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Operations and Services
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Tropical Cyclone Coordination and Emergency Operation, 10-602

TROPICAL CYCLONE OPERATIONS COORDINATION

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SUMMARY OF REVISIONS: This directive supersedes NWS Western Region Supplement 2-2009, dated May 17, 2013. Updated section 2.1 to change the backup contact office to WFO Tucson, to be consistent with the parent directive. Additionally, references to local WFO Tropical Cyclone Emergency Operations Plans have been removed (included in the parent directive).

Signed 03/03/16
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Director, Western Region

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1. Introduction. This regional supplement provides additional guidance and instructions for Western Region (WR) Weather Forecast Offices (WFOs) regarding coordination of tropical cyclone advisories and related operations. Tropical cyclones, although rare in the western U.S., are very high impact events. The National Hurricane Center (NHC) is the official source of tropical cyclone forecast and coastal watch and warning information (Note: The Central Pacific Hurricane Center (CPHC) is the official backup for eastern Pacific tropical cyclones; offices should maintain contact information for both NHC and CPHC). Timely and efficient coordination between NHC, affected Weather Forecast Offices (WFOs) (including State Liaison Offices (SLOs)), River Forecast Centers (RFCs), the WR Regional Operations Center (ROC), the Weather Prediction Center (WPC), the Storm Prediction Center (SPC), and the Ocean Prediction Center (OPC) is critical. It is also vital for WFOs and RFCs to closely coordinate their operations in advance of, and during tropical cyclones, to help ensure consistent provision of information to emergency responders, the media, and the general public.

The specifics of this Supplement apply to southern California offices, which, according to historical records, are vulnerable to a direct hit from a land-falling tropical depression, tropical storm, or in the extreme case, hurricane. Additionally, offices serving inland areas of the southwestern U.S. may potentially be impacted by strong winds at higher elevations and flash flooding within their county warning areas.

2. Coordination.

2.1 Coordination with NHC: Conference calls with all affected WR offices and the WR ROC will be initiated by NHC when any tropical depression, tropical storm, or hurricane forecast point enters into (or develops within) Western Region land, coastal, or adjacent offshore boundaries within 72 hours. Conference calls will normally occur at approximately 0200 Coordinated Universal Time (UTC), 0800 UTC, 1400 UTC, and 2000 UTC (one hour prior to scheduled NHC Advisory issuances). Note that actual call times may be adjusted slightly if there are other active tropical cyclones in the Atlantic, Caribbean, and/or Gulf of Mexico. Notification of the initiation of conference calls will be provided by NHC to WFO San Diego via 12Planet or by phone (or to WFO Tucson for backup purposes). The contacted WFO will then notify the other affected WR offices, WR ROC, WPC, SPC, and OPC for participation in the coordination call, including provision of the conference call telephone number and pass code (as provided by NHC).

These 6-hourly conference calls will continue until the tropical cyclone moves out of the Western Region area. All other routine forecast collaboration calls between WFOs should be superseded by these NHC-led calls for the duration of the tropical cyclone threat. For simplicity,

and acknowledging the forecast difficulties associated with tropical cyclones, all offices listed in Section 1 should participate in these calls, even if the system will only peripherally affect their County Warning Area(s). Mission-critical and time-critical products or services (i.e., Level 1 products and services) should have priority.

WFOs and RFCs serving the southwestern U.S., as well as their backup offices, will include the NHC conference call number and passcode, and the general NHC Operations (non-conference call) telephone number prominently in their local Station Duty Manuals or relevant operations manual.

2.2 Coordination between WFOs: WFOs should closely coordinate their forecast grids to help ensure consistency of information, particularly with respect to QPF and wind forecasts.

2.3 Coordination with State Liaison Offices (SLOs): SLOs (WFO Sacramento and WFO Oxnard for California; WFO Phoenix for Arizona, and WFO Reno for Nevada) should coordinate closely with their state emergency management officials, and with adjacent SLOs, to help ensure provision of consistent forecast information and related expected impacts.

2.4 Coordination between the WR ROC and affected WFOs/RFCs: The WR ROC should closely coordinate with affected WFOs and RFCs regarding expected significant impacts, to help effectively communicate concerns to the NWS Operations Center (NOC) and other federal partners, as necessary (e.g. FEMA Region IX).

3. Products.

3.1 Coastal WFOs (San Diego and Oxnard): In accordance with NWSI 10-601, use Hurricane Local Statements (HLS) to issue/update tropical cyclone watches and warnings. Refer to NWSI 10-601 for detailed procedures and information.

3.2 Inland WFOs: Use the Non-Precipitation Warning (NPW) to issue/update High Wind Watches/Warnings for tropical storm or hurricane force winds associated with tropical cyclones. Refer to NWSI 10-601 and 10-515 for additional information. Because of the rarity of tropical storms/hurricanes in the southwestern U.S., forecasters at inland WFOs are highly encouraged to add information to High Wind Watches/Warnings (in the overview section) emphasizing the storm's tropical origin/characteristics.

3.3 All WFOs: WFOs should be prepared to issue a Post-Tropical Cyclone Report (PSH) if a tropical cyclone threatened or directly impacted their county warning areas. Refer to NWSI 10-601 for additional information and criteria for preparation and dissemination.

4. Additional.

4.1 WSR-88D operations: WFOs should coordinate radar operations, and in particular ensure that the velocity increment is appropriate for anticipated maximum velocities, and use consistent Z-R relationships for the legacy PPS as much as possible. When a tropical cyclone is occurring or imminent, affected WFOs are highly encouraged to switch to the PPS "Tropical Z-R" relationship (250R1.2), in consultation with their local Unit Radar Committees (URCs). Specific instructions should be readily available to the forecast staff. The WSR-88D Tropical Cyclone Operations Plan from the Office of the Federal Coordinator for Meteorology (OFCM) may be used as a guide.

4.2 Upper Air Soundings: Upper air sites should anticipate potential requests from NHC for 6-hourly soundings and accommodate such requests whenever possible. Normally, NHC will provide 12- 24 hours advance notice for planning purposes.

4.3 NHC Pre-Advisory Worksheets: NHC routinely produces preliminary tropical cyclone forecast information, via an internal "Pre-Advisory Worksheet". WFO Forecasters may access these Pre-Advisory Worksheets for planning purposes. Instructions for accessing these worksheets should be included in local procedures. Information contained in these worksheets is strictly preliminary (not official), and WFOs will not externally disseminate it.

4.4 Hurricane Liaison Team: The FEMA Hurricane Liaison Team (HLT) is typically activated at NHC (at the discretion of the NHC Director) for land-falling U.S. tropical storms or hurricanes. The HLT will be available for direct contact with state Emergency Management Officials. WFOs should include the contact information for the HLT in their local procedures.

4.5 Supplementary Observations from NOAA Vessels: If any NOAA vessels are operating in an area of interest (e.g. off the west coast of Mexico, southern California, or in the Gulf of California), they may be able to provide supplemental observations to WFOs. The WR ROC may be able assist in determining if any NOAA vessels are in or near potential areas of interest during the tropical cyclone threat, and if so, coordinate contact between the NOAA vessel(s) and WFOs. WFOs should pass along any relevant observations to NHC.

4.6 WFO Exercises and Drills: WFOs are highly encouraged to conduct periodic internal drills and exercises, preferably annually, to help maintain staff proficiency in support of potential tropical cyclone operations.