Mission
Deliver national and global operational weather, water and climate products and services essential to protecting life, property and economic well-being.

Vision
The trusted source for environmental predictions from the sun to the sea, when it matters most.
Atlantic Forecast Area
Offshore and High Seas
(radiofax charts to Europe and Africa)
Pacific Forecast Area
Offshore and High Seas
(radiofax charts to Asia)
WMO Metareas
Why?

Heat Maps of extratropical hurricane-force lows in the Atlantic and Pacific

Atlantic average, 45
Pacific average, 36
Why?

M/V TRUONG NGUYEN 136, TEN PERSONS ON BOARD, SANK IN 14-30.7N 109-12.7E AT 062130Z APR. NINE PERSONS RESCUED, ONE REMAIN MISSING. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
DISTRESS SIGNAL RECEIVED ON 406 MHZ FROM SIX METER M/V PARA-DICE, WHITE AND BLUE HULL IN VICINITY 30-14.20S 114-58.40E AT 090335Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.
MAN OVERBOARD FROM F/V ESURAJAN IN 12-17.20N 080-08.25E AT 090330Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

DISTRESS SIGNAL RECEIVED ON 406 MHZ IN VICINITY 11-14N 144-45E AT 000338Z APR. VESSELS IN VICINITY REQUESTED TO DISTRESS SIGNAL RECEIVED ON 406 MHZ FROM AIRCRAFT A SHARP LOOKOUT, ASSIST IF POSSIBLE.

FISHERMAN MISSING FROM F/V MARANATHA IN VICINITY 10-18.5N 075-55.0E AT 070330Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

REPORTS TO MRCC MUMBAI, PHONE: 9122 2438 8065, 9122 2438 3592, FAX: 9122 2431 6558, E-MAIL: INDSAR@VSNL.NET, MRCC-WEST@INDIANCOASTGUARD.NIC.IN.

DISTRESS SIGNAL RECEIVED ON 406 MHZ IN VICINITY 19-24.7N 052-53.1W. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

RUBBER BOAT IN DISTRESS, UNKNOWN NUMBER OF PERSONS ON BOARD, IN 33-35N 012-02E AT 091220Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

MAN OVERBOARD FROM F/V DE HAI NO26 IN VICINITY 41-00S 070-00E AT 091825 APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

DISTRESS SIGNAL RECEIVED ON 406 MHZ IN 16-09.20S 142-24.06W. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

070939Z APR 22 HYDROPAC 945/22(63). ARABIAN SEA. INDIA. DNC 03.

FISHERMAN MISSING FROM F/V MARANATHA IN VICINITY 10-18.5N 075-55.0E AT 070330Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

REPORTS TO MRCC MUMBAI, PHONE: 9122 2438 8065, 9122 2438 3592, FAX: 9122 2431 6558, E-MAIL: INDSAR@VSNL.NET, MRCC-WEST@INDIANCOASTGUARD.NIC.IN.

DISTRESS SIGNAL RECEIVED ON 406 MHZ IN VICINITY 11-14N 144-45E AT 000338Z APR. VESSELS IN VICINITY REQUESTED TO DISTRESS SIGNAL RECEIVED ON 406 MHZ FROM AIRCRAFT A SHARP LOOKOUT, ASSIST IF POSSIBLE.

RUBBER BOAT IN DISTRESS, UNKNOWN NUMBER OF PERSONS ON BOARD, IN 33-35N 012-02E AT 091220Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

MAN OVERBOARD FROM F/V ESURAJAN IN 12-17.20N 080-08.25E AT 090330Z APR. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

DISTRESS SIGNAL RECEIVED ON 406 MHZ IN VICINITY 19-24.7N 052-53.1W. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

080027Z APR 22 HYDROLANT 995/22(24). WESTERN SOUTH ATLANTIC. BRAZIL-NORTH COAST. DNC 01.

THREE CREWMEN MISSING FROM M/V MILA MARIA IN VICINITY 02-39.47S 040-40.40W ON 05 APRIL. VESSELS IN VICINITY REQUESTED TO KEEP A SHARP LOOKOUT, ASSIST IF POSSIBLE.

REPORTS TO ANY COASTAL RADIO STATION.

At least 11 events from 4/7 to 4/11 2022
Why?

Vessel Avoidance
18 UTC
September 8, 2021

Courtesy - Seavision
What We Do

Over 150 products each day

https://ocean.weather.gov
What We Do

Alaska/Arctic Analysis

Forecasts and analyses for parts of the Arctic
What We Do

Alaska/Arctic Analysis

U.S. National Ice Center
NOAA component = OPC Ice Services Branch

https://usicecenter.gov
What We Do

National Digital Forecast Database (NDFD)
https://www.weather.gov/mdl/ndfd_info
https://digital.weather.gov/

Top: oceanic domain of the NDFD, forecast, April 12, 2022, 0000 UTC
Upper Right: wind and wave forecasts, April 6, 2022, 2100 UTC
How We Do It

Satellite imagery

L: visible image, Pacific, January 24, 2020, 00 UTC
R: infrared image + altimeter, Atlantic, October 27, 2020, 12 UTC

59-foot seas
Satellite imagery

*Scatterometer data, January 4, 2018, from 1618 UTC*
How We Do It

Global Forecast System (GFS) and European Centre for Medium-Range Weather Forecast (ECMWF)

Surface pressure 87 hour forecast December 7, 2021 0300 UTC
How We Do It

Wavewatch and European Centre for Medium-Range Weather Forecast (ECMWF)

Significant Wave Height
180 hour / 186 hour forecast
May 11, 2019
Observations

Satellite imagery

*Visible image, July 29, 2015, 12 UTC*
Observations

Global Forecast System (GFS)

*Six-hour forecast, July 29, 2015, 12 UTC*
Ship Observations Team  VOS Data Coverage between 60° North and 60° South
Near surface air pressure requirements for global Numerical Weather Prediction
(Threshold value for WMO-OSCAR Requirement #251 in this grid: 15; breakthrough: 750)

October 2020

Generated by www.ocean-ops.org  11/11/2020
WMO Observing Systems Capability Analysis and Review Tool (OSCAR) requirements for air pressure measurements for global Numerical Weather Prediction (NWP):

- Goal of observations every 15 km taken every 60 minutes
- Breakthrough goal of observations every 100 km taken every 6 hours
  - "Breakthrough", if achieved, would result in a significant improvement for air pressure, and can be considered an optimum when planning or designing observing systems.
- For high-resolution NWP, breakthrough goal is observations every 10 km taken every 60 minutes

https://www.wmo.int/pages/prog/amp/mmop/sot.html
Decision Support Services

Hurricane-Force Wind Warning
Today into Tonight

KEY MESSAGES:

CALL TO ACTION: Vessels planning to be in the area should be executing avoidance!

- Powerful low pressure off of the mid-Atlantic and southern New England coasts will continue to move northeast, reaching the Canadian Maritimes tonight.
- Areas of hurricane-force sustained winds will develop by early this afternoon in vicinity of the Gulf Stream, well offshore of Delmarva. These hurricane-force sustained winds will spread east along the Gulf Stream late in the day.
- Tonight, areas of hurricane-force winds will shift north to offshore of Nova Scotia.
- Elsewhere, widespread gales will be in place off of the U.S. east coast, with numerous areas of storm-force conditions from offshore of the northeast North Carolina coast north and northeast into the Gulf of Maine.
- Hurricane-force wind gusts can accompany the storm-force sustained winds.
- Areas of freezing spray will develop in cold air behind the low today from the Gulf of Maine to the mid-Atlantic coast. Areas of moderate freezing spray will occur in the Gulf of Maine from late today into Sunday.

ISSUED: 14 UTC January 29, 2022
@NWSOPC
@WNC_Atlantic

Outlook for the Western Atlantic
East Coast N of 31N to 65W

Wind Forecast (knots) and Wave Forecast (Feet) Valid 4 PM EST / 21 UTC January 29, inset shows warnings in effect at 1329 UTC January 29
(hurricane-force in red, storm in purple, gale in light purple).
Decision Support Services

Spot Forecast for vicinity 36N 128W
Issued: 2000 UTC November 10, 2021
Valid: 1800 UTC November 10, 2021 through 0000 UTC November 12, 2021

Overview: A northeast-to-southwest oriented high pressure ridge will persist across this area over the next 24 hours, and as a result winds are expected to remain 10 knots or less. Northwest swell, 6 to 8 feet at 11 to 14 seconds, will impact the area through the forecast period. Surface visibility is generally expected to remain around 3 nautical miles over the next 24 hours, with a chance for visibilities of less than 1 nm from 0300 UTC to 0600 UTC, and again from 1000 UTC to 1800 UTC. Ceilings, mostly LIFR conditions, around 500 ft are expected tonight and tomorrow.

Sea surface temperature: 62°F

Next update will be at: As requested

Metogram: 

News Release

U.S. Coast Guard 1st District PA Detachment New York
Contact: Coast Guard PA Detachment New York
Office: (212) 514-4291
After Hours: (917) 703-0983
PA Detachment New York online newsroom

Response crews recover more than 450,000 gallons of oil from Coimbra shipwreck

https://content.govdelivery.com/accounts/USDHSCG/bulletins/25234c3
ECDIS
Future of High Seas Forecasts?

HIGH SEAS FORECAST
M&S OCEAN PREDICTION CENTER WASHINGTON DC
3336 UTC WED DEC 02 2020

SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE
HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE
MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

ONLY YOU KNOW THE WEATHER AT YOUR POSITION. REPORT IT TO THE
NATIONAL WEATHER SERVICE, EMAIL US AT
VOSOPS@NOAA.GOV (LOWERCASE).

SECURITY

PACIFIC N OF 20N AND S OF 67N E OF A LINE FROM BERING STRAIT
TO 100W 100E.

ALL FORECASTS VALID OVER ICE FREE FORECAST AREAS

SYNOPSIS VALID 1200 UTC DEC 02.
24 HOUR FORECAST VALID 1200 UTC DEC 03.
48 HOUR FORECAST VALID 1200 UTC DEC 04.

WINDS...

STORM WARNING...
LOW 995 MB MOVING NE 20 KT, TURNING NW AFTER 12 HOURS.
WITHIN 200 NM E OF FRONT FROM 50N/130W TO 50N/240W TO LOW
CENTER 400 NMW WINDS 35 TO 50 KT. SEAS 18 TO 25 FT. ELSEWHERE
WITHIN 400 NM E OF FRONT AND FROM 14N TO 40N BETWEEN 22W AND A
LINE FROM 45N/20W TO 35N/30W TO 35N/25W, WINDS 25 TO 35 KT.
SEAS 12 TO 24 FT. ALSO...EXCEPT WHERE DESCRIBED BELOW...WITHIN A LINE FROM
40N/20W TO 30N/0W AND A LINE FROM 50N/100W TO BERING WINDS LESS
THAN 25 KT. SEAS 8 TO 20 FT.

24 HOUR FORECAST LOW 985 MB. HNS. 400 NW TO 500 NW.
SEAS 8 TO 17 FT.

STORM WARNING...
LOW 995 MB MOVING SE 20 KT. WITHIN 100 NM S QUADRANT
WINDS 35 TO 45 KT. SEAS 18 TO 24 FT. ELSEWHERE FROM 300 TO 400
WINDS 20 TO 25 KT. SEAS 12 TO 16 FT.

48 HOUR FORECAST LOW DISSIPATED INLAND, ASSOCIATED CONDITIONS
DIMINISHED.

STORM (Low, Front, Area, Line) -- TAFB (Gap Winds), OPC

Gale (Low, Front, Area, Line) -- TAFB (Gap Winds), OPC

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Department of Commerce // National Oceanic and Atmospheric Administration // 26
Need to Serve Mariners with 21\textsuperscript{st} Century Information

\textit{GFS 120-hour forecast, valid December 8, 2021, 12 UTC}
Forecasting and Decision Support at High Latitudes

Research Vessel Nathaniel B. Palmer
Antarctica
November 18, 2020
Social Media

Facebook
https://www.facebook.com/NWSOPC

Twitter
@NWSOPC

2020/21 North Atlantic Hurricane Force Wind Events

Highlighting the hurricane force (HF) wind event season from June 1, 2020, through May 31, 2021.

Timothy Collins
August 13, 2021

https://storymaps.arcgis.com/stories/608b5b390dec433c92dd26b0a7817e44
Thank you!

Darin Figurskey

darin.figurskey@noaa.gov