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NATIONAL WEATHER SERVICE INSTRUCTION 10-602
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Operations and Services
Tropical Cyclone Weather Services Program, NWSPD 10-6

TROPICAL CYCLONE COORDINATION AND EMERGENCY OPERATIONS

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OPR: W/AFS26 (J. Fieux) **Certified by:** W/AFS26 (G. Schoor)
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***SUMMARY OF REVISIONS*:** This directive supersedes NWS Instruction 10-602, *Tropical Cyclone Coordination and Emergency Operations*, dated April 2, 2024.

Major revisions were necessary to accurately reflect the evolution of internal NWS coordination since the last update. Changes include:

1. Reconfiguring Section 1 to separate coordination routinely conducted through conference calls from situationally driven coordination.
2. Updates to Section 1 to reflect the conversion of the former "medium range" conference call to a "daily tropical coordination" call.
3. Updated to Section 1 to clearly detail the participants and scope of advisory coordination calls and daily tropical coordination calls.
4. Reduce redundancy in the text of Section 1, most notably by no longer repeating common elements of advisory coordination calls for the Atlantic and eastern Pacific.


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June 2, 2025

Allison Allen Date
Director
Analyze, Forecast and Support Office

Tropical Cyclone Coordination and Emergency Operations

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1 Coordination

For the purposes of this directive, all references to tropical cyclones are inclusive of potential tropical cyclones, post-tropical cyclones, and subtropical cyclones.

Coordination between National Weather Services (NWS) offices is conducted both routinely and situationally during tropical cyclone events.

1.1 Routine Coordination

The National Oceanic and Atmospheric Administration (NOAA) coordination calls via video teleconference and the electronic worksheet are the primary means of coordination for tropical cyclones by the National Hurricane Center (NHC). There are two primary types of coordination calls – daily tropical coordination calls and advisory coordination call associated with a specific forecast/advisory. NHC conducts these calls with Weather Forecast Offices (WFOs), River Forecast Centers (RFCs) and other Regional and National Centers (Regional Operations Centers [ROCs], National Weather Service (NWS) Operations Center [NWSOC], Storm Prediction Center [SPC], Weather Prediction Center [WPC], Ocean Prediction Center [OPC], NHC's Tropical Analysis and Forecast Branch, Climate Prediction Center, and the National Water Center [NWC]). These calls cover active tropical cyclones or systems with a potential for tropical cyclone development and impacts to U.S. land areas. In the Atlantic basin, this includes

systems that are located or forecast to be located south of 20˚N and west of 60˚W, or anywhere west of 70˚W (excluding the Caribbean Sea west of 75˚W), and anywhere west of 65˚W north of 38˚N (see Figure 1 below). In the eastern Pacific basin, this includes systems that are located or forecast to be located north of 25˚N and east of 120˚W.

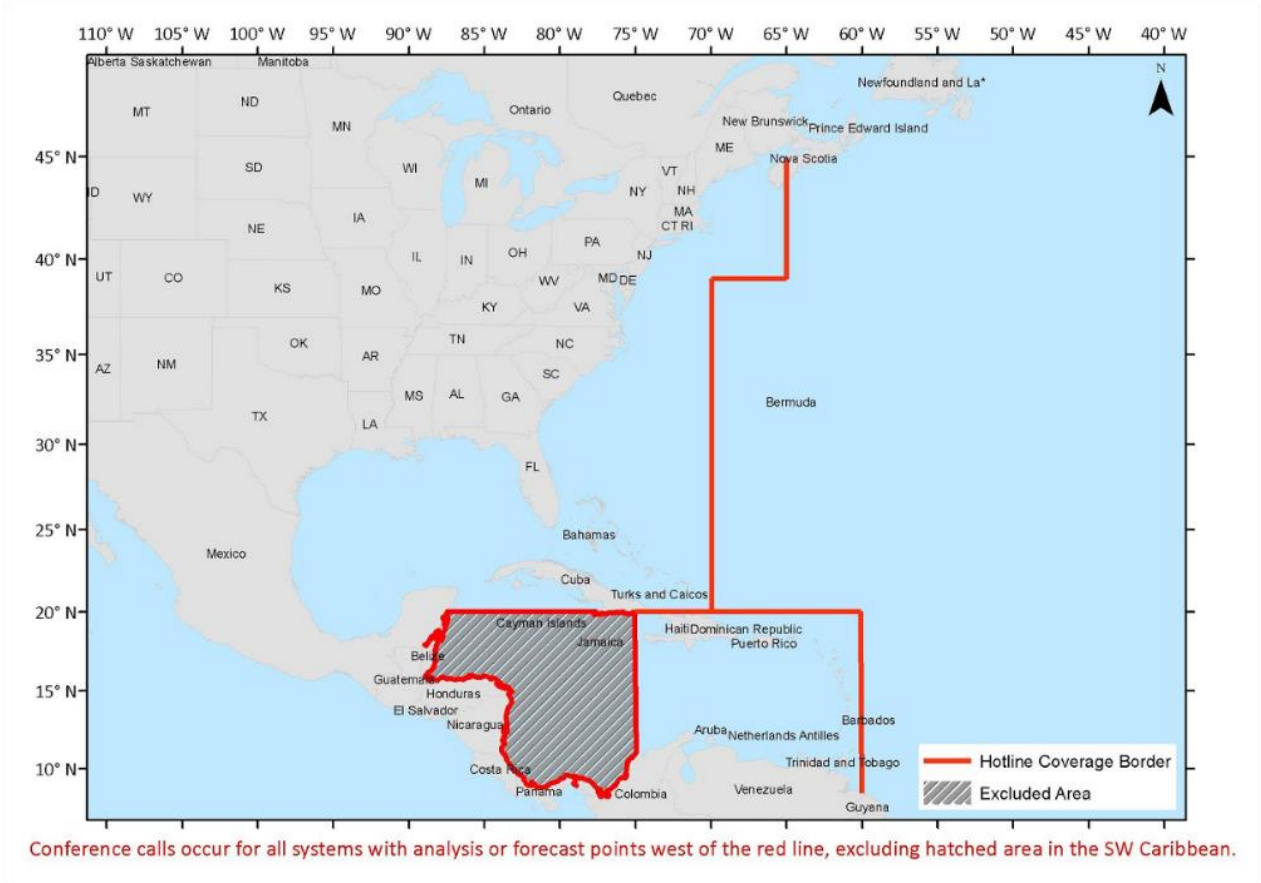

Figure 1. Coordination Call coverage area for the Atlantic basin.

1.1.1 Daily Tropical Coordination Calls

From May 15 through November, NHC initiates and conducts the daily tropical coordination call to coordinate forecasts and messaging for systems with a potential for tropical cyclone development and impacts to U.S. land areas over the next 3 weeks. These calls also discuss the forecast beyond 5 days for active systems with the potential for impacts to U.S. land areas over the next 7 days.

1.1.2 Advisory Coordination Calls

NHC leads collaboration on forecasts and messaging for active tropical cyclones, and makes operational watch / warning decisions on tropical wind and storm surge watches / warnings, on the advisory coordination calls with WFOs and other Centers.

Advisory coordination calls for systems in the Atlantic basin are initiated and conducted by NHC at 0200, 0800, 1400, 2000 Coordinated Universal Time (UTC) for the 0300, 0900, 1500, and 2100 UTC advisories, respectively, on tropical cyclones with analysis or forecast points

located within the area described in Figure 1. Advisory coordination calls are also conducted before the first advisory of all tropical cyclones in the Atlantic basin, before the issuance of special advisories or upon request from a call participant. NHC will inform WFOs, RFCs, ROCs, and other appropriate Centers before the first coordination call for a system when the first advisory is expected to be issued, when a system moves or is forecast to move into the geographic region outlined in Figure 1 and before the issuance of a special advisory. This notification will contain the information that users will need to join the coordination calls.

For advisory conference calls for eastern Pacific systems, NHC will notify impacted NWS Western Region (WR) WFOs, WPC, OPC, TAFB, SPC, and NWC of the need for calls. NHC will also notify the WR ROC of the need for an initial coordination call. WR ROC will notify any other WR offices (e.g., RFCs and CWSUs), as needed.

NHC, WPC, NWC, ROCs, and WFOs coordinate the issuance and discontinuance of watches and warnings, storm surge, and other storm parameters on the advisory coordination call. NHC includes WPC's Senior Branch Forecaster and the NWC Shift Lead in coordination calls whenever NHC plans to include quantitative precipitation forecast amounts and flood statements for the conterminous United States or Puerto Rico/U.S. Virgin Islands in tropical cyclone advisories. NHC will make every effort to coordinate with the appropriate offices prior to the conference call, resources permitting, if issuing or canceling watches or warnings.

Once extratropical transition has occurred in a system that is offshore, OPC and NHC will coordinate on the forecast of the extratropical cyclone. WPC has the option of providing NHC with estimates of extratropical transition while a system is over the United States.

An electronic worksheet, providing draft forecast positions, intensity, and wind radii will normally be available to conference call participants for all tropical cyclones by one hour before the regularly scheduled advisory issuance time. An advisory coordination call is required if the advisory information is not available on the electronic worksheet for any tropical cyclone by the deadline noted above and within the area described in Figure 1.

Since forecast positions, intensity, wind radii, forecast reasoning, watches and warnings, etc., are discussed approximately one hour before official products are issued, no outside users or the public are permitted to listen to the call or access the electronic worksheet. NWS staff members will not provide tropical cyclone related information discussed or coordinated via the coordination calls or electronic worksheet to any user or the public prior to the official release of this information by NHC. This provides for the issuance of information to all users at the same time on an equal basis. An exception is that state and local emergency management officials can be briefed prior to the release of the advisory products regarding watches and warnings so that these officials will be prepared to answer inquiries when the package is officially issued.

1.2 Situational Coordination

The following sections detail situational coordination that may occur during tropical cyclone events.

1.2.1 Central Pacific Coordination

NHC and the Central Pacific Hurricane Center (CPHC) will coordinate whenever a tropical cyclone is forecast to cross between the eastern and central Pacific basins within 24 hours. In addition, NHC will coordinate with CPHC prior to issuing a forecast / advisory when a system to the east of 140°W could influence / affect Hawaii within the 7 day (168 hour) forecast period. In the event of a disagreement, the Center issuing the next advisory will make the final decision.

1.2.2 Other Advisories

When it is time to discontinue all tropical wind and storm surge watches and warnings over the contiguous U.S., NHC will provide notice to WPC no later than 90 minutes before NHC issues their final advisory if WPC will be continuing the issuance of advisories due to a rainfall or flash flooding threat from the system. WPC will also coordinate with NHC if there is a reasonable possibility NHC should consider issuing advisories again due to the need for tropical wind or storm surge watches / warnings. When WPC is issuing advisories, they will coordinate as appropriate with NWC, WFOs, RFCs, National and Regional Operation Center(s), and SPC.

1.2.3 Coordination of Tropical Cyclone Points

TAFB and CPHC will support OPC with positions of tropical cyclones for the unified surface analysis.

WPC and OPC will place on their prognostic surface charts NHC's and CPHC's tropical cyclone forecast positions out to 120 hours for WPC and 96 hours for OPC. Unnamed systems forecast to attain tropical storm or hurricane / typhoon strength during the forecast period will have their prognostic positions labeled as a tropical cyclone. For all NWS offices that issue day 3 through 7 prognostic charts, those offices will use the appropriate tropical cyclone symbols on charts through the end of the tropical cyclone advisory forecast period on day 5 (120 hours).

1.2.4 Rainfall

NHC will discuss rainfall on their regular advisory coordination calls prior to the advisory package issuance for active tropical cyclones and include rainfall information coordinated with field offices by WPC in their advisories. WPC will maintain this coordination with field offices on rainfall messaging when WPC is issuing advisories.

1.2.5 Inland Flooding

NHC will discuss inland flooding information on their regular advisory coordination calls prior to advisory package issuance for active tropical cyclones and include information coordinated with NOAA field offices by NWC in their advisories. CPHC and WPC will also incorporate coordinated flooding messages from NWC in their advisories as appropriate.

1.2.6 Tornadoes

The SPC will be the single coordinated voice of the NWS regarding tornado threats for the conterminous United States and issue tornado watches as required for areas affected by tropical cyclones. SPC should coordinate with NHC and WFOs before issuing a tornado watch. To

assist NHC, this coordination should be done on regularly scheduled advisory coordination calls. Hurricane Local Statements (HLS) and Tropical Cyclone Local Watch/Warning (TCV) products, where applicable, will convey the level of tornadic threat forecast by SPC based upon SPC products.

Tropical cyclone forecast centers will include appropriate information about tornadoes in their advisories.

1.2.7 Military Services

The NWS is the basic source of tropical cyclone forecasts for all Department of Defense (DoD) interests in the North Pacific east of 180° longitude and for the North Atlantic as provided by interdepartmental agreements in the National Hurricane Operations Plan (NHOP). If the DoD wishes to discuss special problems concerning warnings and forecasts for the Atlantic or eastern Pacific areas, they should contact the NHC Director or the NHC hurricane specialist on duty. In the Central Pacific, the CPHC Director will provide similar services to the military. WFO Guam and Weather Service Office (WSO) Pago Pago generally base their tropical cyclone products on the tropical cyclone bulletins of the Joint Typhoon Warning Center (JTWC), the United States designated center for United States DoD interests in the western and southern Pacific. WFO Guam coordinates directly with Air Force Weather staff at Andersen Air Force Base and with the Joint Region Emergency Managers through the Guam Homeland Security/Office of Civil Defense.

1.2.8 Requesting NWS Regional Hurricane Models

NHC makes the decision to run the NWS regional hurricane models (e.g. Hurricane Analysis and Forecast System (HAFS), etc.) for any tropical / subtropical cyclone or tropical disturbance in the Atlantic or eastern Pacific Ocean. CPHC makes requests for running the NWS regional hurricane models in the central Pacific. Coordination between NHC and CPHC is required when there are multiple systems that also include central Pacific tropical cyclone or invest areas. JTWC may also request running these models for tropical cyclones, including those affecting Guam and American Samoa. NHC and CPHC provide their request to the NCEP Central Operations Senior Duty Meteorologist (SDM) and the SDM executes the model run(s). NHC and CPHC have access to 7 slots for running the NWS regional hurricane models, with two slots available for JTWC for systems in their area that could affect U.S. interests. The first five requests for HAFS-A runs also automatically set up a corresponding run of the HAFS-B model.

2 Transfer of Responsibility for Issuing Advisories

When a tropical cyclone approaches the line of division between Centers responsible for issuing advisories, the forecaster who is currently handling the storm will:

a. Contact the Center into whose area the storm is moving, to plan for transferring responsibility after the issuance of the next advisory. When a tropical cyclone is approaching 180° longitude, CPHC will coordinate with both Regional Specialized Meteorological Center (RSMC) Tokyo (the World Meteorological Organization [WMO] designated tropical cyclone center) and JTWC for transferring responsibilities, and

b. Add a statement to the final advisory as follows:
"THE NEXT ADVISORY ON (storm name) WILL BE ISSUED BY THE(appropriate Tropical Cyclone Forecast Center) AT (time in [UTC])."

In these situations, the Tropical Cyclone Forecast Center issuing a final advisory will also provide the Advanced Weather Interactive Processing System (AWIPS) and WMO communications headings for the advisory product to be issued by the gaining Forecast Center.

When NHC and WPC coordinate for a transfer of responsibility to WPC, the following statement will be included in the final Tropical Cyclone Public Advisory (TCP) from NHC: "This is the last public advisory issued by the National Hurricane Center on this system. Future information on this system can be found in public advisories issued by the Weather Prediction Center under AWIPS header TCPATn and WMO header WTNT3n KWNH beginning at HHMM AM/PM LTZ." (Where n is 1-5 and LTZ is the appropriate local time zone). NHC will coordinate with WPC to determine the time of issuance of the first WPC Public Advisory.

For CPHC when a tropical cyclone is moving east to west across the International Dateline, the following statement will be included in the final TCP from CPHC: "This is the last bulletin issued by the Central Pacific Hurricane Center. The next bulletin will be issued by the RSMC Tokyo. For U.S. interests, see the public advisories issued by U.S. NWS forecast office Guam and DoD warnings issued by the Joint Typhoon Warning Center."

3 Emergency Operating Instructions

Centers and WFOs with primary and backup warning and forecast responsibilities for areas within 300 miles of the Gulf and Atlantic coasts and east or south of the Appalachian ridges, in Hawaii, Puerto Rico, Guam, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Republic of Palau, Republic of the Marshall Islands, on the California coast from Point Piedras Blancas southward, and American Samoa in the South Pacific, will prepare and keep an up-to-date local Tropical Cyclone Emergency Operations Plan. The Plan should specify actions to be taken. This includes:

a. What to do before each tropical cyclone season;

b. What to do when a tropical cyclone constitutes a possible threat to its county warning area (CWA) or a Center's local geographic area;

c. What to do when a tropical storm, hurricane or typhoon watch is issued for its CWA or a Center's local geographic area;

d. What to do when a tropical storm, hurricane or typhoon warning is issued for its CWA or a Center's local geographic area; and

e. What to do immediately after the tropical cyclone has passed.

3.1 Exercises

If NWS field offices and Centers require test / sample products from NHC or CPHC to support local exercises with emergency management officials or backup exercises, these offices should coordinate their request through their respective Regional tropical cyclone program manager or tropical team leader by the December preceding the tropical season. NHC will only provide such support before the official start of the tropical cyclone season. Any test products provided by NHC or CPHC will be carefully noted with the word "EXERCISE" included at the top of each test text product and with "EXERCISE" indicated on test graphics.

3.2 Emergency Action When Warning Not Received or Considered Inadequate

National tropical cyclone forecast centers or their backups initiate and issue tropical cyclone warnings. When tropical cyclone forecast center (or their back-up) warnings are not received by WFOs, or are inadequate to cover current or imminent conditions, coastal WFOs and their backup WFOs, should issue Hurricane Local Statements (HLSs), WFO Tropical Cyclone Watch / Warning (TCV) products, or other appropriate WFO-level warnings, as needed. Whenever possible, the WFO should contact the appropriate tropical cyclone forecast center (or its backup, if necessary) and advise the center tropical cyclone warnings were not received or do not adequately represent current conditions. However, if communications failure prevents contact with the appropriate tropical cyclone forecast center, or if at the discretion of the forecast office a delay would jeopardize life or property, the WFO should immediately issue WFO-level products to communicate the hazards. WFOs should notify the appropriate tropical cyclone forecast center (or its backup, if necessary) of the actions that were taken as soon as possible. Under such circumstances, WFO Guam will issue TCPs and HLSs and WSO Pago Pago will issue HLSs, when warranted, if coordination cannot be made in a timely manner with the JTWC.