

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

United States Forces Korea  
Regulation 115-1

13 February 2007

**Climatic, Hydrological, and Topographic Services**

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

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This regulation supersedes USFK Regulation 115-1, 13 November 1995.

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For the Commanding General:

DAVID P. VALCOURT  
Lieutenant General, USA  
Chief of Staff

Official:



F.W. MORRIS  
Chief of Publications and  
Records Management

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**Summary.** This regulation establishes responsibilities associated with United States Forces Korea (USFK) Area Weather Advisories (AWAs), Tropical Cyclone Threat Assessment Products (TC-TAPs), and Tropical Cyclone Conditions of Readiness (TCCORs).

**Summary of Change.** This document has been substantially changed. A full review of its contents is required.

**Applicability.** This regulation applies to all USFK component and subordinate commands.

**Supplementation.** Issue of further supplements to this regulation by subordinate commands is prohibited unless prior approval is obtained from HQ USFK, (FKJ2-SWO), Unit #15173, APO AP 96205-5173.

**Forms.** USFK forms are available at [http://www-hr.korea.army.mil/Program\\_Policy](http://www-hr.korea.army.mil/Program_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 HQ USFK, (FKJ2-SWO). Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the HQ USFK, (FKJ2-SWO), Unit #15173, APO AP 96205-5173.

**Distribution.** Electronic Media Only.

## **CONTENTS**

### **Section I GENERAL**

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

### **Section II POLICIES AND PROCEDURES**

5. Policy
6. Requirement Control Symbol Assignment

### **APPENDIXES**

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

### **GLOSSARY**

## **Section I GENERAL**

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

### **2. REFERENCES.**

a. Required publication. USCINCPACINST 3140.1X (Tropical Cyclone Operations Manual).

b. Related publications.

- (1) PACAFI 15-101 (Weather Support for PACAF), 23 February 2004.
- (2) PACAFI 15-102 (Tropical Cyclone Reconnaissance), 21 November 2003.
- (3) PACOM Joint Manual for METOC Support.

**3. EXPLANATION OF ABBREVIATIONS AND TERMS.** Abbreviations and terms used in this regulation are explained in the glossary.

### **4. RESPONSIBILITIES.**

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

(1) Issues AWAs based on forecast hazardous weather conditions that are expected to affect the Korean Theater but which are not associated with tropical cyclones.

(2) Makes every reasonable effort to issue AWAs within the desired lead times shown in Appendix A.

(3) Issues TC-TAP bulletins for Korea when Kunsan AB, Osan AB, Camp Humphreys, Camp Eagle, Camp Red Cloud, K-16 (Seoul AB), K-2 (Taegu AB), and the initial impact location is expected to receive sustained winds  $\geq 35$ -knots w/in 96 hours due to a tropical cyclone. Any additional locations will be based on command operational requirements. The bulletin will discuss at a minimum the closest point of approach, max forecasted wind intensity (sustained and gusts), onset and duration of 50kt winds, as well as any remarks (precip, etc). Additional criteria have been coordinated with the Battlefield Weather Team at the forecasted location. 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 B contains a sample TC-TAP bulletin.

b. The 607 WS:

(1) Advises USFK J3 on tropical cyclone forecasts that will affect the Korean Theater.

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

(3) Provides American Forces Network (AFN) Korea, Yongsan Army Installation, with plain-language tropical cyclone information bulletins.

c. AFN Korea broadcasts Korea-wide tropical cyclone bulletins.

d. At the USFK Commander's discretion, USFK J3 issues Fragmentary Orders (FRAGOs) for the ROK based on 607 WS input.

e. All USFK weather units:

(1) Monitor the JTWC forecast positions for all tropical cyclones that threaten the ROK.

(2) Take special observations in accordance with USCINCPACINST 3140.1X.

(3) 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 E shows the USFK geographical areas used when issuing a TCCOR.

(4) 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. Outlooks beyond 48 hours are highly uncertain, are subject to change, and are for planning purposes only.

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

(6) If necessary, issue local weather warnings and advisories to local military commanders addressing areas for which they are responsible.

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

f. CC Seoul EOC disseminates all AWAs and TCCOR messages upon receipt to the agencies shown in Appendix F.

g. Component and subordinate commanders establish procedures to safeguard their personnel and equipment against adverse environmental conditions. Units desiring notification of AWAs and TCCOR messages should coordinate requirements through their chain of command.

## **Section II**

### **POLICIES AND PROCEDURES**

**5. POLICY.** The JTWC is responsible for monitoring and forecasting tropical cyclone development and movement. The USFK weather units are responsible for providing 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.

**6. 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**

### **AREA WEATHER ADVISORY (AWA) CRITERIA**

The following forecast conditions will result in the issuance of AWAs. The Desired Lead Time (DLT) for each event is shown in parentheses.

- a. Tornado/Funnel Cloud within 5NM (30 min).
- b. Surface Winds equal to or greater than 45 knots (2 hrs).
- c. Surface Winds equal to or greater than 30 knots, but less than 45 knots (2 hrs).
- d. Hail, 1/2 inch or more in diameter (2 hrs).
- e. Rain accumulation of 2 inches or more within a 12-hour period (4 hrs).
- f. Rain accumulation of 5 inches or more within a 24-hour period (4 hrs).
- g. Snow accumulation of 2 inches or more within a 12-hour period (2 hrs).
- h. Freezing precipitation (2 hrs).
- i. Surface temperature below 0 degrees Fahrenheit (-18 degrees Celsius) (6 hrs).
- j. Surface wind chill temperature below -20 degrees Fahrenheit (-29 degrees Celsius) (6 hrs).

## **APPENDIX B**

### **SAMPLE TROPICAL CYCLONE THREAT ASSESSMENT PRODUCT (TC-TAP) BULLETIN**

FXXX11 PHIK 23/2100Z

TROPICAL CYCLONE-THREAT ASSESSMENT PRODUCT

TYPHOON 03W

BASED ON JTWC WARNING #: 12

#### **CAMP HUMPHREYS, KOREA**

MAX SUSTAINED WIND: 45 KTS

MAX GUSTS: 60 KTS

MAX WIND DATE/TIME: 25/1800Z

CLOSEST POINT OF APPROACH: 24NM at 25/1800Z

30-KT WINDS BEGIN-END: 25/1200Z-26/0200Z

45-KT WINDS BEGIN-END: 25/1600Z-26/0000Z

50-KT WINDS BEGIN-END: 25/1700Z-25/2300Z

15-KT CROSSWINDS BEGIN-END: 25/0000Z-26/0600Z

25-KT CROSSWINDS BEGIN-END: 25/0800Z-26/0400Z

PRECIP BEGIN-END: 25/0500Z-26/0500Z

REMARKS: 1-2" PRECIP EXPECTED

#### **USFK AREA FORECAST**

AREA 1 MAX WINDS 35 KTS

AREA 2 MAX WINDS 50 KTS

AREA 3 MAX WINDS 60 KTS

AREA 4 MAX WINDS 60 KTS

AREA 1 PRECIPITATION 1-2"

AREA 2 PRECIPITATION 2"

AREA 3 PRECIPITATION 3-4"

AREA 4 PRECIPITATION 5-6"

FOR GRAPHICAL PRODUCTS, PLEASE REFER TO

<https://metoc.npmoc.navy.mil/jtwc.html>

FORECASTER/QC: WG/JL



## **APPENDIX C**

### **TROPICAL CYCLONE CONDITIONS OF READINESS (TCCOR)**

1. A TCCOR is an alert status providing an approximate timetable of an approaching tropical cyclone.
2. A TCCOR message specifies the geographical area(s) of the ROK to be alerted.
3. There are four TCCOR levels:
  - a. TCCOR ONE. 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. Winds greater than or equal to 50 knots (including gusts) are forecast to affect the designated area(s) within 24 hours.
  - c. TCCOR THREE. Winds greater than or equal to 50 knots (including gusts) are forecast to affect the designated area(s) within 48 hours.
  - d. TCCOR FOUR. Winds greater than or equal to 50 knots (including gusts) are forecast to affect the designated area(s) within 72 hours.

## APPENDIX D

### SAMPLE TROPICAL CYCLONE CONDITION OF READINESS (TCCOR) MESSAGE

UNCLASS

SUBJECT: TYPHOON READY-KOREA 94 W CONDITION OF READINESS

MESSAGE: #1

DATE: 11 May 04

VALID: 11/0300I MAY 04

#### 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 READY-KOREA 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 CHEJU-DO) 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 (1): WINDS GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE OCCURRING OR EXPECTED TO OCCUR WITHIN 12 HOURS.

B. TCCOR TWO (2): WINDS GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE EXPECTED TO OCCUR WITHIN 24 HOURS.

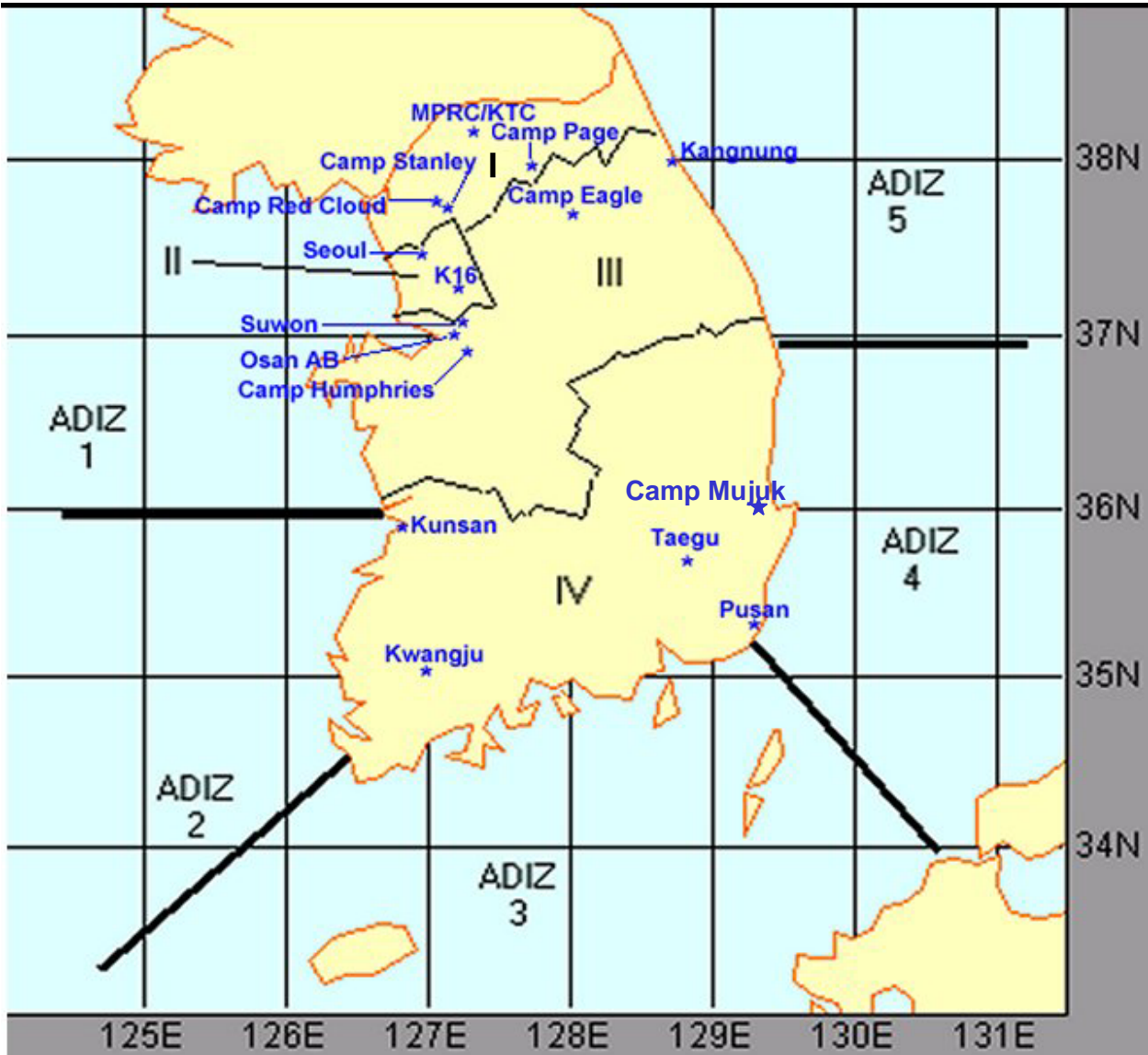
C. TCCOR THREE (3): WINDS GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE EXPECTED TO OCCUR WITHIN 48 HOURS.

D. TCCOR FOUR (4): WINDS GREATER THAN OR EQUAL TO 50 KNOTS (INCLUDING GUSTS) ARE EXPECTED TO OCCUR WITHIN 72 HOURS.

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

APPENDIX E

MAP OF USFK AREAS



## APPENDIX F

### COMMAND CENTER (CC) SEOUL EMERGENCY OPERATIONS CENTER (EOC) AREA WEATHER ADVISORY AND TROPICAL CYCLONE CONDITION OF READINESS DISTRIBUTION LIST

32 AAMDC  
7 AF/CV  
7 AF SODO  
8th Army Safety Office  
A C of S J1  
AREA II SUPPORT ACTIVITY, CDR  
Area IV KORO DPA  
C/J5 ADMIN BRANCH  
CC SEOUL EOC  
CFEN-D  
CFEN-PL  
CNFK Operations Watch Officer  
COC Watch Officer USFK J33OPS  
DIV INF 2HQ DIV CDR  
DIV INF 2HQ SPEC STAFF ADC (S)  
EUSA CMD GRP  
EUSA EO  
EUSA G3  
EUSA G3OPS  
EUSA IG  
IMA KORO EOC  
J2 SGM  
MARFORK C/S  
MARFORK G-3  
MFAB/CC  
SCJS OPS, Calendar  
SOCKOR SOJ0  
UNC MAC ASEC-O  
USFK ADCS  
USFK CMD CHAP OFC  
USFK CMD GRP  
USFK CMD GRP XO  
USFK CSCT#1  
USFK Dep Chief of Staff  
USFK DIR OF SAFETY  
USFK DJ3  
USFK J1 JOINT MPR & ORG  
USFK J2 XO  
USFK J3  
USFK J3 CSCT #2

USFK J33 OPS  
USFK J34 –Force Protection  
USFK J35  
USFK J39 PSYOP  
USFK J3CSCT#3  
USFK J4 SURGEON  
USFK J4 XO  
USFK J63  
USFK JA  
USFK PAO

## GLOSSARY

### Section I. ABBREVIATIONS

AFN	American Forces Network
AWA	Area Weather Advisory
CC	Command Center
DLT	Desired Lead Time
EOC	Emergency Operations Center
FRAGO	Fragmentary Order
JTWC	Joint Typhoon Warning Center
METOC	Meteorology and Oceanography
NM	Nautical Miles
OWS	Operational Weather Squadron
ROK	Republic of Korea
SWO	Staff Weather Officer
TCCOR	Tropical Cyclone Condition of Readiness
TC-TAP	Tropical Cyclone Threat Assessment Product
USFK	United States Forces Korea
WS	Weather Squadron

### Section II. TERMS

**Area Weather Advisory.** Forecast of weather conditions that pose a hazard to life or property. The 17 OWS issues Area Weather Advisories.

**Desired Lead Time.** The amount of advance notice an agency requires prior to the onset of a particular weather phenomenon.

**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.”

**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.

**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.

**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.