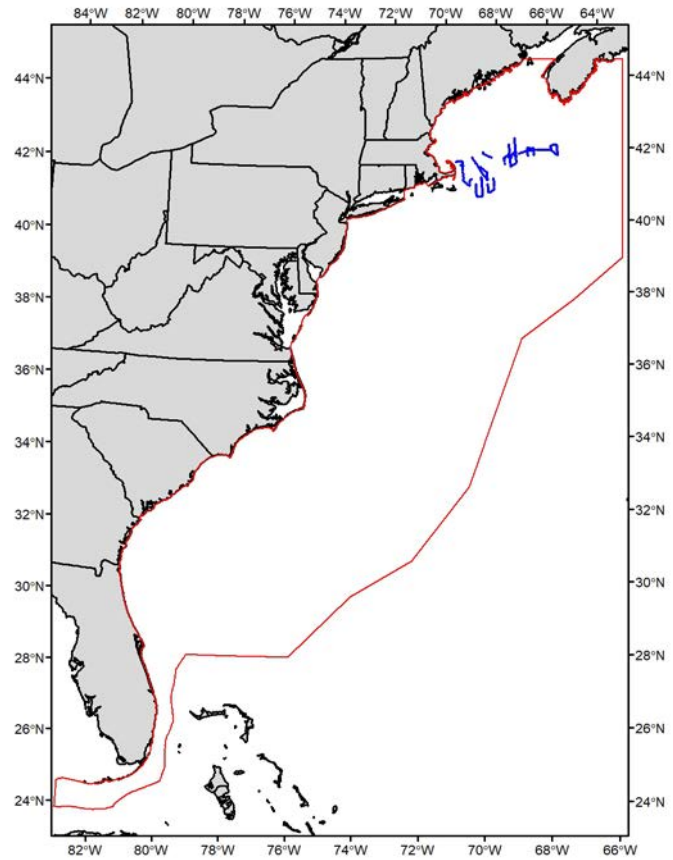
300-m strip transect, continuous data recording

Number of transect segments analyzed

287

Total survey area analyzed

341 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

HerringAcoustic07

Dates

October 2007

Platform

Boat

Survey protocol

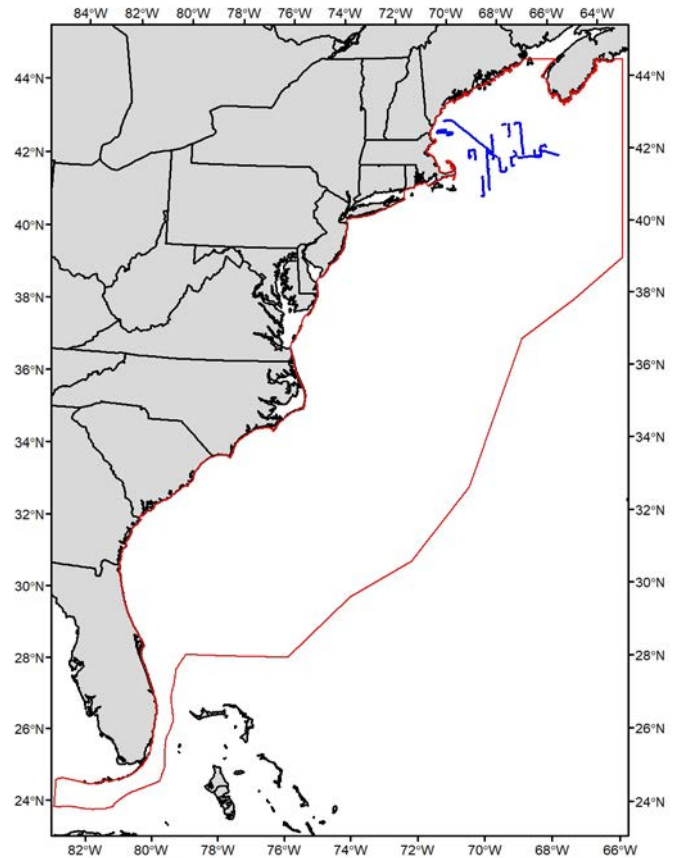
300-m strip transect, continuous data recording

Number of transect segments analyzed

334

Total survey area analyzed

395 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

HerringAcoustic08

Dates

September – October 2008

Platform

Boat

Survey protocol

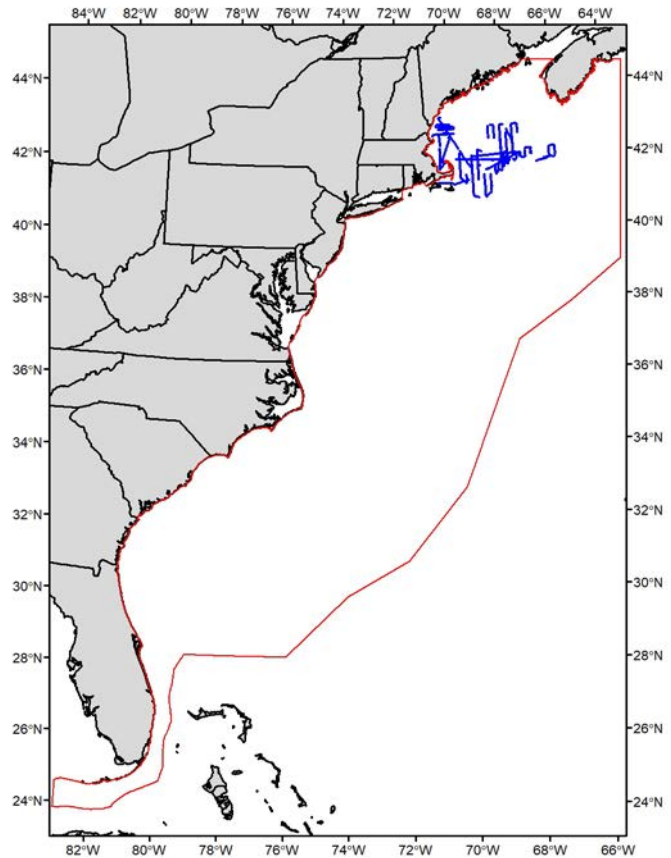
300-m strip transect, continuous data recording

Number of transect segments analyzed

822

Total survey area analyzed

990 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

HerringAcoustic09Leg1

Dates

September 2009

Platform

Boat

Survey protocol

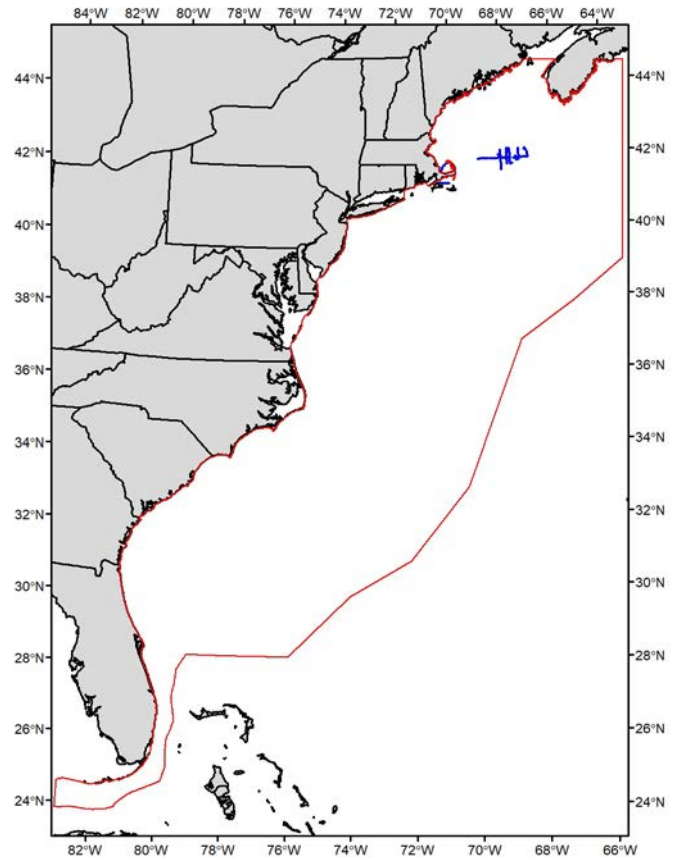
300-m strip transect, continuous data recording

Number of transect segments analyzed

127

Total survey area analyzed

151 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

HerringAcoustic09Leg2

Dates

September – October 2009

Platform

Boat

Survey protocol

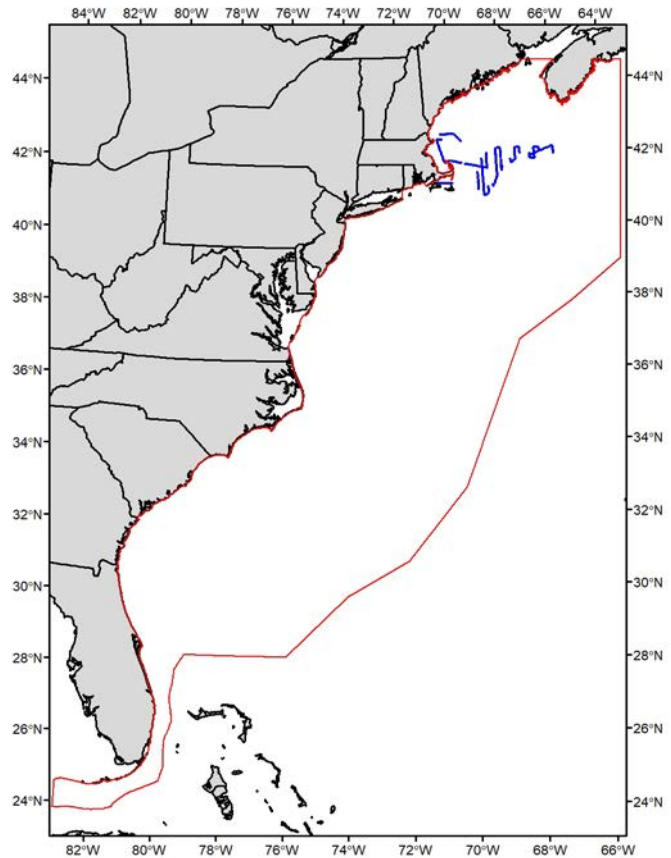
300-m strip transect, continuous data recording

Number of transect segments analyzed

289

Total survey area analyzed

341 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

HerringAcoustic09Leg3

Dates

October 2009

Platform

Boat

Survey protocol

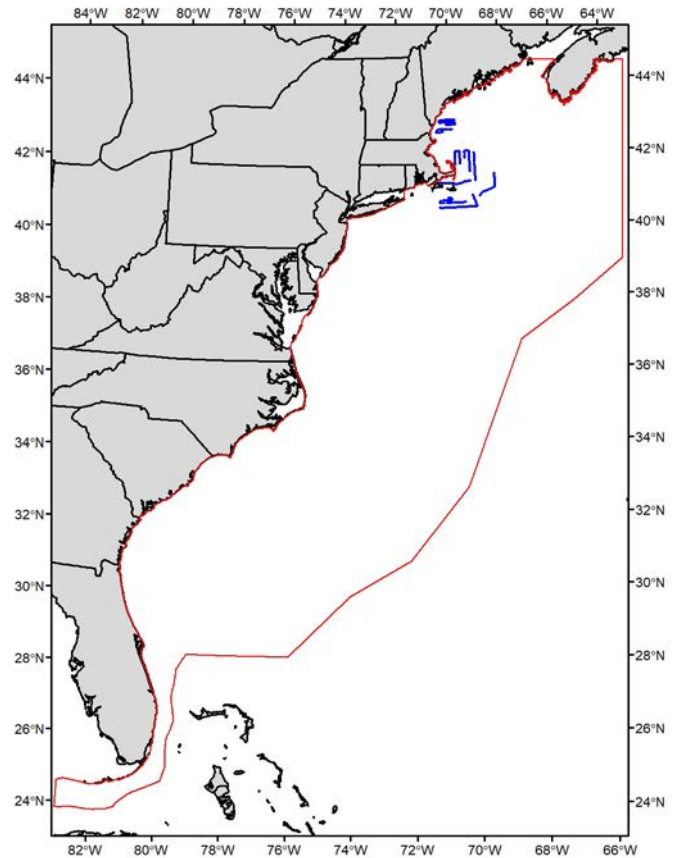
300-m strip transect, continuous data recording

Number of transect segments analyzed

263

Total survey area analyzed

315 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Richard Veit, City University of New York College of Staten Island

Dataset

HerringAcoustic2010

Dates

September – October 2010

Platform

Boat

Survey protocol

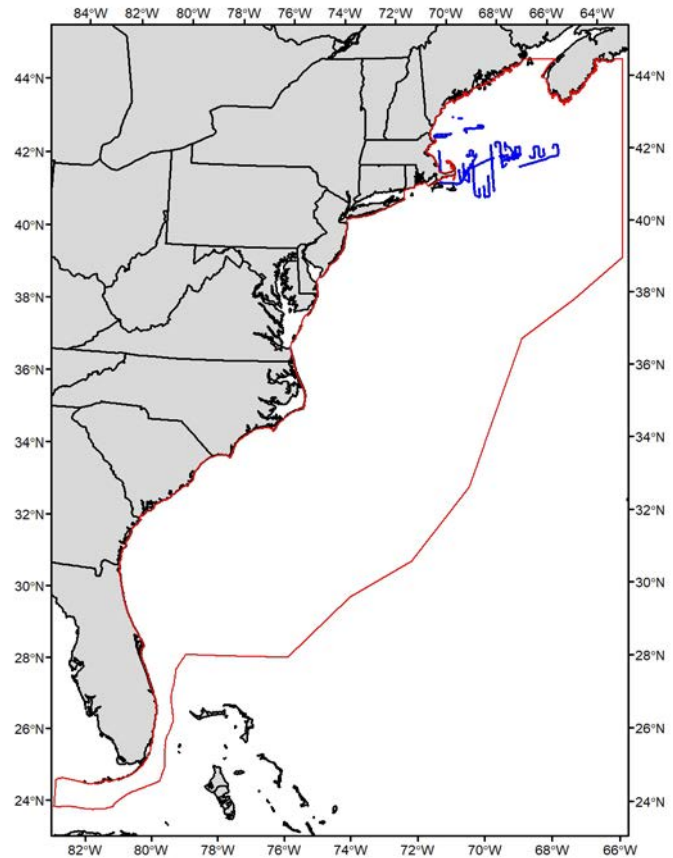
300-m strip transect, continuous data recording

Number of transect segments analyzed

555

Total survey area analyzed

670 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

HerringAcoustic2011

Dates

September – October 2011

Platform

Boat

Survey protocol

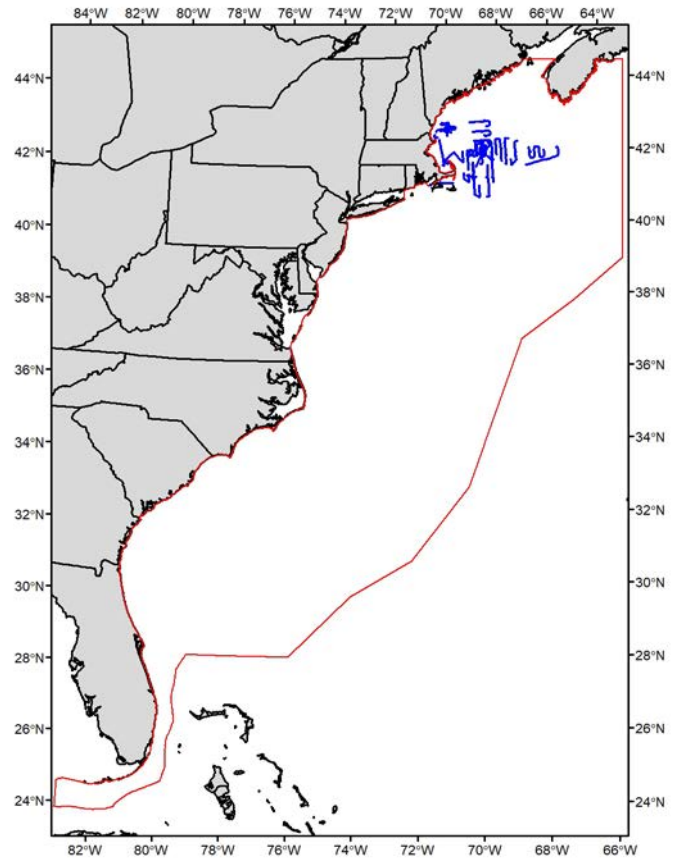
300-m strip transect, continuous data recording

Number of transect segments analyzed

808

Total survey area analyzed

950 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Holly Goyert, City University of New York College of Staten Island

Dataset

HerringAcoustic2012

Dates

September – October 2012

Platform

Boat

Survey protocol

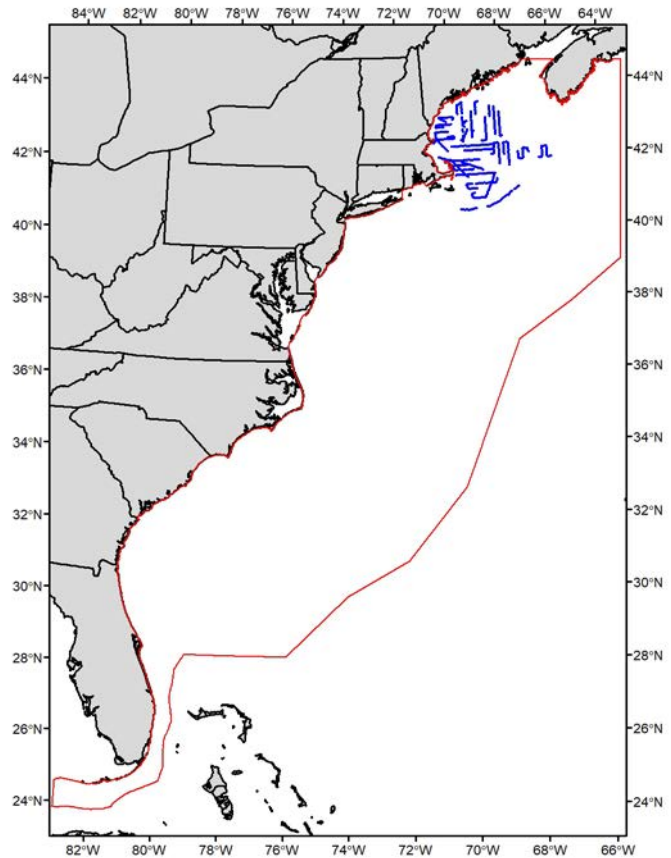
300-m strip transect, continuous data recording

Number of transect segments analyzed

772

Total survey area analyzed

917 km²



Description

Seabird (and marine mammal) surveys conducted aboard NOAA research cruises that were part of NOAA Acoustic Herring surveys in the Gulf of Maine

Contact

Timothy White, Bureau of Ocean Energy Management

Dataset

MassAudNanAerial

Dates

August 2002 – March 2006

Platform

Aerial

Survey protocol

183-m strip transect (91.5 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

5226

Total survey area analyzed

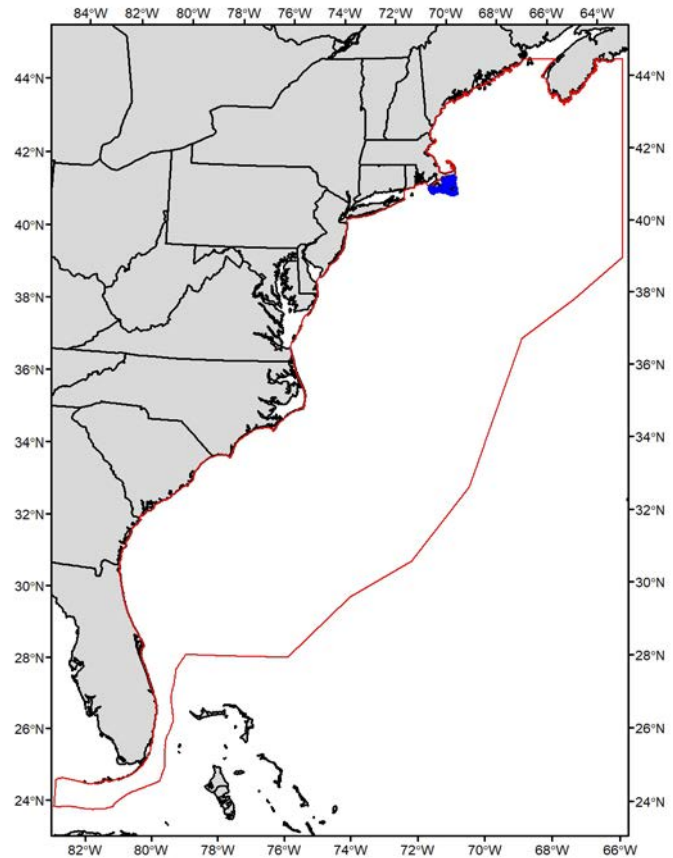
3814 km²

Description

Seabird surveys by Massachusetts Audubon in Nantucket Sound to assess potential effects of offshore wind energy development; flight altitude (500 feet) might have limited the ability to identify some species

Contact

Becky Harris or Simon Perkins , Massachusetts Audubon Society



Dataset

MassCEC2011-2012

Dates

January 2011 – November 2012

Platform

Aerial

Survey protocol

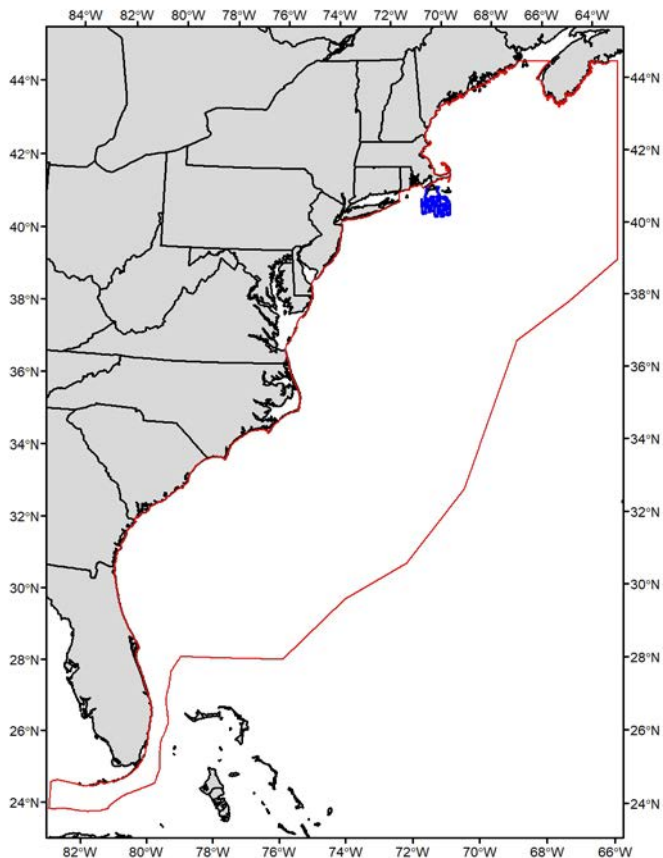
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

2511

Total survey area analyzed

4016 km²



Description

Avian surveys conducted in Bureau of Ocean Energy Management Wind Energy Area south of Nantucket and Martha’s Vineyard, Massachusetts

Contact

Timothy White, Bureau of Ocean Energy Management
Richard Veit, City University of New York College of Staten Island

Dataset

MassCEC2013

Dates

January – December 2013

Platform

Aerial

Survey protocol

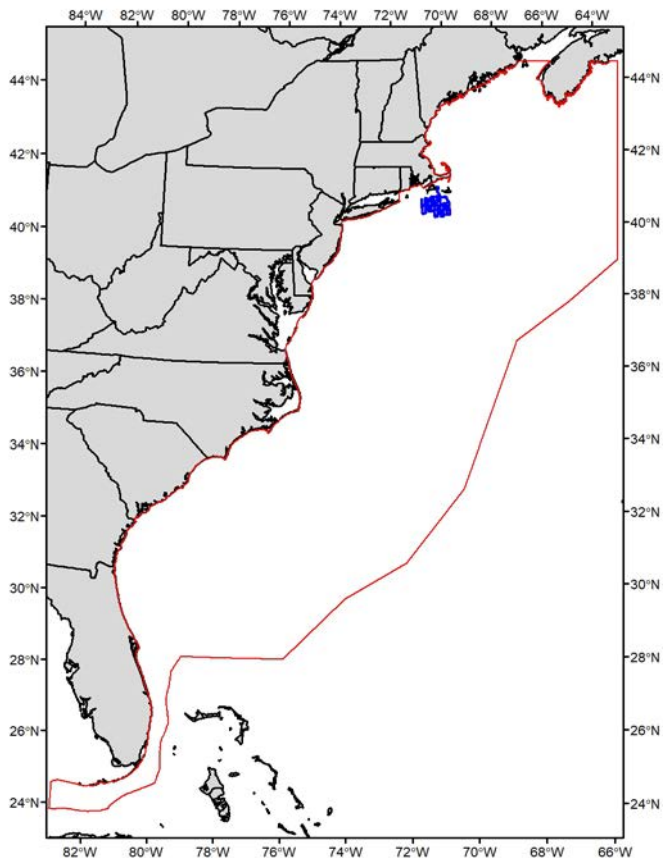
400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

2248

Total survey area analyzed

3596 km²



Description

Avian surveys conducted in Bureau of Ocean Energy Management Wind Energy Area south of Nantucket and Martha's Vineyard, Massachusetts

Contact

Timothy White, Bureau of Ocean Energy Management
Richard Veit, City University of New York College of Staten Island

Dataset

MassCEC2014

Dates

January 2014 – January 2015

Platform

Aerial

Survey protocol

400-m strip transect (200 m on either side of the trackline), continuous data recording

Number of transect segments analyzed

1512

Total survey area analyzed

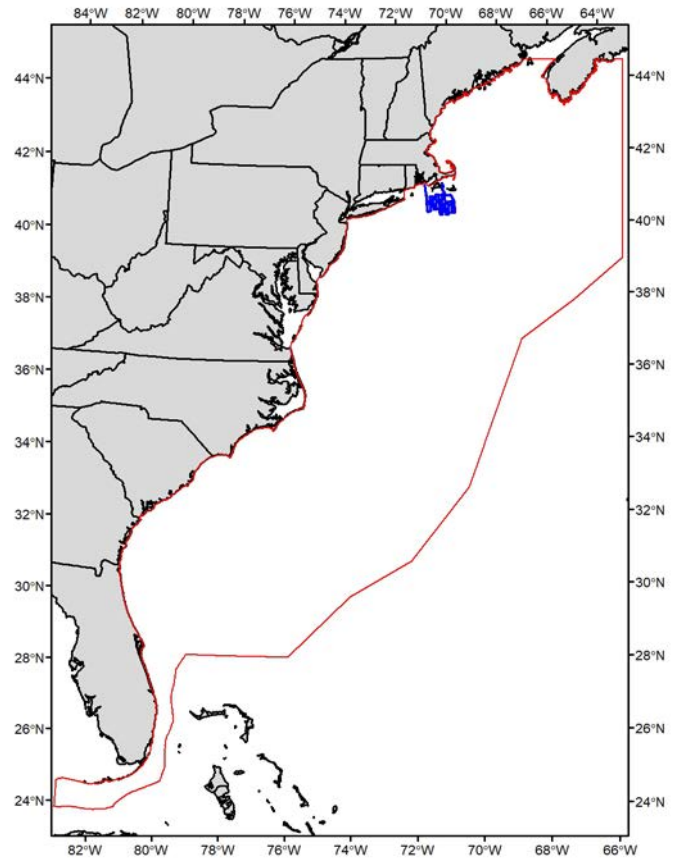
2421 km²

Description

Avian surveys conducted in Bureau of Ocean Energy Management Wind Energy Area south of Nantucket and Martha's Vineyard, Massachusetts

Contact

Timothy White, Bureau of Ocean Energy Management
Richard Veit, City University of New York College of Staten Island



Dataset

NewEnglandSeamount06

Dates

May – June 2007

Platform

Boat

Survey protocol

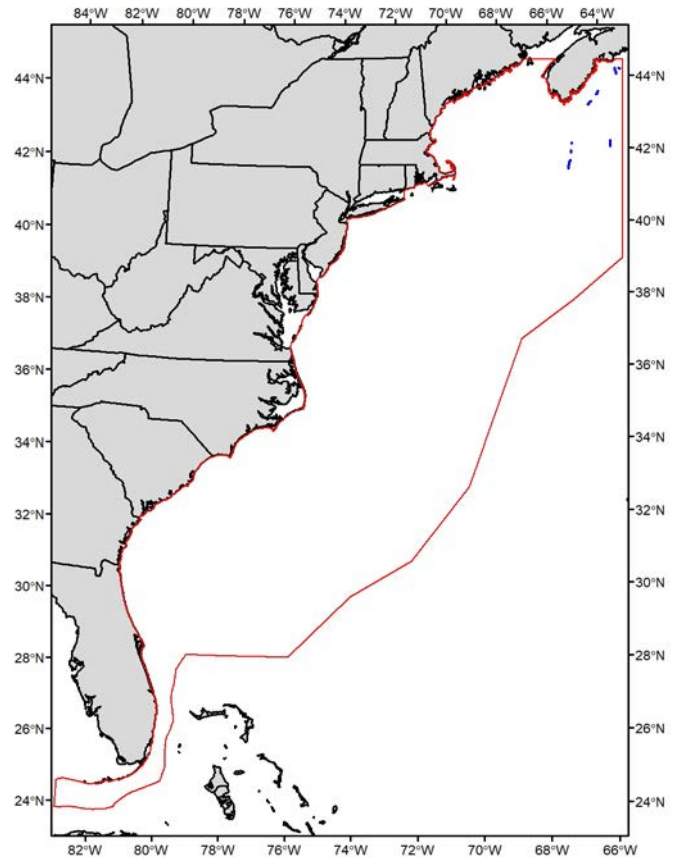
300-m strip transect, binned data recording (discrete)

Number of transect segments analyzed

65

Total survey area analyzed

36 km²



Description

Seabird (and marine mammal) survey conducted for the Canadian Wildlife Service (CWS) of Environment and Climate Change Canada (EC) in the Sargasso Sea to and from the New England seamount chain

Contact

Carina Gjerdrum, EC-CWS

Dataset

NJDEP2009

Dates

January 2008 - December 2009

Platform

Boat

Survey protocol

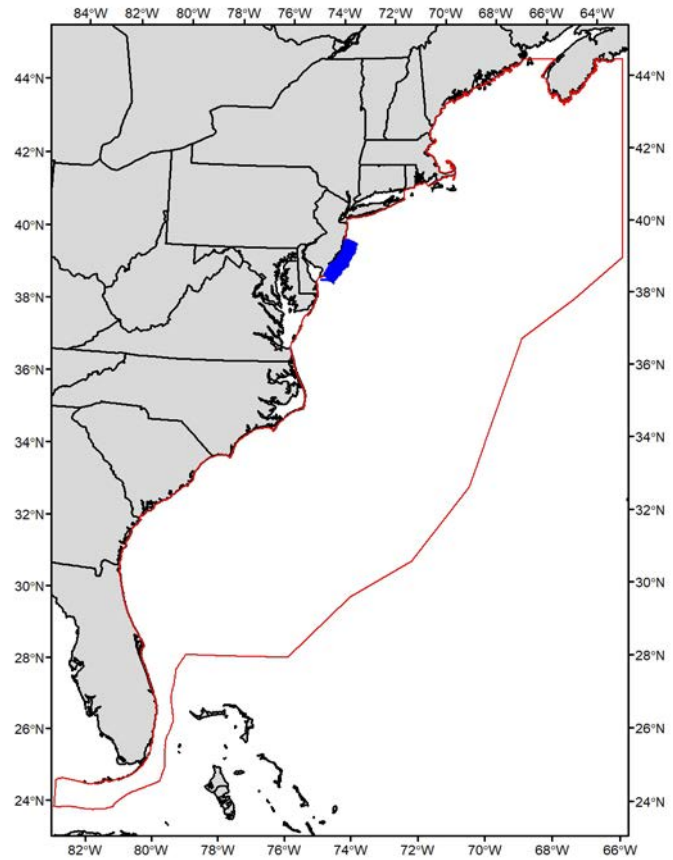
300-m strip transect, continuous data recording

Number of transect segments analyzed

4971

Total survey area analyzed

5967 km²



Description

Surveys conducted by Geo-Marine, Inc. for the New Jersey Department of Environmental Protection (NJDEP) to collect baseline information on birds, turtles, and mammals in offshore waters of New Jersey

Contact

GeoMarine, Inc.

Dataset

NOAA/NMFS_NEFSCBoat2004

Dates

June – August 2004

Platform

Boat

Survey protocol

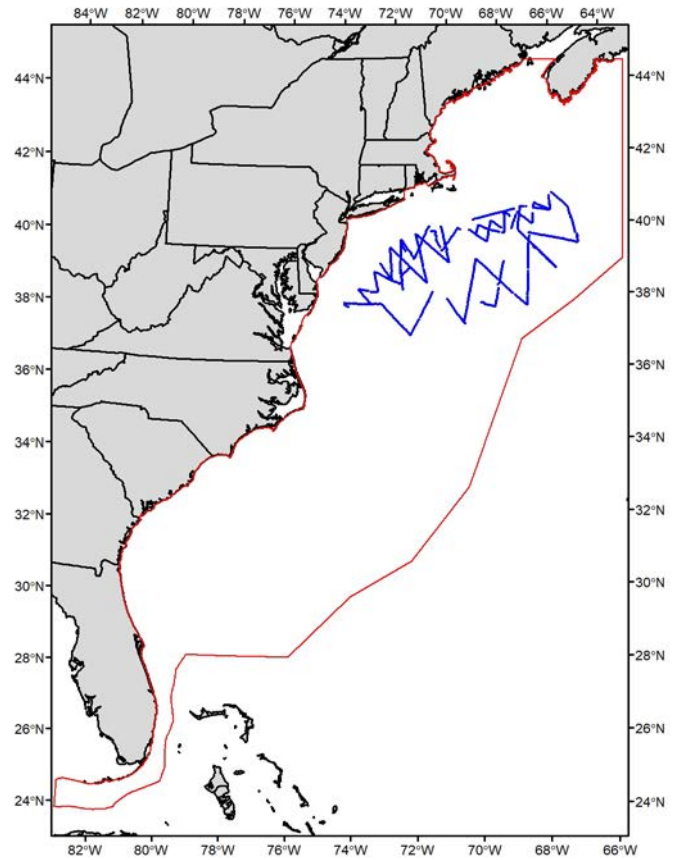
300-m strip transect, continuous data recording

Number of transect segments analyzed

1207

Total survey area analyzed

1422 km²



Description

Survey conducted by NOAA Northeast Fisheries Science Center (NEFSC)

Contact

Elizabeth Josephson, NOAA NEFSC

Dataset

NOAA/NMFS_NEFSCBoat2007

Dates

August 2007

Platform

Boat

Survey protocol

300-m strip transect, continuous data recording

Number of transect segments analyzed

633

Total survey area analyzed

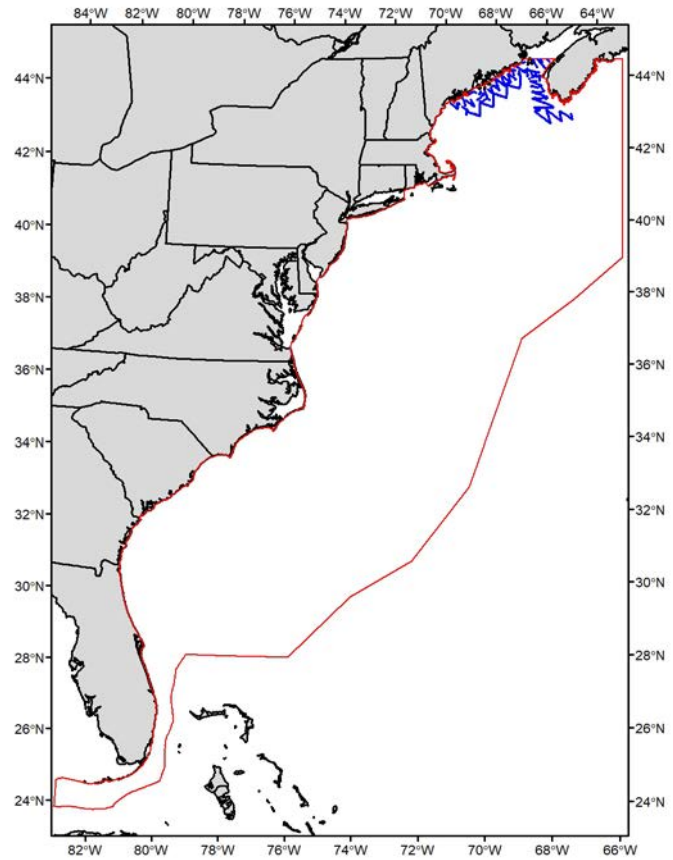
746 km²

Description

Survey conducted by NOAA Northeast Fisheries Science Center (NEFSC)

Contact

Elizabeth Josephson, NOAA NEFSC



Dataset

NOAAMBO7880

Dates

January 1978 – November 1979

Platform

Boat

Survey protocol

300-m strip transect, binned data recording (discrete)

Number of transect segments analyzed

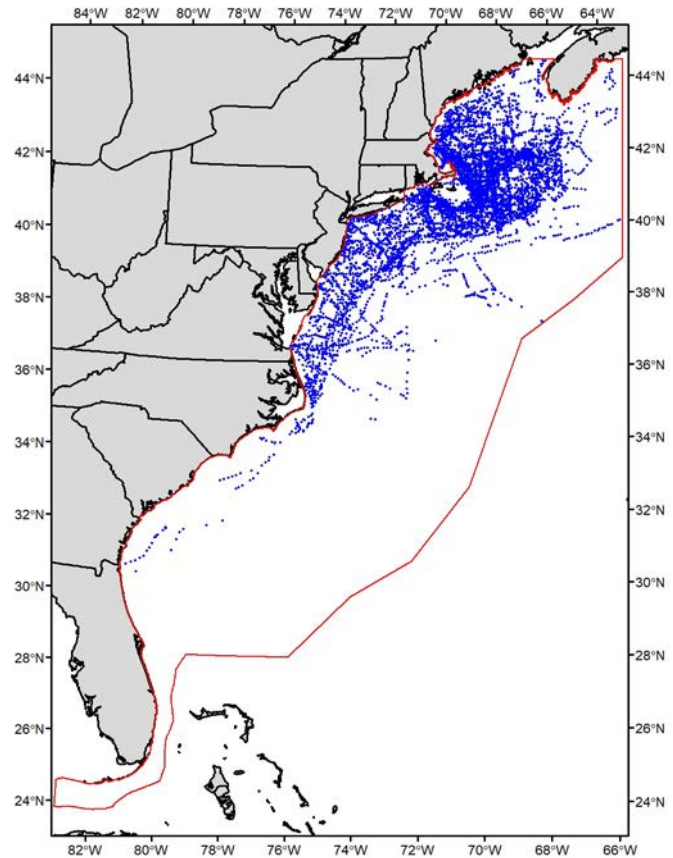
6965

Total survey area analyzed6417 km²**Description**

Opportunistic seabird (and marine mammal) surveys conducted by Manomet Bird Observatory aboard a range of cruises (NOAA, U. S. Coast Guard, and foreign research)

Contact

Doug Forsell, U. S. Fish and Wildlife Service Chesapeake Bay Field Office



Dataset

PlattsBankAerial

Dates

July 2005

Platform

Aerial

Survey protocol

340-m strip transect (170 m on either side of the track line), continuous data recording

Number of transect segments analyzed

869

Total survey area analyzed

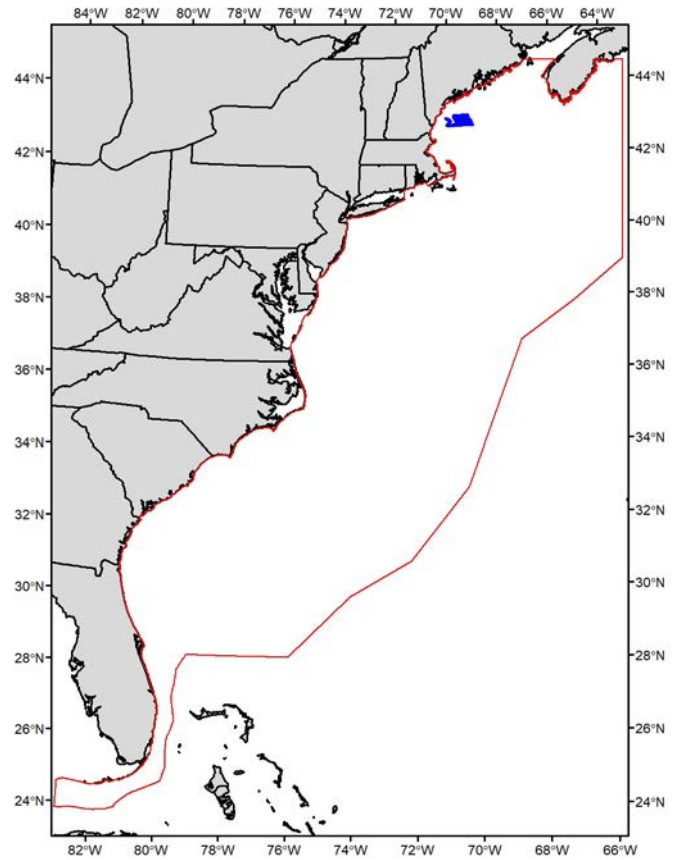
1178 km²

Description

Seabird (and other upper trophic level predator) aerial survey conducted in the Platts Bank area, Gulf of Maine

Contact

Nicholas Wolff, University of Southern Maine



Dataset

RISAMPAerial

Dates

December 2009 – August 2010

Platform

Aerial

Survey protocol

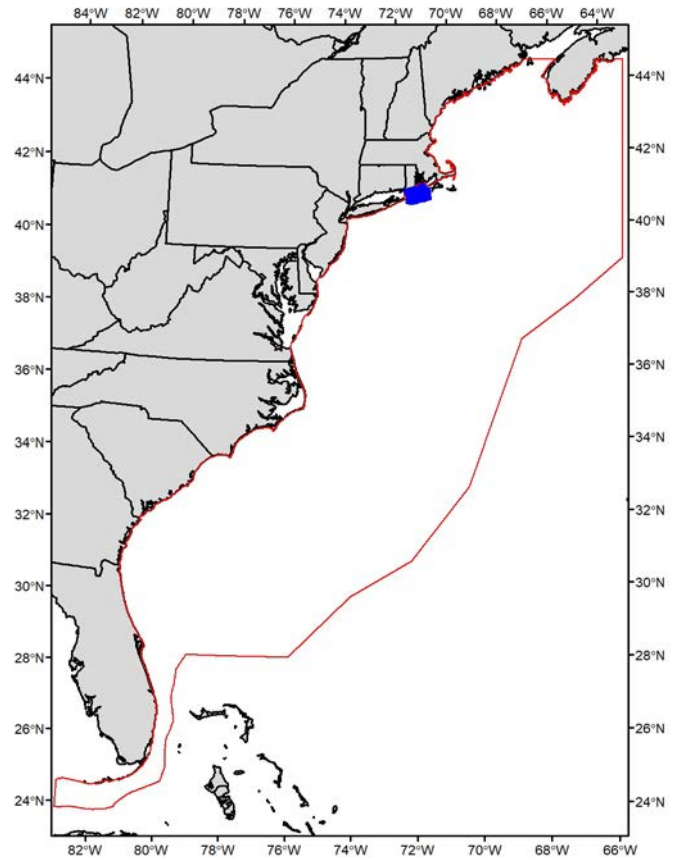
300-m strip transect, continuous data recording

Number of transect segments analyzed

2466

Total survey area analyzed

2953 km²



Description

Surveys to assess bird distributions within Rhode Island Ocean Special Area Management Plan (RISAMP) study area

Contact

Kristopher Winiarski, University of Massachusetts

Dataset

RISAMPBoat

Dates

July 2009 – August 2010

Platform

Boat

Survey protocol

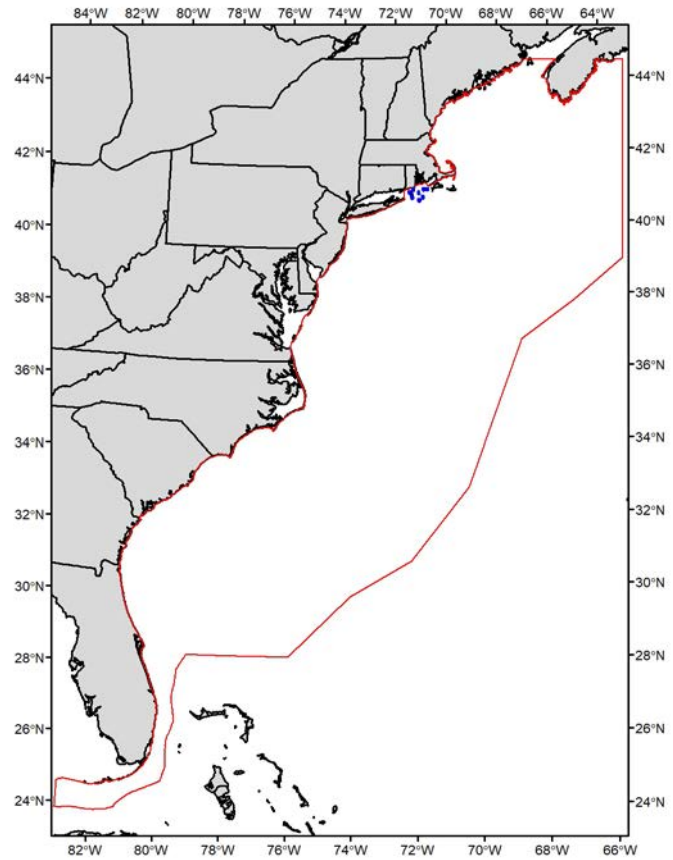
300-m strip transect, continuous data recording

Number of transect segments analyzed

781

Total survey area analyzed

1022 km²



Description

Surveys to assess bird distributions within Rhode Island Ocean Special Area Management Plan (RISAMP) study area

Contact

Kristopher Winiarski, University of Massachusetts

Dataset

SEFSC1992

Dates

January – February 1992

Platform

Boat

Survey protocol

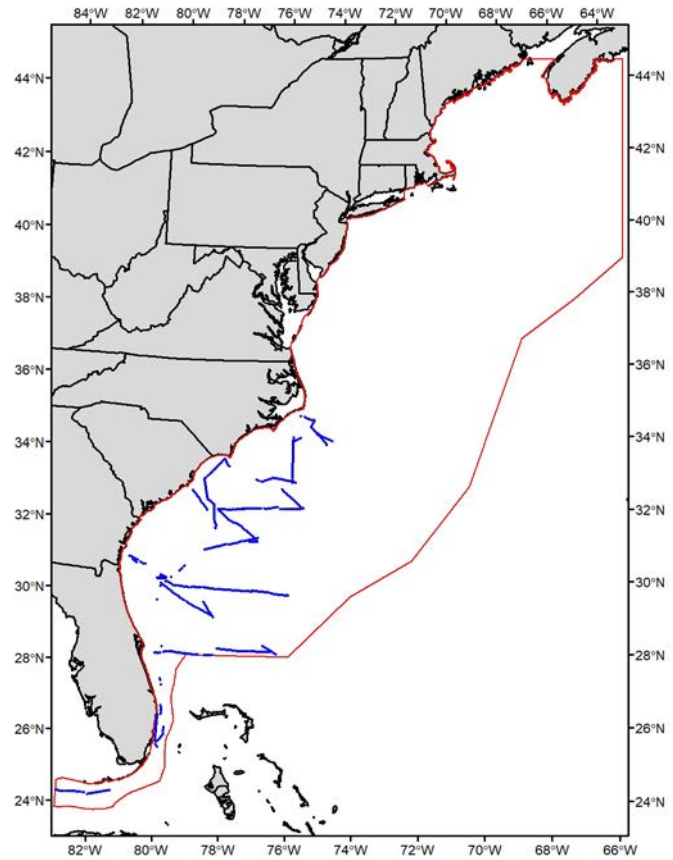
300-m strip transect, continuous data recording

Number of transect segments analyzed

783

Total survey area analyzed

938 km²



Description

Marine mammal survey (with seabird observations) conducted by NOAA Southeast Fisheries Science Center (SEFSC); seabirds were not the focus of the survey effort so some birds might have been missed

Contact

Lance Garrison, NOAA SEFSC

Dataset

SEFSC1998

Dates

July – August 1998

Platform

Boat

Survey protocol

300-m strip transect, continuous data recording

Number of transect segments analyzed

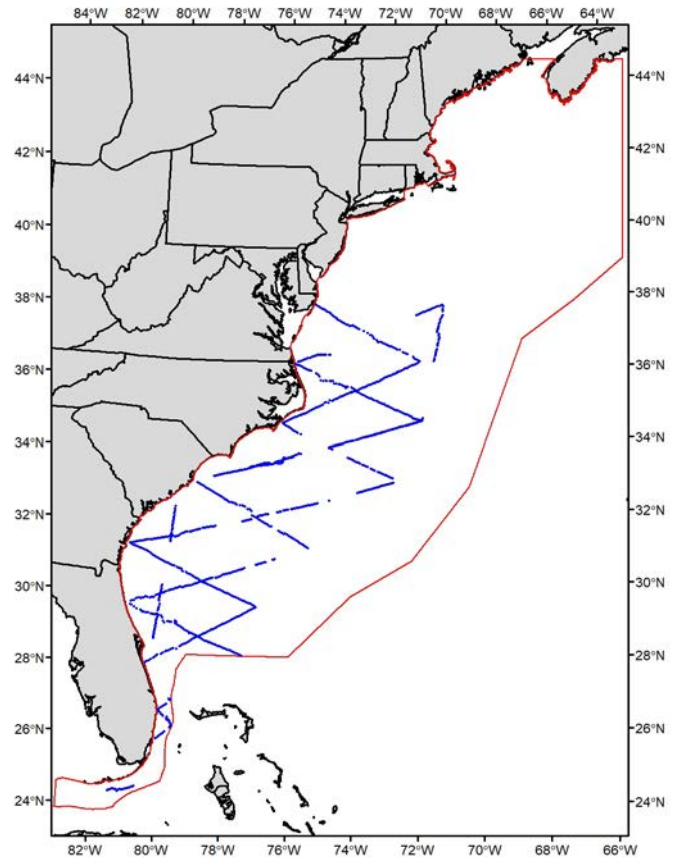
1365

Total survey area analyzed1596 km²**Description**

Marine mammal survey (with seabird observations) aboard NOAA Ship Relentless Cruise RS 98-01 (3) conducted by NOAA Southeast Fisheries Science Center (SEFSC); seabirds were not the focus of the survey effort so some birds might have been missed

Contact

Lance Garrison, NOAA SEFSC



Dataset

SEFSC1999

Dates

August – September 1999

Platform

Boat

Survey protocol

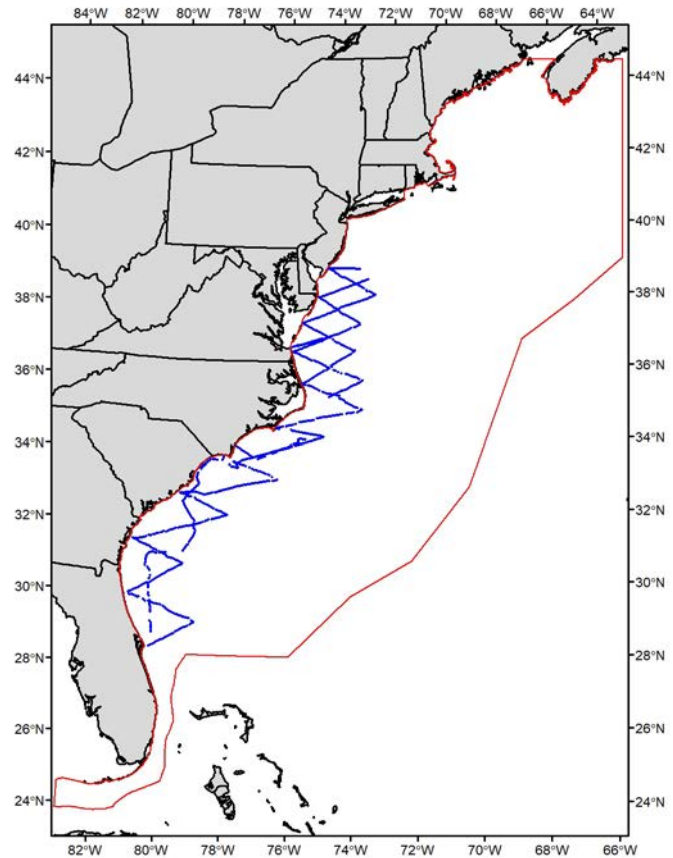
300-m strip transect, continuous data recording

Number of transect segments analyzed

1254

Total survey area analyzed

1475 km²



Description

Marine mammal survey (with seabird observations) conducted by NOAA Southeast Fisheries Science Center (SEFSC); seabirds were not the focus of the survey effort so some birds might have been missed

Contact

Lance Garrison, NOAA SEFSC

Dataset

StatoilMaine

Dates

May 2012 – October 2013

Platform

Boat

Survey protocol

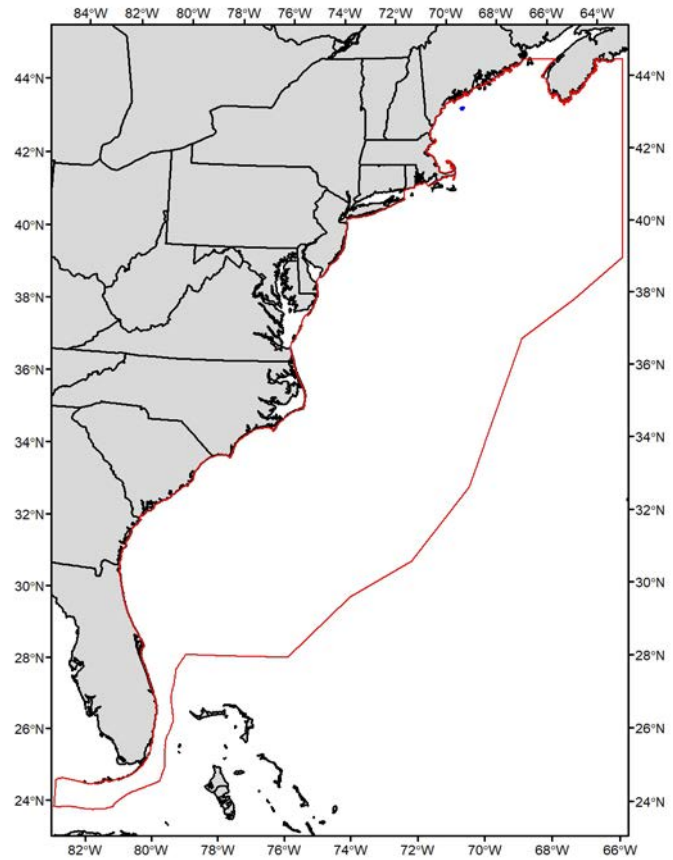
300-m strip transect, continuous data recording

Number of transect segments analyzed

400

Total survey area analyzed

480 km²



Description

Avian surveys conducted by Tetra Tech, Inc. and Statoil in the Hywind Demonstration Project area (Maine)

Contact

David Bigger, Bureau of Ocean Energy Management

Dataset

WHOIJuly2010*

Dates

July 2010

Platform

Boat

Survey protocol

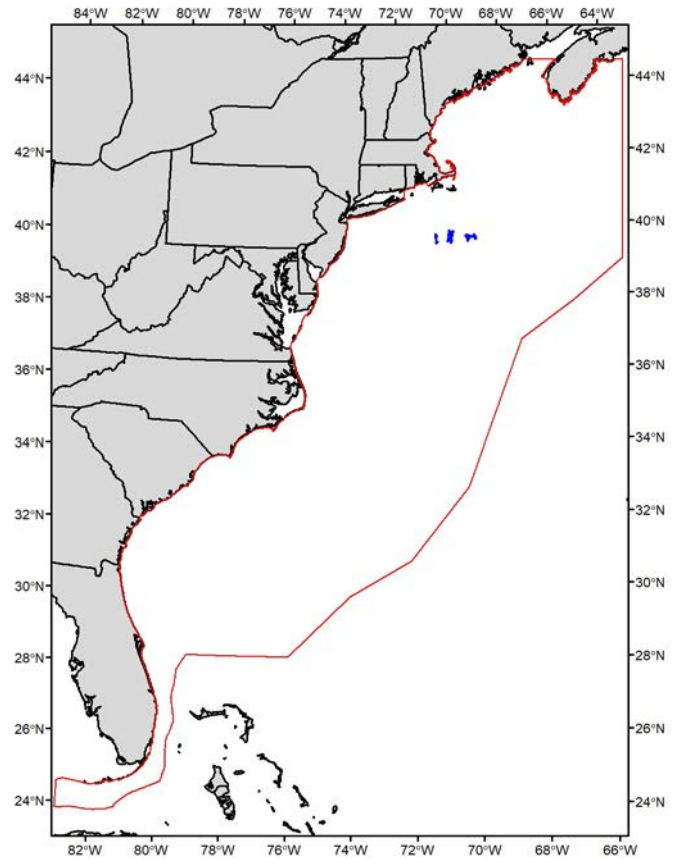
300-m strip transect, continuous data recording

Number of transect segments analyzed

86

Total survey area analyzed

102 km²



Description

Survey conducted aboard Woods Hole Oceanographic Institute cruise

Contact

Timothy White, Bureau of Ocean Energy Management
Richard Veit, City University of New York College of Staten Island

* Note: This dataset is not publicly available but was made available under a restricted usage agreement

Dataset

WHOISept2010*

Dates

September 2010

Platform

Boat

Survey protocol

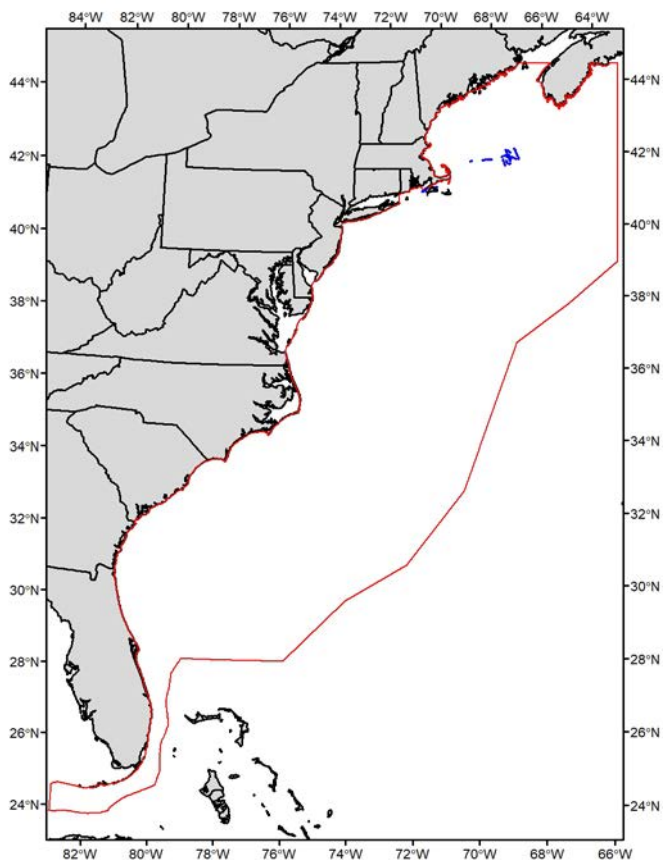
300-m strip transect, continuous data recording

Number of transect segments analyzed

85

Total survey area analyzed

99 km²



Description

Survey conducted aboard Woods Hole Oceanographic Institute cruise

Contact

Timothy White, Bureau of Ocean Energy Management
Richard Veit, City University of New York College of Staten Island

* Note: This dataset is not publicly available but was made available under a restricted usage agreement