

Offshore Waters Forecasts

Purpose

The Tropical Analysis and Forecast Branch (TAFB) of the National Hurricane Center (NHC) provides forecast and warning information to mariners who travel on the oceanic waters adjacent to the U.S. and its territorial coastal waters in the Gulf of Mexico, Caribbean Sea, and portions of the tropical and subtropical North Atlantic Ocean. The primary alphanumeric product issued by the NHC/TAFB for this purpose is the Offshore Waters Forecast, serving users who operate from the coastal waters out several hundred nautical miles from shore. The Offshore Waters Forecast complements the higher resolution Coastal Waters Forecast produced by local National Weather Service forecast offices and cover the U.S. territorial waters from the coast out to 60 nm offshore.

Coverage

The Offshore Waters Forecasts cover the Gulf of Mexico, Caribbean Sea, and portions of the Atlantic Ocean south of 31°North and west of 55° West. This area is divided into 32 zones designed in part to take into account the regional marine climatology. The configuration of the Offshore Waters Marine zones is shown on the map below:

Offshore Zones



Content

There are two Offshore Waters Forecast provided by the NHC/TAFB. The MIAOFFNT3 (WMO header FZNT23 KNHC) covers the Caribbean Sea, and portions of the Atlantic Ocean south of 31° North and west of 55° West. The MIAOFFNT4 (WMO header FZNT24 KNHC) encompasses the Gulf of Mexico.

These Offshore Waters Forecasts provide mariners with a general overview of large scale environmental marine conditions out five days, to include winds, seas, and major weather impacts. Marine warnings such as gale warnings or warnings for tropical storms or hurricanes will be headlined for each affected zone through the first 36 hours of the forecast period. In addition, brief, plain-language synopses are included in the forecast for the Gulf of Mexico, the Caribbean Sea and Tropical Atlantic, and the Southwest North Atlantic areas.

Winds represent predominant conditions at 10 meters above the surface of the water. Wind direction is described by the eight points of the compass.

Sea state is described in terms of “significant wave height” which is defined in the NWS Glossary as “the mean or average height of the highest one third of all waves in a swell train or in a wave generating region. It approximates the value an experienced observer would report if visually estimating sea height.” Seas will typically be expressed in terms of a range (e.g. 2 to 4 ft). This is to represent uncertainty in the forecast, especially considering the large areas of each marine zone. *In fact, it is important to emphasize that there is a broad spectrum of wave heights at any given time in any part of the ocean, and individual wave heights may be twice the significant wave height.* In addition to significant wave height, dominant swell and direction are described as needed.

The Offshore Waters Forecast also includes weather impacts whenever they are expected to pose a danger to navigation. This may be in the form of widespread areas of fog, smoke, or volcanic ash that limit visibility, or large clusters of moderate to strong thunderstorms.

Marine Zone Names and Universal Geographic Codes (UGC's)

Offshore Marine Zones

UGC	Offshore Marine Zone Name
AMZ011	Caribbean N of 18N W of 85W including Yucatan Channel
AMZ013	Caribbean N of 18N between 76W and 85W including the Cayman Basin
AMZ015	Caribbean approaches to the Windward Passage
AMZ017	Gulf of Honduras
AMZ019	Caribbean from 15N to 18N between 80W and 85W
AMZ021	Caribbean from 15N to 18N between 72W and 80W
AMZ023	Caribbean N of 15N between 64W and 72W
AMZ025	Offshore Waters Leeward Islands
AMZ027	Tropical Atlantic from 15N to 19N between 55W and 60W
AMZ029	W Central Caribbean from 11N to 15N W of 80W
AMZ031	Caribbean from 11N to 15N between 72W and 80W including Colombia Basin
AMZ033	Caribbean S of 15N between 64W and 72W including Venezuela Basin
AMZ035	Offshore waters Windward Islands including Trinidad and Tobago
AMZ037	Tropical Atlantic from 07N to 15N between 55W and 60W
AMZ039	Southwest Caribbean S of 11N including approaches to the Panama Canal
AMZ111	Atlantic from 27N to 31N W of 77W
AMZ113	Atlantic from 27N to 31N between 70W and 77W
AMZ115	Atlantic from 27N to 31N between 65W and 70W
AMZ117	Bahamas N of 22N including the Cay Sal Bank
AMZ119	Atlantic from 22N to 27N E of Bahamas to 70W
AMZ121	Atlantic from 22N to 27N between 65W and 70W
AMZ123	Atlantic S of 22N W of 70W including approaches to the Windward Passage
AMZ125	Atlantic S of 22N between 65W and 70W including Puerto Rico Trench
AMZ127	Tropical Atlantic from 15N to 19N between 55W and 60W
GMZ011	NW Gulf including Stetson Bank

GMZ013	N Central Gulf including Flower Garden Banks Marine Sanctuary
GMZ015	NE Gulf N of 25N E of 87W
GMZ017	W Central Gulf from 22N to 26N W of 94W
GMZ019	Central Gulf from 22N to 26N between 87W and 94W
GMZ021	Gulf from 22N to 25N E of 87W including Straits of Florida
GMZ023	SW Gulf S of 22N W of 94W
GMZ025	E Bay of Campeche including Campeche Bank

Although not technically marine zones, the Synopsis paragraphs also have assigned UGC's as shown below:

Synopses

UGC	Offshore Marine Zone Name
AMZ001	Synopsis for the Caribbean and Tropical N Atlantic from 07N to 19N between 55W and 65W
AMZ101	Synopsis for the Southwest North Atlantic including the Bahamas
GMZ001	Synopsis for the Gulf of Mexico