

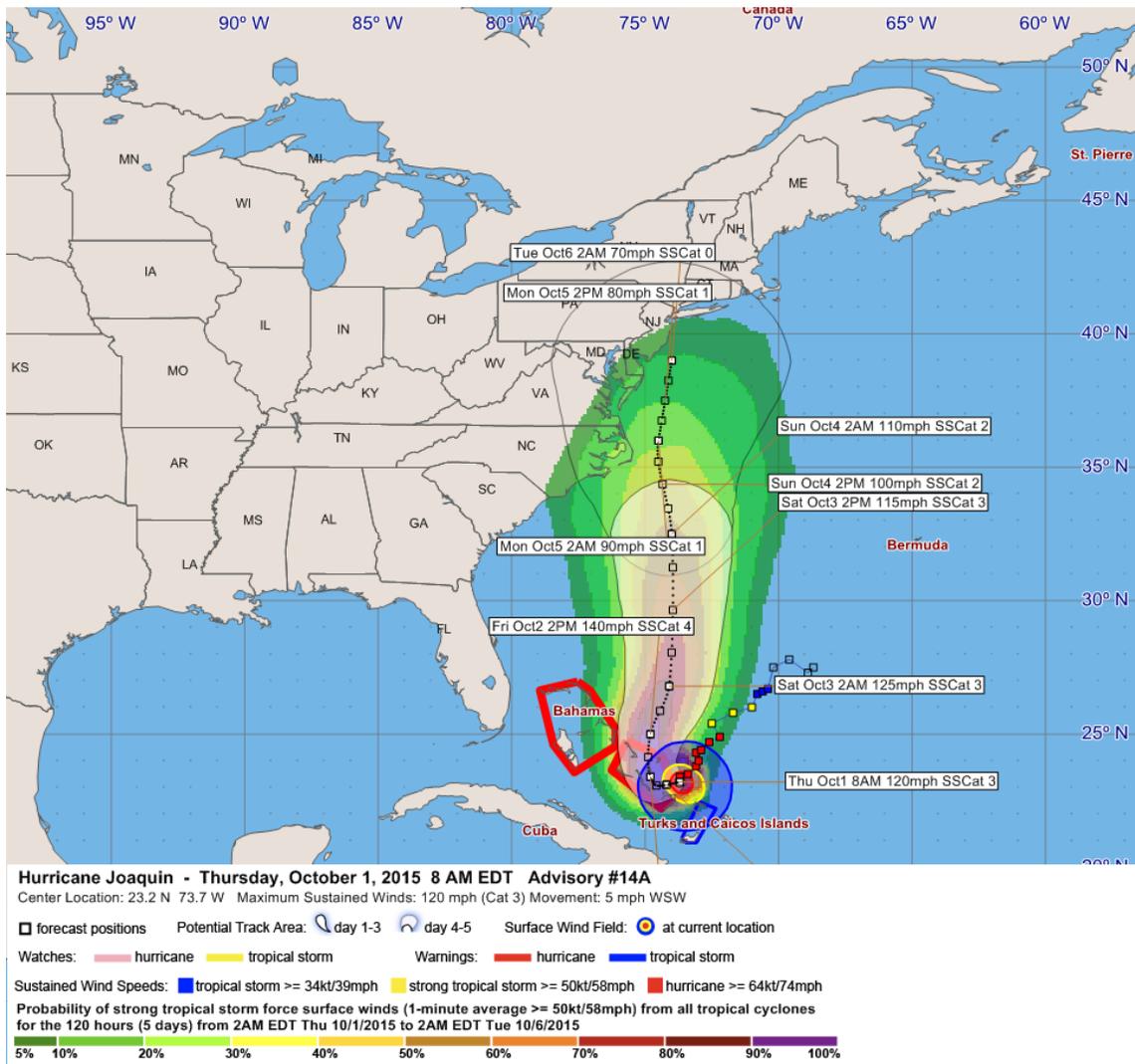
# Storm Summary for Hurricane Joaquin

Thursday, October 01, 2015 at 8 AM EDT

(Output from Hurrevac, based on National Hurricane Center Forecast Advisory #14A)

Joaquin is currently a Category 3 major hurricane on the Saffir-Simpson Hurricane Wind Scale, with maximum sustained winds of 120 mph (105 kts), moving west-southwest at 5 mph. The estimated minimum central pressure is 942 mb. Hurricane-force winds extend outward up to 35 miles (55 km) from the storm center. Tropical storm-force winds extend outward up to 140 miles (220 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 011159

BULLETIN  
HURRICANE JOAQUIN INTERMEDIATE ADVISORY NUMBER 14A  
NWS NATIONAL HURRICANE CENTER MIAMI FL AL112015  
800 AM EDT THU OCT 01 2015

...EYE OF JOAQUIN NEAR SAMANA CAYS IN THE BAHAMAS...  
...CENTRAL BAHAMAS TO EXPERIENCE HURRICANE FORCE WINDS...STORM  
SURGE...AND HEAVY RAIN THROUGH TONIGHT...

SUMMARY OF 800 AM EDT...1200 UTC...INFORMATION

LOCATION...23.2N 73.7W  
ABOUT 10 MI...15 KM N OF SAMANA CAYS BAHAMAS  
ABOUT 75 MI...120 KM SE OF SAN SALVADOR BAHAMAS  
MAXIMUM SUSTAINED WINDS...120 MPH...195 KM/H  
PRESENT MOVEMENT...WSW OR 240 DEGREES AT 5 MPH...7 KM/H  
MINIMUM CENTRAL PRESSURE...942 MB...27.82 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 excluding 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

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At 800 AM EDT (1200 UTC), the center of Hurricane Joaquin was located near latitude 23.2 North, longitude 73.7 West. Joaquin is moving toward the west-southwest near 5 mph (7 km/h), and this motion is expected to continue today. A turn toward the west-northwest is forecast tonight, followed by a turn toward the north and an increase in forward speed on Friday. On the forecast track, the center of Joaquin will move near or over portions of the central Bahamas today and tonight and pass near or over portions of the northwestern Bahamas on Friday.

Maximum sustained winds are near 120 mph (195 km/h) with higher gusts. Joaquin is a category 3 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some strengthening is forecast in the next day or so, with some fluctuations in intensity possible on Friday.

Hurricane force winds extend outward up to 35 miles (55 km) from the center and tropical storm force winds extend outward up to 140 miles (220 km).

The minimum central pressure just extrapolated by an Air Force Reserve Hurricane Hunter aircraft is 942 mb (27.82 inches).

## HAZARDS AFFECTING LAND

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**WIND:** Hurricane conditions are expected to continue in portions of the central and southeastern Bahamas through Friday. Hurricane conditions are expected over portions of the northwestern Bahamas on Friday. Tropical storm conditions will affect portions of the southeastern Bahamas through tonight.

**STORM SURGE:** A dangerous storm surge will raise water levels by as much as 5 to 8 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 northwest Bahamas within the hurricane warning area, and 1 to 2 feet is expected in the southeast Bahamas. 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 are possible. 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.

**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 today and spread northward through the weekend. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

## NEXT ADVISORY

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Next complete advisory at 1100 AM EDT.

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Forecaster Beven

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WTNT41 KNHC 010849

HURRICANE JOAQUIN DISCUSSION NUMBER 14  
NWS NATIONAL HURRICANE CENTER MIAMI FL AL112015  
500 AM EDT THU OCT 01 2015

Data from the last aircraft mission indicated the Joaquin had strengthened a little more, and the intensity of 105 kt is supported by flight-level, SFMR, and dropsonde data from the plane. The central pressure of 948 mb is based on a dropsonde that measured 950 mb with 20 kt of wind. The satellite presentation of the hurricane continues to gradually improve, with cold tops expanding near and west of the center, although the eye is not yet apparent in infrared imagery. Another hurricane hunter aircraft will be investigating Joaquin later this morning.

Joaquin is expected to intensify a little more in the next 12 to 24 hours while over very warm waters and with decreasing vertical shear. After that time, there could be some fluctuations in intensity due to eyewall replacement cycles and perhaps some upwelling of cold waters due to the slow motion of the hurricane. After 48 hours, cooler SSTs and increasing shear should result in gradual weakening as Joaquin moves northward. The new NHC intensity forecast is similar to the previous one and close to the HWRF through 24 hours. After that time, the NHC prediction is above the intensity consensus since the official forecast keeps the cyclone offshore, while the remainder of the intensity guidance shows weakening due to decay over land.

The initial motion of the hurricane is still toward the southwest or 230/04 under the influence of a narrow ridge to the north. A slow motion with a bending of the track toward the west and then the west-northwest is expected during the next 24 hours as the ridge weakens. During this time the NHC track has been adjusted southward following the latest trend in the guidance. The slow motion of Joaquin will mean a prolonged period of hurricane conditions in portions of the central Bahamas, along with very heavy rain and storm surge.

By 36 hours, Joaquin should begin to move faster toward the north as it comes under the influence of a deep-layer trough that cuts off over the southeastern United States. There have been big changes in some of the track guidance overnight, perhaps due to data from the synoptic surveillance mission flown by the NOAA G-IV jet for the 00Z model cycle. In particular, the GFS and UKMET have shifted eastward by several hundred miles in 3 to 4 days relative to their previous solutions. Overall for this cycle there has been a spreading out of the guidance envelope beyond 2 days, with a wide range of solutions shown. The HWRF and GFDL are the fastest to bring Joaquin north out of the Bahamas and still show a sharp westward turn taking the cyclone inland over the Carolinas in 3 to 4 days. The GFS has trended slower coming out of the Bahamas and now shows a track toward Long Island and southern New England in 5 days, with the UKMET farther offshore. The latest ECMWF is still the slowest and farthest east with a track just west of Bermuda in 4 to 5 days.

Given the large shift in some of the guidance, the NHC track has been adjusted just a little to the east and slower at days 3 through 5, and now lies on the left side of the multi-model consensus and left of the GFS, UKMET and ECMWF solutions. Confidence remains very low in the eventual track of Joaquin and any potential impacts for the United States, and further adjustments to the NHC track may be needed later today.

KEY MESSAGES:

1. Preparations to protect life and property in the central Bahamas should be complete. The slow motion of Joaquin during the next 24 to 36 hours will bring a prolonged period of hurricane force winds, storm surge, and very heavy rainfall to those islands.
2. Confidence in the details of the forecast after 72 hours remains low, as there have been some large changes in the model guidance overnight. The range of possible outcomes is still large, and the possibility of a hurricane landfall in the Carolinas still cannot be ruled out.
3. Efforts continue to provide the forecast models with as much data as possible. The NOAA G-IV jet flew the first in a series of missions in the storm environment last night, and these missions will continue today. The National Weather Service also continues to launch extra balloon soundings.
4. Because landfall, if it occurs, is still more than three days away, it's too early to talk about specific wind, rain, or surge impacts from Joaquin in the United States. Regardless of Joaquin's track, strong onshore winds will create minor to moderate coastal flooding along the coasts of the mid-Atlantic and northeastern states through the weekend.
5. A hurricane watch for a portion of the U.S. coast could be required as early as tonight.
6. Many portions of the eastern U.S. are currently experiencing heavy rains and gusty winds associated with a frontal system. These heavy rains are likely to continue for the next few days, even if the center of Joaquin stays offshore. The resulting inland flood potential could complicate preparations for Joaquin should it head toward the coast, and even more substantial inland flooding is possible if Joaquin later passes near or over these same areas.

FORECAST POSITIONS AND MAX WINDS

INIT 01/0900Z 23.4N 73.7W 105 KT 120 MPH  
12H 01/1800Z 23.1N 74.2W 115 KT 130 MPH  
24H 02/0600Z 23.4N 74.8W 120 KT 140 MPH  
36H 02/1800Z 25.0N 74.8W 120 KT 140 MPH  
48H 03/0600Z 26.8N 74.1W 110 KT 125 MPH  
72H 04/0600Z 32.5N 74.0W 95 KT 110 MPH  
96H 05/0600Z 36.0N 74.5W 80 KT 90 MPH  
120H 06/0600Z 39.0N 74.0W 60 KT 70 MPH

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Forecaster Brennan

