

**United States Forces Korea  
Regulation 115-1**

**Climatic, Hydrological, and Topographic Services**

**USFK AREA WEATHER WATCHES AND  
TROPICAL CYCLONE PROCEDURES  
FOR THE REPUBLIC OF KOREA**

**Interim Changes Issue Date: May 2014**

# ***SUMMARY of CHANGE***

USFK REG 115-1

USFK Area Weather Watches and Tropical Cyclone Procedures for the Republic Of Korea

The interim changes are listed below, dated May 2014—

- o Changes “winds” to “**Destructive winds**” (Appendix E).
- o Adds “**TCCOR FIVE**”, (**Tropical Cyclone Conditions of Readiness**). For the Korean Theater of Operations, “**TCCOR FIVE**” is synonymous with the seasonal occurrence of Typhoons (1 Jun to 1 Oct) and will not require a formal declaration by the TCCOR authority. (Appendix E, para E-3e).
- o Replaces paragraphs A, B, C, D with the following (Appendix F, para 5):
  - A. TCCOR ONE: DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE OCCURRING OR ARE FORECAST TO AFFECT THE DESIGNATED AREA(S) WITHIN 12 HOURS.**
  - B. TCCOR TWO: DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE ANTICIPATED AND FORECASTED TO AFFECT THE DESIGNATED AREA(S) WITHIN 24 HOURS.**
  - C. TCCOR THREE: DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE POSSIBLE AND FORECASTED TO AFFECT THE DESIGNATED AREA(S) WITHIN 48 HOURS.**
  - D. TCCOR FOUR: DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE POSSIBLE AND FORECASTED TO AFFECT THE DESIGNATED AREA(S) WITHIN 72 HOURS.**
- o Updates **POC information**. (Appendix F, para 6)

Headquarters  
United States Forces Korea  
Unit #15237  
APO AP 96205-5237

United States Forces Korea  
Regulation 115-1

22 July 2014

Climatic, Hydrological, and Topographic Services

USFK AREA WEATHER WATCHES AND TROPICAL CYCLONE PROCEDURES FOR THE  
REPUBLIC OF KOREA

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\*This regulation supersedes USFK Regulation 115-1, dated 1 May 2013.

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FOR THE COMMANDER:

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OFFICIAL:



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**Summary.** This regulation outlines responsibilities for providing weather support for United States Forces Korea (USFK). Specific responsibilities are contained in weather support documents of individual Eighth Army units and Air Force weather units supporting USFK.

**Summary of Change.** This document has been updated to reflect changes in accordance with supporting joint and service publications.

**Applicability.** This regulation applies to all USFK, USFK Service Components and subordinate organizations, and units supporting USFK in the Korean Theater of Operations (KTO).

**Supplementation.** Issue of further supplements to this regulation by subordinate commands is prohibited unless prior approval is obtained from USFK J2 (FKJ2-SWO), Unit #15173, APO AP 96205-5173, [usaf.yongsan.607-asog.list.607-ws@mail.mil](mailto:usaf.yongsan.607-asog.list.607-ws@mail.mil), DSN 315-725-7288.

**Forms.** USFK forms are available at [http://8tharmy.korea.army.mil/g1\\_AG/Programs\\_Policy](http://8tharmy.korea.army.mil/g1_AG/Programs_Policy).

**Records Management.** Records created as a result of processes prescribed by this regulation must be identified, maintained, and disposed of according to AR 25-400-2. Record titles and descriptions are available on the Army Records Information System website at <https://www.arims.army.mil>.

**Suggested Improvements.** The proponent of this regulation is USFK J2 (FKJ2-SWO). Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to USFK J2 (FKJ2-SWO), Unit #15173, APO AP 96205-5173 or email [usaf.yongsan.607-asog.list.607-ws@mail.mil](mailto:usaf.yongsan.607-asog.list.607-ws@mail.mil), DSN 315-725-7288.

**Distribution.** Electronic Media Only (EMO).

## **CONTENTS**

### **Chapter 1**

#### **Introduction, page 1**

- 1-1. Purpose
- 1-2. References
- 1-3. Explanation of Abbreviations and Terms
- 1-4. Responsibilities

### **Chapter 2**

#### **Policies and Procedures, page 4**

- 2-1. Policy
- 2-2. Requirement Control Symbol Assignment

#### **Appendixes, page 5**

- A. Sample SWS
- B. Area Weather Watch (AWW) Criteria
- C. Sample Area Weather Watch (AWW)
- D. Sample Tropical Cyclone Threat Assessment Product (TC-TAP)
- E. Tropical Cyclone Conditions of Readiness (TCCORs)
- F. Sample Tropical Cyclone Condition of Readiness (TCCOR) Message
- G. Map of USFK Areas
- H. Command Center (CC) Seoul Emergency Operations Center (EOC) Area Weather Watch and Tropical Cyclone Condition of Readiness Distribution List

### **Figure List**

Figure 1-1. Resource Protection Funnel, page 2

#### **Glossary, page 15**

## **Chapter 1**

### **Introduction**

#### **1-1. Purpose**

To establish requirements and responsibilities for protecting military resources. This regulation establishes responsibilities associated with USFK Area Weather Watches (AWWs), Tropical Cyclone Threat Assessment Product (TC-TAP) bulletins, and Tropical Cyclone Conditions of Readiness (TCCORs).

#### **1-2. References**

a. Required publication. USPACOMINST 0539.1, Tropical Cyclone Operations.

b. Related publications.

(1) PACAFI 15-101 (Weather Support for PACAF), 15 June 2009.

(2) USPACOMINST 0539.2, Meteorological and Oceanographic (METOC) Support to Joint Operations in U.S. Pacific Command (USPACOM), 11 August 2010.

(3) Joint Publication (JP) 3-59, Meteorological and Oceanographic Operations, 7 December 2012.

(4) USFK Regulation 115-2, Meteorology and Oceanography Support Responsibilities, 23 January 2013.

(5) USFK Regulation 10-2, Installation Management and Base Operations, 7 June 2007.

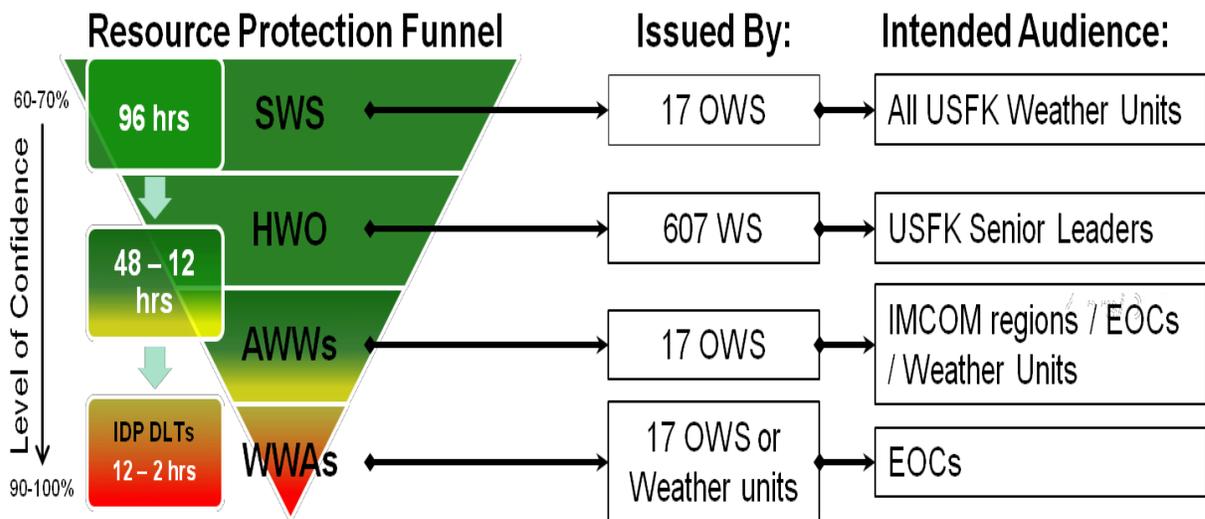
#### **1-3. Explanation of Abbreviations and Terms**

Abbreviations and terms used in this regulation are explained in the glossary.

#### **1-4. Responsibilities**

a. The 17th Operational Weather Squadron (17 OWS):

(1) Coordinates resource protection with USFK weather units. Figure 1-1 depicts the resource protection funnel:



**Figure 1-1. Resource Protection Funnel**

(2) Issues SWSs based on the potential for hazardous weather conditions that are expected to affect the KTO within 96 - 48 hrs to all USFK Weather Units. **Appendix A** contains an example SWS.

(3) Issues AWWs within 48-12 hours of the onset of significant weather. **Appendix B** contains AWW Criteria. **Appendix C** contains an example AWW. Tropical cyclone wind notifications are covered by TC-TAP bulletins.

(4) Issues TC-TAP bulletins for the KTO when tropical storm winds greater than or equal to 35 knots are expected to impact Kunsan AB, Osan AB, USAG Humphreys, USAG Red Cloud, K-16 (Seoul AB), and K-2 (Taegu AB) w/in 96 hours. Winds greater than or equal to 35 knots and not associated with tropical cyclones will be addressed through AWWs. Requirements for additional locations based on command operational requirements may be requested through the USFK FKJ2-SWO. TC-TAP bulletins will discuss the closest point of approach, max forecasted wind intensity (sustained and gusts), onset and duration of 50kt winds, as well as any remarks such as precipitation totals. For additional criteria, coordinate with your supporting weather unit. Every effort will be made to have a fully coordinated TC-TAP in effect NLT 90 minutes after the latest Joint Typhoon Warning Center warning is posted. **Appendix D** contains a sample TC-TAP bulletin.

(5) Issues WWAs within 12-2 hours in advance of significant weather in accordance with Installation Data Plans (IDP).

b. The 607 WS:

(1) Issues Hazardous Weather Outlooks (HWO) to USFK senior leaders when weather is forecasted to significantly impact operations across the KTO.

(2) Advises USFK J3 on tropical cyclone forecasts that will affect the KTO with the USFK J3 as the issuing authority for TCCOR changes. **Appendix E** contains the definitions of TCCOR

for the KTO.

(3) Provides Command Center (CC) Seoul Emergency Operations Center (EOC) with draft TCCOR messages based on the latest Joint Typhoon Warning Center (JTWC) forecast. Appendix B describes TCCORs. **Appendix F** shows an example of a TCCOR message.

(4) Provides American Forces Network (AFN) Korea, United States Army Garrison-Yongsan, with plain-language tropical cyclone information bulletins.

c. All USFK weather units:

(1) Issue WWAs in accordance with IDP procedures.

(2) Monitor JTWC forecast positions for all tropical cyclones that threaten the KTO.

(3) Take special observations in accordance with applicable regulations.

(4) Participate in conference calls initiated by 17 OWS to discuss the JTWC tropical cyclone forecast and weather conditions expected over USFK weather units' areas of responsibility. **Appendix G** shows the USFK geographical areas used when issuing a TCCOR.

(5) Brief the JTWC consensus forecast as the official tropical cyclone forecast for US forces in the ROK. USFK weather units will not deviate from JTWC's tropical cyclone position, track, movement, maximum wind speed, or intensity trend. JTWC consensus forecast products may differ from tracks briefed by the ROKAF Combined Weather Squadron at CFC level briefings. Outlooks beyond 48 hours are highly uncertain, are subject to change, and are for planning purposes only.

(6) Ensure their supported military commanders are informed of the latest TCCOR.

(7) Ensure the necessary weather warnings and advisories are issued for areas of responsibility and advise local military commanders in the area of responsibility of tropical cyclone conditions and forecasts.

(8) Ensure local forecasts are consistent with the current CC Seoul TCCOR message and 17 OWS TC-TAP bulletins.

d. Responsibilities of Non-Weather Agencies/Offices:

(1) CC Seoul EOC disseminates all HWOs, AWWs, and TCCOR messages upon receipt to the agencies shown in **Appendix H**.

(2) At the USFK Commander's discretion, USFK J3 issues Fragmentary Orders (FRAGOs) for US military installations within the KTO based on 607 WS input.

(3) AFN Korea broadcasts Korea-wide tropical cyclone bulletins.

(4) Component and subordinate commanders establish procedures to safeguard their personnel and equipment against adverse environmental conditions. Units desiring notification of AWWs and TCCOR messages should coordinate requirements through their respective USFK Service Component to the FKJ2-SWO.

## **Chapter 2**

### **Policies and Procedures**

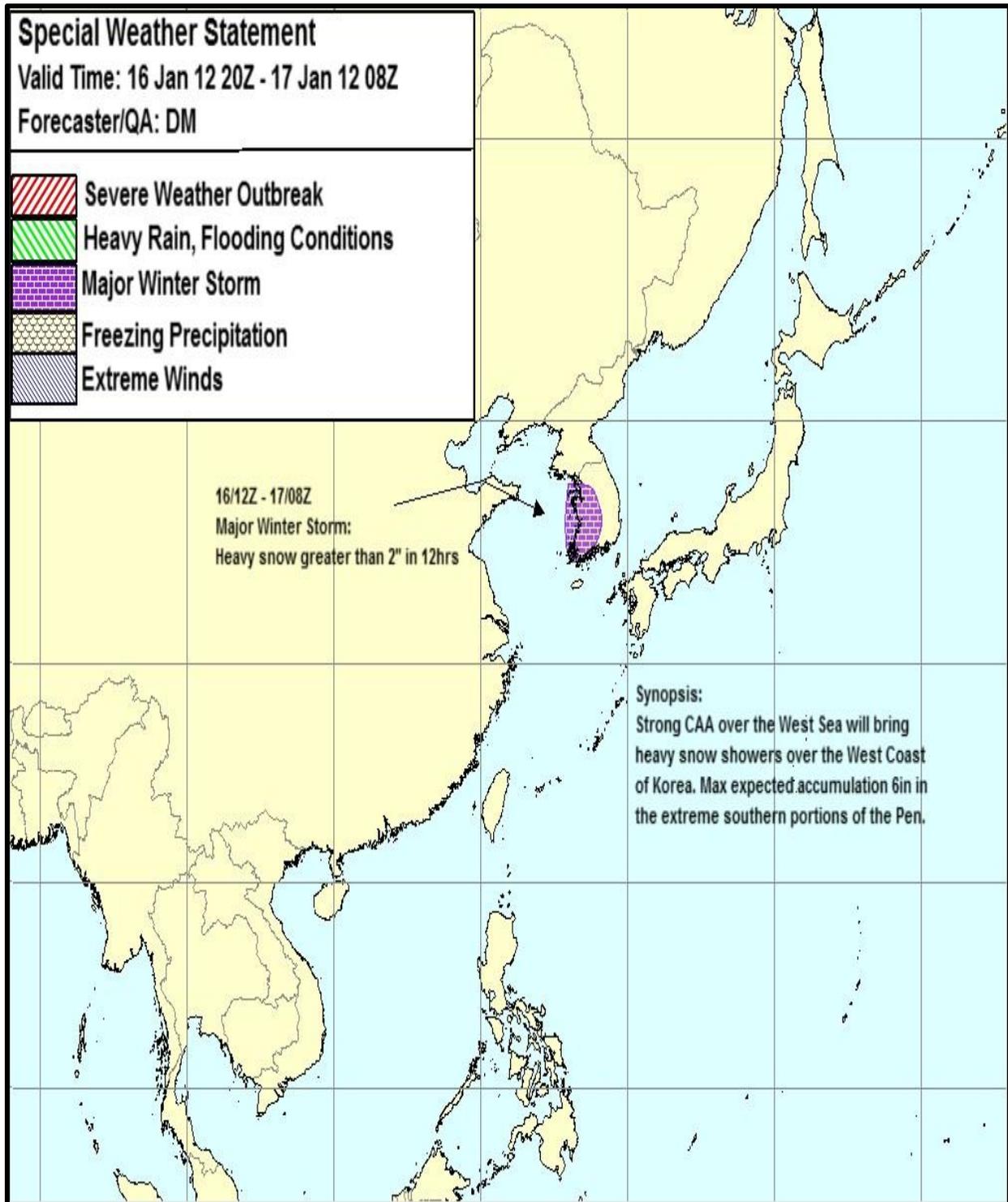
#### **2-1. Policy**

The JTWC is responsible for monitoring and forecasting tropical cyclone development and movement. USFK weather units are responsible for providing their local installation commanders with the final, locally refined forecast of the expected onset, speed, and duration of winds and other tropical cyclone-associated weather phenomena that will affect their installations.

#### **2-2. Requirement Control Symbol Assignment**

These information requirements are exempt from a Requirement Control Symbol in accordance with AR 335-15, subparagraph 5-2c(4).

Appendix A  
Sample SWS



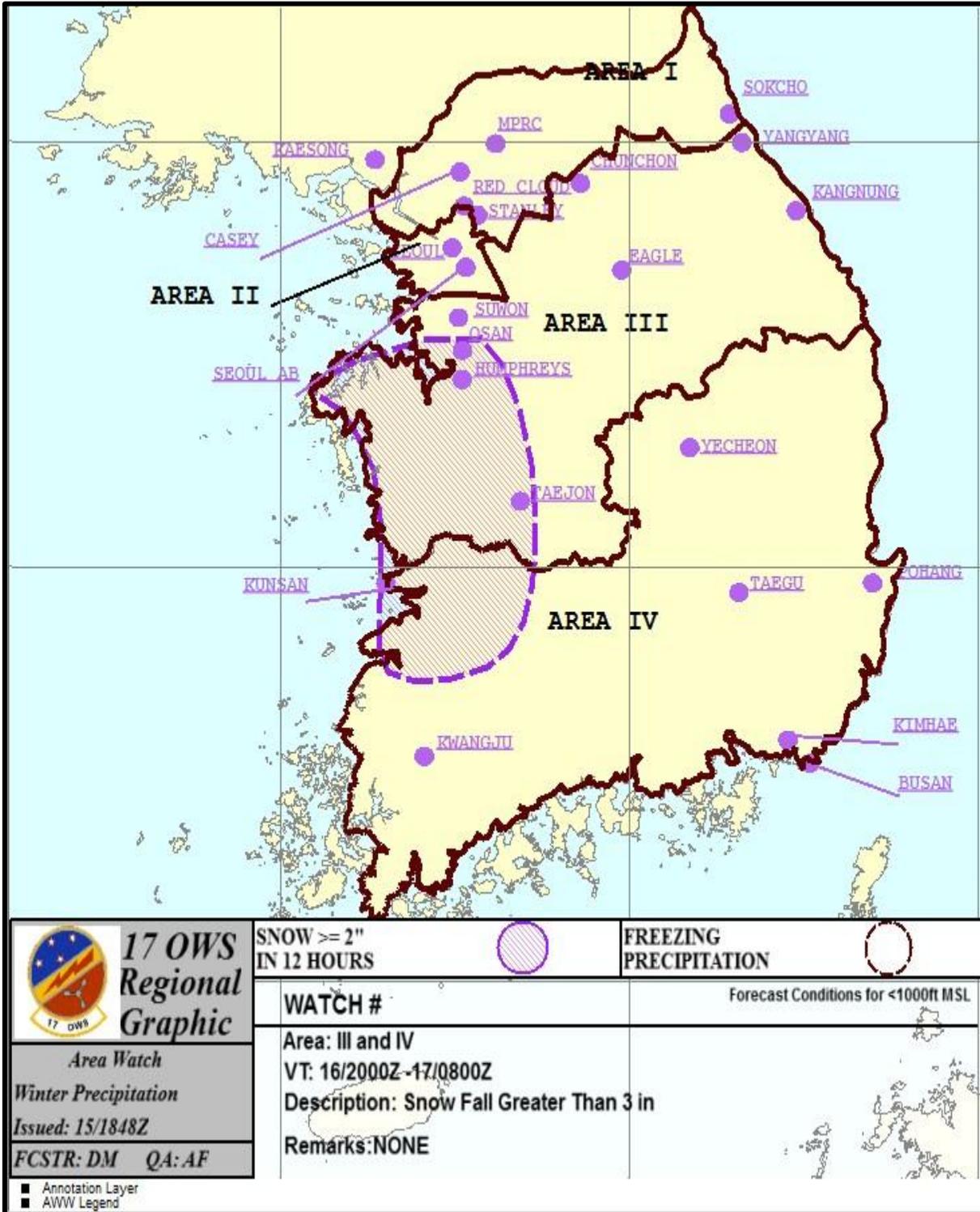
## **Appendix B**

### **Area Weather Watch (AWW) Criteria**

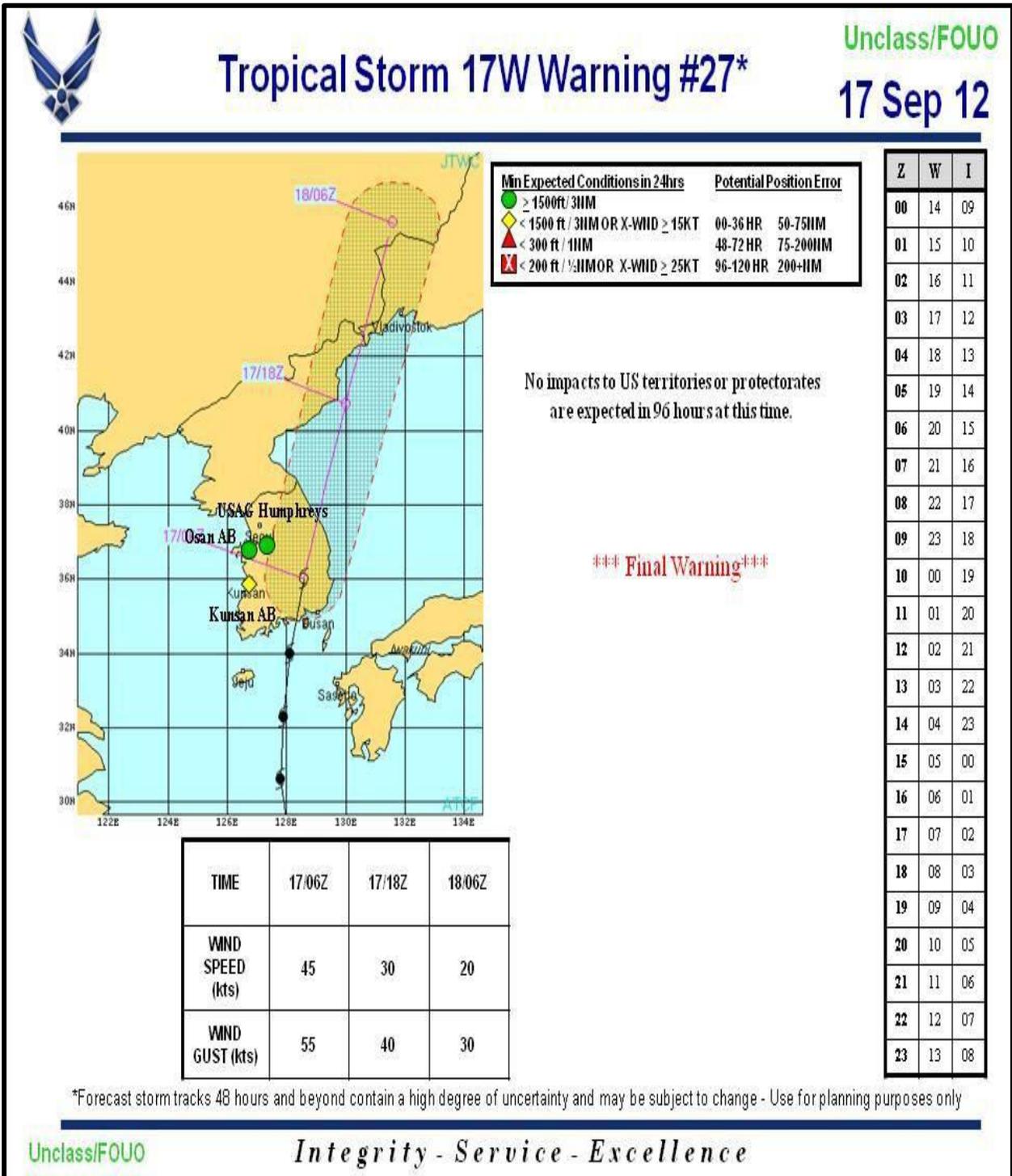
The following forecast conditions will result in the issuance of AWWs. The Desired Lead Time (DLT) for each event is 48 hours.

- a. Severe Thunderstorms (Damaging Winds GTE 45kts and/or Hail GTE ½ inch).
- b. Moderate Thunderstorms (Strong Winds GTE 30 kts but LT 45kts and/or Hail GTE ¼ inch but LT ½ inch).
- c. Damaging Winds GTE 45 kts (not associated with Thunderstorm activity).
- d. Strong Winds GTE 30 but LT 45kts (not associated with Thunderstorm activity).
- e. Heavy Rain GTE 2 inches in 12 hours.
- f. Heavy Rain GTE 5 inches in 24 hours.
- g. Heavy Snow GTE 2 inches in 12 hours.
- h. Freezing precipitation.
- i. Surface temperature below 0 degrees Fahrenheit (-18 degrees Celsius).
- j. Surface wind chill temperature below -20 degrees Fahrenheit (-29 degrees Celsius).

**Appendix C**  
**Sample Area Weather Watch (AWW)**



Appendix D  
 Sample Tropical Cyclone Threat Assessment Product (TC-TAP)



**Appendix E**  
**Tropical Cyclone Conditions of Readiness (TCCOR)**

**E-1.** A TCCOR is an alert status providing an approximate timetable of an approaching tropical cyclone.

**E-2.** A TCCOR message specifies the geographical area(s) of the ROK to be alerted.

**E-3.** There are five TCCOR levels:

a. TCCOR ONE. Destructive winds, greater than or equal to 50 knots (including gusts) are occurring or are forecasted to affect the designated area(s) within 12 hours.

b. TCCOR TWO. Destructive winds, greater than or equal to 50 knots (including gusts) are anticipated and forecasted to affect the designated area(s) within 24 hours.

c. TCCOR THREE. Destructive winds, greater than or equal to 50 knots (including gusts) are possible and forecasted to affect the designated area(s) within 48 hours.

d. TCCOR FOUR. Destructive winds, greater than or equal to 50 knots (including gusts) are possible and forecasted to affect the designated area(s) within 72 hours.

e. TCCOR FIVE. Destructive winds are possible w/in 96 hours. For the Korean Theater of Operations, TCCOR FIVE is synonymous with the seasonal occurrence of Typhoons (1 Jun to 1 Oct) and will not require a formal declaration by the TCCOR authority.

f. TCCOR ALL CLEAR. Winds greater than or equal to 50 knots (including gusts) are no longer forecast to affect the designated area.

**Appendix F**  
**Sample Tropical Cyclone Condition of Readiness (TCCOR) Message**

UNCLASS

SUBJECT: TYPHOON READY-KOREA 94 W CONDITION OF READINESS MESSAGE: #1

DATE: 11 May 13 VALID: 11/0300I MAY 13

1. TROPICAL CYCLONE CONDITIONS OF READINESS (TCCOR) IN EFFECT:

A. TCCOR FOUR IS NOW IN EFFECT FOR USFK AREAS ONE THROUGH FOUR.

B. TCCOR THREE IS EXPECTED TO BE ISSUED AT 12/0300I FOR USFK AREAS THREE AND FOUR, WHILE USFK AREAS ONE AND TWO ARE EXPECTED TO BE ISSUED AT 12/0600I.

2. THIS INFORMATION IS BASED ON THE LATEST FORECAST FROM THE JOINT TYPHOON WARNING CENTER (JTWC). TYPHOON READY-KOREA IS LOCATED APPROXIMATELY 390 NM MILES SOUTH OF CHEJU-DO, ROK. TYPHOON READYKOREA HAS TRACKED NORTHWESTWARD AT 05 KNOTS DURING THE PAST SIX HOURS WITH SUSTAINED WINDS OF 65 KNOTS GUSTING TO 75 KNOTS.

3. TIMING OF WINDS:

A. WINDS OF 35-49 KNOTS ARE EXPECTED TO AFFECT USKF AREAS THREE AND FOUR BEGINNING 14/0000I MAY 04 UNTIL THE ONSET OF GREATER THAN 50 KNOT WINDS AT 14/0300I. MAXIMUM WINDS AT USFK AREAS THREE AND FOUR ARE EXPECTED TO BE 75 KNOTS SUSTAINED GUSTING TO 85 KNOTS.

B. WINDS OF 35-49 KNOTS ARE EXPECTED TO AFFECT USKF AREAS ONE AND TWO BEGINNING 14/0300I MAY 04 UNTIL THE ONSET OF GREATER THAN 50 KNOT WINDS AT 14/0600I. MAXIMUM WINDS AT USFK AREAS ONE AND TWO ARE EXPECTED TO BE 35 KNOTS SUSTAINED GUSTING TO 55 KNOTS.

C. WINDS GREATER THAN 50 KNOTS OVER USFK AREAS ONE THROUGH FOUR ARE EXPECTED TO END AT 14/1200I MAY 04.

D. WINDS OF 35 TO 49 KNOTS OVER USFK AREAS ONE THROUGH FOUR ARE EXPECTED TO END AT 14/1400I MAY 04.

E. HEAVY RAIN ASSOCIATED WITH TYPHOON READY-KOREA WILL END IN THE ROK BY 14/1500I MAY 04.

4. TYPHOON FORECAST:

A. 12-HOUR POSITION: 11/1500I MAY 04, TUESDAY AFTERNOON, THE FORECAST POSITION IS 27.2N, 127.9E (APPROXIMATELY 320 NM TO THE SOUTH OF CHEJUDO) SUSTAINED WINDS NEAR THE CENTER OF THE TYPHOON ARE FORECAST TO BE 85 KNOTS GUSTING TO 75 KNOTS.

B. 24-HOUR POSITION: 12/0300I MAY 04, WEDNESDAY MORNING, THE FORECAST POSITION IS 28.9N, 126.4 E (250 NM SOUTH OF CHEJU-DO). SUSTAINED WINDS NEAR THE

CENTER OF THE TROPICAL STORM ARE FORECAST TO BE 85 KNOTS GUSTING TO 105 KNOTS.

C. 36-HOUR POSITION: 12/1500I MAY 04, WEDNESDAY AFTERNOON, THE FORECAST POSITION IS 31.3N, 127.3 E (190 NM SOUTH OF CHEJU-DO). SUSTAINED WINDS NEAR THE CENTER OF THE TROPICAL STORM ARE FORECAST TO BE 85 KNOTS GUSTING TO 105 KNOTS.

5. DEFINITION OF TROPICAL CYCLONE CONDITIONS OF READINESS (TCCOR):

A. TCCOR ONE. DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE OCCURRING OR ARE FORECAST TO AFFECT THE DESIGNATED AREA(S) WITHIN 12 HOURS.

B. TCCOR TWO. DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE ANTICIPATED AND FORECASTED TO AFFECT THE DESIGNATED AREA(S) WITHIN 24 HOURS.

C. TCCOR THREE. DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE POSSIBLE AND FORECASTED TO AFFECT THE DESIGNATED AREA(S) WITHIN 48 HOURS.

D. TCCOR FOUR. DESTRUCTIVE WINDS, GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE POSSIBLE AND FORECASTED TO AFFECT THE DESIGNATED AREA(S) WITHIN 72 HOURS.

6. THE NEXT TCCOR MESSAGE WILL BE RELEASED BY USFK/J3-OPS WHEN WEATHER CONDITIONS WARRANT. POC IS CAPT IWASHITA, MSGT SHRYOCK, OR LTCOL WEAVER AT 724-2144 FOR QUESTIONS.

Appendix G  
Map of USFK Areas



**Appendix H  
Command Center (CC) Seoul Emergency Operations Center (EOC) Area Weather Watch and  
Tropical Cyclone Condition of Readiness Distribution List**

ACoS, CJ5  
AFN-KOREA  
Camp Mujuk CDO  
CFCC  
CFDC  
CFCS  
CFCCC  
CFCD  
CFCJ  
CFPA  
Chinhae Watch Officer  
CJ33  
CJ39 IO  
CNFK CoS  
CNFK PAO  
CNFK SDO Org Account  
CNFK SODO  
C7F Watch Captain  
Dep J3  
DODDS-KOREA  
EANC-CG  
Eighth Army Ops Mailbox  
FKCC  
FKCS  
FKCSM  
FKDCS  
FKJ3  
FKJ1  
FKJ2  
FKJ4  
FKSC-D  
IMCOM-Pacific PAO  
Navy Region Korea CoS  
MARFORK CDO  
MARFORK G3  
MARFORK G2  
UNCMAC  
USAG RED CLOUD  
USAG CASEY  
USAG YONGSAN  
USAG HUMPHREYS  
USAG DAEGU  
USFK LNO  
USFK PAO  
USFK Staff J1  
USFK Staff J2  
USFK Staff J33  
USFK Staff J4

USFK Staff J5  
USFK Staff J6  
USFK Staff J8  
III MEF Cmd Ctr  
2ID DTOC  
2ID/CG  
7AF/CC  
7AF Workflow  
7AF/BWDO  
7AF/CAG Workflow  
7AF/CS  
7AF/A3A5  
8FW/CP  
19th ESC/CG  
19th ESC/SPO  
51FW/OC  
528 SUST BDE  
604 ASOS  
607 AOG  
607 AOC/CC  
607 AOC/CCO  
607 WS

## Glossary

### Section I. Abbreviations

AFN	American Forces Network
AWW	Area Weather Watch
CC	Command Center
EOC	Emergency Operations Center
FRAGO	Fragmentary Order
HWO	Hazardous Weather Outlook
IDP	Installation Data Plan
JTWC	Joint Typhoon Warning Center
METOC	Meteorology and Oceanography
NM	Nautical Miles
OWS	Operational Weather Squadron
ROK	Republic of Korea
SWO	Staff Weather Officer
SWS	Special Weather Statement
TCCOR	Tropical Cyclone Condition of Readiness
TC-TAP	Tropical Cyclone Threat Assessment Product
USFK	United States Forces Korea
WS	Weather Squadron
WWA	Warning, Watch, Advisory

### Section II. Terms

**Area Weather Watch.** Forecast of weather conditions that pose a hazard to life or property. The 17 OWS is responsible for issuing Area Weather Watches (AWWs).

**Fragmentary Order.** An abbreviated form of an operation order (verbal, written, or digital) usually issued on a day-to-day basis that eliminates the need for restating information contained in a basic operation order. It may be issued in sections. It is issued after an operation order to change or modify that order or to execute a branch or sequel to that order. Also called “FRAG order.”

**Hazardous Weather Outlook.** A statement issued to senior USFK leaders alerting them to impending weather and associated risk considerations. 607WS is responsible for issuing HWOs.

**Installation Data Plans.** Pre-coordinated weather warning, watch, advisory notification criteria between 17 OWS, as the supporting USFK unit, and individual weather teams in the KTO. IDPs are maintained on the 17OWS website at <https://17ows.hickam.af.mil>.

**Joint Typhoon Warning Center.** A joint United States Navy / United States Air Force entity under the command of the Naval Pacific Meteorology and Oceanography Center, Hawaii, responsible for issuing tropical cyclone warnings for the United States Pacific Command area west of 180 degrees longitude.

**Knot.** A unit of wind speed equal to one nautical mile per hour, or approximately 1.15 statute miles per hour.

**Special Weather Statement.** A statement designed to alert weather units of the potential for severe weather to threaten or impact USFK assets and operations. The statement is based on model output and contains a level of subjectivity.

**Super Typhoon.** A tropical cyclone in which the maximum sustained surface wind speed is 130 knots or greater.

**Sustained Wind.** Wind speed obtained by averaging the observed values over a 1-minute period.

**Tropical Cyclone.** A general term used for an area of low pressure that originates over the tropical oceans. Tropical depressions, tropical storms, typhoons, and super typhoons are all tropical cyclones.

**Tropical Depression.** A tropical cyclone in which the maximum sustained surface wind speed is 33 knots or less.

**Tropical Storm.** A tropical cyclone in which the maximum sustained surface wind speed is between 34 and 63 knots, inclusive.

**Typhoon.** A tropical cyclone located west of 180 degrees longitude, north of the equator, and east of the Malaysian Peninsula, in which the maximum sustained surface wind speed is between 64 and 129 knots, inclusive.

**Warning, Watch, Advisory.** An all encompassing term that references special weather products to facilitate resource protection decisions. As outlined in USFK Reg 115-2, WWA criteria are coordinated between primary customers and supporting weather units in the KTO.

**Wind Gust.** A rapid fluctuation in wind speed, lasting for less than 1 minute, with a variation of 10 knots or more between peaks and lulls.