



DEPARTMENT OF THE NAVY  
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IN REPLY REFER TO

OPNAVINST 3140.24F  
N84  
27 Aug 08

OPNAV INSTRUCTION 3140.24F

From: Chief of Naval Operations

Subj: ADVERSE AND SEVERE WEATHER WARNINGS AND CONDITIONS OF  
READINESS

Encl: (1) Common Weather Warning Terminology and Criteria  
(2) DoD Conditions of Readiness

1. Purpose. To promulgate information on Department of Defense (DoD) and the National Weather Service (NWS) terminology and severe weather criteria, used for determining and setting conditions of readiness for United States Navy (USN) and United States Marine Corps (USMC) activities and commands in advance of adverse or severe weather.

2. Cancellation. OPNAVINST 3140.24E.

3. Scope and Applicability. Adverse or severe weather poses a significant threat to military personnel, ships, aircraft and installations. Adequate and timely weather warnings, combined with prompt and effective action by commanders, will minimize loss, damage, and help ensure the safety of personnel. The weather warning criteria and terminology defined in this instruction are applicable at all Navy and Marine Corps activities and commands.

4. Action Required. Commanders and commanding officers shall:

a. Use all available weather information to minimize potential loss of life and damage to property associated with hazardous weather.

b. Include precautionary measures and planned rapid responses in local directives to ensure safety of personnel and property when warnings of destructive weather are received.

c. Commander, Naval Meteorology and Oceanography Command (CNMOC), and USMC weather activities are responsible for the

timely dissemination of hazardous or destructive weather warnings to naval airfields and fleet concentration areas. If CNMOC or Marine Corps weather activities warnings are not available, commanders and commanding officers should use warning information disseminated by other agencies to include the NWS, United States Air Force, National Oceanic and Atmospheric Administration (NOAA) and local media. Enclosure (1) contains a list of the DoD and NWS/NOAA weather warning terminology and criteria.

5. Conditions and Criteria. Conditions of readiness criteria prescribed in enclosure (2) shall be used at all Navy and Marine Corps activities and commands, and may be modified to reflect local readiness criteria. Local area commanders, at their discretion, may set a higher condition of readiness for their activities but may not lower any condition of readiness below that established by the regional disaster preparedness officer, emergency manager or regional planning agent for natural disasters, or their delegated representative.



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Common Weather Warning Terminology and Criteria

	USN/USMC	NWS
Wind Warnings		
Small Craft Warning	Sustained wind of 18-33 knots are forecast for harbors and inland waters.	Sustained wind of 25-33 knots (Varies slightly by geographical region) are forecast for harbors and inland waters, as well as adjacent coastal areas within 24 hours. Can also be issued based on local sea conditions (varies by geographical region).
Airfield Wind Advisory	Sustained wind of 18-33 knots or frequent gusts to 25 knots or greater are forecast for airfields and installations.	Sustained wind of 25-39 Miles per Hour (mph) (22-34 knots) for at least 1 hour and/or any gusts to 57 mph (40-49 knots) are forecast over land. Issuance is normally site specific.
Gale Warning	Sustained wind of 34-47 knots are forecast for harbors, inland waters, ocean areas, airfields and installations.	A warning of sustained surface winds, or frequent gusts, in the range of 34 knots (39 mph) to 47 knots (54 mph) inclusive, either predicted or occurring, and not directly associated with a tropical cyclone.

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	USN/USMC	NWS
<b>Storm Warning</b>	<b>Sustained wind of 48 knots or greater</b> are forecasted for harbor, inland waters, ocean areas, airfields and installations.	A warning of sustained surface winds, or frequent gusts, in the range of 48 knots (55 mph) to 63 knots (73 mph) inclusive, either predicted or occurring, and not directly associated with a tropical cyclone.
<b>Tropical Cyclone Warnings</b>		
<b>Tropical Depression</b>	Warning for land, harbor, inland water, and ocean areas for <b>sustained wind of 33 knots or less / no specified timeframe.</b>	N/A
<b>Tropical Storm</b>	Warning for land, harbor, inland waters, and ocean areas for <b>sustained wind of 34-63 knots / no specified timeframe.</b>	N/A
<b>Hurricane/ Typhoon</b>	Warning for land, harbor, inland waters, and ocean areas for <b>sustained wind of 64 knots or greater / no specified timeframe.</b>	N/A
<b>Tropical Storm Watch</b>	N/A	An announcement for specific coastal areas that <b>tropical storm conditions are possible within 36 hours.</b>

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	USN/USMC	NWS
<b>Tropical Storm Warning</b>	N/A	A warning that <b>sustained wind within the range of 34-63 knots</b> (39-73 mph or 63-117 Kilometer per Hour (km/h)) associated with a tropical cyclone are expected in a specified coastal area <b>within 24 hours or less.</b>
<b>Hurricane Watch</b>	N/A	An announcement for specific coastal areas that <b>hurricane conditions are possible within 36 hours.</b>
<b>Hurricane Warning</b>	N/A	A warning that <b>sustained wind 64 knots</b> (74 mph or 118 km/h) or higher associated with a hurricane are expected in a specified coastal area <b>in 24 hours or less.</b> A hurricane warning can remain in effect when dangerously <b>high water or a combination of dangerously high water and exceptionally high waves continue</b> , even though wind may be less than hurricane force.

	USN/USMC	NWS
<b>Thunderstorm and Tornado Warnings</b>		
<b>Thunderstorm Watch (T2)</b>	Destructive wind and accompanying thunderstorms are <b>within 25 Nautical Miles (NM), or expected within 6 hours.</b> Associated lightning/thunder, torrential rain, hail, severe downbursts, and sudden wind shifts are possible. Take precautions that will permit establishment of an appropriate state of readiness on short notice.	N/A
<b>Thunderstorm Warning (T1)</b>	Destructive wind and accompanying thunderstorms are <b>within 10 NM, or expected within 1 hour.</b> Associated lightning/thunder, torrential rain, hail, severe downbursts, and sudden wind shifts are possible. Take immediate safety precautions and shelter.	N/A

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<b>Severe Thunderstorm Watch</b>	(Severe T2) Severe thunderstorms are defined as having gusts of wind <b>greater than 50 knots, hail with a diameter greater than 3/4" and/or tornadoes.</b> Destructive wind accompanying severe thunderstorms are within <b>25 NM, or expected within 6 hours.</b> Associated lightning/thunder, torrential rain, hail, severe downbursts, sudden wind shifts and tornadic activity are possible. Take precautions that will permit establishment of an appropriate state of readiness on short notice.	Severe thunderstorm development is possible within or adjacent to the Watch area. Severe thunderstorms are defined as having <b>gusts of wind greater than 50 knots (60 mph, 95 km/h), hail with a diameter greater than 3/4" and/or tornadoes.</b> These watches are issued for large areas by the Storm Prediction Center in Norman, Oklahoma, and are usually valid for 4 to 6 hours.

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	USN/USMC	NWS
<b>Severe Thunderstorm Warning</b>	(Severe T1) Severe thunderstorms are defined as having <b>gusts of wind greater than 50 knots, hail with a diameter greater than 3/4" and/or tornadoes</b> . Destructive wind accompanying severe thunderstorms are <b>within 10 NM, or expected within 1 hour</b> . Associated lightning/thunder, torrential rain, hail, severe downbursts, sudden wind shifts and tornadic activity are possible. Take immediate safety precautions and shelter.	Severe thunderstorm is indicated by Doppler radar or sighted by skywarn spotters. Severe thunderstorms are defined as having <b>gusts of wind greater than 50 knots (60 mph, 95 km/h), hail with a diameter greater than 3/4" and/or tornadoes</b> . These warnings are issued by local NWS field offices for counties and/or portions of counties.
<b>Tornado Watch</b>	N/A	<b>Conditions are favorable</b> for the development of severe thunderstorms and tornadoes in and close to the watch area. These watches are issued for large areas by the Storm Prediction Center in Norman, Oklahoma, and are usually valid for 4 to 6 hours.



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<b>Tornado Warning</b>	N/A	<b>Conditions are likely</b> that a tornado exists. Strong rotation in a thunderstorm is indicated by Doppler radar or a tornado is sighted by skywarn spotters.
Special Weather Advisories/Watches/Warnings		
<b>Winter Snow Advisory</b>	Up to <b>1" of snow in 12 hours</b> ; or up to <b>2" in 24 hours</b> .	N/A
<b>Winter Snow Warning</b>	<b>Moderate to heavy snow</b> with freezing precipitation within 6 hours.	N/A
<b>Winter Storm Advisory</b>	N/A	Specific advisories used to describe conditions which may pose a threat to specified users, but are not serious enough to warrant a warning of the general public. Conditions include <b>snow (less than 4")</b> , <b>blowing snow</b> , <b>wind chill</b> , <b>freezing rain</b> , <b>dense fog</b> , etc.

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	USN/USMC	NWS
Winter Storm Watch	N/A	When the <b>risk of a hazardous weather event has increased significantly</b> , but its <b>occurrence, location, and/or timing is still uncertain</b> . Such weather events include blizzards, heavy snow, freezing rain or drizzle, and sleet.
Winter Storm Warning	N/A	When the risk of a <b>hazardous weather event is imminent or occurring</b> . The winter storm warning covers the same conditions included under winter storm watch.
Freezing Precipitation Advisory	Up to 1/4" accumulation.	<b>Any accretion on road surfaces.</b>
Freezing Precipitation Warning	Greater than 1/4" accumulation.	<b>6" or more accumulation in 12 hours for sleet or 1/2" accumulation or more for freezing rain.</b>

	USN/USMC	NWS
<b>Storm Surge Warning</b>	Warning issued for coastal areas, harbor, bays, and inland waters when <b>abnormally high tides</b> are forecast to impact operations. The specific warning height above normal mean high tide will be determined by local area commanders.	An abnormal rise in sea level accompanying a hurricane or other intense storm, whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone. Storm surge is usually estimated by subtracting the normal tide from the observed storm tide.
<b>Flash Flood Watch/Warning</b>	N/A	<b>Heavy rainfall may result in, or has produced, flash flooding.</b>
<b>Coastal Flood Watch/Warning</b>	N/A	<b>Strong on-shore wind, potentially combined with heavy rainfall, may result in, or has produced, coastal flooding.</b> Special statements may be issued for astronomically high-tides which produce minor flooding.
<b>Tsunamis/Sieche</b>		
<b>Tsunamis Warning</b>	N/A	Pacific Tsunami Warning Center
<b>Seiche Warning</b>	Naval Maritime Forecast Center, Pearl Harbor, issues Seiche warnings as required or as requested by the user.	N/A

DoD Conditions of Readiness

1. Conditions of readiness are set using the applicable term indicating wind force, such as setting Gale Condition. Unless specifically stated otherwise, conditions of readiness are based on sustained wind. Tropical cyclone conditions are set only for cyclonic systems of tropical or subtropical origin. Gale and storm conditions are used for wind storms other than tropical cyclones, or for wind outside a tropical cyclone's general circulation.

<b>TROPICAL CYCLONE, SUB-TROPICAL, EXTRA-TROPICAL WIND STORMS (Issue using gale, storm, tropical storm, or hurricane/typhoon to indicate force of destructive wind.)</b>	
<b>Condition V</b>	Destructive winds are possible within <b>96 hours</b> .
<b>Condition IV</b>	Trend indicates a possible threat of destructive wind of the force indicated within <b>72 hours</b> . Review hazardous and destructive weather implementation plans, as established by local regulations.
<b>Condition III</b>	Destructive wind of the force indicated are possibly within <b>48 hours</b> . Take preliminary precautions.
<b>Condition II</b>	Destructive wind of the force indicated are anticipated within <b>24 hours</b> . Take precautions that will permit establishment of an appropriate state of readiness on short notice.
<b>Condition I</b>	Destructive wind of the force indicated are occurring or anticipated within <b>12 hours</b> . Take final precautions as prescribed.

2. Further amplification of the basic conditions prescribed above is authorized to facilitate conditions of readiness within local commands. The previous setting of a lower condition of readiness is not a prerequisite for setting any of the conditions. The forecast wind values may be different than the threshold values in enclosure (1) to reflect best possible forecast information. Examples:

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a. "Set Gale Condition II. Destructive wind of 35 to 40 knots are anticipated within 24 hours."

b. "Set Tropical Storm Condition III. Destructive wind of 50 knots or greater are possible within 48 hours."

c. "Set Hurricane Condition I. Destructive wind of 80 knots or greater are anticipated within 12 hours."