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PRELIMINARY REPORT WITH THE ADVISORIES AND BULLETINS ISSUED.


# National Oceanic and Atmospheric Administration Weather Bureau Hurricane Series 

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## HURRICANE BETSY - SEPTEMBER 2-11, 196́1 Preliminary Report

Hurricane BETSY, second of the 1961 season, developed from a slow-moving easterly wave in the middle Atlantic. The first indications that a tropical disturbance was developing came from the Norwegian tanker GRANHEIM on September 2 when this vessel reported a barometer reading of 980 mbs . ( 28.94 inches) and asserted the ship was in a tropical storm. The Danish tanker CHARLOTTE MAERSK also reported signs of a tropical storm at that time. On the basis of this and other surface reports the first advisory on BETSY was issued on Septamber 3 at 04002 pinpointing the storm 1500 miles east southeast of San Juan, Puerto Rico. Highest winds were estimated at 60 mph near the center and intensification was predicted. BEISY reached hurricane intensity on the morning of September 3rd. when Navy reconnaissance aircraft estimated surface winds at 90 knots. Although the storm originally moved in a west northwest direction, it soon came under the influence of a changing upper air pattern and moved in a norti northwesterly direction from September 3 to September 8. The hurricane became nearly stationary on September 8 but moved rapidly eastward on September 9 after coming under the influence of the North Atlantic westerlies.

BETSY apparently reached maximum intensity on the 6th when Air Force reconnaissance aircraft estimated winds in the eastern quadrant of the hurricane at 120 knots. The central pressure was computed to be 943 mb ( 27.85 inches).

Hurricane BETSY remained at sea during its entire course and at no time was any threat to land areas. The closest the storm came to the U. S. mainland was on the 9th when BEISY was 600 miles southeast of Cape Cod, Mass. No damage, injuries or fatalities have been reported in connection with this hurricane.
gAN JUAN WEATHER BUREAU TROPICAL STORM ADVISORY NUMBER 2 BETSY MIDNIGHI AST SEPTEMBER 21962.
THE SECOND TROPICAL STORM OF THE SEASON HAS FORMED IN THE ATLANTIC. FROM SURFACE VESSEL REPORTS IN THE AREA IT IS ESTIMATED TO BE LOCATED AT MIDNIGET AST... $0400 Z$ NGAR LATITUDE $15.5 N$ LONGITUDE $44.2 W$ OR ABOUT 1500 STATUIE MLLES EAST SOUTHEAST OF SAN JUAN PUERTO RICO.

TROPICAL STORM BETSY APFEARS TO BE MOVING TOWARD THE WEST NORTMWEST AT ABOUT 13 MPH. HTGREST WINDS ARE ESTIMATED TO BE 60 MPH NEAR THE CENTER AND GALE WINDS EXTEND 100 MLLES IN THE NORTEERN SEMLGIRCLE AND 75 MLIES IN THE SOUTHERN SEMLCIRCLE.

IT IS EXPECTED TO CONTINUE MOVING TOWARD THE WEST NORTHWEST AT ABOUT THE SAME SPEED FOR THE NEXT 12 HOURS AND TO INCREASE IN SIZE AND INIENSITY FROBABLY REACHING HURRICANE FORCE WITHIN THE NEXT 24 HOURS. BETSY OFFERS NO IMMEDIATE THREAT TO THE LESSER ANTIILIES.

VESSELS IN THE RATH OF TROPICAL STORM BETSY SHOUD EXERCISE CAUTION.
HIGGS

SAN JUAN WEATHER BUREAU TROPICAL STORM ADVISORY NUMBER 2 BETSY 6 AM AS'T SEPTYMBER 32961.
TROFICAL STORM BETSY IS ESTTMATPED FROM SURFACE VESSEL REPORTS TO BE CENTERED AT 6 AM AST LOOOL NEAR LATITUDE $25.5 N ~ L O N G I T U D E ~ 4 G . O W ~$ OR ABOUT 1350 STATUTE MILES EAST SOUTHEAST OF SAN JUAN PUERTO RTCO.

TROPICAL STORM BETSY APPEARS TO BE MOVING TOWARD THE WEST NORTHWEST ABOUT 12 MPH. HIGHEST WINDS ARE ESTIMATED TO BE 70 MPH IN A SMAL工 AREA NEAR THE CENTER AND GALE WINDS EXTEND OUTWARD 100 MLIES FROM THE CENTER.

IT IS EXPECIED TO CONTINUE MOVING TOWARD THE WEST NORTHWEST AT ABOUT 12 MPH FOR THE NEXT 12 HOURS AND TO INCREASE SLIGHTLY IN SIZE AND INTENSITY REACHING HURRICANE FORCE. TROPICAL STORM BETSY OFFERS NO IMMEDIATE THREAT TO TTE ANITLLES.

VESSELS IN THE PATH OF TROPICAL STORM BETSY SHOULD EXERCISE CAUTION.
THE NEXT ADVISORY ON BETSY WILL EE ISSUED BY THE SAN JUAN WEATHER BUREAU AT LZ OCLOCK NOON AST... $1600 Z$.
FENHLON

SAN JUAN WEATHER BUREAU ADVISORY NUMBER 3 HURRICANE BETSY 12 NOON AST SEPTEMBER 3 196.
TROFICAL STORM BEISY REACHED HURRICANE INTENSITY DURING THE PAST SEVERAL HOURS AND FROM AIRCRAFI RECONNAISSANCE AND SURFACE VESSEL REPORTS HURRICANE BETSY IS CENTERED AT 12 NOON... $16002 .$. .NEAR 16.3 NORIT LATITUDE 47.5 WEST LONGITUDE OR ABOUT 1250 STATVIE MILES EAST SOUTHEAST OF PUERTO RICO.

HURRICANE BETSY IS MOVING TOWARD THE WEST NORTHWEST AT ABOUT 15 MPH. HIGHEST WIND REPORIED IS 200 MPH OVER A SMALI AREA NEAR THE CENTER AND GALE WINDS EXTEND OUIWARD 150 MILES FHOM THE CENTER IN THE NORTHEAST AND 75 MILES IN THE SOUTHWEST QUADRANT.

IT IS EXPECTED TO CONTINUE MOVING TOWARD THE WEST NORTHWEST AT ABOMT 15 MPH FOR THE NEXT 12 HOURS AND TO INCREASE SLIGHTLY IN SIZE AND INTENSITY. HURRICANE BETSY OFFBRS NO IMMEDIATE THREAT TO THE ISLANDS OF THE LESSER ANIILIES ALTHOUGH HEAVY BWELLS ARE EXPECTED TO DEVELOP ON THE EASIERN EXPOSURE OF THE WINDWARD AND SOUTHERN LEEWARD ISLANDS DURING THE NEXT 24 HOURS.

VESSELS IN THE PATH OF HURRICANE BETSY SHOULD EXERCISE CAUFION AND SMALL CRAFT IN THE LESSER ANITLLES SHOULD NOT VENIURE FAR FROM PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE SAN JUAN WEATHER BUREAU AT 6 PM AST... $2200 Z$.
HURTEY

SAN JUAN WEATHER BUREAU HURRICANE ADVISORY NUMBER 4 HURRICANE BETSY GPM AST SEPTEMBER 32961.
FROM ATRCRAFT AND VESSEL REPORTS TODAY IURRICANE BETSY IS CENTERED AT 6 PM AST... 22002...NEAR LAIITUDE 16. $8 N$ LONGITUDE $49.2 W$ OR ABOUT 1160 MILES EAST SOUTHEAST OF SAN JUAN PUERTO RICO.

HURRICANE BETSY IS MOVING TOWARD THE WEST NORTHWEST AT ABOUT 15 MPR. THE HIGHEST WINDS ARE ESTIMATED AT 100 MPH OVER A SMALL AREA NEAR THE CENTER AND GALE WINDS EXITED OUTWARD 200 MLLES FROM TTE CENTER IN THE NORTHEAST AND 75 MLLES FROM THE CENIEER IN THE SOUTHWEST QUADRANTS, LOWEST PRESSURE IS ESTIMATED TO BE 973 MLLLIBARS...28.75 INCHES OF MERCURY.

IT IS EXPECTED TO CONTINUE MOVING TOWARD THE WEST NORTHNEST AT THE SAME SFEED FOR THE NEXT 12 HOURS AND SHOULD INCREASE SLIGHTLY IN SIEE AND INIENSITY. HEAVY SWELLS ARE EXPECIED TO DEVELOP IN THE NORTHERN WINDWARD AND LEEWARD ISLANDS DURING THE NEXT 24 HOURS. VESSELS IN THE PATH OF HURRICANE BEISY SHOULD EXERCISE CAUTION AND SMALL CRAFI IN THE LESSER ANTILLES SHOULD NOT VENTURE FAR FROM PORT.

THE NEXT ADVISORY WILK BE ISSUED BY THE SAN JUAN WEATHER BUREAU AT 12 MIDNIGHT... O4OOZ.
HIGGS

SAN JUAN WEATHER BUREAU HURRICANE ADVISORY NUMBER 5 BEISY MIDNIGHT AST SEPIEMBER 31961.
VESSEL AND AIRCRAFT REPORTS TONIGHT INDICATE IHHAT HURRICANE BETSY HAS RECURVED TOWARDS A MORE NORTHERLY DIRECTION OF MOVEMENT. AT MIDNIGHT ASTO4OOZ IT WAS ESTIMATED TO EE LOCATFD NEAR IATITUDE 19.3N LONGITUDE 49.TW OR ABOUT IIOO MILES EAST OF SAN JUAN PUERIO RICO. HURRICANE BETSY IS NOW MOVING TOWARD THE NORTH NORIHWEST AT A SLIGHTLY ACCELERATED SFEED OF 18 MPH.

HIGHEST WINDS ARE ESTIMATED TO BE 100 MPH OVER A SMAIL AREA NEAR THE CENTER AND GALE WINDS EXTEND OUIWARD 2OO STATUTE MLLES IN THE NORTHWEST QUADRANT' AND 75 STAITYIE MIIES IN THE SOUIHWEST QUADRANT.

HURRICANE BETSY IS EXPECIED TO CONTINUE MOVING NORTH NORTHWESTWARD AT ABOUT 18 MPH FOR THE NEXT 12 HOURS WITH NO CHANGE IN SIZE OR IN INIENSITY.

IN ITS PRESENL POSITIONS AND DIRECITON OF MOVEMENT IT POSES NO THREAT TO THE LESSER ANLILLES. VESSELS IN THE PATH OF THIS HURRTCANE SHOUTD EXERCISE 'CAU'ILON.

THE NEXT ADVISORY WILL BE ISSUED BY THE MLAMI WEATHER BUREAU AT 5 AM EST ... $1000 Z$.
HUNDEBY:

MIAMI WEATHER BUREAU HURRICANE ADVISORY NUMBER 6 BETSY 5AM EST SEPIEMBER 41962.
SPARSE REPORTS RECEIVED DURING THE NIGHT INDICATE THAT HURRICANE BETSY CONTINUES TO MOVE TOWARDS THE NORTTWEST ABOUT ZO MPH. AT $5 A M$ EST...1000Z...IT WAS NEAR LATTTUDE 20.6 NORIT AND LONGITUDE 50.6 WEST OR ABOUT 1000 STAIUTE MIIES EAST OF SAN JUAN PUERTO RICO.

HIGHEST WINDS ARE ESTIMATED 100 MLIES PER HOUR NEAR THE CENTER AND GALES EXTEND OUT $2 O 0$ MILES IN THE NORTHEAST QUADRANT AND 75 MILES IN THE SOUTHWEST,

HURRICANE BEISY IS EXPECTED TO CONTTNUE MOVLNG TOWARD THE NORTHWBS ABOUT $2 O$ MPH WITH LITHLE CHANGE IN SIZE OR INIENSITY FOR THE NEXT 12 HOURS.

SHIPPING IN THE HURRICANE PATH SHOULD EXERCISE CAUTION.
THE NEKT ADVISORY WIL工 BE ISSUED BY THE MUAMI WEATHER BUREAU AT 11 AM EST MONDAY.

## KRAFTI

MLAMI WEATHER BUREAU HURRICANE ADVISORY NUMBER 7 BETSY 11 AM EST SEPTEMBER 4.1961.
ON THE BASIS OF A FENEITATION OF TIEE CENHER OF HURRICANE BETSY BY RECONNATSSANCE AIRCRAFT THIS MORNING THE STORM WAS ESTIMATED AT 11 AM EST. . $1600 Z .$. TO BE LOCATED NEAR LATITUDE 21.5 NORTH LONGITUDE 50.4 WEST OR ABOUT 1100 SILATUTE MILES SOUTHEAST OF BERMUDA,

HURRICANE BEISY IS MOVING TOWARD THE NORTYNORTHWEST AT ABOUT 14 MPH. THE HIGHEST WINDS ARE ESTIMATED AT 100 MPH OVER A SMALL AREA NEAR THE CENIER AND GALE WINDS EXTEND OUFWARD 230 MIIES FROM THE CENTER IN THE NORIHEAST AND IL5 MLLES IN TEE SOUIHWEST QUADRANT. LOWEST PRESSURE IS ESTIMATED AT 987 MB OR 29.15 INCHES.

THE STORM IS EXPECTED TO CONTINUE MOVING IN A NORTHNORTHWEST DIRECTION AT ABOUT THE SAME SPEED FOH THE NEXT L2 HOURS BE CURVING GRADUALIY TOWARD THE MORIH AND NORTHNORTHEASI DURING THE SUBSEQUENT 24 HOURS. NO GIGNIFICANT CHANGE IN INIENSITY IS IRDICATED.

VESSELS IN THE PATH OF HURRICANE BETSY SHOULD EXIRRCISE CAUTION.
PRESENT INDICATIONS ARE THAT BURRICANE BETSY WILU RECURVE NORTHWARD THRU THE MLDDLE ATLANIC AND REFTUSENTS NO THREAT TO THE US MAINLAND.

THE NEXT ADVISORY WILL BE ISSUED BY THE MLAMI WEATHER BUREAU AT 5 PM EST MONDAY.
DUNN

MIAMI WEATHER BUREAU HURRICANE ADVISORY NUMBER 8 BETSY 5 PM EST SEPTEMBER 41961.
RECONHAISSANCE AIRCRAFT AND SHIP REPORTS LOCATED THE CENTER OF HURRICANE BETSY AT 5PM EST... $22 O O Z, . . N E A R ~ L A T I T U D E ~ R 2.9 ~ N O R T H ~$ LONGIIUDE 50.7 WEST OR ABOUT 1075 STATUTE MILES SOUIHEAST OF BERMUDA.

HURRICANE BETSY REMAINS ON A NORTHNORTHWEST COURSE AT ABOUT 25 MPH. HTGHEST WLNDS ARE ESTIMATED AT 100 MPH OVER A SMALL AREA NEAR THE CENIER AND GAJE WINDS EXTEND OUIWARD 200 MILGS EXCEPT ONLY ABOUT 85 MILES IN THE SOUIHWEST QUADRANT, LOWEST PRESSURE IS ESTIMATED AT 982 MRS OR 29.00 INCHES.

BETSY IS FORECAST TO MOVE AT ABOUT THE SAME SYEED GRADUALLY RECURVING TOWARD THE NORTH AND NORTHEAST DURING THE NEXT 12 TO 24 HOURS. NO SIGNIFICANT CHANGE IN INTENSITTI OR SIZE IS INDICATED.

VESSELS IN THE PATH OF KURRICANE BETSY SHOULD EXERCISE CAUTION.
PRESENI INDICATIONS ARE THAT HURRICANE BEISY WILL CONIINUE TO RECURVE NORTHWARD THROUGH THE MUDDLE ATLANTIC OCEAN AND REPRESENIS NO THREAT TO THE US MAINLALD.

THE NEXT REGULAR ADVISORY WILL IS ISSUED BY THE MLAMI WEATHER BUREAU AT 1IPM ESI MONDAY.
CIARK

MIAMI WEATHER BUREAU HURRICANE ADVISORY NUMBER 9 BETSY 11 PM EST SEPTEMBER 41961.
AT 11 PM EST. ..0400Z...HURRICANE BETSY WAS LOCATED NEAR LATITUDE 24.0 NORTH LONGITUDE 50.5 WEST OR ABOUT 1000 MLIES SOUTHEAST OF BERMUDA. THIS IS AN ESTIMATED POSITION BASED ON SPARSE SHIP REPORTS TOGETHER WITH AFTERNOON RECONNAISSANCE FIXES.

HURRICANE BETSY IS MOVING ON A NORTHERLY COURSE AT ABOUT 14 MPH. HIGHEST WINDS ARE ESTIMATED AT 100 MPH OVER A SMALU AREA NEAR THE CENTER AND GALE WINDS EXTEND OUTWARD 200 MLLES EXCEPT ONLY ABOUT 85 MLLES IN THE SOUTHWEST QUADRANT.
betsy is forecast to continue moving at about the same speed and gradually curve towards tee northnortheast and northeast during THE NEXT 12 TO 24 HOURS, NO SIGNIFICANT CHANGE IN INTENSITY OR SIZE IS INDICATED.
vessels in the path of hurricane betsy should exercise cauilion.
PRESENT INDICATIONS ARE THAT FURRICANE BETSY WILL CONTINUE ON A COURSE THAT WILL KEEP IT FAR AT SEAS AND THEREFORE IT OFFERS NO THREAT TO THE U.S. MAINLAND.
the next regular advisory will be issued by the muami weather bureau at 5 am est tuesday.
HILL
kLami weather bureau advisory number 10 betsy 5 am est tuesday 5 sepiember 1961.
AT 5 AM EST... 1000Z...HURRICANE BETSY WAS CENIERED NEAR LATITUDE 25.3 NORTH AND LONGITUDE 50.7 WEST OR ABOUT 1000 MLLES SOUTHEAST OF BERMUDA AND WAS CONTINUNG TO MOVE TOWARD THE NORTH ABOUT 15 MPH.
highest winds are estimated 100 mph near the cenier and gaies extend out about 200 miles to the east and north of the center and 85 MILES TO THE SOUTHWEST.

HURRICANE BETSY IS EXPECTED TO CONTINUE NORTHWARD MOVEMENT AT ABOUT THE SANE SPEED WITH LITTLE CHANGE IN SIZE OR INIENSITY DURING the next 12 to 24 HOURS WITH A TURN tOWARD NORTHEAST LATER. THIS CARRIES THE HURRICANE FAR TO SEA AND IT OFTERS NO THREAT TO THE UNITED STAIES MAINEAND.

VESSELS IN THE PATH SHOULD EXERCISE CAUTION
THE NEXT ADVISORY WILL bE ISSUED BY THE MLAMI WEATHER BUREAU AT 11 AM EST.
KRAFT
miami weather bureau hurricane advisory number 11 betisy 11 am est sepiember 51961.
RECONNAISSANCE ATRCRAFT AND SHIPPING REPORTS FROM THE IMNEDIATE VICINITY OF HURRICANE BEISY INDICATED A NORTHNORTHWEST MOVENENT AT ABOUT 15 MPH DURING THE LAST 12 HOURS WITH YIE CENTER AT 11 AM EST... $16002 .$. . ESTIMATED TO BE REAR LATTTUDE 27.1 NORIH AND LONGITUDE 52.9 WEST OR ABOUT 800 STATUTE MLLES EASTSOUTHEAST OF BBRMUDA.
hIGHeSt Winds are 100 MPH near the Center and gaies extend outward 200 miles to the fast and north of the centin and 85 illes to THE SOUTHWEST.
 intensity. Even though hurricaie bexsy has shown a more northuesterly course during the night it still offers no threat to ite US MAINLAND.

VESSELS IN THE PAIT OF HURRICANE BETSY SHOULD EXPRCISE CAUIION.
the next advisory will be issued by the manil weather burenu at 5 fm est tuesday.
CLARK WEATHER BUREAU MLAMI

MLAMI WEATHER BUREAU HURRICANE ADVISORY NUMBER 12 BETSY 5 PM EST SEPTEMBER 51961.
REPORTS FROM RECONNAISSANCE AIRCRAFI INDICAIE HURRICANE BETSY HAS INTENSIFIED SOME DURING THE DAY BUT CONTINUES ON A NORTH NORTHWEST COURSE NEAR 16 MPH. AT 5 PM EST.., 22OOZ. . THE CENTER WAS NEAR LATITUDE 28.0 NORTH LONGITUDE 53.5 WEST OR ABOUT 725 MILES EASTSOUTKEAST OF BERMUDA AND 1600 MILES EAST OF MLAML.

HIGHEST WINDS ARE NOW AROUND 115 MPH OVER A SMALL AREA NEAR THE CENTER AND WINDS OF hURRICANE FORCE ARE WITHIN 45 MILES OF THE CENTER, GALE WINDS EXTEND OUTWARD 215 MLLES EXCEPT ONLY SOME 100 MILES IN THE SOUTHWEST QUADRANT.

HURRICANE BETSY IS EXPECTED TO MAIMTAIN ABOUT THE SAME COURSE AND SPEED DURING THE NEXT 12 TO 24 HOURS WITH NO IMPORTANT CHANGE IN SIZE OR INIENSITY. HURRICANE BETSY STILL OFFERS NO THREAT TO THE US MAINLAND.

VESSELS IN THE PATH OF THE RURRICANE SHOULD EXERCISE EXTREME CAUTION
the next advisory will be issued by the miami weather bureau at 11 pm est tuesday.
CLARK

Miami Weather Bureau Hurricane Advisory Number 13 BETSY, 11 p.m. EST September 5, 1961.
Reconnaissance aircraft indicate that Hurricane Betay has iatensified a little this evening and is continuing on a northnorthwesterly course near 18 mph . at 11 pm EST... 0400 Z ...the center was near latitude 29.4 north longitude 54.7 west or about 620 Statute miles Eastsoutheast of Bermuda.

Highest winds are now around 125 mph over a small area near the center and winds of hurricane force extend outward 45 miles from the center. Gale winds extend outward 225 miles except only some 100 miles in the southwest quadrant.

Hurricane Betsy is expected to maintain a northnorthwesterly course near 18 mph tonight and early Wednesday. The course should be a iittle more northerly late Wednesday. Little change in size or intensity is forecast. The Hurricane offers no threat to the US mainland.

Vessels in the path should exercise extreme caution.
The next regular advisory will be issued by the Miami Weather Bureau at 5 am EST Wednesday.
sugg.

Miami Weather Bureau Hurricane Advisory Number 14, BETSY 5 am EST 6 September 1961.
Hurricane Betsy was near latitude 30.8 north longitude 55.2 West at 5 am EST... 1000 Z ...or about 550 statute miles east of Bermuda and moving north northwestward 18 mph .

Highest winds are estimated 125 mph near the center and gales extend out 225 miles to the east and north and 100 miles southwest of the center.

Indications are for northward movement about 18 mph today with little change in size or intensity. The hurricane offers no threat to the United States Mainland.

Vessels in the path should exercise extreme caution.
The next Advisory will be issued by the Miami Weather Bureau at 11 am EST.
KRAFT.

Miami Weather Bureau Hurricane Advisory Number 15 BETSY. 11 am EST September 6, 1961.
Reconnaissance aircraft indicate that hurricane Betsy continues on a northnorthwest course with a speed near 17 mph and is an intense and well defined storm. At 11 am EST... 1600 Z ...the center was near latitude 31.7 north longitude 56.7 west or about 480 statute miles east of Bermuda and 1100 miles eastsoutheast of Cape Hatter as North Carolina.

Highest winds are about 125 mph over a small area near the center and hurricane force winds within 60 miles of the center. Gales extend outward 225 miles to the East and North and 100 miles to the Southwest. Lowest pressure is estimated at 945 MB or 27.90 inches.

Hurricane Betsy is forecast to continue in about the same direction but with a slightly slower forward speed during the next l2 hours and probably turn to a more northerly course thereafter. Little change is expected in size or intensity. The Hurricane offers no threat to the United States Mainland.

Vessels in the path of Hurricane Betsy should exercise extreme caution.
The next advisory will be issued by the Miami Weather Bureau at 5 pm EST.
CLARK, Weather Bureau Miami.

Miami Weacher Bureau Hurricane Advisory Number 16 BETSY 5 pm EST September 61961 ,
Reconnaiseance aircraft reports indicate Hurricane Betsy is an intense and well defined storm continuing to move towards the northnorthwest at about 17 mph . At 5 pm EST...22002...the center was near latitude 33.3 north longitude 57.2 west or about 430 statute miles slightly north of east from Bermuda and 1050 miles east of Cape Hatteras North Carolina.

Highest winds were estimated 135 mph over a amall area near the center and hurricane force winda within 70 miles of the center. Gales extend outward 225 miles to the north and east and 100 miles to the southwest. Lowest pressure is estimated at 845 MBS or 27.90 inches.

Hurricane Betsy is forecast to make a gradual turn to the north with a slightly slower forward speed during the next 12 to 24 hours. Little change is expected in size or intensity. The hurricane offers no threat to the United States Mainland.

This is a severe hurricane and all shipping in its path should exercise extreme caution.
The next advisory will be isaued by the Washington Weather Bureau office at 11 pur EST.
CLARK

## Washington Weathet Bureau Hurricane Advisory Number 17 BETSY 11 pmest Sept 6, 1961.

Reconnaissance aifcraft which penetrated the eye of Hurricane Betsy on Wednesday reported that the center of the hurricane was intense and well defined. Present indications are that the storm is moving toward the north northwest at about 15 milles per hour. At 11 pm RST. . 04002 the center was near latitude 34.5 north longitude 57.5 west or about 460 stature miles east northeast of Bermuda and 1030 miles east of Cape Hatteras North Carolina.

Highest winds were estimated 235 mph ovr a small area near the center and hurricane force winds within 70 miles of the center. Gales extend outward 225 miles to the north and east and 100 mlles to the southwest. Lowest pressure is estimated at 945 MBS or 27.90 inches.

Hurricane Betsy is forecast to continue moving at itg present forward speed toward the north northwest with some gradual turning toward the north during the next 12 to 24 hours. Little change is expected in size or intensity. The hurricane offers no threat to the United States Mainland.

This is a severe hurricane and all shipping in its path should exercise extreme caution.
The next advisory will be issued by the Washington Weather Bureau at 5 am EST Thursday.
MOOK

Washington Weather Bureau Hurricane Advi.sary Number 18 BETSY 5 am EST September 71961.
Little information has been received from the immediate vicinity of Hurricane Betsy during the night. At 5 am EST... $10002 .$. the center was estimated to be located near latitude 35.4 north longitude 58.0 west or about 460 statute miles east northeast of Bermuda and about 1000 miles east of Norfolk, Virginia moviag north northwest about 14 mph .

Betsy is a dangerous hurricane with an intense well defined core of winds estimated at 135 mph over a small area near the center and hurricane force winds extend 70 miles from the center. Gale winds extend outward 225 miles to the north and east and 100 miles to the southwest. The lowest pressure is estimated at 945 MBS or 27.91 fnches.

Hurricane Betsy is farecast to slow its forward speed today and gradually turn to northeast tonight. Little change is expected in size or intensity. The hurricane offers no threat to the United States Mainland.

This is a severe hurricane and all shipping in its path should exercise extreme caution.
The next advisory will be issued by the Washington Weather Bureau at 11 am EST.
E. HOOVER.

Washington Weather Bureau Hurricane Advigory Number 19 BETSY 11 am EST September 7, 1961.
Little or no information was received during the night from the vicinity of Hurricane Betsy. Reconnaissance aircraft located the storm a few hours ago and at 11 am EST... 16002...the center was near latitude 35.0 north longitude 59.0 west or about 380 statute miles northeast of Bermuda and 930 statute miles east of Cape Hatteras. The hurricane is moving toward the northwest at a speed of around 11 miles per hour.

Betsy is still a dangerous hurricane with winds up to 125 miles per hour over a small area around the center and hurricane force winds extend outward 90 miles from the center. Gale force winds extend outward 230 miles except only 115 miles over the southwest quadrant. The lowest pressure reported by aircraft this morning was 978 MBS or 28.88 inches.

Hurricane Betsy is expected to continue its present speed and direction for the next 12 hours then show a gradual change to a more northward course. Little change is expected in size or intensity during the next 12 hours.

All shipping in the path should exercise extreme caution.
The next advisory will be issued by the Washington Weather Bureau at 5 pm EST.
norquest.

Washington Weather Bureau Hurricane Advisory Number 20 BETSY 5 pmest September 7, 1961.
Reconnaissance aircraft reports indicate hurricane Betsy has moved very slowly during the pabt 6 hours and at 5 pm EST... 2200Z... was centered near latitude 34.8 north longitude 58.8 west or about 380 statute miles northeast of Bermuda or 770 statute miles southeast of Nantucket Island.

Betsy is still a dangerous hurricane with winds up to 125 miles per hour over a mall area near the center and hurricane force winds extend outward about 90 miles from the center. Gale force winds extend outward 230 miles except only out to 115 miles over the southwest quadrant. The lowest pressure reported by aircraft this afternoon was 954 Miliibars or 28.17 inches.

Hurxicane Betsy is expected to move on a northward course about 7 miles per hour during the next 12 to 24 hours, Little change is expected in size or intensity during the next 12 hours.

All shipping in the path of Betsy should continue to exercise extreme caution.
The next advisory will be issued by the Washington Weather Bureau at 11 pm EST.
SChmidt.

Washington Weather Bureau Hurricane Advisory Number 21 BETSY 11 pm EST September 7, 1961.
Aircraft and ship reports received from the vicinity of Hurricane Betsy show that the hurricane has continued to move very slowly during the past 6 hours and at $11 \mathrm{pm} E S T$... $0400 \mathrm{Z} .$. .was centered near latitude 35.0 north longitude 58.9 west or about 400 statute miles northeast of Bermuda or 760 miles southeast of Nantucket Massachusetts.

The highest winds in Hurricane Betsy are 125 wiles per hour over a small area near the center and winds of hurricane force extend outward 90 miles from the center. Gale force winds extend outward 230 mities north and east of che center and to a distance of 115 miles southwest of the center of this dangerous hurricane.

Betsy is expected to move on a northward course at about 7 miles per hour for the next 12 hours and increase slightly in forward speed as it begins to turn gradually coward the north northeast on Friday afternoon.

All shipping in the path of Hurricane Betsy should continue to exercise extreme caution,
The next advisory on Hurricane Betsy will be issued by the Washington Weather Bureau at 5 am Friday.
MOOK

Weather Bureau Washington National Airport September 8, 1961. Washington Weather Bureau Hurricane Advisory Number 22 BETSY 1000Z September 8

Little information has been received from the iumediate vicinity of Hurricane Betsy during the night. At 10002 the center was estimated to be near latitude 35.5 north longitude 59.2 west. Betsy continues to move very slowly in north northwest direction.

The highest winds in Hurricane Betsy are estimated at 110 knots over a small area near the center and winds of hurricane force extend outward 80 miles from the center. Gale force winds extend outward 200 miles north and east of the center and to a distance of 100 miles southwest of the center. Betsy ia still a dangerous hurricane with an intense well defined core of strong winds.

Hurricane Betsy is not expected to move much during the next 24 hours possibly drifting northward around 5 knots today and turning more easterly tonight with forward speed increasing slowly. Little change is expected in size or intensity during the next 24 hours.

All shipping in the path of Betsy should continue to exercise extreme caution.
The next advisory will be issued by the Washington Weather Bureau 1600 Z .

## E, HOOVER

## Washington Weather Bureau Hurricane Advibory Number 23 日ETSY 11 am EST September 8, 1961.

Reconnaissance aircraft and ship reports indicate that Hurricane Betsy has continued to move slowly toward the northwest and at 11 am EST. . 1600 , .. the center was located near latitude 36.2 north longitude 60.4 west or about 360 statute miles northeast of Bermuda and about 660 miles southeast of Cape Cod, Massachusetts.

The highest winds in Hurricane Betsy are about 125 miles per hour over a small area near the center and hurricane force winds extend outward about 90 miles. Gale force winds continue to extend about 230 miles to the north and east of the center and about 115 miles to the southwest.

Hurricane Betsy is forecast to move towards the northwest about 6 miles per hour during the next 12 hours with forward speed increasing gradually.

Little change is expected in size or intensity during the next 12 hours.
All shipping in the path of Betsy should exercise extreme caution
The next advisory will be issued by the Washington Weather Bureau at 5 pm EST.
SCHMIDT

Washington Weather Bureau Hurricane Advisory Number 24 BETSY 5 pm EST September 8, 1961.
Reports from reconnaissance alrcraft indicate that Hurricane Betay has moved very little during the past 6 hours and at 5 pm Est. 2200 Z ...was located near latitude 35.9 north longitude 59.9 west or about 365 statute miles northeast of Bermuda and about 660 statute miles southeast of Cape Cod Massachusetts.

The highest winds in Hurricane Betsy are about 115 miles per hour over amall area near the center and hurricane force winds extend outward about 80 miles . Gale force winds extend outward about 230 miles to the north and east of the center and about 115 miles to the southwest.

Hurricane Betsy is forecast to move slowly northward during the next 12 to 24 hours with a forward speed of about 6 miles per hour tonight and a slow increase in forward speed on Saturday.

Little change is expected in size or intensity during the next 12 hours.
All shipping in the path of Hurricane Betsy should exercise extreme caution.
The next advisory will be issued by the Washington Weather Bureau at 11 pm EST.

Weather Bureau Airport Station East Boston Mass September 8, 1961. Boston Weather Bureau Statement on Hurricane BETSY 6pm EDT. .
Hurricane Betsy has moved very little during the past 6 hours but it is expected to take a turn to the north in the next 12 to 24 hours. This path will carry the storm and its dangerous winds well to the east of the New England coast. However swells and seas associated with the hurricane may affect the New England coast from Block Island northward. Easterly swells of 4 to feet are expected from Block Island to Portsmouth NH through tonight and Saturday but no unusually rough seas are yet indicated for that area. Winds are forecast to increase to about 10 to 15 knots from the northeast from Eastport to Biock Island on Saturday. Further statements on the effects of Hurricane Betsy on the New England coast will be issued by the Boston Weather Bureau if the situation becomes more threatening.

## TENENBAUM

Weather Bureau Washington National Airport Friday September 8, 1961. Washington Weather Bureau Advisory Number 25 BETSY 11 pm EST September 8, 1961.

Reports received from reconnaissance aircraft indicate that Hurricane Betsy has decreased slightly in intensity during the past 24 hours but that it must still be classed as a dangerous hurricane. Betsy has been moving very slowly toward the north or north northwest and at 11 pm EST. . 0400 Z ....was located near latitude 36.7 north longitude 60.0 west or about 620 statute miles southeast of Cape Cod Massachusetts.

The highest winds in Hurricane Betsy are about 90 miles per hour over a small area near the center and hurricane force winds extend outward about 70 miles. Gale force winds continue to extend outward about 230 miles to the north and east and about 115 miles to the southwest. The lowest sea level pressure was reported by aircraft at 974 MBS or 28.76 inches.

Hurricane Betsy is forecast to move slowly northward during the next 24 hours with a forward speed of about 6 miles per hour.
Some decrease in intensity near the center of the hurricane is expected to occur during the next 12 to 24 hours but the area of gale winds around the hurricane may increase slightly.

All shipping in the path of Hurricane Betsy should exercise extreme caution.
The next advisory on Hurricane Betsy will be issued by the Washington Weather Bureau at 5 am EST Saturday.
MOOK

Washington Weather Bureau Advisory Number 26 BETSY 5 am EST September 9, 1961.
Little information has been received from the fmediate vicinity of Hurricane Betsy during the night. At 5 am EST... $10002 .$. the center was estimated near latitude 37.0 north longitude 60.0 west or about 600 statute miles southeast of Cape Cod Massachusetts. Hurricane Betsy is moving very slowly in a mostly northward direction.

The highest winds in Hurricane Betsy are about 90 miles per hour over a small area near the center and hurricane force winds extend outward about 60 miles. Gale winds extend outward about 230 miles from the center.

Hurricane Betsy is not expected to move much during the next 24 hours gradually turning more toward east with forward speed increasing slowly.

The intensity is expected to decrease near the center while the area of gale winds around the hurricane may increase slightly during the next 24 hours.

All shipping in the path of Hurricane Betsy should exercise caution.
The next advisory on Hurricane Betsy will be issued by the Washington Weather Bureau at 11 am EST,
E. HOOVER

Washington Weather Bureau Advisory Number 27 BETSY 11 am EST September 9, 1961.
Reconnaissance aircraft this morning indicate that Betsy has moved slowly eastward during the night with some rise in central pressure. The center at 11 am EST...1600Z...was located at latitude 36.5 north longitude 58.6 west or about 1700 statute miles southeast of Cape Cod, Massachusetts.

The bighest winds are about 90 miles per hour and hurricane force winds cover a small area around the center. Gale force winds extend outward about 230 miles from the center. The lowest pressure reported by aircraft was 982 MBS or 29.00 inches.

Hurricane Betsy is expected to move toward the northeast at 6 or 7 miles per hour for next 12 hours then gradually increase in forward speed and move between nor theast and eastnortheast.

The intensity should continue to decrease gradually near the center while the area of gale winds slowly expand during the next 24 hours.

All shipping in the path should exercise caution.
The next advisory on Hurricane Betsy will be issued by the Washington Weather Bureau at 5 pm EST.
NORQUEST

Washington Weather Bureau Hurricane Advisory Number 28 BETSY 5 pm EST September 9, 1961.
Aircraft reports during the day have indicated that Betsy has been moving in a general northeasterly direction at around li miles per hour. At 5 pm . EST., 2200Z...Betsy was centered latitude 38.2 north longitude 57.2 west or about 700 statute miles east southeast of Cape Cod Massachusetts.

Highest winds are about 85 miles per hour and hurricane force winds cover a small area around the center. Gales extend outward about 230 miles.

Hurricane Betsy is expected to move generally toward the northeast at about 11 miles per hour for the next 12 hours then turn more toward the east and increase in forward speed.

The intensity should continue to decrease gradually near the center while the area of gale winds may alowly expand during the next 24 hours.

All shipping in the path should exercise caution.
The next advisory on Hurricane Betsy will be isaued by the Washington Weather Bureau at 11 pm EST. norquest

Washington Weather Bureau Hurricane Advisory Number 29 BETSY 11 pm EST September 9, 1961.
Reports received from reconnaissance alrcraft on Saturday along with reports from ships in the area indicate that Hurricane Betsy has continued to more northeastward about 11 miles per hour and at 11 pm ESS... $04002 .$. was centered latitude 38.8 north longitude 56.2 west or about 550 statute miles southeast of Halifax Nova Scotia.

Hurricane Betsy has continued to decrease in intensity near its center and highest winds are now estimated to be around 80 miles per hour. Hurricane force winds are limited to a small area near the center but gales extend outward about 230 miles.

Hurricane Betsy is expected to turn more toward the east northeast as its forward speed increases to 18 miles per hour or more on Sunday. The intensity should continue to decrease gradually near the center during the next 24 hours.

All shipping in the path of Betsy should exercise caution.
The next advisory will be issued by the Washington Weather Bureau at 5 an EST Sunday,
MOOK

Washington Weather Bureau Hurricane Advisory Number 30 BETSY 10002 September 10.
Little information has been received from the immediate vicinity of Hurricane Betsy during the night. at 1000 f the center was estimated near 39.5 N 55.0 N . Betsy is moving east northeastward about 15 knots.

The highest winds in Hurricane Betsy are about 70 knots near the center. Hurricane force winds are also limited to small area near the center. Gale winds extend outward about 200 miles from the center.

Hurricane Betsy is forecast to continue on east northeast track with forward speed increasing steadily during next 24 hours. This movement will place the center close to the atationary weather ship at latitude 44 north and longitude 41 west late tonight or early Monday morning. The intensity should continue to decrease gradually near the center during the next 24 hours.

All shipping in the path of Betsy should exercise caution.
The next advisory will be issued by the Washington Weather Bureau at 16004 .
E. HOOVER

Washington Weather Bureau Hurricane Advisory Number 31;11 am EST September 10, 1961.
Reports received from reconnaissance aircraft this morning indicate that Hurricane Betsy has been moving east northeastward about 22 miles per hour and at 11 an EST... 1600 Z ...the center was located near latitude 40.0 north longitude 50.5 west or about 480 statute miles south southeast of Cape Race Newfoundland.

Highest winds in Hurricane Betsy are now about 75 miles per hour over a very small area near the center. Gale force winds extend outward about 230 miles from the center.

Hurricane Betsy is forecast to continue moving towards the east northeast during the next 24 hours and with forward speed increasing to about 34 miles per hour after 12 hours. This movement will bring the center close to the stationary weather ship at latitude 44 north and longitude 41 west late tonight or early Monday. The intensity should decrease gradually near the center and the storm will probably begin losing its tropical charactaristics after another 12 hours.

A11 shipping in the path of Betsy should exercise caution.
The next advisory will be issued by the Washington Weather Bureau at 5 pm EST today.
SCHMIDI

Washington Weather Bureau Hur ricane Advisory Number 32 BEISY 5 pm EST September 10, 1961.
Reports received from reconnaissance aircraft this afternoon indicate that Hurricane Betsy is moving towards the east northeast
 500 statute miles southeast of Cape Race Newfoundland.

The highest winds in Hurricane Betsy are still about 75 miles per hour over a small area near the center, Gale force winds extend outward about 230 miles in all directions.

Hurricane Betsy is forecast to continue moving towards the east northeast during the next 24 hours with a forward speed of about 30 miles per hour during the first 12 hours and speed increasing to about 36 miles per hour the next 12 hours. This movement will bring the center somewhat to the south of stationary weather ship at latitude 44 north and longitude 41 west late tonight or early Monday. The intensity will remain the same for about 12 hours but after that time the storm will probably begin losing its tropical characteristics as it moves over colder water.

All shipping in the path of Betsy should continue to exercise caution.
The next advisory will be issued by the Washington Weather Bureau at 11 pm EST today.
SCHMIDT

Washington Weather Bureau Hurricane Advisory Number 33 BETSY 11 pm EST September 10, 1961.
Hurricane Betsy has continued to move toward the east northeast at a speed of about 30 miles per hour and at 11 pm est.. 0400 C . . . the center was located near latitude 41.3 north longitude 44.2 west or about 590 miles southeast of Cape Race Newfoundland.

The highest winds in Hurricane Betsy are still estimated to be about 75 miles per hour over a small area near the center. Gales extend outward about 230 miles in the southeast semicircle and about 170 miles in the northwest semicircie.

Hurricane Betsy is forecast to continue moving toward the east northeast with a forward speed of about 35 miles per hour and increasing in forward speed to 40 miles per hour and turning more toward the east after 12 hours. This course will take Hurricane Betsy north of the Azores Islands at a considerable distance on Monday afternoon. The storm is not expected to change in size or intensity during the next 24 hours.

All shipping in the path of Betsy should continue to exercise caution.
The rext advisory on Hurricane Betsy will be issued by the Washington Weather Bureau at 5 am EST Monday.
MOOK

Washington Weather Bureau Hurricane Advisory Number 34 BETSY 5 an EST September 11, 1961.
Hurricane Betsy continues to move toward the east northeast and the forward speed has increased to about 35 miles per hour and at 5 am EST... 1000Z...the center was located near latitude 42.5 north longltude 39.5 west or about 500 statute miles northwest of the most western of the Azores Islands.

The highest winds in Hurricane Betsy are still estimated about 75 miles per hour over a small area near the center. Gales extend outward about 350 miles in the southeast semicircle and about 170 miles in the northwest semicircle. Gale winds are expected on the western island of the Azores during the afternoon taday.

Hurricane Betsy is forecast to continue moving toward the east northeast with the forward speed increasing to more than 40 miles per hour during the next 24 hours. The intensfty should decrease near the center and Betsy should lose her tropical characteristics as she moves over colder water tonight if not during the day today.

All shipping in the path of Betsy should continue to exercise caution.
The next advisory will be issued by the Washington Weather Bureau at 11 am EST today,

## E. HOOVER

Washington Weather Bureau Hurricane Advisory Number 35 BETSY 11 am EST September 11, 1961.
Reports from reconnaissance aircraft indicate that Hurricane Betsy has moved about 40 miles per hour towards the east northeast and at 11 am EST. . $16002 .$. the center was located near latitude 46.2 north and longitude 36.0 west or about 530 statute miles northwest of the most western Azores Lslands.

The highest winds in Betsy are still about 75 miles per hour over a small area near the center. Gales extend outward about 350 miles to the east and south and about 170 miles to the northwest.

Betsy is forecast to move towards the east northeast about 40 miles per hour during the next 12 hours and then turn more towards the northeast at about the same speed. The intensity should decrease near the center and the storm should lost its tropical characteristics during the next 12 hours as $f$ moves over colder water.

All shipping in the path of Betsy should continue to exercise caution. This is the last public advisory on Betsy. Future advices on this storm will be carried in the Marine Advisories issued from Washington for broadcast over NSS.

SCHMIDT

