

# MIDAS data from R/V Pelican cruises PE03-NGOMEX, PE04-NGOMEX, PE06-NGOMEX, PE07-NGOMEX, PE09-05, PE11-06 in the Northern Gulf of Mexico, 28-30N 89-94W; 2003-2010 (GoMX NGOMEX project)

**Website:** <https://www.bco-dmo.org/dataset/3548>

**Version:** 28 September 2011

**Version Date:** 2011-09-28

## Project

» [NGOMEX - Living Marine Resources of the Northern Gulf of Mexico](#) (GoMX - NGOMEX)

## Program

» [Gulf of Mexico - Deepwater Horizon Oil Spill](#) (GoMX - DHOS)

Contributors	Affiliation	Role
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## Dataset Description

Multi year MIDAS data

## Methods & Sampling

[R/V Pelican MIDAS System Description \(.pdf\)](#)

## Data Processing Description

Generated from MIDAS .dat files contributed by Jamie Pierson

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## Data Files

File
<b>MIDAS.csv</b> (Comma Separated Values (.csv), 76.72 MB) MD5:99a234fb537eccd5d60aeb303ed5f87f Primary data file for dataset ID 3548

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## Parameters

Parameter	Description	Units
date	date (GMT)	yyyymmdd
time	time(GMT)	hhmmss
lon	longitude (West is negative)	decimal degrees
lat	latitude (South is negative)	decimal degrees
Wind_Speed_True	True Wind Speed	knots
Wind_Direction_True	True Wind Direction	degrees
Air_Temperature	Air Temperature	degrees celsius
Humidity	Humidity	percentage
Barometric_Pressure	Barometric_Pressure	hPa
PAR	PAR	mE/m2s
Heading	Heading	degrees
SOG	SOG	knots
COG	COG	DegT

Depth	Depth (High Freq)	meters
Fluorometer	Fluorometer	milligrams/meter <sup>3</sup> (?)
Transmittance	Transmittance	percentage
Temp_Sea	Sea Temp	degrees celsius
Conductance	Conductance	S/m
Salinity	Salinity	psu
Temp_Seachest	Seachest Temp	degrees celsius
Depth_Low	Depth (Low Freq)	meters
Wind_Speed_Relative	Relative Wind Speed	Knots (?)
Wind_Direction_Relative	Relative Wind Direction	degrees
Wind_Speed_Raw	Raw Wind Speed	Knots (?)
Wind_Direction_Raw	Raw Wind Direction	degrees magnetic (?)
Fluor_Range	Fluoro Range	milligrams/meter <sup>3</sup> (?)
Fluor_Raw	Raw Fluoro	milligrams/meter <sup>3</sup> (?)
Wetlab_Volts	Wetlabs Volts	volts
Wetlab_raw_counts	Wetlabs raw counts	counts
Year	Year of data collection	yyyy

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## Instruments

<b>Dataset-specific Instrument Name</b>	Multiple Instrument Data Acquisition System
<b>Generic Instrument Name</b>	Multiple Instrument Data Acquisition System
<b>Generic Instrument Description</b>	MIDAS System

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## Deployments

### PE03-NGOMEX

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/58120">https://www.bco-dmo.org/deployment/58120</a>
<b>Platform</b>	R/V Pelican
<b>Start Date</b>	2003-06-30
<b>End Date</b>	2003-08-05
<b>Description</b>	<p>2003 Sampling cruise to the Northern Gulf of Mexico Note: Deployment Id assigned by BCO-DMO staff (not official)</p> <p><b>Processing Description</b>  BCO-DMO Processing Notes BCO-DMO Pass 1 Processing Description: - MIDAS for years 2003, 2004, 2006, 2007, 2008, 2010 processed - Original data for individual years were reformatted to a BCO-DMO format as reported using either excel or an awk - Parameters/Data for the individual years were compared and a common set of parameters for all years was generated - Pass 1 data were then formatted to the Pass 2 or common data format using awk: NGOMEX_20[xx]_Fix_BCODMO_Midas.awk BCO-DMO Pass 2 Processing Description: - Because of the nature of the original data reporting, an awk was generated for each individual year - A common header record was output for each year's worth of data - All parameters re-formatted to a set of parameters common to all NGOMEX MIDAS data - All parameters o/p in the same order - All decimal places reported to the same number - Data for parameters for which no data were reported for a particular year o/p as "nd"</p>

### PE04-NGOMEX

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/58121">https://www.bco-dmo.org/deployment/58121</a>
<b>Platform</b>	R/V Pelican
<b>Start Date</b>	2004-07-28
<b>End Date</b>	2004-08-02
<b>Description</b>	<p>2004 Sampling cruise to the Northern Gulf of Mexico Note: Deployment Id assigned by BCO-DMO staff (not official)</p> <p><b>Processing Description</b>  BCO-DMO Processing Notes BCO-DMO Pass 1 Processing Description: - MIDAS for years 2003, 2004, 2006, 2007, 2008, 2010 processed - Original data for individual years were reformatted to a BCO-DMO format as reported using either excel or an awk - Parameters/Data for the individual years were compared and a common set of parameters for all years was generated - Pass 1 data were then formatted to the Pass 2 or common data format using awk: NGOMEX_20[xx]_Fix_BCODMO_Midas.awk BCO-DMO Pass 2 Processing Description: - Because of the nature of the original data reporting, an awk was generated for each individual year - A common header record was output for each year's worth of data - All parameters re-formatted to a set of parameters common to all NGOMEX MIDAS data - All parameters o/p in the same order - All decimal places reported to the same number - Data for parameters for which no data were reported for a particular year o/p as "nd"</p>

### PE06-NGOMEX

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/58122">https://www.bco-dmo.org/deployment/58122</a>
<b>Platform</b>	R/V Pelican
<b>Start Date</b>	2006-08-04
<b>End Date</b>	2006-08-13
<b>Description</b>	<p>2006 Sampling cruise to the Northern Gulf of Mexico Note: Deployment Id and Chief Scientist assigned by BCO-DMO staff (not official)</p> <p><b>Processing Description</b>  BCO-DMO Processing Notes BCO-DMO Pass 1 Processing Description: - MIDAS for years 2003, 2004, 2006, 2007, 2008, 2010 processed - Original data for individual years were reformatted to a BCO-DMO format as reported using either excel or an awk - Parameters/Data for the individual years were compared and a common set of parameters for all years was generated - Pass 1 data were then formatted to the Pass 2 or common data format using awk: NGOMEX_20[xx]_Fix_BCODMO_Midas.awk BCO-DMO Pass 2 Processing Description: - Because of the nature of the original data reporting, an awk was generated for each individual year - A common header record was output for each year's worth of data - All parameters re-formatted to a set of parameters common to all NGOMEX MIDAS data - All parameters o/p in the same order - All decimal places reported to the same number - Data for parameters for which no data were reported for a particular year o/p as "nd"</p>

#### PE07-NGOMEX

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/58123">https://www.bco-dmo.org/deployment/58123</a>
<b>Platform</b>	R/V Pelican
<b>Start Date</b>	2007-07-21
<b>End Date</b>	2007-08-07
<b>Description</b>	<p>2007 Sampling cruise to the Northern Gulf of Mexico Note: Deployment Id and Chief Scientist assigned by BCO-DMO staff (not official)</p> <p><b>Processing Description</b>  BCO-DMO Processing Notes BCO-DMO Pass 1 Processing Description: - MIDAS for years 2003, 2004, 2006, 2007, 2008, 2010 processed - Original data for individual years were reformatted to a BCO-DMO format as reported using either excel or an awk - Parameters/Data for the individual years were compared and a common set of parameters for all years was generated - Pass 1 data were then formatted to the Pass 2 or common data format using awk: NGOMEX_20[xx]_Fix_BCODMO_Midas.awk BCO-DMO Pass 2 Processing Description: - Because of the nature of the original data reporting, an awk was generated for each individual year - A common header record was output for each year's worth of data - All parameters re-formatted to a set of parameters common to all NGOMEX MIDAS data - All parameters o/p in the same order - All decimal places reported to the same number - Data for parameters for which no data were reported for a particular year o/p as "nd"</p>

#### PE09-05

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/58124">https://www.bco-dmo.org/deployment/58124</a>
<b>Platform</b>	R/V Pelican
<b>Start Date</b>	2008-08-01
<b>End Date</b>	2008-08-12
<b>Description</b>	<p>2008 Sampling cruise to the Northern Gulf of Mexico Note: Cruise ID confirmed with R2R catalog Original cruise data are available from the NSF R2R data catalog</p> <p><b>Processing Description</b>  BCO-DMO Processing Notes BCO-DMO Pass 1 Processing Description: - MIDAS for years 2003, 2004, 2006, 2007, 2008, 2010 processed - Original data for individual years were reformatted to a BCO-DMO format as reported using either excel or an awk - Parameters/Data for the individual years were compared and a common set of parameters for all years was generated - Pass 1 data were then formatted to the Pass 2 or common data format using awk: NGOMEX_20[xx]_Fix_BCODMO_Midas.awk BCO-DMO Pass 2 Processing Description: - Because of the nature of the original data reporting, an awk was generated for each individual year - A common header record was output for each year's worth of data - All parameters re-formatted to a set of parameters common to all NGOMEX MIDAS data - All parameters o/p in the same order - All decimal places reported to the same number - Data for parameters for which no data were reported for a particular year o/p as "nd"</p>

#### PE11-06

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/58640">https://www.bco-dmo.org/deployment/58640</a>
<b>Platform</b>	R/V Pelican
<b>Start Date</b>	2010-09-01
<b>End Date</b>	2010-09-07
<b>Description</b>	<p>2010 Sampling cruise to the Northern Gulf of Mexico Note: Cruise ID confirmed with R2R catalog Original cruise data are available from the NSF R2R data catalog</p> <p><b>Processing Description</b>  BCO-DMO Processing Notes BCO-DMO Pass 1 Processing Description: - MIDAS for years 2003, 2004, 2006, 2007, 2008, 2010 processed - Original data for individual years were reformatted to a BCO-DMO format as reported using either excel or an awk - Parameters/Data for the individual years were compared and a common set of parameters for all years was generated - Pass 1 data were then formatted to the Pass 2 or common data format using awk: NGOMEX_20[xx]_Fix_BCODMO_Midas.awk BCO-DMO Pass 2 Processing Description: - Because of the nature of the original data reporting, an awk was generated for each individual year - A common header record was output for each year's worth of data - All parameters re-formatted to a set of parameters common to all NGOMEX MIDAS data - All parameters o/p in the same order - All decimal places reported to the same number - Data for parameters for which no data were reported for a particular year o/p as "nd"</p>

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## Project Information

### NGOMEX - Living Marine Resources of the Northern Gulf of Mexico (GoMX - NGOMEX)

**Coverage:** Northern Gulf of Mexico, 28-30N 89-94W

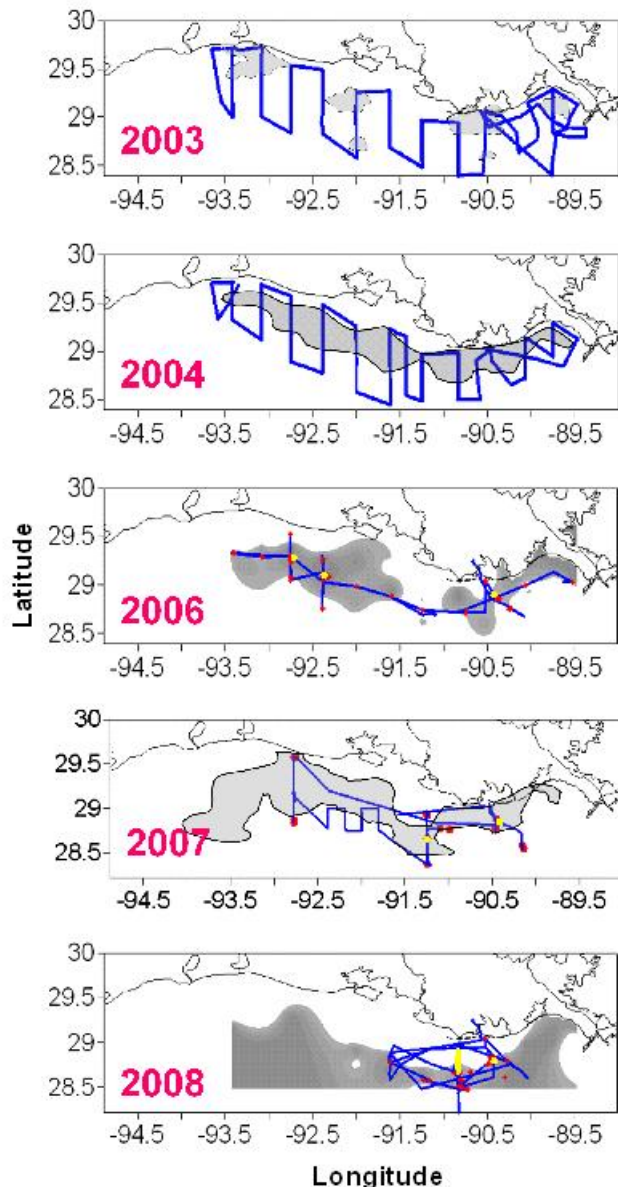
### NGOMEX - Living Organisms of the Northern Gulf of Mexico

A synthesis of data collected in the Northern Gulf of Mexico from 2003-2004, 2006-2008 and 2010

Data include:

- CTD Profiles
- Rosette Samples
- MIDAS underway meteorological
- Towed SCANFISH
- Net Trawls
- Zooplankton counts

**High-resolution mapping of the major ecosystem components of the NGOMEX by year**



**References:**

- Kimmel, D. G., W. C. Boicourt, J. J. Pierson, M. R. Roman, X. Zhang. 2010. The vertical distribution and diel variability of mesozooplankton biomass, abundance and size in response to hypoxia in the northern Gulf of Mexico USA. *Journal of Plankton Research* 32(8): 1185-1202. doi:10.1093/plankt/fbp136
- Pierson, J. J., M. R. Roman, D. G. Kimmel, W. C. Boicourt, & X. Zhang. 2009. Quantifying changes in the vertical distribution of mesozooplankton in response to hypoxic bottom waters. *Journal of Experimental Marine Biology and Ecology* 381: S74-S79. doi.org/10.1016/j.jembe.2009.07.013
- Kimmel, D. G., W. C. Boicourt, J. J. Pierson, M. R. Roman, & X. Zhang. 2009. A comparison of the mesozooplankton response to hypoxia in Chesapeake Bay and the northern Gulf of Mexico using the biomass size spectrum. *Journal of Experimental Marine Biology and Ecology* 381: S65-S73. doi.org/10.1016/j.jembe.2009.07.012

Zhang, H., S. A. Ludsin, D. M. Mason, A. T. Adamack, S. B. Brandt, X. Zhang, D. G. Kimmel, M. R. Roman, & W. C. Boicourt. 2009. Hypoxia-driven changes in the behavior and spatial distribution of pelagic fish and mesozooplankton in the northern Gulf of Mexico. Journal of Experimental Marine Biology and Ecology. 381: S80-91. <http://dx.doi.org/10.1016/j.jembe.2009.07.014>

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## Program Information

### Gulf of Mexico - Deepwater Horizon Oil Spill (GoMX - DHOS)

**Coverage:** Northern Gulf of Mexico

### Grants for Rapid Response Research (RAPID)

The RAPID funding mechanism is used for proposals having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events.

### GOM - Broader Impacts

The need to understand the impact of this largest oil spill to date on ecosystems and biochemical cycling is self evident. The consequences of the disaster and accompanying clean up measures (e.g. the distribution of dispersants) need to be evaluated to guide further mediating measures and to develop and improve responses to similar disasters in the future. Would it be advantageous if such oil aggregates sink, or should it rather remain suspended? Possibly measures can be developed to enhance sinking or suspension (e.g. addition of ballast minerals) once we understand their current formation and fate. Understanding the particle dynamics following the input of large amounts of oil and dispersants into the water is a prerequisite to develop response strategies for now and in the future.

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## Funding

Funding Source	Award
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-1043261</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-1043248</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-1043249</a>

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