

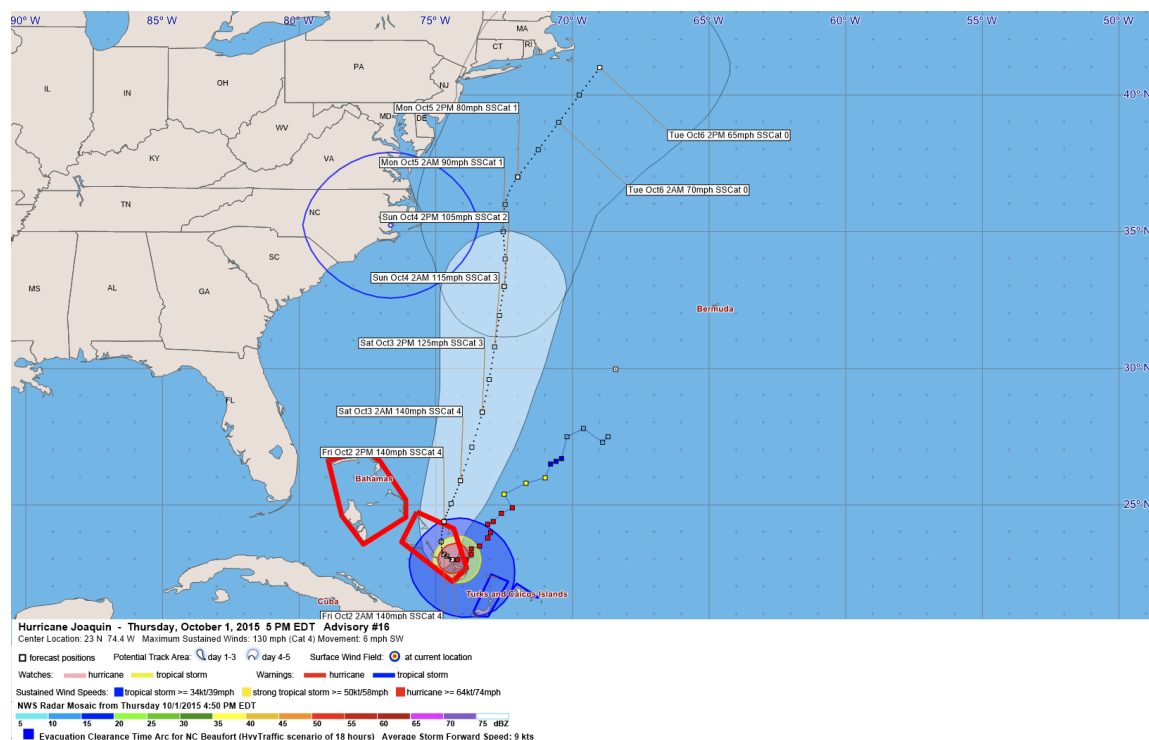
Storm Summary for Hurricane Joaquin

Thursday, October 1, 2015 at 5 PM EDT

(Output from Hurrevac, based on National Hurricane Center Forecast Advisory #16)

Joaquin is currently a Category 4 major hurricane on the Saffir-Simpson Hurricane Wind Scale, with maximum sustained winds of 130 mph (115 kts), moving southwest at 6 mph. The estimated minimum central pressure is 936 mb. Hurricane-force winds extend outward up to 45 miles (75 km) from the storm center. Tropical storm-force winds extend outward up to 175 miles (280 km) from the storm center.

Certain coastal locations are under Hurricane Warning and Tropical Storm Warning. The geographic extents of these watches and warnings are detailed in the advisory text at the end of this report.



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WTNT31 KNHC 012045

BULLETIN
HURRICANE JOAQUIN ADVISORY NUMBER 16
NWS NATIONAL HURRICANE CENTER MIAMI FL AL112015
500 PM EDT THU OCT 01 2015

...EXTREMELY DANGEROUS CATEGORY 4 JOAQUIN MOVING THROUGH THE
CENTRAL BAHAMAS...
...HURRICANE CONDITIONS TO CONTINUE OVER THE CENTRAL BAHAMAS
TONIGHT...

SUMMARY OF 500 PM EDT...2100 UTC...INFORMATION

LOCATION...23.0N 74.4W
ABOUT 15 M...25 KM NW OF CROOKED ISLAND BAHAMAS
ABOUT 70 MI...110 KM S OF SAN SALVADOR BAHAMAS
MAXIMUM SUSTAINED WINDS...130 MPH...215 KM/H
PRESENT MOVEMENT...SW OR 235 DEGREES AT 6 MPH...9 KM/H
MINIMUM CENTRAL PRESSURE...936 MB...27.64 INCHES

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

None.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Warning is in effect for...

- * Central Bahamas
- * Northwestern Bahamas including the Abacos, Berry Islands, Eleuthera, Grand Bahama Island, and New Providence
- * The Acklins, Crooked Island, and Mayaguana in the southeastern Bahamas

A Hurricane Watch is in effect for...

- * Bimini
- * Andros Island

A Tropical Storm Warning is in effect for...

- * Remainder of the southeastern Bahamas including the Turks and Caicos Islands
- * Andros Island

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. Preparations to protect life and property should be complete in the central Bahamas.

A Hurricane Watch means that hurricane conditions are possible within the watch area.

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area.

For storm information specific to your area, please monitor products

issued by your national meteorological service.

DISCUSSION AND 48-HOUR OUTLOOK

At 500 PM EDT (2100 UTC), the center of Hurricane Joaquin was located near latitude 23.0 North, longitude 74.4 West. Joaquin is moving toward the southwest near 6 mph (9 km/h), and a westward or southwestward motion is expected through tonight. A turn toward the north is expected on Friday, and a faster motion toward the north is expected Friday night and Saturday. On the forecast track, the center of Joaquin will move near or over portions of the central Bahamas tonight and pass near or over portions of the northwestern Bahamas on Friday.

Maximum sustained winds are near 130 mph (215 km/h) with higher gusts. Joaquin is a category 4 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some additional strengthening is possible tonight and Friday, with some fluctuations in intensity possible Friday night and Saturday.

Hurricane-force winds extend outward up to 45 miles (75 km) from the center and tropical-storm-force winds extend outward up to 175 miles (280 km).

The estimated minimum central pressure is 936 mb (27.64 inches).

HAZARDS AFFECTING LAND

WIND: Hurricane conditions are expected to continue across portions of the central and southeastern Bahamas through Friday. Hurricane conditions are expected over portions of the northwestern Bahamas tonight and Friday. Tropical storm conditions will affect other portions of the southeastern Bahamas, and the Turks and Caicos Islands through tonight.

STORM SURGE: A very dangerous and life-threatening storm surge will raise water levels by as much as 5 to 10 feet above normal tide levels in the central Bahamas in areas of onshore flow. A storm surge of 2 to 4 feet above normal tide levels is expected in the remainder of the Bahamas within the hurricane warning area. Near the coast, the surge will be accompanied by large and dangerous waves.

RAINFALL: Joaquin is expected to produce total rain accumulations of 10 to 15 inches over the central Bahamas with isolated maximum amounts of 20 inches. Rainfall amounts of 5 to 10 inches are expected over the southeastern Bahamas, with 2 to 4 inches over the northwestern Bahamas. This rainfall could result in life-threatening flash floods. Outer rain bands of Joaquin may affect portions of eastern Cuba, Haiti, and the Dominican Republic today and tonight.

SURF: Swells generated by Joaquin will affect portions of the Bahamas during the next few days, and will begin to affect portions of the southeastern coast of the United States tonight and spread northward through the weekend. These swells are likely to cause life-threatening surf and rip current conditions. Regardless of Joaquin's track, a prolonged period of elevated water levels and large waves will affect the mid-Atlantic region, causing significant

beach and dune erosion with moderate coastal flooding likely. Please consult products from your local weather office.

NEXT ADVISORY

Next intermediate advisory at 800 PM EDT.

Next complete advisory at 1100 PM EDT.

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Forecaster Beven

WTNT41 KNHC 012045

HURRICANE JOAQUIN DISCUSSION NUMBER 16
NWS NATIONAL HURRICANE CENTER MIAMI FL AL112015
500 PM EDT THU OCT 01 2015

The earlier Air Force Reserve Hurricane Hunter aircraft reported 700-mb flight-level winds of 120 kt in the southwestern eyewall, with a subsequent 114-kt surface wind estimate from the Stepped Frequency Microwave Radiometer in the southeastern eyewall. The last central pressure extrapolated from the aircraft data was 936 mb. In addition, satellite intensity estimates from TAFB, SAB, and CIMSS are now in the 115-127 kt range. Based on these data, the intensity was increased to 115 kt at 1800 UTC, making Joaquin a Category 4 hurricane. While this advisory will not increase the intensity any further, it is expected that the next aircraft arriving in the hurricane near 0000 UTC will find a stronger system.

Joaquin is expected to intensify a little more during the next 12 hours or so as it remains over very warm waters and in an environment of decreasing vertical shear. After that time, there could be some fluctuations in intensity due to eyewall replacement cycles. While there remains some uncertainty regarding the intensity in the 48-96 hour range, the new forecast is similar to the previous forecast in calling for a steady weakening during this period. Overall, the intensity forecast lies near the upper edge of the guidance envelope.

Joaquin has moved with a more westward component during the past few hours and the initial motion is now 235/5. Water vapor imagery shows a mid- to upper-level ridge north of the hurricane, with a developing deep-layer trough over the eastern and southeastern United States. The dynamical models forecast this trough to become a cut-off low as it moves southeastward and weakens the ridge. This pattern evolution should cause Joaquin to turn northward in 12-24 hours. The guidance after 48 hours has changed somewhat since the last advisory, with the GFS and the UKMET moving farther to the east and lying closer to the ECMWF. In addition, the HWRF has made a big jump to the east and now shows an offshore track. These changes have pushed the consensus models farther eastward.

The Canadian, GFDL, and NAVGEM models are holdouts, however - still calling for Joaquin to interact with the United States trough and turn northwestward toward the U. S. coast. The new forecast track is adjusted to the east of the previous forecast between 48-120 hours, but it still lies well to the left of the GFS, UKMET, ECMWF, HWRF, and the consensus models. Further eastward adjustments to the track are likely.

KEY MESSAGES:

1. Joaquin's slow motion means that extremely dangerous conditions will continue over portions of the warning areas in the Bahamas well into Friday.
2. A strong majority of the forecast models are now in agreement on a track farther away from the United States east coast. We are becoming optimistic that the Carolinas and the mid-Atlantic states will avoid the direct effects from Joaquin. However, we cannot yet completely rule out direct impacts along on the east coast, and residents there should continue to follow the progress of Joaquin over the next couple of days.
3. Efforts to provide the forecast models with as much data as possible continue, with twice daily NOAA G-IV jet missions in the storm environment, and extra NWS balloon launches.
4. Even if Joaquin moves out to sea, strong onshore winds associated with a frontal system will create minor to moderate coastal flooding along the coasts of the mid-Atlantic and northeastern states through the weekend. In addition, very heavy rains, not associated with Joaquin, are expected to produce flooding over portions of the Atlantic coastal states. Please see products issued by local NWS Forecast Offices.

FORECAST POSITIONS AND MAX WINDS

INIT 01/2100Z 23.0N 74.4W 115 KT 130 MPH
12H 02/0600Z 23.2N 74.7W 120 KT 140 MPH
24H 02/1800Z 24.4N 74.7W 120 KT 140 MPH
36H 03/0600Z 25.9N 74.1W 120 KT 140 MPH
48H 03/1800Z 28.4N 73.3W 110 KT 125 MPH
72H 04/1800Z 33.0N 72.5W 90 KT 105 MPH
96H 05/1800Z 37.0N 72.0W 70 KT 80 MPH
120H 06/1800Z 41.0N 69.0W 55 KT 65 MPH

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