



24 August 2020
 (241302Z AUG 2019)

BULLETIN
TROPICAL STORM MARCO
TROPICAL STORM LAURA

Please distribute to all traffic nets and EMCOMM organizations
 www.radio-relay.org

TROPICAL STORM MARCO STATUS

Tropical Storm Marco shows a weakening trend. It is now unlikely that Marco will evolve into a hurricane. The expected path shows the tropical storm making landfall in late Monday evening. It will then likely turn left and move along the Gulf Coast toward Houston, Texas. This will maintain the weakening trend. The projected path is shown in this graphic:



Here is the official bulletin issued at 240858Z from the National Hurricane Center:

970
WTNT44 KNHC 240858
TCDAT4

Tropical Storm Marco Discussion Number 16
NWS National Hurricane Center Miami FL AL142020
400 AM CDT Mon Aug 24 2020

Marco is clearly weakening tonight. Data from an Air Force Reserve Hurricane Hunter mission showed that flight-level and SFMR had decreased along with a substantial rise in central pressure. In addition, GOES-16 1-min satellite data show the surface center well displaced from the deep convection, and it appears that Marco is decoupling from its mid-level circulation to the northeast. The initial wind speed is set to 50 kt, and that could be generous.

Some large changes have been required on this forecast. Considering the shear is only forecast to increase, there is no significant chance that Marco re-intensifies to a hurricane, and the hurricane warnings have been replaced with tropical storm warnings. Furthermore, now that the storm is losing vertical coherence, the intensity forecast has been decreased as well, and is fairly consistent with the model consensus and almost every model.

Marco has turned northwestward this morning at about 9 kt. The storm should gradually turn westward as it approaches southeastern Louisiana due to the shallower cyclone feeling the low-level ridge. Marco will likely dissipate in a couple of days near the Texas/Louisiana border due to continued strong shear. Guidance has come into better agreement on the track going slightly inland or just brushing the Louisiana coast, and the track has been nudged southward on this advisory. It should be noted that the heaviest rain and strongest winds will likely be northeast of the center, so users should not focus on the exact track of the cyclone.

Key Messages:

1. Gusty winds, dangerous storm surge, and heavy rainfall are expected from Marco along portions of the Gulf Coast beginning later today. Interests in these areas should follow any advice given by local government officials.
2. Tropical Storm Laura could bring additional storm surge, rainfall, and wind impacts to portions of the U.S. Gulf Coast by the middle of the week. This could result in a prolonged period of hazardous weather for areas that may also be affected by Marco. Interests there should monitor the progress of Marco and Laura and updates to the forecast during the next few days.

FORECAST POSITIONS AND MAX WINDS

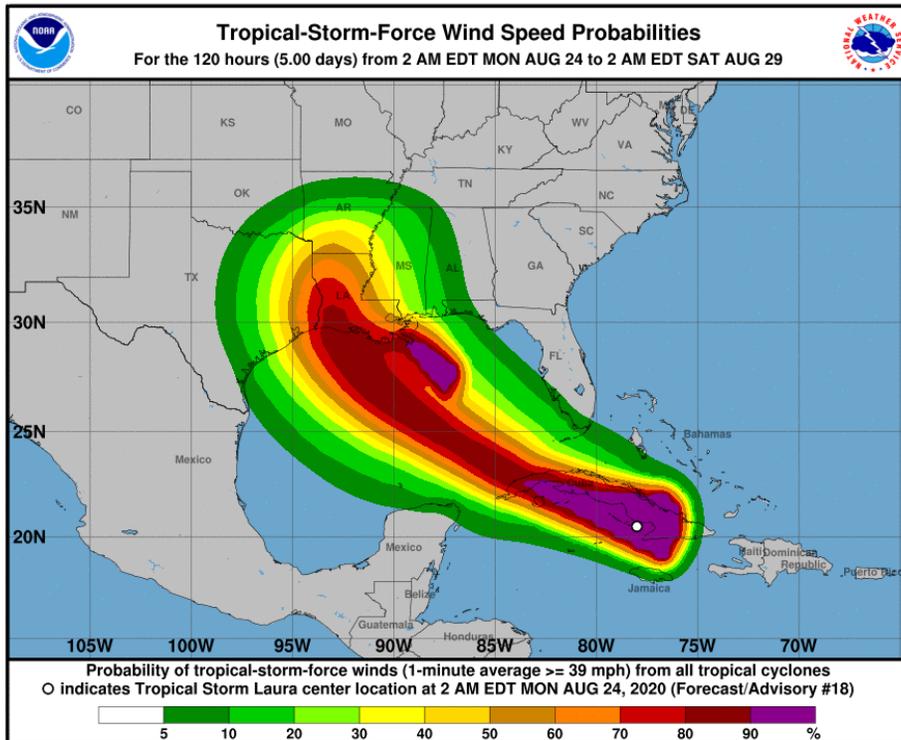
INIT 24/0900Z 27.6N 88.2W 50 KT 60 MPH 12H 24/1800Z 28.6N 89.2W 45 KT 50 MPH 24H 25/0600Z 29.2N 90.8W 35 KT 40 MPH...INLAND 36H 25/1800Z 29.5N 92.7W 30 KT 35 MPH...OVER WATER 48H 26/0600Z 29.4N 94.5W 25 KT 30 MPH...POST-TROP/REMNT LOW 60H 26/1800Z...DISSIPATED

\$\$ Forecaster Blake

TROPICAL STORM LAURA STATUS:

As with all tropical storms, the exact path of Tropical Storm Laura is difficult to predict. However, some consensus is beginning to develop indicating landfall will likely impact Southwest and South-central Louisiana. At this time, Laura is expected to develop into a hurricane with winds in the range of 105 to 110 mph and rainfall amounts between 8 to 15 inches.

Earliest impacts will likely be felt on Wednesday afternoon with the arrival of tropical storm force winds. Conditions will then deteriorate steadily. All storm preparations should be completed by no later than Wednesday morning. The projected path is shown in this graphic:



This is the latest forecast bulletin issued at 240857Z:

375
WTNT43 KNHC 240857
TCDAT3

Tropical Storm Laura Discussion Number 18
NWS National Hurricane Center Miami FL AL132020
500 AM EDT Mon Aug 24 2020

Satellite data indicate that Laura has moved back over the warm waters of the Caribbean Sea south of Cuba. Modest northerly vertical wind shear has kept the bulk of the deep convection displaced into the southern semicircle of Laura's circulation. Earlier ASCAT-B/-C scatterometer passes around 0210Z-0250Z revealed a small circulation just offshore southeastern Cuba. However, this feature is considered to be a leeside vortex, possibly having developed in response to the long-fetch southerly low-level flow passing over Jamaica, and not the primary low-level center associated with Laura. The initial intensity is being maintained at 55 kt based on 43-46 kt wind vectors located just offshore southeastern Cuba that were present in the aforementioned ASCAT data, and allowing for some undersampling by the scatterometer instrument.

The initial motion estimate is 290/18 kt. The deep-layer Bermuda-Azores ridge to the north of the cyclone is forecast by all of the models to build and expand westward across the Bahamas, Florida, and into the eastern and central Gulf of Mexico over the next few days. This dominant steering flow pattern is expected to keep Laura moving west-northwestward just offshore the southern coast of Cuba today, followed by the cyclone emerging over the southeastern Gulf of Mexico on Tuesday. By late Tuesday and early Wednesday, a mid- to upper-level trough located over the south-central U.S. is forecast to pinch off and dig southwestward and merge with the remnants of Tropical Storm Marco over the western Gulf of Mexico, eroding the western extent of the ridge in the process. This is expected to cause Laura to slow down and gradually turn northwestward and then northward toward the northwestern Gulf coast by late Wednesday and early Thursday. The latest NHC model guidance is in excellent agreement on this developing synoptic pattern, and the official forecast is similar to but slightly left or south of the previous advisory track to account for the expected northerly to northeasterly wind shear keeping the convection and low-level center displaced to the south for the next 24 hours or so. On the forecast track, Laura is expected to remain just offshore the southern Cuba today, move into the Gulf of Mexico by early Tuesday morning, and approach the U.S. northwest Gulf coast area Wednesday night and early Thursday.

Since Laura's center is expected to remain over water just south of Cuba, there is the possibility that some slight strengthening could occur today or tonight before the cyclone reaches the Gulf of Mexico in 24 hours. After that, Laura will be moving over the very warm and deep waters of Gulf Stream and Loop Current located over the southeastern Gulf, which could trigger a brief period of rapid intensification. The GFS and ECMWF models, along with the statistical and corrected-consensus models, only strengthen the cyclone to a peak intensity around 75 kt. In contrast, the HRWF and HMON models bring Laura to major hurricane strength by 60 hours. Given the very favorable environmental conditions of high SSTs near 31 deg C and low vertical shear values less than 10 kt after 24-36 hours, subsequent intensity forecasts might have to trend more toward the regional models. But for now, the official intensity forecast will continue to follow a blend of the regional and global model intensity

forecasts, and lies at the high-end of the intensity guidance at 60 and 72 hours.

Users are again reminded to not to focus on the exact details of the track or intensity forecasts as the average NHC track error at 72 h is around 100 miles and the average intensity error is around 15 mph (13 kt). In addition, winds, storm surge, and rainfall hazards will extend far from the center.

Key Messages:

1. Tropical storm conditions are expected across much of Cuba today. Heavy rainfall is likely across Cuba and Jamaica today, and these rains could cause mudslides and life-threatening flash and urban flooding. Tropical storm conditions are expected in the Dry Tortugas, and the Middle and Lower Florida Keys later today.
2. While the details of the long-range track and intensity forecasts remain uncertain, Laura is forecast to strengthen over the Gulf of Mexico and there is an increasing risk of dangerous storm surge, wind, and rainfall impacts along portions of the U.S. Gulf Coast by the middle of the week. This could result in a prolonged period of hazardous weather for areas that are likely to be affected by Marco. Interests along the Gulf Coast should monitor the progress of Laura and Marco and updates to the forecast during the next couple of days.

FORECAST POSITIONS AND MAX WINDS

INIT	24/0900Z	20.8N	78.9W	55 KT	65 MPH
12H	24/1800Z	21.7N	81.5W	55 KT	65 MPH
24H	25/0600Z	22.9N	84.6W	60 KT	70 MPH
36H	25/1800Z	24.5N	87.6W	65 KT	75 MPH
48H	26/0600Z	26.1N	90.2W	75 KT	85 MPH
60H	26/1800Z	28.0N	92.3W	85 KT	100 MPH
72H	27/0600Z	29.8N	93.3W	90 KT	105 MPH
96H	28/0600Z	35.4N	91.5W	35 KT	40 MPH...INLAND
120H	29/0600Z	37.6N	82.1W	25 KT	30 MPH...POST-TROP/REMNT LOW

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Forecaster Stewart

As with all forecasts, variables are present. Please consult subsequent forecasts for more specific information. Please see latter portions of this bulletin for operational information pertaining to radio communications networks.

EMERGENCY COMMUNICATIONS PREPAREDNESS

EmComm program managers in the path of Tropical Storm Laura should prepare now for a potentially serious event. Some preparedness steps to consider include:

- Ensure that equipment at key stations, such as EOCs, hospitals, relief agencies and similar public service facilities is tested and working correctly. When practical, test standby power systems, emergency lighting and similar resources. Inspect antenna mounts, transmission lines and related items carefully.
- Disasters directly impact volunteers, thereby diminishing the level of staffing available within volunteer programs. Ensure that mutual aid arrangements are in place with nearby EmComm groups. Address issues such as identification, security requirements and staging. Include your EMA in these discussions.
- Identify and tentatively assign volunteers to provide liaison to external networks. Examples include the Hurricane Watch Net, RRI/NTS nets, SHARES, MARS, etc.
- Create a preliminary frequency plan. Assign repeaters/nets in advance to anticipated emergency management functions (e.g. hospital net, shelter net, general coordination net, etc.).
- Identify primary, secondary and perhaps tertiary frequencies/repeaters/modes for key functions.
- Prepare packets of message forms, maps and other operational materials for distribution to volunteers at staging areas.
- Consider assigning volunteers to monitor FRS channel one in support of the *National SOS Radio Network* program (see below). This can be done from both home and mobile stations. Distribute the radio public service announcement audio file to local broadcast stations for use should a hurricane warning be issued. The audio files are available at:

<http://radio-relay.org/emcomm/national-sos-radio-network/>

EmComm volunteers and traffic operators in the affected area should also prepare for a potentially serious event. Preparedness steps to consider include:

- The priority of a volunteer is to make arrangements for the safety and security of one's family.
- Inspect any equipment to be used in an emergency. Ensure storage batteries are charged. Store enough gasoline for a generator. Test portable communications equipment.
- Fill your automobile gasoline tank.
- Have appropriate clothing, rain gear and personal protective equipment available for deployment.
- Advise your local EC or other EmComm manager if you are available to assist.
- If you cannot deploy, but will remain at home, be prepared to assist your neighbors by providing connectivity to emergency services or welfare message originations via RRI/NTS in the event of a cellular outage.
- Review the Radio Relay International *National Emergency Communications Response Plan* at:

<http://radio-relay.org/wp-content/uploads/2020/08/RRI-NECRP-2020-8-1-Final-Approved.pdf>

In particular, note the following sections/appendices within the National Emergency Communications Response Plan:

- Sections 2
 - Section 14
 - Section 15
 - Appendix A
 - Appendix H
- Download a copy of the latest Radio Relay International *Net Directory*. This curated net directory is reviewed and updated regularly by RRI volunteers and provides the most accurate net data available at this time:

<http://radio-relay.org/wp-content/uploads/2020/08/Traffic-Net-Directory-2020-6.pdf>

- In the event of infrastructure outages, monitor FRS Channel 1 in your neighborhood for requests for emergency assistance or messaging via the National SOS Radio Network. More information on the *National SOS Radio Network* and the *Neighborhood Hamwatch* programs can be found at:

<http://radio-relay.org/emcomm/national-sos-radio-network/>

<http://radio-relay.org/emcomm/neighborhood-hamwatch/>

GUIDANCE FOR ROUTING OF MESSAGE TRAFFIC

At present, RRI/NTS Networks remain in routine configuration. Changes to operational status may be made depending on the progress of the storm and its impacts. The following guidance anticipates the requirement for emergency communications services:

Emergency communications program managers requiring use of the RRI traffic system may access any operational RRI/NTS network to establish initial communications and begin originating record message traffic. Net managers should accept message traffic from the disaster area and then route it via the most expedient method. Options include the RRI Digital Traffic Network (DTN), IATN CW circuits or direct transfer to the destination region or section network.

A complete list of nets is available to all EmComm operators on the RRI Web Page at:

<http://radio-relay.org/wp-content/uploads/2020/08/Traffic-Net-Directory-2020-6.pdf>

Upon commencing with the *systematic* origination of priority or welfare precedence message traffic, and at the earliest possible convenience, a priority radiogram requesting emergency communications support should be transmitted to the RRI Emergency Management Director. The radiogram should identify the general source location (typically a state or region) of the traffic and the anticipated priority of traffic to be originated. This information will be used to identify any specific point-to-point circuits or other specialized routings required to support local emergency operations. For example, if quantities of message traffic are to be originated to a specific agency, the destination of that agency should be identified in the request.

A sample Activation Request Message is shown in Appendix A, Example 1 (page 32) of the *RRI National Emergency Communications Response Plan*

Contact Information for the RRI Emergency Manager is:

JAMES WADES WB8SIW
C/O EMERGENCY PREPEAREDNESS ASSOCIATES, LLC
PO BOX 43
NILES MI 49120
833-377-0722 X 700
JAMES DOT WADES ATSIGN RADIO HYPHEN RELAY DOT ORG

Priority (Agency) Message Traffic

Operational message traffic bearing the “priority” precedence will be routed immediately to an outlet if available. If an outlet is unavailable, the receiving station should immediately undertake delivery of the message traffic if possible. In order of priority, IATN circuits and DTN are recommended for expediting the flow or priority messages.

Welfare Message Traffic

Welfare message traffic *leaving* the affected area may be injected into any available net. However, it is recommended that stations planning to originate welfare traffic in quantity notify the RRI Emergency Manager so that special routings and inject points may be assigned.

If originating welfare radiograms via Winlink using the RRI Radiogram Form template, please be certain to select the correct RRI destination region depending upon the destination address.

Digital Traffic Stations and RRI-Winlink Liaisons

Upon transition into emergency status, *RRI Winlink Liaison Stations* and *RRI Digital Traffic Stations* should increase the frequency of their connects to the network to expedite the flow of any messages originated within the disaster area. The recommended minimum connect frequency will be identified in an operational “QNC” radiogram if emergency status is required.

National SOS Radio Network and Hamwatch Program

The *National SOS Radio Network* can provide a valuable community service in the event of a localized or widespread cellular outage.

Radio operators monitor FRS channel one for citizen requests for assistance or information. The broader local Amateur Radio Service infrastructure, in turn, provides connectivity to local emergency services, relief agencies or, in the case of welfare traffic, the broader national messaging layer.

GMRS/FRS connectivity into the local neighborhoods also provides a rich source of situational awareness data for use by emergency management and relief agencies.

The following link contains a suitable public service announcement for use by local broadcast stations:

<http://radio-relay.org/emcomm/national-sos-radio-network/>

The Neighborhood Hamwatch Program can also prove to be an excellent tool for supporting local VOADs and community groups active in disaster response. Here is a link to more information on the Radio Relay International Web Page:

<http://radio-relay.org/emcomm/neighborhood-hamwatch/>

Radio Relay International – Requests for Assistance:

RRI networks are operating on schedule and, as always, the RRI Digital Traffic Network operates 24/7/365. These resources remain available for outgoing welfare message traffic. Requests from net managers or EMCOMM coordinators for specialized communications circuits or additional network cycles to support either operational or welfare message traffic should be directed to:

James Wades
Radio Relay International
Emergency Manager
833-377-0722 x 700

END