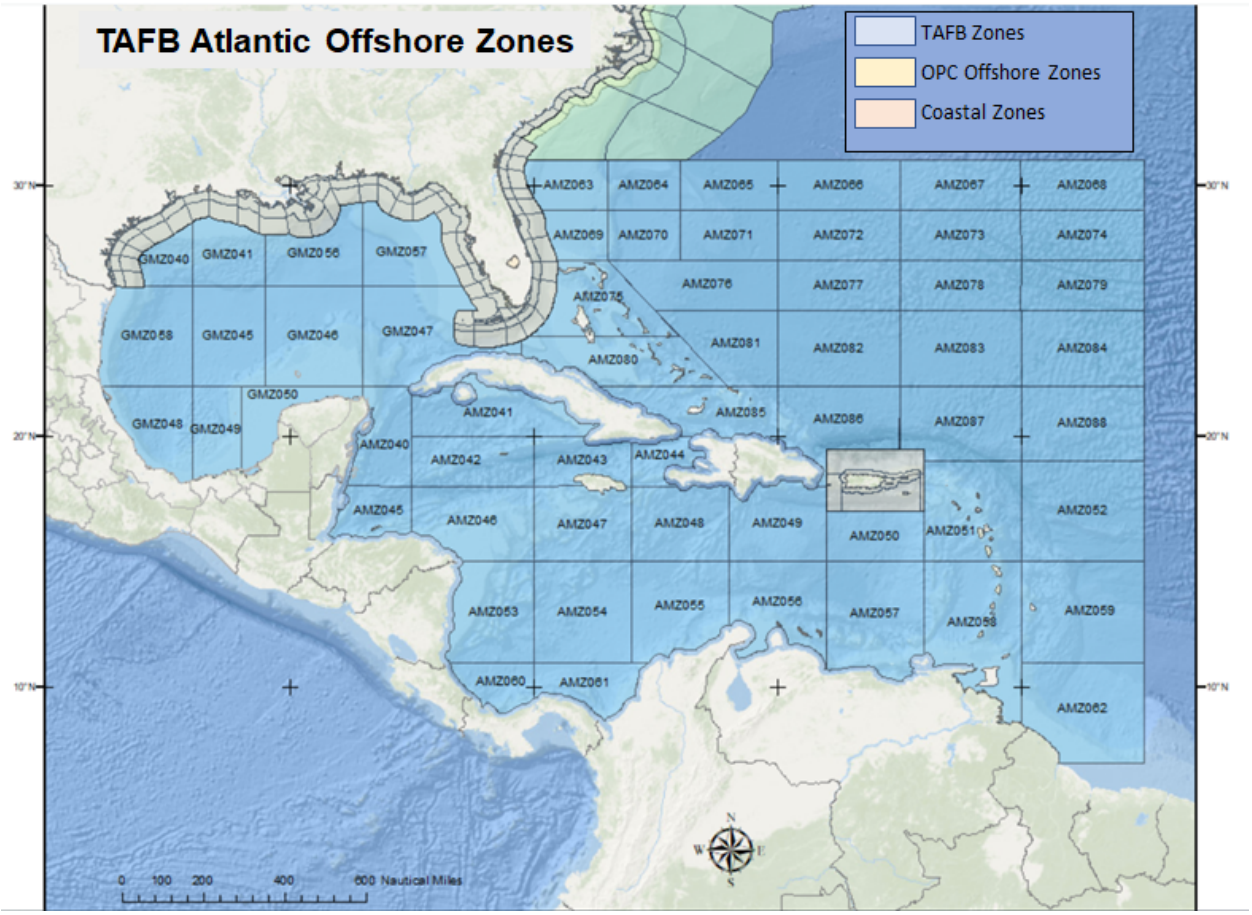
Offshore Waters Forecasts

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 60 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:



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)

UGC Offshore Marine Zone Name

GMZ040 (NW Gulf including Stetson Bank)
GMZ041 (SW Louisiana Offshore Waters including Flower Garden Banks Marine Sanctuary)
GMZ056 (N Central Gulf N of 26N between 87W and 91W)
GMZ057 (NE Gulf N of 26N E of 87W)
GMZ047 (E Gulf from 22N to 26N E of 87W Including Straits of Florida)
GMZ058 (W Central Gulf from 22N to 26N W of 94W)
GMZ045 (W Central Gulf from 22N to 26N between 91W and 94W)
GMZ046 (Central Gulf from 22Nto 26N between 87W and 91W)
GMZ048 (SW Gulf S of 22N W of 94W)
GMZ049 (Central Bay of Campeche S of 22N between 92W and 94W)
GMZ050 (E Bay of Campeche S of 22N between 87W and 92W)

AMZ040 (Caribbean N of 18N W of 85W including Yucatan Basin)
AMZ041 (NW Caribbean N of 20N E of 85W)
AMZ042 (Caribbean from 18N to 20N between 80W and 85W including Cayman Basin)
AMZ043 (Caribbean from 18N to 20N between 76W and 80W)
AMZ044 (Caribbean Approaches to the Windward Passage)
AMZ045 (Gulf of Honduras)
AMZ046 (Caribbean from 15N to 18N between 80W and 85W)
AMZ047 (Caribbean from 15N to 18N between 76W and 80W)
AMZ048 (Caribbean from 15N to 18N between 72W and 76W)
AMZ049 (Caribbean N of 15N between 68W and 72W)
AMZ050 (Caribbean N of 15N between 64W and 68W)
AMZ051 (Offshore Waters Leeward Islands)
AMZ052 (Tropical N Atlantic from 15N to 19N between 55W and 60W)
AMZ053 (W Central Caribbean from 11N to 15N W of 80W)
AMZ054 (Caribbean from 11N to 15N between 76W and 80W)
AMZ055 (Caribbean from 11N to 15N between 72W and 76W)
AMZ056 (Caribbean S of 15N between 68W and 72W)
AMZ057 (Caribbean S of 15N between 64W and 68W)
AMZ058 (Offshore Waters Windward Islands including Trinidad and Tobago
AMZ059 (Tropical N Atlantic from 11N to 15N between 55W and 60W)
AMZ060 (SW Caribbean S of 11N W of 80W)
AMZ061 (SW Caribbean S of 11N E of 80W including Approaches to Panama Canal)
AMZ062 (Tropical N Atlantic from 07N to 11N)

AMZ063 (Atlantic from 29N to 31N W of 77W)
AMZ064 (Atlantic from 29N to 31N between 74W and 77W)
AMZ065 (Atlantic from 29N to 31N between 70W and 74W)
AMZ066 (Atlantic from 29N to 31N between 65W and 70W)
AMZ067 (Atlantic from 29N to 31N between 60W and 65W)

AMZ068 (Atlantic from 29N to 31N between 55W and 60W)
AMZ069 (Atlantic from 27N to 29N W of 77W)
AMZ070 (Atlantic from 27N to 29N between 74W and 77W)
AMZ071 (Atlantic from 27N to 29N between 70W and 74W)
AMZ072 (Atlantic from 27N to 29N between 65W and 70W)
AMZ073 (Atlantic from 27N to 29N between 60W and 65W)
AMZ074 (Atlantic from 27N to 29N between 55W and 60W)
AMZ075 (Northern Bahamas from 24N to 27N)
AMZ076 (Atlantic from 25N to 27N E of Bahamas to 70W)
AMZ077 (Atlantic from 25N to 27N between 65W and 70W)
AMZ078 (Atlantic from 25N to 27N between 60W and 65W)
AMZ079 (Atlantic from 25N to 27N between 55W and 60W)
AMZ080 (Central Bahamas from 22N to 24N including Cay Sal Bank)
AMZ081 (Atlantic from 22N to 25N E of Bahamas to 70W)
AMZ082 (Atlantic from 22N to 25N between 65W and 70W)
AMZ083 (Atlantic from 22N to 25N between 60W and 65W)
AMZ084 (Atlantic from 22N to 25N between 55W and 60W)
AMZ085 (Atlantic S of 22N W of 70W including Approaches to the Windward Passage)
AMZ086 (Atlantic S of 22N between 65W and 70W including Puerto Rico Trench)
AMZ087 (Atlantic from 19N to 22N between 60W and 65W)
AMZ088 (Atlantic from 19N to 22N between 55W and 60W)

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