

NATIONAL WEATHER SERVICE POLICY DIRECTIVE 10-6

FEBRUARY 6, 2025

Operations and Services

TROPICAL CYCLONE WEATHER SERVICES PROGRAM

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Type if issuance: Routine

SUMMARY OF REVISIONS: This directive supersedes National Weather Service Policy Directive (NWSPD) 10-6, *Tropical Cyclone Weather Services Program*, dated April 24, 2020. The following changes were made to this directive:

1. Section 1 was updated to clarify that the term “tropical cyclone” pertains to ongoing tropical cyclones in addition to potential and post tropical cyclones.
2. Section 1 was updated to define NWSI as National Weather Service Instruction.
3. Section 3.2 was updated to clarify that the Hurricane Forecast Improvement Program is a program and not a project per House of Representatives 6093 - Weather Act Reauthorization Act of 2023, Section 104.
4. Section 3.3 was updated to account for changes to the roles of the Regional Operations Center and the National Weather Service Operations Center.
5. The References and Terms sections were updated to reflect the current name of Instruction 10-604.
6. The Additional Supporting Documentation section was updated to include the Interagency Council for Advancing Meteorological Services (ICAMS), Interagency Meteorology Coordination Office as the current manager of the National Hurricane Operations Plan (NHOP).
7. Minor grammatical adjustments throughout the document.

1 This policy directive establishes the framework for the Tropical Cyclone Weather Services Program. For the purposes of this directive, all references to tropical cyclones are inclusive of potential and ongoing tropical cyclones, post-tropical cyclones, and subtropical cyclones. Tropical cyclones have a profound socioeconomic impact on the United States, its territories and other nations. As the nation’s coastal population grows, timely and accurate tropical cyclone forecasts and warnings are increasingly critical to decision-makers and the coastal population. The National Weather Service (NWS) provides tropical cyclone products as defined in NWS Instruction (NWSI) 10-601: *WEATHER FORECAST OFFICE TROPICAL CYCLONE PRODUCTS* and NWSI 10-607: *TROPICAL CYCLONE FORECAST CENTER PRODUCTS* to meet the needs of a diverse user and partner base.

2 The NWS will provide authoritative, timely and credible tropical cyclone information. These products will exploit technology to the fullest to meet user and partner needs, promote public safety and enhance the national economy.

3 This policy directive establishes the following authorities and responsibilities:

3.1 The Analyze, Forecast, and Support Office (AFSO) is responsible for establishing national policy and procedural directives, and overseeing national performance and effectiveness measures for the Tropical Cyclone Weather Services Program. AFSO identifies and validates service needs and establishes operational requirements for observations, forecasting, and warning applications for the Tropical Cyclone Weather Services Program. AFSO coordinates the design, validation, and implementation of new science and technology as well as new products and services. AFSO is also responsible for outreach efforts to promote the Tropical Cyclone Weather Services Program with national users and partners.

3.2 The Office of Science and Technology Integration (STI) plans, develops, demonstrates, and integrate scientific techniques and system capabilities for Tropical Cyclone Weather Services. In addition, STI oversees collaborative and applied research and development activities in coordination with other NWS units and NOAA line offices, as well as the research community including NOAA's Hurricane Forecast Improvement Program (HFIP) and the U.S. Weather Research Program (USWRP).

3.3 NWS Regional Headquarters offices are responsible for ensuring the offices within their region are organized, trained, equipped, and ready to fulfill the Tropical Cyclone Weather Services Program obligations within their region. Regional Headquarters are responsible for ensuring offices' compliance with established policies and procedures; coordinating with AFSO on Tropical Cyclone Weather Services Program policy and requirements; developing supplements to procedural directives and coordinating them with AFSO; ensuring supplements are compatible across regional boundaries; and evaluating performance and effectiveness indicators of the Tropical Cyclone Weather Services Program within their region. Regional Operations Centers (ROCs) within each NWS Regional Headquarters facilitate coordination of consistency of both products and services as well as impacts messaging during tropical cyclone events. ROCs and/or Regional Headquarters also assist with coordinating mutual aid requests including services, personnel, and other resources for the affected office(s). They are also responsible for maintaining communication with the NWS Operations Center (NWSOC) about field operations and any events of interest.

The NWSOC is responsible for maintaining communication and delivering pertinent information from the ROCs and national centers to the senior leadership. Both ROCs and the NWSOC support NWS personnel that are embedded at the agencies of core partners, with ROCs focused on partners within their area of responsibility and the NWSOC focused on federal level partners and interests.

3.4 The National Centers for Environmental Prediction (NCEP) and the Office of Water Prediction (OWP) support the Tropical Cyclone Weather Services Program consistent with AFSO procedural directives as described below.

3.4.1 The Weather Prediction Center (WPC) is the NCEP unit responsible for providing a suite of rainfall products and services to communicate the rainfall forecast and inform inland flood messaging associated with tropical cyclones affecting the conterminous United States and Puerto Rico/U.S. Virgin Islands (USVI), in addition to its tropical cyclone forecast center responsibilities outlined in section 3.5.5 below.

3.4.2 The OWP's National Water Center (NWC), in collaboration with WPC and River Forecast Centers (RFC), is responsible for providing guidance to inform the freshwater hydrologic impacts across the conterminous United States, Puerto Rico/US Virgin Islands and the Hawaiian Islands for tropical cyclones. The collaboration of freshwater flood messaging and local impacts includes affected WFOs in addition to NWC, WPC, ROCs, and RFCs.

3.4.3 The Storm Prediction Center (SPC) is the NCEP unit responsible for predicting severe weather associated with tropical cyclones affecting the conterminous United States.

3.4.4 NCEP's Ocean Prediction Center (OPC), NCEP's Tropical Analysis and Forecast Branch (TAFB) at the National Hurricane Center (NHC), and Weather Forecast Office (WFO) Honolulu are responsible for predicting winds and waves associated with tropical cyclones in the offshore and high seas areas within the NWS's area of responsibility (AOR). These offices issue marine warnings consistent with the tropical cyclone forecast information provided by the NHC and the Central Pacific Hurricane Center (CPHC).

3.5 The following tropical cyclone forecast centers, WFO Guam, and Weather Service Office (WSO) Pago Pago have tropical cyclone forecast responsibilities as noted below.

3.5.1 NHC is the NCEP unit responsible for all meteorological and storm surge decisions concerning analysis and forecasting of tropical cyclones for the Atlantic Ocean north of the equator and the eastern Pacific Ocean north of the equator and east of 140°West longitude.

3.5.2 CPHC, under the Director, Pacific Region, is responsible for all meteorological and storm surge decisions concerning analysis and forecasting of tropical cyclones for the Pacific Ocean north of the equator from 140°West to 180°West longitude. CPHC can provide tropical cyclone consultation to WSO Pago Pago when requested.

3.5.3 WFO Guam, under the Director, Pacific Region, will provide tropical cyclone watches and warnings for the Territory of Guam, the Republic of Palau, the Republic of the Marshall Islands, the Federated States of Micronesia and the Commonwealth of the Northern Mariana Islands using the Joint Typhoon Warning Center (JTWC) forecast information as guidance.

3.5.4 WSO Pago Pago, under the Director, Pacific Region, will provide tropical cyclone watches and warnings for the Territory of American Samoa using the JTWC forecast information as guidance.

3.5.5 In addition to providing a suite of rainfall products and services for tropical cyclone events as noted in Section 3.4.1, WPC will assume public advisories from NHC for post-landfall systems that have weakened below tropical storm strength but are expected to maintain a persistent surface low pressure area and a threat of flash flooding in the conterminous U.S.

3.6 WFOs will issue tropical cyclone products designed to inform media, local decision makers, and the public on present and anticipated tropical cyclone conditions in their area of responsibility. Each WFO will ensure products are consistent with the latest products issued by their respective tropical cyclone forecast center.

4 The NWS will measure the effectiveness of the tropical cyclone weather services policy using the mission-critical performance measures of reducing the annual average 48-hour track and annual average 48-hour intensity forecast errors. The goal of this policy is to improve the operational effectiveness of tropical cyclone weather services to the nation.

5 This policy directive is supported by the references and glossary of terms listed in Appendix 1.

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Kenneth E. Graham Date
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Appendix 1

REFERENCES AND GLOSSARY OF TERMS

References

Instruction 10-601	<i>Weather Forecast Office Tropical Cyclone Products</i>
Instruction 10-602	<i>Tropical Cyclone Coordination and Emergency Operations</i>
Instruction 10-603	<i>National Hurricane Center and Central Pacific Hurricane Center Hurricane Liaison Team</i>
Instruction 10-604	<i>Tropical Cyclone Names and Definitions</i>
Instruction 10-605	<i>Tropical Cyclone Official Geographic Defining Points</i>
Instruction 10-607	<i>Tropical Cyclone Forecast Center Products</i>

Additional Supporting Documentation

National Hurricane Operations Plan (NHOP), Interagency Council for Advancing Meteorological Services (ICAMS), Interagency Meteorology Coordination Office

Terms

Tropical Cyclone - For the purposes of this Policy Directive and the associated Instructions, the generic term “tropical cyclone” includes ongoing and potential tropical cyclones, tropical depressions, tropical storms, hurricanes, typhoons, subtropical depressions, subtropical storms, and post-tropical cyclones. Specific definitions for each of these weather systems are provided in NWSI 10-604: *Tropical Cyclone Names and Definitions*.