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U. S. Weather Bureau.

Hurricane Hattie, October 27-31, 1961...

## U. S. DEPARTMENT OF COMMERCE BRAR <br>  Y.S WEATHER BUREAU

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Natant Detent \& Atmospheric A a ministration U.S. Dept. of Commerce


## OCTOBER 27-31,1961

## PRELIMINARY REPORT WITH THE ADVISORIES AND BULLETINS ISSUED.



# National Oceanic and Atmospheric Administration Weather Bureau Hurricane Series 

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## HURRICANE "HATMTE" OCTOBER 27-31, 1961

 PRELIMINARY REPORTHurricane "Hattie" was the most intense tropical cyclone to move into Central America from the western Caribbean since the devastating Aurricane called "Janet" crossed the Yucatan Peninsula in September 1955.
"Hattie" formed in the southwestern Caribbean north of the Panama Canal zone near San Andres Island. On the basis of ship and island reports it was identified as a tropical storm in the afternoon of october 27, 1961. It intensified rapidly and reached hurricane force before midnight. It moved northward through the western Caribbean and intensified further on the 28 th and 29 th and posed a serious threat to Jamaica, Grand Cayman and westexn Cuba. Then late in the day on the 29th "Hattie" began turning toward the left in response to a major shift in the upper air circulation patterns to the north over the United States and the Gulf of Mexico. The center passed between Grand Cayman and Swan Island and by the forenoon of October 30 was turning toward its eventual westsouthwest course in the direction of British Honduras and the east coast of the Yucatan Peninsula. Its intenaity had increased further, and as it approached the coast, highest winds near the center were estimated at 150 mph with gusts to 200 MFH . The central pressure had dropped to a minimum of 923 millibars or 27.26 inches of mercury. The center crossed the coast just south of Belize about 8:00 am EST on October 31, attended by destructive winds, very high tides, and torrential rainfall.

During the forenoon of October 30 British Hoaduras and the east coast of the Yucatan Peninsula were warned to expect destructive winds and tides of about 15 feet as the hurricane moved inland in the Chetumal-Belize area during the night and the following forenoon. Warnings of torrential, flood producing rains were added later. These waraings were broadcast in the threatened area and enabled extensive evacuation and other preparations to be accomplished.

Navy aircraft and Weather Bureau research planes tracked the hurricane from the vicinity of St. Andres Island until it crossed the coast near Belize. Valuable reports were also provided by ships and the island stations of St. Andres, Grand Cayman and Swan Island.

The forecasting of the course of this hurricane was made unusually difficult by rapid and unusual changes in the circulation patterns in the middle atmosphere over the United States, the Gulf of Mexico and the adjacent tropical ocean areas.

In British Honduras the wind and flood water of Hurricane "Hattie" destroyed all weather instruments and records. Therefore all meteorological data must be estimated. Barometer readings in the "eye" of the hurricane ranged from 27.17 to 27.45 inches. Highest winds have been estimated by untrained observers from 150 MPH to 200 MPH or more. Based on minimum central pressure sustained winds of 150 MPH and gusts to 200 MPH are reasonable. Storm tides of 10 to 11 feet were general along the Belize waterfront, and waves deposited mud on the third floor: of some buildings. Storm tides of 12 and 14 feet are reported to have occurred at other points.

In Belize, with a population of over 3l,000 persons, 40 per cent of all buildings were completely destroyed and another 25 to 35 per cent severely damaged. Almost every building had some damage. Stann Creek was, if possible, even more severely damaged. Latest fatality figures (as of November 3, 1961) show a total of approximately 200, as follows: Belize 108, Turneffe Key 36, Stann Creek 27, and Key Caulker 14; others in scattered localities. The final figures will likely be larger. Honduras reported 1 fatality and Guatemala 11, most of these apparently in flash floods from heavy rains.

The Governor of British Honduras is reported to have stated that Hurricane "Hattie" was much worse than the 1931 hurricane in which 2000 persons died and that the fact that there was a comparatively small death toll this time was due to the advance warnings. Considerable evacuation was attempted to buildings which were thought safe. Some of these disintegrated during the storm. In Stann Creek. 3500 of the 4500 residents were evacuated.

At San Andres Island in the early stages of the hurricane gusts of a little over 100 MPH were reported with lowest pressure 991 mb or 29.26 inches. One person was kilied and 15 injured. Property damage was about $\$ 300,000$.

Minor damage from torrential rains occurred at Grand Cayman but winds there did not reach hurricane force. At Swan Island highest gusts were slightly under hurricane force. Damage was minor and there was one injury.

Miami Weather Bureau Advisoiy Number 1 Tropical Stozm Hattie 5 PM EST 27 October 1961.
Tropical Storm Hattie was developed during the day in the area of subnormal pressure in the southwestern Caribbean north of the Panama Canal Zone which has been under observation during the last few days. At 5 PM EST ... 2200Z... The center was estimated on the basis of ship reports and the San Andres Island observation near latitude 12.9 North Longtitude 82.4 West which ts 50 statute miles northwest of San Andres Island and 550 miles southwest of Kingston Jamaica. Tropical Storm Hattie appears to be moving slowly northwestward at about 8 milles per hour. Highest winds are estinated at 70 miles per hour in squalls near the center and gale winds extend outward 125 miles in the northern and 60 miles in the southern semicircle.

Present indications are that the storm will turn toward a more northnorthwesterly direction during the next 12 hours at about the same rate of speed. It is expected to increase to hurricane intensity tonight.

Interests along the north coast of Nicaragua and the extreme eastern coast of Honduras should remain on the alert and take necessary precautions for 60 to 80 miles per hour squalls and heavy rains. Suall craft along the Nicaraguan and northeastern Honduran coasts should remain in cafe harbor. Because of a possible later turn to the northeast small craft in Jamaica should also remain in port. Heavy rains and flash flooding are likely in the hilly areas of eastern Nicaragua and Honduras.

Shipping in the path of the tropical storm should exercise caution.
The next advisory will be issued by the Miami Weather Bureau at 11 PM EST today.
dunN Weather Bureau Miami

Miami. Weather Bureau Advisory Number 2 Hattie 11 PM EST 27 October 1961.
Hattic has now increased to Hurricane intensity and at 11 PM $\mathrm{O}_{4} 002$. .was centered near altitude 12.7 North Longitude 82.2 West, This position is about 135 miles southeast of Puerto Cabezas Nicaragua. The hurricane is moving very slowly at not more than 6 miles per hour toward the northwest.

Highest winds are estimated 75 miles per hour with gales extending outward from the center 140 miles in the northeast semdircle and 70 miles to the southwest.

The hurricane is expected to continuc toward the northwest at about 6 miles per hour for the next 12 hours probably turning toward the north northwest at a slightly faster rate of forward movement thereafter.

Interests along the north coasts of Nicaragua and extreme northeastern Khonduras should take precautions against 60 to 80 miles per hour squalls and heavy rains and all small craft in these areas should remain in safe harbor. Small craft in Jamaica should not venture far from port until it is definitely established that the hurricane will not affect the vicinity of Jamaica. Heavy rains and flash flooding kare likely in the hilly areas of eastern Nicaragua and Honduras.

This is a very small but growing hurricane and shipping should exercice caution.
The next regular advisory will be issued from the Miami Weather Bureau at 5 AM EST Saturday.
MOORE Weather Bureau Miami

Miami Weather Bureau Hurricane Advisory Number 3 Hattie 5 AM EST October 28, 1961.
Hurricane Hattie was centered near latitude 13.3 North Longitude 81.8 West or about 120 miles east southeast of Puerto Cabezas at 5 AM EST... $1000 \mathrm{Z} \ldots$ It was moving toward the north northwest at 7 miles per hour.

Highest winds are estimated 75 miles per hour near the center and gales extend outward 140 miles to the northeast and 70 miles to the southwest.

Hattie is expected to continue moving slowly toward the north northwest for the next 24 hours and conditions are favorable for some further increase in size and intensity.

Interests in northeastern Nicaragua and eastern Honduras should be alert for possible flooding from heavy rains.
Small creft around the northwestern Caribbean should remain in port.
Shipping in the path of this hurricane should exercise caution.
The next regular advisory will be issued from the Miami Weather Bureau at 11 AM EST Saturday.
KRAFI Weather Bureau Miami

Miami Weather Bureau Hurricane Advisory Number 4 Hattie 11 AM EST 28 october 1961.
Recomaissance Aircraft this morning indicate Hattie has intensified further and is now moving on a northerly course near 7 miles per hour. At 11 AM EST....1600Z.... Hurricane Hattie was centered near Latitude 13.9 North Longitude 81,6 West or about 125 statute miles east of Puerto Cabezas Nicaragua and 425 miles southwest of Kingston Jamaica.

Hurricane Hattie is now a dangerous storm with macimum winds eatinated 125 miles per hour over a small axea near the center and hurricane force winds within 40 miles of the center. Gales extend outward 140 miles in the northeast semicircle and 70 mlles to the southwest. Lowest pressure reported by the aircraft was 28.62 inches or 969 millibars.
Hattie is expected to continue on a northerly course at about the same speed for the next 12 to 24 hours with a slow increase in size but no important change in intensity.

The more northerly course will take the center well to the east of the Nicaragua and northeast honduras coasts so that rainfall will be somewhat less than expected carlier, A large area of rain to north and east of Hattie may produce flooding over Jamaica during the next 24 hours.

Small craft around the northwestern Caribbean should remain in port.
Shipping in the path of furricane Hattie should exercise extreme caution.
The next regular advisory will be Issued by the Miami Neather Bureau at 5 PM EST.
Clark Weathex Bureau Miami

Miami Weather Bureau Hurricane Advisory Number 5 Hattie 5 PM EST October 28, 1961.
hecomaissance aircraft reports indicate Hurricane Hattie continued on a northerly course at about 8 miles pex hour and at 5 PM EST ... 22002 ... was centered near Latitude 14.6 North Longtitude 81.5 west or about 130 statute miles eastnortheast of Puerto Cabezas Nicaragua and 385 miles southeest of Kingston Jamaica.
This is a dangerous hurricane with maxinum winds estimated 125 mil es per hour over a small area near the center and hurricane force winds within 50 miles of the center. Gales extend outward 150 miles in all quadrants. Lowest pressure is now 28.23 inches or 956 Millibars.
Hurricane Hattie is expected to continue on a northerly course at about the same forward speed for the next 12 to 24 hours with a slow increase in size but no marked change in intensity.

Hidespread rain north and ea st of the storm may produce some locel flooding over Jamaica and Cuba during the next day or two. Small craft around thevestern Caribbean should remain in port.

Shipping in the path of Hurricane Hattie should exercise extreme caution.
The next regular advisory will be losued by the Miami Weather Bureau at 12 PM EST.
CIARK Weather Bureau Miami

Miami. Weather Bureau Hurricane Advisory Number 6 Hattie 11 PM EST October 28, 1961.
Reconnalasance aircraft reports show that Hurricane Hattie is moving toward the north at 9 miles per hour and at 11 PM EST . . 04002 ... was centered near Latitude 15.5 North Longitude 81.5 West. This position is about 160 miles notheast of Puerto Cabezas Nicaragua and 350 miles southwest of Kingston Jamaica.

Thls is a dangerous hurricane with maximan winds 125 miles per hour over a small area neax the center and winds of inaricane force within 50 miles of the center. Gales extend outward 150 mfles in all quadrants. The barometric pressure in the center is 28.11 inches or 952 militbars.

Hattie is expected to continue toward the north at about 9 miles per hour for the next 12 to 24 hours with no marked change in intensity but a slight increase in size.

The expected movement would bring the center very near frand cayman island by darly Sunday night with hurricane force winds probably beginning there by later afternoon. Interests in Jamadca and Cuba should pay close attention to future adviaories. Some local flooding may occur in those areas within the next 24 hours.

All small craft in the Western Caribbean should remain in port and shipping in the path of the hurricane should exercise extreme caution.

The next regular advisory will be tasued from the MianW Wather Bureau at 5 AM EST Sunday.
MOORE Weather Bureau Miami

Miami Weather Bureau Hurricane Advisory Number 7 Hattie 5 AM EST October 29. 1961.
AT 5 AM EST... 1000Z...
Hurricane Hattie was centered near Latitude 16.8 North Longitude 81.1 West or about 175 Statute Miles South of Grand Cayman Island. It is moving toward the north about 12 miles per hour.

This is a dangerous hurricane with highest winds estimated 125 miles per hour near the center and gales extend out 150 miles in all directions.

Little change is expected in intensity size and movement of the hurricane during the next 24 hours. It should pass near but probably a little east of Grand Cayman late today. Small craft around the Northwestern Caribbean should remain in port and shipping should exercise caution.

The next advisory will be issued by the Miami Weather Bureau at 11 AM EST.
KRAFI Weather Bureau Miami

MLami Weather Bureau Hurricane Advisory Number 8 Hattie 11 AM EST October 291961.
On the basis of a penetration of the storm by reconnaissance aircraft Hurricane Hattie was centered at 11 AM EST... 16002. . Near Latitude 17.4 North Longitude 81.3 West which is about 125 statute miles south of grand Gayman and 400 miles southsoutheast of Havana. The hurricane is moving northward around 9 miles per hour.

This is a dangerous hurricane with maximum winds 125 miles per hour over a small area near the center. Hurricane force winds extend outward 65 miles from the center. Gales extend outward 185 statute miles in the eastern and 140 miles in the western semicircle. The lowest pressure reported in the center this morning was 28.44 inches or 963 millibars.

Hattie will continue toward the north during the next 12 to 24 hours with little change in speed or intensity but with a slight increase in size.

The expected movement will bring the center vexy near Grand Cayman Island around or a little bit before midnight tonight with hurricane force winds beginning there by later afternoon. Persons along the south coast of Cuba in the Habana and extreme western Las Villas Provinces should be on the alert for evacuation to high ground early Monday. The passage of the hurricane across the coast line will be attended by extremely high tides near and to the east of the center on the south coast and throughout the hurricane area on the north coast. Persons in Habana Matanzas and extreme Western Las Villas provinces should begin preparations for destructive winds. Gale winds should begin early monday forenoon with hurricane winds developing later in the day.

Heavy rains will occur in Jamaica and Cuba well ahead of the hurricane and some local flooding is likely.
A11 interests in and around Cuba should pay close attention to future advisories. The present course of Hurricane Hattie and the overall weather situation is increasing the thred to extreme southern Plorida from this storm.

All small craft in the Northwestern Caribbean and around Cuba should remain in port and shipping in the path of the hurricane should exercise extreme caution.

The next regular advisory will be issued from the Miami Weather Bureau at 5 PM EST This afternoon with a bulletin at 2 PM.
DUNN Weather Bureau Miami

Miam Weather Bureau Bulletin Hurricane Hattie for press and radio and TV 2 PM EST October 291961.
At 2 PM Hurricane Hattie was centered with 20 miles or so of Latitude 18.0 North Longitude 82.0 West which is about llo statute miles south of Grand Cayman Island and about 460 niles due south of Key West. The storm is moving in a general northerly direction at about 9 Mi es per hour although during the past several hours the direction of movement has been a little west of north.

Navy reconnaissance aircraft estimate maximum winds near the center at 125 miles per hour and a Weather Bureau Research Aircraft measured winds of 128 miles per hour in the north quadrant and 113 miles per hour in the south quadrant at 5000 feet. In a well developed hurricane the winds at the surface and at 5000 feet are usually about the same.

The hurricane center should pass near Grand Cayman Lsland during the night with hurricane force winds beginning there by late this afternoon. Persons along the south coast of Cuba in the Habana and extreme Western Las Villas Rrovinces should be on the alert for evacuation to high ground in the or the interior early Monday. All interests in and around Cuba should pay close attention to future advisories and the present course of Hurricane Hattie and the overall weather situation is increasing the storm threat to extreme southern Florida.

A11 small craft in the Northwestern Caribbean and around Cuba should remain in port. Small craft warnings are also displayed from Tarpon Springs Florida southward includiag the Elorida Keys and on the east coast as far north as Jacksonville.

Sustained winds of 20 to 30 miles per hour are occurring over most of the Plorida display area occasionally briefly 35 to 45 miles per hour in squalls along the lower east coast. Around midday gusts up to 72 miles per hour were reported at Hillsboro light and some beach erosion is occurring. These winds are not directly due to Hurricane Hattie but to strong pressura gradient between a large high centered east of Cape Hatteras and the hurricane in the Northwestern Caribbean.

The next advisory from the Mami Weather Bureau will be issued at - PM this afternoon.
DUNN Weather Bureau Miami

Miami Weather Bureau Hurricane Advisory Number 9 HATTIE 5 PM EST October 291961.
On the basis of aircraft reconnaissance into the storm center every three hours today Hurricane Hattie was centered at $S$ FM EST ... 22002 ... near Latitude 18.4 North Longitude 82.4 West which is about 95 statute miles southwest of Grand Cayman and 430 miles about due south of Key West. During the past few hours the hurricane has been moning toward the northwest at li miles per hour.

This isa dangerous hurricane with maximum winds 1.25 miles per hour over a small area near the center. Hurricane winds extend outward 70 miles from the center. Gales extend outward 200 miles in thr northeastern sembircle and 140 miles to the southwest. The lowest pressure reported in the center this afternoon was 28.23 inches or 956 millibars.

Hattie is expected to turn back toward a north northwest course during the next 12 hours and likely a more northerly course thereafter with no important change in speed or intensity but with a silight increase in size.

The forecast movement will bring the center of the west of Grand Cayman Island around the middle of the night and over or close to the Iale of Pines Monday afternoon, Winds should reach hurricane force on the Isle of pines Monday forenoon and over portions of western Cuba Monday afternoon. Extremely high tides and rough seas will attend the passage of the storm in the Grand Cayman and Isle of Pines area and near and to the aest of the center as it reaches the south coast of Cuba late Monday. All persons in these areas subject to storm surge inundations should evacuate to a safe location. Persons in the western provinces of Cuba should begin preparations for destructive winds which should reach gale force monday forenoon with hurricane winds developing late in the day.

Heavy rains in Jamaica tonight and in Cuba Monday and Monday night will cause some local flooding.
All small craft in the northwestern Caribbean and in the Florida straits should remain in port and shipping in the path of the hurricane should exervise extreme caution.

All interests in and around Cuba should pay close attention to future advisories. The present course of Hurricane Hattie and the overall weather situation is steadily increasing the threat to south Florida from this storm and all interests in this area should keep posted on forthcoming advices.

The next regular advisory will be issued from the Miami Weather Bureau at 11 FM EST tonight with a bulletin at 8 PM.
DUNN Weather Bureau MIami

Miami Weather Bureau Bulletin on Hurricane Hattie 8 PM EST October 291961.
Hurricane Hattie is continuing on her course toward the northwest at about 13 miles per hour and at 8 PM EST was centered about 90 miles southwest of Grand Cayman Island or some 415 miles south of Key West. A change to a more northerly course is expected in the next 12 to 24 hours.

Reconnaissance aircraft have made frequent checks on the movement and intensity of the hurricane during the day and will continue to watch it closely during the night. There is no indication of any important change with highest winds continuing about 125 miles per hour near the center. Gales which reach out about 200 miles to the northeast of the center are not far off the south central coast of cuba.

Sinall craft warning flags are flying around the Florida Peninsula. From Jacksouville and Tarpon Springs southward through the keys for winds 20 to 30 miles per hour with occasional higher speads in squalls on the east coast. These winds are not directiy due to the hurricaqe lut are a result of the pressure difference between it and the high pressure area of the middle Atlantic coast.

Winds will be increasing over western Cuba and are expected to reach hurricane force on the Isle of pines Monday forenoon and over portions of the Western Provinces by afternoon. Extremely high tides and rough seas will precede and accompany the storm. Heavy rains will cause some local flooding in Jamaica tonight and in Cuba Monday.

The position of this hurricane and its expected movement offers a distinct threat to south Florida and interests from the latitude of the storm northward to this area should keep posted on future advisories.

The next regular advisory will be issued from the Miami Weathor Bureau at 11 PM EST Sunday.
Moore Weather Bureau Miami

Miami Weather Bureau Advisory Number 10 Hattie 11 PM EST 29 October 1961.
A reconnaissance aircraft which flew into the eye of Hurricane hattie tonight showed that there has been a marked decrease in the rate of forward movement and it is now moving toward the northwest at not more than 6 miles per hour. At 11 PM EST ... 0400 z ... the hurricane was centered near Latitude 18.4 North Longitude 82.7 west. This position is about 110 miles west southwest of Grand Cayman Island and 440 mlles south of Key West Florida.

Highest winds are estimated 125 miles per hour near the center with hurricane force winds extending out 70 miles from the center. Gales extend outward 200 miles in the northeastern semicircle and 140 mfles to the southwest.

Hattie is expected to move on a very slow and erratic course generally toward the northwest and at not more than 6 miles per hour for the next 12 to 18 hours. The slowing in forward motion is the result of a large scale change in surrounding pressure patterns with rising pressures to the north of the hurricane and the course beyond that time is not definite at present.

The slower movement means that the hurricane will not affect Cuba as soon as was indicated earlier but all persons in western Cuba should remain on the alert for future advices and be ready for quick action in case a more northerly course or an increase in the rate of forward motion occuxs. Precautions should be continued on the Isle of Pines and in western Cuba for the possibility of dangerous winds. Seas will continue quite rough on the south coast and some local flooding may occur.

All small craft in the northwestern Caribbean and in the Florida straits should remain in port and shipping near the hurricane should exercise caution.

There is still a chance of the hurricane affecting south Florida within the next two or three days and interests there should continue to keep posted on the latest advisories.

The next regular advisory will be issued from the Miami Weather Bureau at 5 AM EST with an intermediate bulletin at 2 AM EST.
Moore Weather Bureau Miami

Miami Weather Bureau Bulletin for press radio and televieion 2 AM EST Oct 301961.
At 2 AM EST Hurricane Hattie was about 90 statute miles north of \$wan Island and about 225 miles south of extreme western Cuba. It was drifting toward the Yucatan Peninsula and will probably continue this drift for 12 hours.

Highest winds are estimated 125 miles per hour near the center of the hurricane and gales extend out 200 miles to the northeast and 140 miles to the southwest.

All interests around the northwest Caribbean area from Western Cuba along eastern Yucatan Peninsula and southward to Honduras should watch for future advices as the path of this hurricane is uncertain.

All small craft in the northestern Caribbean and in the Florida Straits should remain in port and shipping near the hurricane should exere ise caution.

The next regular advisory will be issued from the Miami Weather Bureau at 5 AM EST.
KRAFI Weather Bureau Mami

Miami Weather Bureau Hurricane Advisory Number 11 Hattie 5 AM EST October 301961.
Reconnaissance reports indicate that Hurricane Hattie has taken a turn toward the west and has intensified during the night. At 5 AM EST... $10002 \ldots$. The center was about 250 miles east of chetumal and about the same distance south of the western tip of Cuba near Latitude 18.6 North Longitude 84.5 West moving westward 12 to 15 miles per hour.

Highest winds are now estimated 140 miles per hour near the center with gales extending out 200 miles to the north and about 140 miles to the south. Lowest pressure reported in the center during the night was 27.82 inches or 942 milibars.

Indications are for continued westward movement with the hurricane moving inland in the chetumal area late today and early tonight. High winds and tides will occur along mach of the east coast of the Yucatan Peninsula. Tides of 15 feet are expected where the center reaches the coast. All interests from the Gulf of Honduras northward along east coast of the Xucatan Peninsula should take precautions against very rough seas and the chetumal area against the extremely high winds and tides.

Small craft around the northwest Caribbean should ramain in port and shipping exercise ctution.
The next advisory will be issued from the Mami Weather Bureau at 11 AM EST with an intermediate bulletin at 8 AM EST.

## Miami Weather Bureau bulletin for press radio and television 8 AM EST 30 October 1961.

Hurricane Hattie intensified and turned toward the west during the night and at 8 AM EST was about 225 miles east of chetumal. The hurricane is expected to reach the coast near Chetumal late today or tonight.

Highest winds are estimated 140 miles per houx near the center with gales extending out 200 miles to the north and 140 miles 10 the south. The lowest central pressure was reported as 27.67 inches early today.

High winds and tides are expected from the Gulf of Honduras northward along the east coast of the Yucatan Peninsula today and tonight. Interests through this area should take precautions and especialiy in the area from Belize to Gazumel as the tides will be extremely high 15 feet where the center reaches the coast and for some distance to the north. Much of the are is low and these tides will cause salt water flooding for a considerable distance inland. Heavy rains will also add to the flooding.

The next regulax advisory will be issued from the Miami Weather Bureau at 11 AM EST.
KRAFT Weather Bureau Miami

Miami Weather Bureau advisory number 12 Furricane Hattie 11 AM EST 30 October 1961
At 11 AM EST...1600Z... The center of severe Hurricane Hattia was located near Latitude 18.3 North Longitude 83.9 west moving westsouthwestward at around 8 miles per hour. This position 1 s about 90 statute miles northwest of Swan Island and 250 miles south of the western tip of Cuba.

The hurricane has intensified during the night and the lowest pressure reported in the center this morning was 27.29 inches or 924 millibars. Highest winds are now estimnted at 150 miles per hour near the center with gales extending out 230 miles in the northeastern and 140 miles in the southwestern semicircle.

Indications are for a movement generally toward the west with no marked change in speed during the next 24 hours with the hurricane moving inland in the Chetumalbelize area tonight and Tuesday forenoon. This has become a very severe hurricane and destructive winds and tides will occur along nuch of the east coast of the Yucatan Peninsula and British Honduras. Tides of approximately 15 feet will occur in the aroa where the center reaches the coast. All interests in British Honduras and on the Yucatan Peninsula particularly from Belize to Chetumal should proceed with the necessary evacuation and other precautions against very rough seas very high tides and destructive winds. This seems likely to be the most severe hurricanc in this area since Janet in 1955.

Small craft in the northwestern Caribbean should remain in port and shipping in the path of the furricane should exercise extreme caution.

The rapid and unusual changes taking place in the middle atmosphere over the southern United States and adjaent tropical areas have made the forecasting of the path of this storm quite difficult. Iowever at this time it appears there is no danger to Florida Bahamas and Cuba except for some Eringe squalls.

The next advisory will be issued from the Miami Weather Bureau at 5 PM EST with an intermediate Bulletin at 2 PM EST
DUNN Weather Bureau Mami

Miami Weather Bureau bulletin for pregs radio and TV 2 PM EST 30 October 1961.
At 2 PM EST acvere Hurricane Hattie was located at approximately Latitude 18.2 North Longitude 85.3 Nest. This position is about 110 statute miles northwest of Swan Island and 260 mfles south of the western tip of cuba. It has been moving westsouthwestward about 8 miles per hour.

The hurricane has intensified a little more this morning and the latest central pressure was 923 millibars or 27.26 inches. Highest gusts probable close to 200 miles per hour.

The hurricane is expected to move inland in the Chetumal Belize area tonight and Tuesday forenoon attended by destructive winds and tides along much of the east coast of the Yucatan Peninsula and British Honduras. The necessary evacuation and other precautions againct these conditions have been advised.

During the forenoon Swan Island has been experiencing gustained winds of 50 to 60 miles per hour with gusts to 60 and 70 miles per hour. Waves 20 to 25 feet high have been lashing the Island. About eleven and one half inches of rain fell at Grand Cayman Island duxing the 24 hours ending at 7 AM with 7.80 inches during the six hours between 1 and 7 AM .

The next advisory will be issued from the Miami Weather Bureau at 5 MM ESI Monday.
DUNN Weather Burcau Miami

Mami Weather Bureau Hurricane Advisory Number 13 HATILE 5 EM EST October 301961.
At 5 PM EST ... 2200 ... The center of scvere Hurricane Hattie was located near Latitude 18.1 North Longitude 85.8 West moving westsouthwestward at around 9 miles per hour. This position is about 135 statute miles westnorthwest of Swan Island and 260 miles southsouthwest of the western tip of Cuba.

Highest winds are now estimated at 150 miles per hour near the center with maximam gusts probably close to 200 miles per hour. Gales extend outward 230 miles in the northeastern and 140 miles in the southwestern semicircle.

The hurricane is expected to continue on a west to westsouthwest course with no marked change in speed during the next 24 hours with the hurricane moving inland in the Chetumal-Belize area tonight and Tuesday forenoon probably closer to Belize. Destructive winds and tides will occur along mach of the east coast of the Yucatan Peninsula and British Honduras. Tides of approximately 15 feet above normal will occur in the area where the center reaches the coast. All necessary evacuation and other precaution against very rough seas very high tides destructive winds and torrential rains should be completed at the earliest possible moment. This will be the most severe hurricane in this area since Janet in 1955 . The leading edge of the gale winds will reach the outer coasts early this evening with hurricane winds beginning near or shortly after midnight.

Small craft in the northwestern Caribbean should remain in port and shipping in the path of the hurricane should exercise extreme cautinn.

The next advisory will be issued from the Miami Weather Bureau at 11 PM EST Tonight with an intermediate bulletin at 8 EM EST. DUNN Weather Bureau Miami

Miami Weather Bureau bulletin on Hurricane Hattie 8 PM EST October 301961.
At 8 PN EST Hurricane Hattie was centexed about 130 miles east northeast of Belize British Honduras continuing toward the west southwest at about 9 miles per hour. A reconnaissance plane which penetrated the eye early tonight indicated that the hurricane is still an unusually severe one. Highest winds are estimated 150 miles per hour near the center with some gusts probably reaching 200 miles per hour. Gale force winds are now extending very close to the coast of British Honduras and the central east and the central east coast of the Yucatan Peninsula. Hurricane force winds will reach the coast by or soon after midnight.

The hurricane is expected to move inland in the Belize Honduras Chetumal Mexico area tonjght and Tuesday forenoon accompanied by very destructive winds. Tides ranging up to 15 feet above normal will occur near the point where the center reaches the coast. Torrential rains will cause serious flooding. People in the threatened area have been advised to complete all evacuation and storm preparations at the earliest possible moment. This hurricane has been compared to Janet of 1955 which caused great damage in the same general area.

The next regular advisory will be issued from the Miami Weather Bureau at 11 PM EST.
MOORE Weather Bureau Miami

Niani Weather Bureau Hurricane Advisory Number 14 Hattie 11 PM EST October 30, 1961.
At 11 PM EST ... $0400 Z$... The center of severe Hurricane Hattie was located by reconnaissance aircraft near latitude 17.8 North Longitude B6. 6 West or about 100 miles east northeast of Belize British Honduras and 120 miles southeast of Chetumal Mexico. The hurricane is moving toward the west southwest at about 8 miles per hour.

Highest winds are estimated 150 miles per hour near the center with highest gusts probably close to 200 miles per hour, Winds of gale force extend outward 230 miles in the northeastern semicixcle and over all of the Gulf of Honduras to the southwest.

Little change is expected in course or speed for the next 12 to 24 hours. Destructive winds and tides will occur late tonight and Tuesday along much of the east coast of the Yucatan Peninsula and British Honduras. The most severe conditions will affect the area from the vicinity of Chetumal to just south of Belize with tides ranging up to 15 feet above normal. The center is expected to reach the coast not far from belize by noon Tuesday.

Torrential rains will precede and accompany the center as it moves inland resulting in flooding. All evacuation and other precautionary measures should have been completed by this time. This is an extremely dangerous hurricane.

Small craft around the northwestern Caribbean should remain in port. Shipping near the hurricane should exereise caution.
The next advisory will be issued from the Mlami Weather Bureau at 5 AM EST with an intermediate bulletin at 2 AM EST
MOORE Weather Bureau Miami

Severe Hurricane Hattie continues to move toward Relize British Honduras at 8 miles per hour. The center was about 75 miles eastnortheast of Belize at 2 AM And highest winds are estimated 150 miles per hour with gusts up to 200 miles per hour.

The center should reach the coast about midday but hurricane force winds will begin within the next few hours. High winds and tides will occur today over much of the east coast of the Yucatan Peninsula and British Honduras. The Belize Chetumal area is expected to receive the most severe conditions with tides 10 to 15 feet above normal with salt water flooding the low ground for many miles inland. Torrential rains will also add to the flooding.

This is an exceptionally severe hurricane and all precautions for the protection of life and property ahould be completed.
The next advisory will be issued from the Miami weather Bureau at 5 AM EST.
KRAFT Weather Bureau Miami.

Miami Weather Bureau Hurricane Advisory Number 15 Hattie 5 AM EST October 311961
An hour ago 4 AM EST the barometer was falling repidly when the power failed at Belize. A ship at Belize reported northwest winds well over a 100 miles per hour with waves washing over superstructure of ship at 4 AM. Winds and tides were rising along the east coast of the Yucatan Peninsula and British Honduras. At 5 AM EST.... $1100 \mathrm{~A} .$. . With the center about 30 miles east of Belizenear Latitude 17.4 North Longitude 87.8 West. The hurricane was moving toward the westsouthwest 10 miles per hour and the center should pass near or a little south of Belize within the next few hours.

The area from Belize to Chetumal will havehurricane force winds all morning and tides will be 10 to 15 feet above normal with salt water flooding the low areas for many miles inland. Torrential rains will also add to the flooding.

Highest winds are estimated 150 miles per hour near the center and gales axtend from the coast to 200 miles east of the center.
The most extreme conditions 150 miles per hour winds and 15 foot tides with huge waves will occur at belize in the next few hours and all precautions for the protection of life and property should be continued.

High winds and torrential rains will sprad westward over British Honduras and northern Guatemala as the hurricane moves over land today.

The next advisory will be issued by the Miami Weather Bureau at 11 AM EST with an intermediate builetin at 8 AM EST.
KRAFT Weather Bureau Miami

Miami Weather Buraau Bulletin Hurricane Hattie 8 AM EST Oct 311961.
Severe Hurricane Hattie was on the coast near Belize British Honduras at 8 AM EST. Commanications with Belize failed several hours ago but a ship in the area reported winds well over a 100 miles per hour.

The most severe conditions 150 miles per hour and 15 foot tides with huge waves vere probably already occuring at Belize at 8 AM. Hurricane force winds and tides of 10 to 15 feet above normal are expected from Belize to Chetumal all morning and salt water will be swept many miles inland over the low areas. Torrential rains will add to the flooding.

High winds and torrential raingwill spread westward over British Honduras and northern Guatemalas the hurricane moves over land today. Interests through these areas should be on alert for possible flooding.

All precautions for the protection of life and property should be continued.
The hurricane will pass over same tough ground today and should be considerable weaken by late today,
The next advisory will be issued by the Miami Weather Bureau at 11 AM EST.
KRAFI Weather Bureau Miami

MIAMI WEATHER BUREAU HURRICANE ADVISORY NUMBER 16 HATIIE 11 AM EST OCTOBER 311961.

THE CENTER OF SEVERE HURRICANE HATTIE PASSED OVER THE COAST OF BRITISH HONDURAS AT AND A SHORT DISTANCE SOUTH OF BELIZE AROUND 730 AM EST THIS MORNING ATIENDED BY DESTRUCTIVE WINDS AND VERY HIGH SEAS AND TIDES. WINDS WERE WELL OVER 100 MPH FOR A NUMBER OF HOURS BUT THE MAXIMUM WIND EXPERIENCED THE EXTENT OF THE DAMAGE AND THE NUMBER OF CASUALTIES WILIL NOT BE KNOWN FOR SOME TIME SINCE COMMNICATIONS TO BRITISH HONDURAS HAVE BEEN DISRUPTED.

AT 11. AM EST...1600Z...THE HURRICANE CENTER WAS ESTIMATED NEAR LATTITUDE 17.0 NORTH LONGITUDE 88.8 WEST MOVING WEST SOUTHWESTWARD AT AROUND 10 MPH . THIS POSITION IS ABOUT 50 STATUIE MILES SOUTHWEST OF BELIZE. TTHE HURRICANE IS NOW ENIERING ROUGH TERRRAIN WITH HILLS OVER 3000 FEET HIGH AND THE STORM SHOULD BE LOSING INIENSITY RAPIDLY.

HIGHEST WINDS ARE NOW ESTIMATED AT AROUND 100 MPH NEAR THE CENIER WITH GALE WINDS EXTENDING OUTWARD 200 MILES IN THE EASTERN SEMICIRCLE AND 90 TO 100 MILES IN THE WESTERN SEMICIRCLE. THE HURRICANE IS EXPECTED TO CONIINUE ON A WEST SOUTHWESTWARD COURSE AND AT ABOUT THE SAME SFEED DURING THE NEXT 12 HOURS DISINTEGRATING RAPIDLY. THE DISSIPATING TROPICAL CYCLONE WILL BRING HEAVY RAINS AND SOME FLASH FLOODING DEEP INTO GUATEMALA. ROUGH SEAS AND HIGH TIDES ALONG THE COAST AND WINDS OVER ALI OF BRITISH HONDURAS AND ADJACENT AREAS WILL SITEADILY SUBSIDE THIS AFIERNOON AND TONIGHT.

SMALL CRAFT TN THE NORTHWESTERN CARIBBEAN SHOULD REMAIN IN PORT UNTIL TOMORROW.
THIS IS THE LAST ADVISORY ON HURRICANE HATTIE.
DUNN WEATHER BUREAU MLAMI

