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Unit #15237  
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United States Forces Korea  
Regulation 115-1

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Climatic, Hydrological, and Topographic Services

UNITED STATES FORCES KOREA AREA WEATHER WATCHES AND TROPICAL CYCLONE  
PROCEDURES FOR THE REPUBLIC OF KOREA

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\*This regulation supersedes USFK Regulation 115-1, dated 22 July 2014.

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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 significantly revised and should be reviewed in its entirety. The most significant changes apply to an adjustment to Tropical Cyclone Condition of Readiness (TCCOR) activation criteria, re-designation of USFK Areas to align them with USFK Regulation 10-2, and the addition of a USFK Area VII to encompass all offshore islands.

**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, Department of the Air Force, 607 WS, Unit #15173, APO AP 96271-5173, [usaf.humphreys.607-asog.list.607-ws-usfk.swo@mail.mil](mailto:usaf.humphreys.607-asog.list.607-ws-usfk.swo@mail.mil), DSN 315-753-6663.

**Forms.** USFK forms are available at <https://8tharmy.korea.army.mil/g1/forms-archives.asp>.

**Records Management.** Records created as a result of processes prescribed by this regulation must be identified, maintained, and disposed of according to the governing service regulation. Record titles are available on the Army Records Management Information System (ARIMS) website at <https://www.arims.army.mil> and under USFK Regulation 923.1.

**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, Department of the Air Force, 607 WS, Unit #15173, APO AP 96271-5173 or email [usaf.humphreys.607-asog.list.607-ws-usfk.swo@mail.mil](mailto:usaf.humphreys.607-asog.list.607-ws-usfk.swo@mail.mil), DSN 315-753-6663.

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

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## **Chapter 1 Introduction**

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

To establish requirements and responsibilities for protecting military resources. This regulation establishes responsibilities associated with United States Forces Korea (USFK) Area Weather Watches (AWWs), Hazardous Weather Outlooks (HWOs), Tropical Cyclone Threat Assessment Product (TC-TAP) bulletins, and Tropical Cyclone Condition of Readiness (TCCOR).

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

a. Required publication. USINDOPACOMINST 0539.1, Tropical Cyclone Conditions of Readiness Program, 30 March 2018

b. Related publications.

(1) PACAFI 15-101 Weather Support for PACAF, 10 August 2016.

(2) USINDOPACOMINST 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, 10 January 2018.

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

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

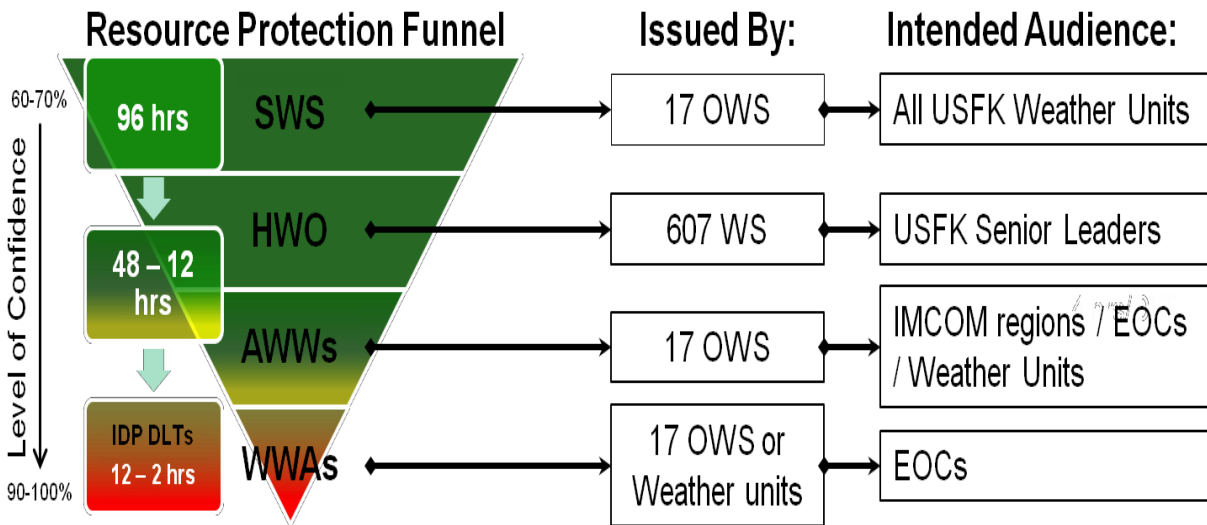
### **1-3. Explanation of Abbreviations and Terms**

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

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

a. The 17th Operational Weather Squadron (17 OWS), Joint Base Pearl Harbor-Hickam, Hawaii:

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



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

(2) Issues Special Weather Statements (SWS) based on widespread hazardous weather conditions (e.g. severe thunderstorms, winter storms, heavy rain, etc.) that are expected to affect the KTO for a period of multiple days. The Desired Lead Time (DLT) for a SWS is 96 - 48 hours before onset.

(3) Issues AWWs in coordination with the 607th Weather Squadron (607 WS) through Joint Environmental Toolkit (JET) with a DLT of 12 hours before the onset of significant weather (with the exception of lightning watches and tornado watches, which have a DLT of 30 minutes). **Appendix A** contains all AWW Criteria.

(4) Issues TC-TAP bulletins for the KTO when tropical cyclone sustained winds greater than or equal to 35 knots are forecast to occur. Requests for additional locations based on command operational requirements may be submitted through the USFK FKJ2-SWO. TC-TAP bulletins will discuss, at a minimum, the closest point of approach, maximum forecast wind intensity (sustained and gusts), onset and duration of 15 knot and 25 knot crosswinds, 35 knot sustained winds, 50 knot sustained winds, and 64 knot gusts, as well as any remarks such as precipitation totals. Every effort will be made to have a fully coordinated TC-TAP in effect NLT 90 minutes after the latest Joint Typhoon Warning Center (JTWC) warning is posted. **Appendix D** contains a sample TC-TAP bulletin.

(5) Issues Watches, Warnings, and Advisories (WWAs) through JET for individual locations within 30 minutes to 12 hours, as applicable, in advance of significant weather in accordance with Installation Data Pages (IDP).

b. The 607 WS, United States Army Garrison (USAG) Humphreys, Republic of Korea:

(1) Issues HWOs to USFK senior leaders when weather is forecast to significantly impact operations across the KTO. **Appendix C** contains an example HWO.

(2) Advises USFK J3 on tropical cyclone forecasts that will affect the KTO. **Appendix E**

contains example TCCOR products. The USFK Commanding General has delegated the approval authority for changes to TCCOR levels for all locations in the Republic of Korea to USFK J3.

(3) Provides the USFK Joint Watch Floor with draft TCCOR messages based on the latest JTWC forecast. **Appendix J** shows an example of a TCCOR message.

c. All USFK weather units:

(1) Issue weather watches, warnings, and advisories (WWAs) in accordance with IDP procedures and ensure the necessary WWAs are issued for areas of responsibility. Advise local installation commanders and emergency managers in the area of responsibility of tropical cyclone conditions and forecasts.

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

(3) Participate in conference calls to discuss the JTWC tropical cyclone forecast and weather conditions expected over USFK weather units' areas of responsibility. **Appendix H** describes the USFK geographical areas used when changing a TCCOR level.

(4) Brief the JTWC consensus forecast as the official tropical cyclone forecast for US forces in the Republic of Korea (ROK). USFK weather units will not deviate from JTWC's tropical cyclone position, track, movement, maximum wind speed, or intensity trend. Weather units may tailor the official tropical cyclone forecast for local effects including vegetation/ground cover, terrain, and position relative to the storm. JTWC consensus forecast products may differ from tracks briefed by the Republic of Korea Air Force (ROKAF) and Combined Weather Squadron at Combined Forces Command (CFC) level briefings. Outlooks beyond 48 hours are highly uncertain and subject to change, so they will be labeled as "For Planning Purposes Only".

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

(6) Ensure locally created forecasts are consistent with the current USFK TCCOR message.

d. Responsibilities of Non-Weather Agencies/Offices:

(1) USFK Joint Watch Floor disseminates all HWOs, AWWs, and TCCOR messages upon receipt to the agencies shown in **Appendix K**.

(2) Commanders at all levels will develop TCCOR checklists to safeguard resources and personnel. Actions taken from checklists are determined by storm timing and projected intensity. Accomplishment of TCCOR checklist items are based both on storm timing and forecast intensity.

(a) Installation commanders will ensure that TCCOR procedures cover all personnel and organizations residing on that installation.

(b) For reports of injury, asset damage, or degradation of capabilities or mission, Commanders will submit applicable Service reports within 24 hours of declaring TCCOR RECOVERY via Service Component Commands to USFK Joint Watch Floor.

(c) All installations will submit Post-Tropical Cyclone Reports to the USFK Joint Watch Floor through their Service Component Command no later than 24 hours after the declaration of TCCOR RECOVERY. All Post-Tropical Cyclone Reports will be submitted to the USFK FK J2

SWO no later than 48 hours after the declaration of TCCOR RECOVERY. **Appendix F** contains an example Post-Tropical Cyclone Report.

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

(4) American Forces Network (AFN) Korea broadcasts Korea-wide tropical cyclone bulletins. AFN will coordinate with installation leadership to determine the frequency with which updates will be broadcast over radio and over television.

(5) 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 their supporting weather unit.

(6) TCCOR issuing authorities will participate in an annual, collaborative exercise with all weather units supporting the KTO to practice TCCOR procedures and warning dissemination.

## **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. Procedures**

a. A TCCOR is an alert status providing an approximate timetable of an approaching tropical cyclone.

b. A TCCOR alert is a time-phased readiness posture that specifies the geographical area(s) of the ROK to be alerted.

c. USFK uses 9 different TCCOR levels to identify the threat of a tropical cyclone. Destructive winds for USFK are defined at a lower threshold at 50 knot gusts than the 50 knot sustained winds prescribed in USINDOPACOMINST 0539.1 due to the fact that Korea has a lower wind speed threshold for damage to occur. TCCOR levels are defined as follows:

(1) TCCOR FIVE (5). Destructive winds, greater than or equal to 50 knot gusts are *possible* within 96 hours.

(2) TCCOR FOUR (4). Destructive winds, greater than or equal to 50 knot gusts are *possible* within 72 hours.

(3) TCCOR THREE (3). Destructive winds, greater than or equal to 50 knots gusts are *possible* within 48 hours.

(4) TCCOR TWO (2). Destructive winds, greater than or equal to 50 knots gusts are *anticipated* within 24 hours.

(5) TCCOR ONE (1). Destructive winds, greater than or equal to 50 knots gusts are *anticipated* within 12 hours.

(6) TCCOR CAUTION (C). Winds gusting between 35-49 knots are *occurring*.

(7) TCCOR ONE EMERGENCY (1-E). Destructive winds, greater than or equal to 50 knots gusts, are occurring.

(8) TCCOR RECOVERY. Destructive winds have subsided and are no longer forecast to occur. Survey and work crews can be sent out to determine the extent of damage and establish safe zones around hazards.

(9) TCCOR ALL CLEAR. Destructive winds have passed and are no longer forecast to occur and recovery efforts are considered complete.

d. It is possible to move up and down between TCCOR levels as a storm passes. For example, a tropical storm could warrant the initial issue of TCCOR ONE, then TCCOR CAUTION as the storm passes, and then to TCCOR RECOVERY at the end of the storm.

e. TCCOR Procedures

(1) TCCOR FIVE (5) will be announced by the TCCOR setting authority per Sec 1.4, b, (2) of this publication annually for the duration of typhoon season from 1 June - 30 November to place all units on the peninsula in a state of enhanced watch.

(2) When the KTO is forecast to experience destructive winds greater than or equal to 50 knots gusting from a tropical storm or typhoon within 72 hours, USFK FKJ2-SWO is responsible for standing up a 24/7 tropical forecaster to maintain forecast consistency across all on and off-peninsula forecasting agencies and make TCCOR recommendations to USFK J3.

(a) Recommended changes to TCCOR levels can be issued for portions of USFK Areas and their installations or the entire Area and their installations depending on the meteorological situation. All installations in a USFK Area should not begin TCCOR procedures solely because their Area was identified in a TCCOR message. Installations should pay close attention to whether they were identified as being at risk for tropical storm force conditions prior to beginning TCCOR procedures.

(b) No later than 90 minutes after the issuance of a JTWC warning that would warrant elevating the TCCOR level for any portion of the ROK, the FKJ2-SWO will send a TCCOR recommendation to USFK J3. USFK J3 will either approve or disapprove of the TCCOR recommendation from FKJ2-SWO upon receipt. In the case of a disapproval, FKJ2-SWO will work closely with USFK J3 to develop an appropriate TCCOR recommendation.

(c) No later than three hours after the initial issuance of the JTWC warning, once the TCCOR recommendation has been coordinated with USFK J3, the FKJ2-SWO will send a finalized TCCOR warning to USFK J3 for distribution to Service Components.

(d) Additional actions taken after receipt of the TCCOR warning will vary drastically from command to command, and requests for additional weather products or emergency management support should be coordinated through the appropriate supporting agencies.

(e) USFK FKJ2-SWO will continue making TCCOR recommendations through TCCOR RECOVERY. TCCOR ALL CLEAR will be announced by installation commanders once recovery



efforts are considered complete with no additional input from the FKJ2-SWO.

(3) Authority to approve a change to an installation's TCCOR level may be delegated to a level no lower than the USFK J33 Watch Officer.

(4) TCCOR levels cannot be changed "just in case" and should align with public JTWC forecasted intensity, track, and timing. Installations requiring additional time for resource and personnel protection should adjust their internal procedures in concert with base emergency management personnel. **TCCOR is a timing-based readiness posture.**

(5) AWWs and WWAs are not required for installations or USFK Areas during tropical storm or typhoon conditions with the exception being WWAs and AWWs for lightning and tornadoes. All other weather phenomena, including, but not limited to, high winds, heavy precipitation, and thunderstorms are assumed to be occurring. Local weather units may continue to disseminate WWAs for their installations for local requirements as needed, (i.e. wind gusts  $\geq 35$  knots). AWWs will still be issued when in TCCOR 5, provided the weather phenomena is NOT associated with a tropical storm or typhoon.

**Appendix A  
Area Weather Watch (AWW) Criteria**

The following forecast conditions will result in the issuance of AWWs:

**Desired Lead Time of at least 12 hours:**

Severe Thunderstorms (Damaging Winds greater than or equal to (GTE) 45 knots and/or Hail GTE ½ inch).

Moderate Thunderstorms (Strong Winds GTE 35 knots but LT 45 knots and/or Hail GTE ¼ inch but LT ½ inch).

Damaging Winds GTE 45 knots (not associated with Thunderstorm activity).

Strong Winds GTE 35 but less than (LT) 45 knots (not associated with Thunderstorm activity).

Heavy Rain GTE 2 inches in 12 hours.

Heavy Rain GTE 5 inches in 24 hours.

Heavy Snow GTE 2 inches in 12 hours.

Freezing precipitation of any intensity.

Surface temperature below 0 degrees Fahrenheit (-18 degrees Celsius).

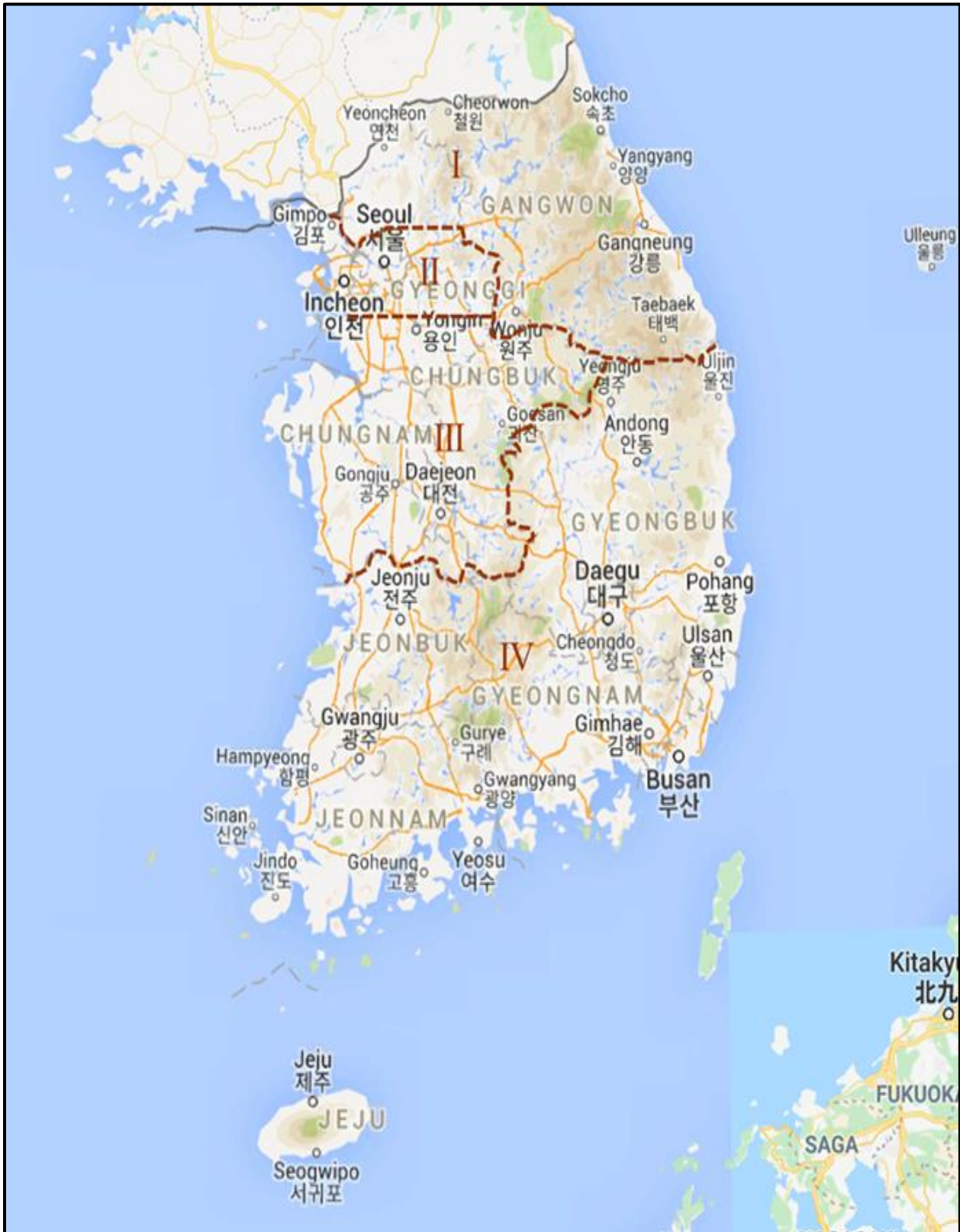
Surface wind chill temperature below -20 degrees Fahrenheit (-29 degrees Celsius).

**Desired Lead Time of at least 30 minutes:**

Lightning of any type.

Tornadic activity.

Appendix B  
AWW Area Map



Appendix C  
Sample Hazardous Weather Outlook (HWO)



# HAZARDOUS WEATHER OUTLOOK

UNCLASSIFIED

**Area I & II:** Rainfall GTE 2" in 12hrs

VT: 24/03L (23/18Z) – 24/15L (24/06Z)

Forecast Value: 2" in 12hrs

**Area III:** Rainfall GTE 2" in 12hrs

VT: 24/00L (23/15Z) – 24/12L (24/03Z)

Forecast Value: 2" in 12hrs

**Area IV:** Rainfall GTE " in 24hrs

VT: 23/21L (23/12Z) – 24/09L (24/00Z)

Forecast Value: 2" in 12hrs

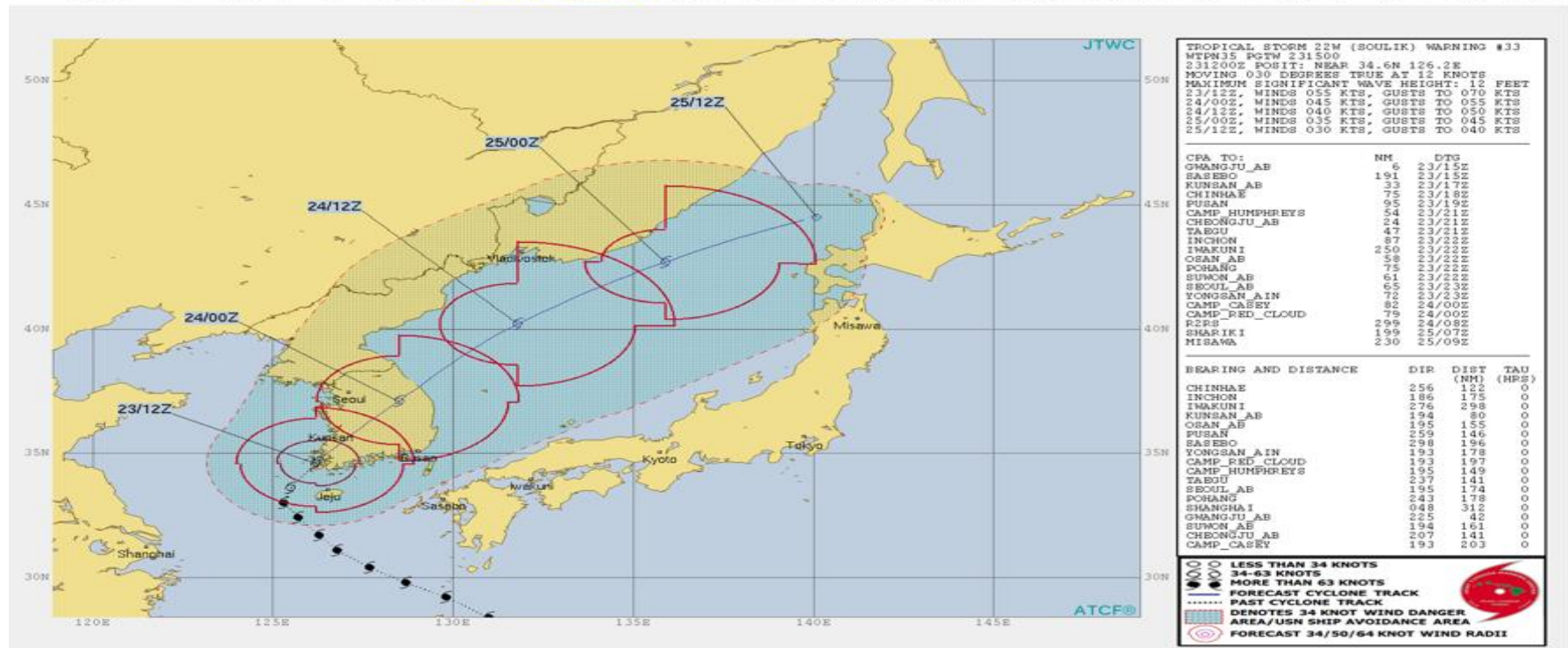


\*Please contact your supporting weather office for site-specific details.

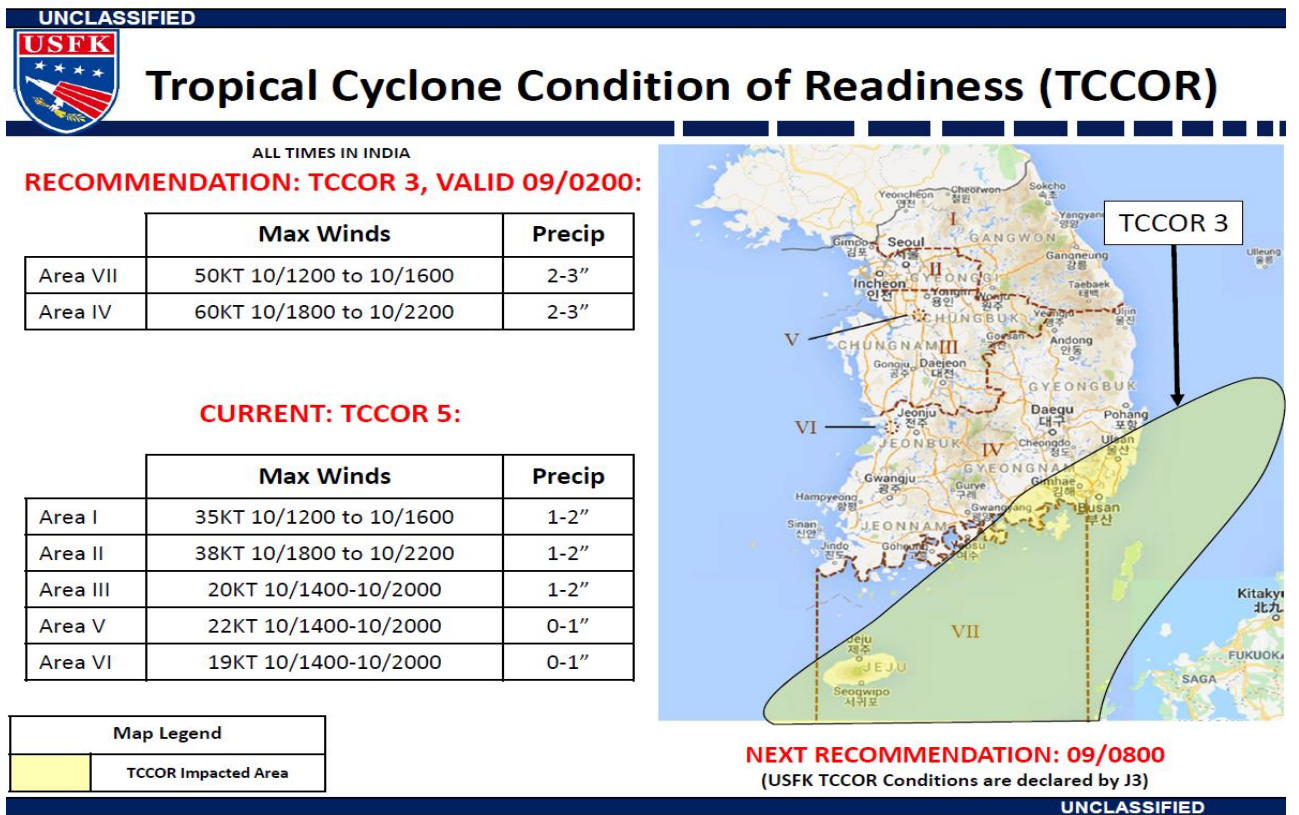
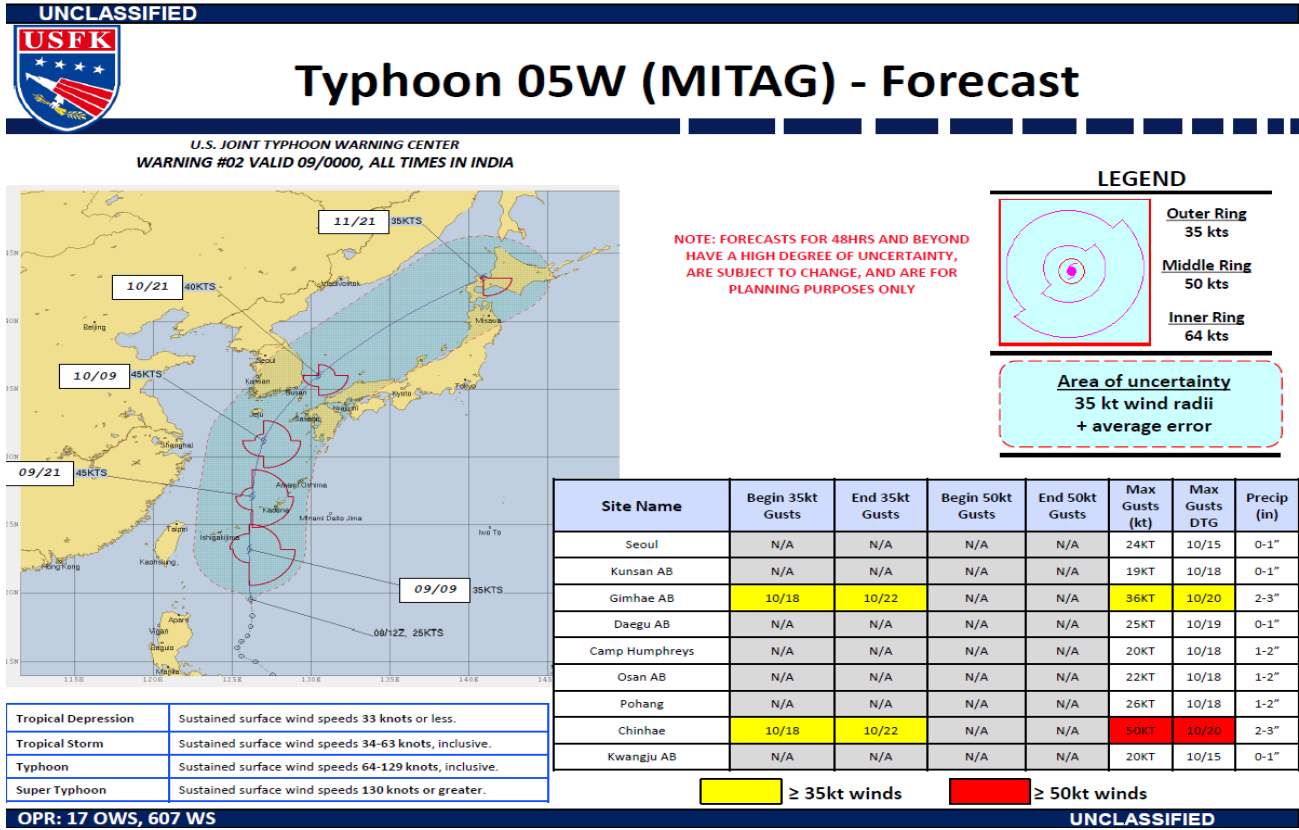


# Appendix D Sample Tropical Cyclone Threat Assessment Product (TC-TAP)

Tropical Cyclone Threat Assessment Product: Tropical Storm Soulik (22W)																
Extracted from official JTWC Forecast Advisory #33 created 23/1500Z																
Based on criteria of >=35KT sustained wind CPA: Closest Point of Approach EOF: End of Forecast period																
CONSIDERING TERRAIN (FRICTION) EFFECTS																
Site Name	Location (ICAO or LAT/LON)	CPA (nm)	CPA DTG	Max Gusts (kt)	Max Gusts DTG	Begin 15kt X-Wind	End 15kt X-Wind	Begin 25kt X-Wind	End 25kt X-Wind	Begin 35kt sustained winds	End 35kt sustained winds	Begin 50kt sustained winds	End 50kt sustained winds	Begin 65kt gusts	End 65kt gusts	Precip (in)
KUNSAN AB	RKJK	33	23/17Z	45	23/18Z	CURRENT	24/09Z	CURRENT	24/03Z	23/16Z	24/01Z	N/A	N/A	N/A	N/A	1-2"
USAG HUMPHREYS	RKSG	54	23/21Z	35	23/17Z	23/18Z	24/02Z	23/20Z	24/00Z	N/A	N/A	N/A	N/A	N/A	N/A	1-2"
OSAN AB	RKSO	58	23/22Z	30	24/00Z	23/15Z	24/02Z	23/18Z	24/03Z	N/A	N/A	N/A	N/A	N/A	N/A	1-2"
SUWON AB	RKSW	61	23/22Z	29	23/22Z	CURRENT	25/06Z	N/A	N/A	23/15Z	24/03Z	N/A	N/A	N/A	N/A	1-2"
SEOUL AB	RKSM	65	23/23Z	30	23/22Z	23/17Z	24/04Z	23/20Z	24/02Z	N/A	N/A	N/A	N/A	N/A	N/A	1-2"
USAG YONGSAN	RKFN	72	23/23Z	30	23/22Z	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1-2"
KWANGJU AB	RKJJ	6	23/15Z	49	23/19Z	CURRENT	24/06Z	CURRENT	23/21Z	CURRENT	24/18Z	N/A	N/A	N/A	N/A	3-4"
CHEONG-JU	RKTU	24	23/21Z	29	23/15Z	CURRENT	24/00Z	N/A	24/00Z	N/A	N/A	N/A	N/A	N/A	N/A	3-4"
USAG CASEY	RKST	82	24/00Z	30	23/23Z	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1-2"
USAG RED CLOUD	RKSB	79	24/00Z	31	23/23Z	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1-2"
CFA CHINHAE	RKPE	75	23/18Z	50	23/16Z	N/A	N/A	N/A	N/A	23/10Z	24/01Z	N/A	N/A	N/A	N/A	3-4"
DAEGU AB	RKTN	47	23/18Z	52	23/18Z	CURRENT	24/09Z	23/21Z	24/06Z	CURRENT	24/03Z	N/A	N/A	N/A	N/A	3-4"
POHANG	RKTH	75	23/22Z	49	23/20Z	23/18Z	24/12Z	23/18Z	24/03Z	23/15Z	24/04Z	N/A	N/A	N/A	N/A	2-3"
KIMHAE	RKPK	95	23/19Z	44	23/18Z	CURRENT	24/12Z	CURRENT	23/03Z	23/18Z	24/00Z	N/A	N/A	N/A	N/A	1-2"



Appendix E  
Sample Tropical Cyclone Condition of Readiness (TCCOR) Product



**Appendix F**  
**Example Post-Tropical Cyclone Report**

**Post Tropical Cyclone Report**

Installation Name \_\_\_\_\_ Date of Report \_\_\_\_\_

Date/Time entered:

TCCOR 5 \_\_\_\_\_ TCCOR 4 \_\_\_\_\_

TCCOR 3 \_\_\_\_\_ TCCOR 2 \_\_\_\_\_

TCCOR 1 \_\_\_\_\_ TCCOR Caution \_\_\_\_\_

TCCOR 1 Emergency \_\_\_\_\_ TCCOR Recovery \_\_\_\_\_

TCCOR All Clear \_\_\_\_\_

Evacuations: # Aircraft \_\_\_\_\_ # Ships \_\_\_\_\_ #Personnel \_\_\_\_\_

\*Highest Wind Speed Recorded \_\_\_\_\_ (KT) Date/Time \_\_\_\_\_

\*Date/Time **Cross Wind**  $\geq$  15 KT Began \_\_\_\_\_ Ended \_\_\_\_\_

\*Date/Time **Cross Wind**  $\geq$  25 KT Began \_\_\_\_\_ Ended \_\_\_\_\_

\*Date/Time **Wind Speed**  $\geq$  34 KT Began \_\_\_\_\_ Ended \_\_\_\_\_

\*Date/Time **Wind Speed**  $\geq$  50 KT Began \_\_\_\_\_ Ended \_\_\_\_\_

Estimated Amount / Type of Damage (\$, trees downed, buildings damaged etc.):

\_\_\_\_\_

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Miscellaneous

Remarks \_\_\_\_\_

\_\_\_\_\_

**\*NOTE:** Installations that do not possess certified wind measuring equipment are exempt from reporting wind data.

Appendix G  
TCCOR Levels

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

CONDITION	DEFINITION	RESPONSE
5	Winds of $\geq$ 50 knots (58 mph) gusting are <b>possible</b> within 96 hrs.	- Report TCCOR 5 declaration and completion of TCCOR 5 checklist via USFK J33.
4	Winds of $\geq$ 50 knots (58 mph) gusting are <b>possible</b> within 72 hrs.	- Report TCCOR 4 declaration and completion of TCCOR 4 checklist via USFK J33.
3	Winds of $\geq$ 50 knots (58 mph) gusting are <b>possible</b> within 48 hrs.	- Report TCCOR 3 declaration and completion of TCCOR 3 checklist via USFK J33.
2	Winds of $\geq$ 50 knots (58 mph) gusting are <b>anticipated</b> within 24 hrs.	- Report TCCOR 2 declaration and completion of TCCOR 2 checklist via USFK J33.
1	Winds of $\geq$ 50 knots (58 mph) gusting are <b>anticipated</b> within 12 hrs.	- Report TCCOR 1 declaration and completion of TCCOR 1 checklist via USFK J33.
<b>Caution (C)</b>	Winds gusting between 35-49 knots are <b>occurring</b> .	- All non-essential travel is suspended - Non-essential personnel should remain indoors - Report TCCOR Caution declaration and completion of TCCOR Caution checklist via USFK J33.
<b>1 Emergency (1E)</b>	Winds $\geq$ 50 knot gusts are <b>occurring</b> .	- All personnel should stay indoors away from windows - Report TCCOR 1 Emergency declaration and completion of TCCOR 1 Emergency checklist via USFK J33.
<b>Recovery</b>	After the passage of a tropical cyclone (TC), when destructive winds have subsided and are no longer forecasted to occur, survey and work crews are sent out to determine the extent of damage and to establish safe zones around hazards (e.g. downed power lines, unstable structures).	- All non-essential personnel should remain indoors while damage assessment and cleanup is accomplished - Report TCCOR 1 Recovery declaration and completion of TCCOR 1 Recovery checklist via USFK J33 - Within 24 hours of TCCOR 1 Recovery, Service Component Command Centers submit Post Tropical Cyclone Report to USFK J33
<b>All Clear</b>	The storm is over and not forecast to return, and recovery efforts are complete.	- All Clear is issued through Component Commander or their delegated authority

**Tropical Cyclone Definitions**

<b>Tropical Storm</b>	Tropical cyclone with maximum sustained winds of 34-63 knots (39-73 mph)
<b>Typhoon</b>	Tropical cyclone with maximum sustained winds of 64-129 knots (74-149 mph)
<b>Super Typhoon</b>	Tropical cyclone with maximum sustained winds of 130 knots (150 mph) or greater



## Appendix H TCCOR Issuance Areas

**H-1.** TCCOR issuance areas are slightly different from the geographically designated areas in USFK Regulation 10-2, appendix A. Installations that fall in Areas I, II, III, IV, and VI remain in their respective areas for TCCOR. Area V only includes Osan AB while the co-located operating bases remain in their respective geographic Areas. Area VII is intended for use with TCCOR procedures only, is not derivative of USFK Regulation 10-2, and includes all offshore locations in the southern East and West Seas, including Jeju Island.

**H-2.** TCCOR issuance areas are as follows:

a. Area I: "Area I consists of northern Gyeonggi-do and all of Gangwon-do. Area I is outlined by the demilitarized zone (DMZ) to the north, the Han River Estuary to the west, and the East Sea to the east. The common boundary with Area II (west to east) begins at a point on the DMZ (52SBG951837). It continues southeast along the north bank of the Han River through the following coordinates: 52SCG108607, 52SCG133622, 52SCG148627, 52SCG148657, 52SCG154666, 52SCG154672, 52SCG158682, 52SCG164686, 52SCG162685, 52SCG181694, and 52SCG189701. The boundary continues northeast along the north side of Route 310 to 52SCG211745 and southeast along the south side of the road to coordinate 52SCG233727. The common boundary between Area I and Area II continues east to 52SCG698797. From that point, the common boundary between Areas I and II continues southeast of the Gangwon-do and Gyeonggi-do provincial boundary to a point with the coordinate 52SCG908277 that is a common point between Areas I, II, and III. The line continues south then east along the Gangwon-do and Chungcheongbuk-do provincial boundaries to a point with the coordinate 52SDG692020. The common boundary between Area IV begins at 52SDG692020 and extends eastward along the Gangwon-do and Gyeongsangbuk-do provincial boundaries to the East Sea."

b. Area II: "Area II (USAG Yongsan) encompasses the greater metropolitan Seoul and adjacent areas. It is bordered on the west by the Yellow Sea, on the south by Area III, on the east by Area I, and on the north by the DMZ and Area I. The common boundary with Area I (west and east) begins at a point on the DMZ with the coordinate 52SBG951837. From that point, the line continues southeast along the north bank of the Han River to the coordinate 52SCG108607, and then through the coordinates 52SCG133622, 52SCG148627, 52SCG148657, 52SCG154666, 52SCG154672, 52SCG158682, 52SCG164686, 52SCG172690, 52SCG181694, and 52SCG189701. It continues northeast along the north side of Route 310 to the coordinate 52SCG211745, southeast along the south side of the road to 52SCG233727. From 52SCG233727, the common boundary between Area II and Area I continues east to 52SCG698797. From 52SCG698797, the common boundary between Area II and Area I runs along the Gangwon-do and Gyeonggi-do provincial boundary to a point 52SCG908277 that is a common point with Areas II, I, and III. It proceeds west to 52SCG099207. It proceeds north to the coast in the vicinity of 52SCG099257."

c. Area III: "Area III (USAG Humphreys) is the west central section of South Korea, bordered on the west by the Yellow Sea, on the south by Area IV, on the east by Areas IV and I, and on the north by Areas II and I. It consists of Chungcheongnam-do and Chungcheongbuk-do and the southeastern portion of Gyeonggi-do, exclusive of Osan/Suwon Air Base (AB) and the surrounding communities that contain USAF personnel and dependents. The common boundary with Area IV (southern) begins on the west coast at the Chungcheongnam-do and Jeollabuk-do provincial boundaries, and follows the boundary and waterway north of Kunsan City to Kanggyong City. It continues to follow the provincial boundary to the intersection of Gyeongsangnam-do, Chungcheongbuk-do and Jeollabuk-do provincial boundaries at coordinate 52SCE986871. The common boundary with Area IV continues from 52SCE986871 and follows the Chungcheongbuk-do and Gyeongsangbuk-do provincial boundaries generally along the ridge line in a northeasterly

direction; it crosses Route 1-1 at 52SDF098077, and then proceeds north until it crosses Route 3 at 52SDF138681. The boundary goes northeastward to Hill 1162 at 52SDF298786, then to Hill 1440 at 52SDF538903, and continues until it intersects the Gangwon-do, Gyeongsangbuk-do and Chungcheongbuk-do provincial boundaries at 52SDG692020. The common boundary with Area I starts at point 52SDG692020 and extends westward along the Chungcheongbuk-do and Gangwon-do provincial boundaries to 52SCG908277 that is a common boundary for Areas I, II, and III. The common boundary with Area II begins there and runs west along grid line 20 to 52SCG099207. It proceeds north to the coast in the vicinity of 52SCG09925.”

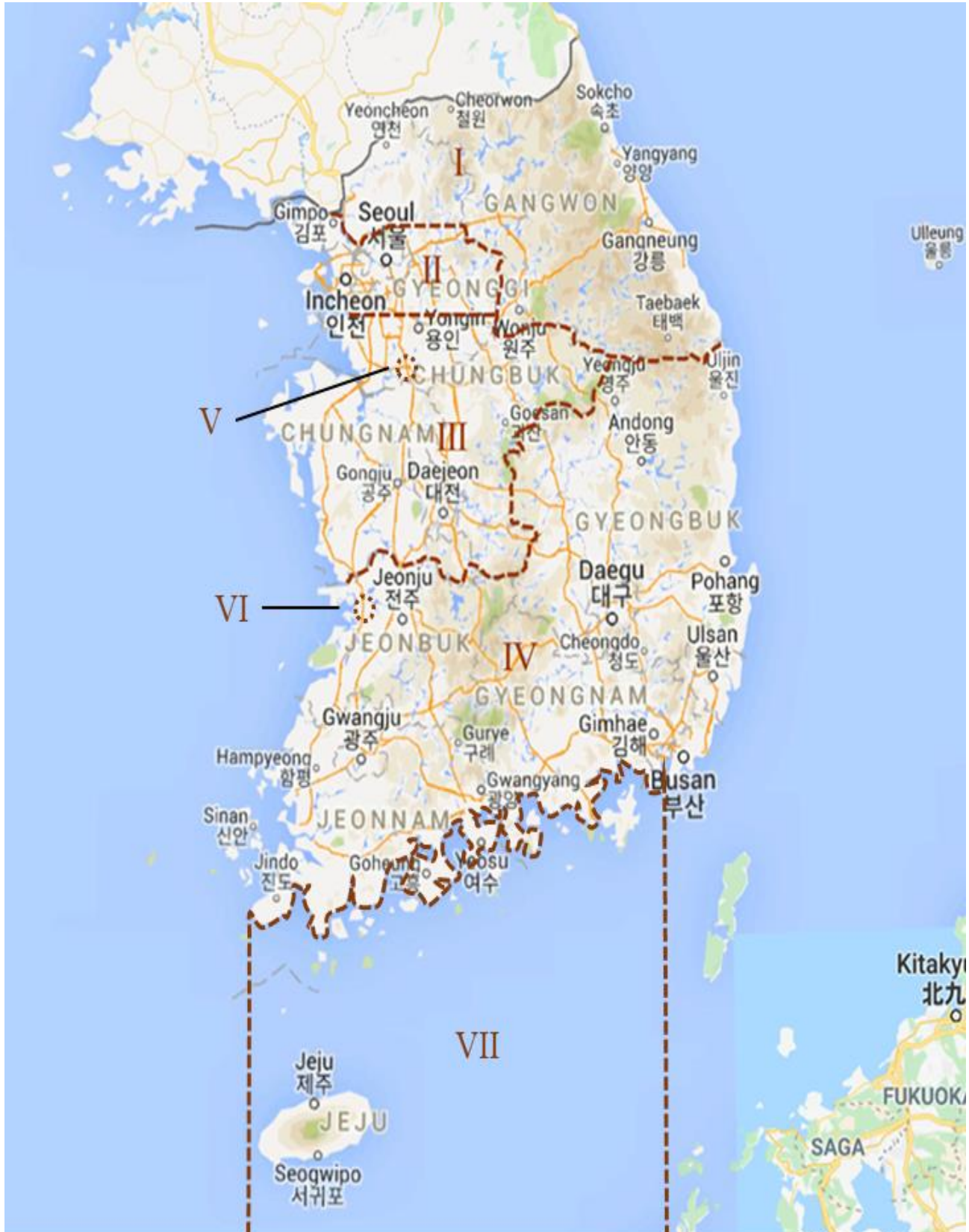
d. Area IV: “Area IV (USAG Daegu) is the southeast central portion of South Korea consisting of Jeollabuk-do, Jeollanam-do, Gyeongsangnam-do, Gyeongsangbuk-do and Jeju-do, exclusive of Kunsan AB, collocated operating base (COBs) located at Kwangju, Cheong Ju, Daegu, and Kimhae ABs, and the surrounding communities that contain USAF personnel and dependents as well as CNFK Detachment Pohang and Fleet Activities Chinhae that contain U.S. Navy personnel and dependents. Area IV is bordered on the south and east by the East Sea, on the west by the Yellow Sea, and on the north by the southern boundaries of Areas I and III. The common boundary with Area III begins on the west coast of South Korea and follows the Chungcheongnam-do and Jeollabuk-do provincial boundaries to 52SCE797977. The boundary continues south eastward to the intersection with Gyeongsangbuk-do, Jeollabuk-do, and Chungcheongbuk-do at 52SCE986871. The common boundary continues at 52SCE986871 and follows the Chungcheongbuk-do and Gyeongsangbuk-do provincial boundaries generally along the ridge line, northward crossing Highway 1-1 at 52SDF098077, northward to Hill 793 at 52SDF144129, westward to Hill 866 at 52SDF002157, northward crossing Route 3 at 52SDF138681, northwestward to Hill 1162 at 52SDF298786 and Hill 1140 at 52SDF538903, and then proceeds to the intersection with Gangwon-do, Chungcheongbuk-do, and Gyeongsangbuk-do provincial boundaries at 52SDG692020. The common boundary with Area I extends eastward from the intersection of the Gangwon-do, Chungcheongbuk-do, and Gyeongsangbuk-do provincial boundaries at 52SDG692020, and extends along the Gangwon-do and Gyeongsangbuk-do provincial boundaries to the East Sea.”

e. Area V consists of Osan AB. This includes a 3-kilometer area around the base.

f. Area VI consists of Kunsan AB. This includes a 3-kilometer area around the base.

g. Area VII: Area VII is the southernmost portion of South Korea consisting of Jeju Island and all offshore islands to the south of the main peninsula. Area VII is bounded to the east and southeast by the East Sea, on the west and southwest by the West Sea, and by the southern boundary of Area IV that runs along the mainland coast of South Korea to the north. The common boundary between Area IV and Area VII begins at 52SBD538301 and continues east to Haenamgap at 52SBC720973. From Haenamgap, the border continues east along the coast to Jijuk-ri at 52SCD443113 and just west of Hitdo at 52SCD750324. It continues along to Noryang-ri at 52SCD971678, the area northwest of Migil at 52SDD444543, and Dongdumul at 52SDD842718. From there, the border continues northeast following the coast, excluding Yeongdo Island, stopping in Busan at 129 degrees east. The east and west boundaries extend vertically south from the origination and termination points of the border with Area IV to the 33rd parallel. The 33rd parallel is the southernmost boundary of Area VII.

Appendix I  
TCCOR Area Map



**Appendix J**  
**Sample TCCOR Message**

UNCLASSIFIED  
SUBJECT: TYPHOON 09W (PRAPIROON) WARNING  
MESSAGE: #7  
ISSUED: 30/2100L JUN 18

CURRENT TCCOR RECOMMENDATION:  
AREA VII: TCCOR ONE EMERGENCY  
AREA VI: TCCOR CAUTION  
AREA V: TCCOR CAUTION  
AREA IV: TCCOR ONE  
AREA III: TCCOR ONE  
AREA II: TCCOR ONE  
AREA I: TCCOR ONE

DISCUSSION: SIGNIFICANT IMPACTS TO OPERATIONS WILL BEGIN TO IMPACT THE KOREAN PENINSULA BEGINNING SATURDAY, 02 JULY 19 AT 0300L LASTING UNTIL MONDAY, 04 JULY 19 AT 1800L. TYPHOON PRAPIROON IS CURRENTLY LOCATED NEAR 32.9N 125.7E AND HAS TRACKED NORTHEAST AT 14 KNOTS OVER THE PAST SIX HOURS.

IMPACTS:  
STRONG WINDS GREATER THAN OR EQUAL TO 50 KNOTS ARE EXPECTED ALONG THE SOUTHERN COAST OF THE ROK. OTHER AREAS WILL SEE ELEVATED SUSTAINED WINDS OF 30-45 KNOTS. ALSO, 5-8" OF RAIN IS EXPECTED AT JEJU AND ACROSS THE SOUTHERN ROK COASTLINE. OTHER AREAS WILL SEE 2-4" OF RAIN.

WE MAY SEE SLIGHT DIFFERENCES IN TRACK AND BETWEEN THE OFFICIAL JOINT TYPHOON WARNING CENTER, THE REPUBLIC OF KOREA AIR FORCE WEATHER WING, AND THE KOREAN METEOROLOGICAL ADMINISTRATION TYPHOON FORECASTS. WE WILL CONTINUE TO MONITOR AND PROVIDE UPDATES/RECOMMENDATIONS.

TCCOR IS A TIME-BASED READINESS POSTURE, IS NOT INTENDED TO CONVEY SPECIFIC IMPACTS FOR AN INSTALLATION, AND SHOULD BE USED AS A PLANNING TOOL. FOR SPECIFIC IMPACTS, PLEASE SEE YOUR SUPPORTING WEATHER UNIT.

THE NEXT MESSAGE WILL BE RELEASED BY USFK/J3-OPS IN APPROXIMATELY SIX HOURS, OR SOONER IF WEATHER CONDITIONS WARRANT.

**Appendix K**  
**USFK AWW and TCCOR 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 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 ASOG  
607 AOC/CC  
607 AOC/CCO  
607 WS

## Glossary

### Section I. Abbreviations

AFN	American Forces Network
AWW	Area Weather Watch
CC	Command Center
DLT	Desired Lead Time
EOC	Emergency Operations Center
FRAGO	Fragmentary Order
HWO	Hazardous Weather Outlook
IDP	Installation Data Page
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 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. 607 WS is responsible for issuing HWOs.

**Installation Data Page.** 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 17 OWS 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 Fleet Weather Center, San Diego, CA, 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.

**Maximum Sustained Surface Wind.** Highest surface wind speed of a tropical cyclone, averaged over a 1-minute period. Note: Sudden temporary increases of wind speeds are called gusts and may be of substantially greater speed (i.e. the maximum sustained winds of 60 knots may include gusts of 85 knots).

**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.