



Afghanistan Civil Aviation Authority

Airside Operating Procedure 04 (Adverse Weather)

Hamid Karzai International Airport

Airside Safety Office

Address: Office # 307, Airside Safety Office, Tower Building

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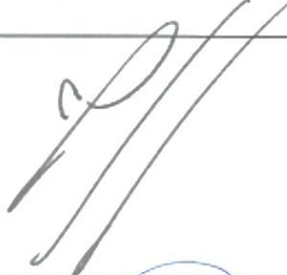



PROMULGATION LETTER

The Airside Operating Procedure 04 – *Adverse Weather* produced by HKIA Airport Safety Office (ASO) as part of the Aerodrome Safety Management System (ASMS).

The Airside Operating Procedure 04 – *Adverse Weather* was reviewed, accepted and promulgated under the authority of the President of the Hamid Karzai Int'l Airport.

This document was drafted by HKIA Safety Officers and reviewed by the Airside Safety Manager.

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Any contribution to improve this document as well as any discrepancy detected shall be directed to Airside Safety Office (ASO).

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Record of Amendments

As any publication which affects safety, this handbook is subject to change from time to time. The Airside Safety Office will distribute the amendments either in hard or soft copy. As the information is updated, the version number of the document will be amended and all concerned parties will be notified accordingly.

Please record all amendments introduced in this document by updating this page, it will help you to keep track of all amendments.

Amendment #	Effective Date	Pages Changed
Version 02	1 st April 2018	All documents



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Definitions

Aerodrome: A defined area on land or water including any building, installations and equipment, intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

Airside: The movement area of an aerodrome, adjacent terrain and buildings or portions thereof, access to which is controlled.

Aeronautical meteorological station: A station designated to make observations and meteorological reports for use in international air navigation.

Meteorological information: Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

Visibility: The greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background

Organization: Generic term which identifies all companies, airlines and other organizations providing a service related to airport operations.

Operator: Any person who is in actual physical control of an aircraft, vehicle or GSE.

Adverse Weather: Refers to any dangerous meteorological phenomena with the potential to cause damage, serious social disruption, or loss of human life.

Thunderstorm: Known as an **electrical storm**, a **lightning storm**, is a type of storm characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder.

High Wind: Is the flow of gases on a large scale. On the surface of the Earth, wind consists of the bulk movement of air.

Low Visibility: temporary condition when the visibility is typically less than 800m (0.5 miles).

Lightning: powerful sudden flow of electricity (an electrostatic discharge) accompanied by thunder that occurs during an electric storm.



Abbreviations

ASO:	Airside Safety Office
AOP:	Airside Operating Procedure
AIS:	Aeronautical Information Service
ACI:	Airport Council International
ACFT:	Aircraft
ACAR:	Afghanistan Civil Aviation Regulation
FSO:	Flight Safety Officer
GSE:	Ground Support Equipment
ICAO:	International Civil Aviation Organization
IATA:	International Air Transportation Association
HKIA:	Hamid Karzai International Airport
METEO:	Meteorology
PPE:	Personnel Protective Equipment
RWY:	Runway
TWY:	Taxiway
TWR:	Tower
ULD:	Unit load device



1. Introduction

1.1. The adverse weather conditions can have a drastic impact on the aerodrome normal operations and result in damage to equipment as well as injuries to personnel.

All airside personnel are expected to make every reasonable effort to minimize associated risks, without compromising their health and safety whilst maintaining the necessary services.

2. Objective

2.1. The objective of Airside Operating Procedure (Adverse Weather) AOP 04 is to:

- I. Provide guidance to HKIA organizations in establishing their own adverse weather procedures privileging the safety of their staff and the safeguard of their equipment.
- II. Outline the responsibilities for airport departments and organizations to face adverse weather conditions in order to increase safety and efficiency of airside activities.



3. Applicability

- 3.1. This Airside Operating Procedures applies to all organizations and respective personnel operating on HKIA airside either permanently or temporarily, such as:
- I. HKIA employees including ACAA staffs assigned to HKIA.
 - II. Governmental law enforcement agencies.
 - III. Employees of companies based at HKIA.
 - IV. Representatives of airlines flying to/from HKIA.
 - V. Personnel of contracted companies doing construction work or others.
 - VI. All personnel not included above whom demonstrates an operational need to operate on the airside.

4. Responsibilities

4.1. Airport Operational Director

The Airport Operational Director is responsible to:

- I. Review and approve this AOP 04 and its subsequent directives.
- II. Ensure the dissemination and compliance with this AOP 04.

4.2. Airside Safety Office

The Airside Safety Office is responsible to:

- I. Update the AOP 04 and submit it for approval.
- II. Disseminate and promote the AOP 04 to all Organizations operating at HKIA.
- III. Monitor compliance with the AOP 04.
- IV. Disseminate Weather Warnings to the organizations' Operations Center.
- V. Conduct airside inspections during and after Adverse Weather phenomena as prescribed in AOP 01.

4.3. Air Traffic Control Tower

- I. Air Traffic control is responsible to broadcast the Weather Warnings received from METEO office via the Ramp Control net/Radio.

4.4. Meteorological Office

- I. METEO office is responsible to report meteorological information including Weather Warnings.

4.5. Organizations

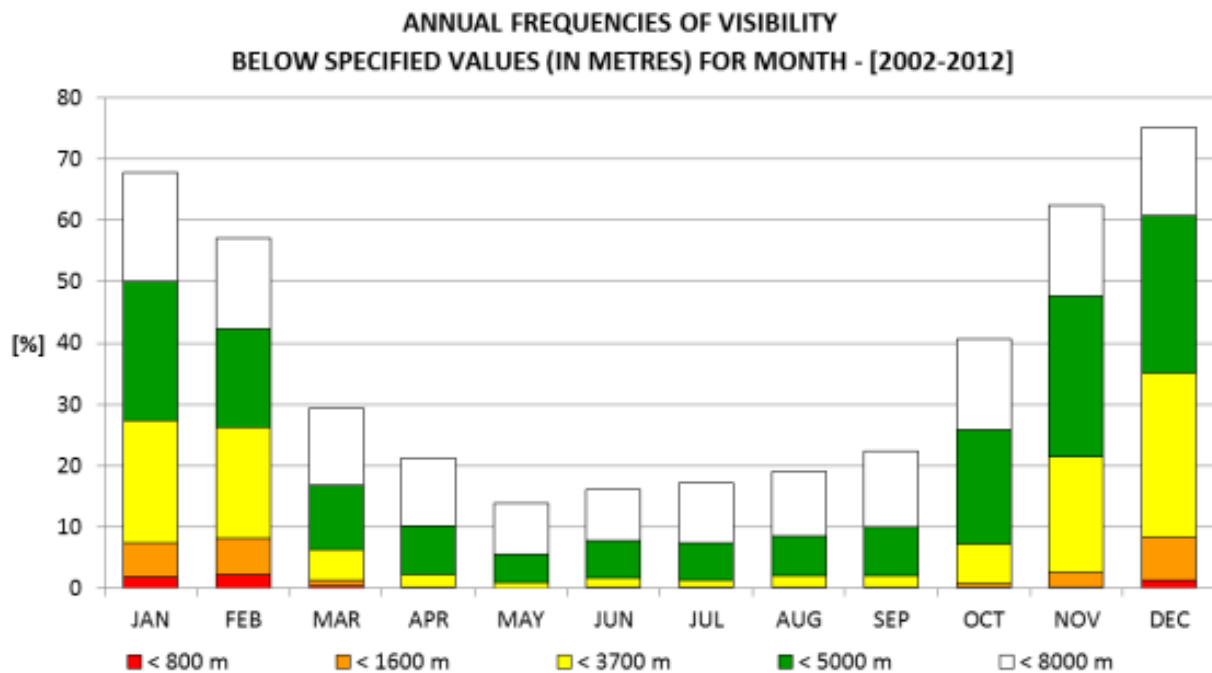
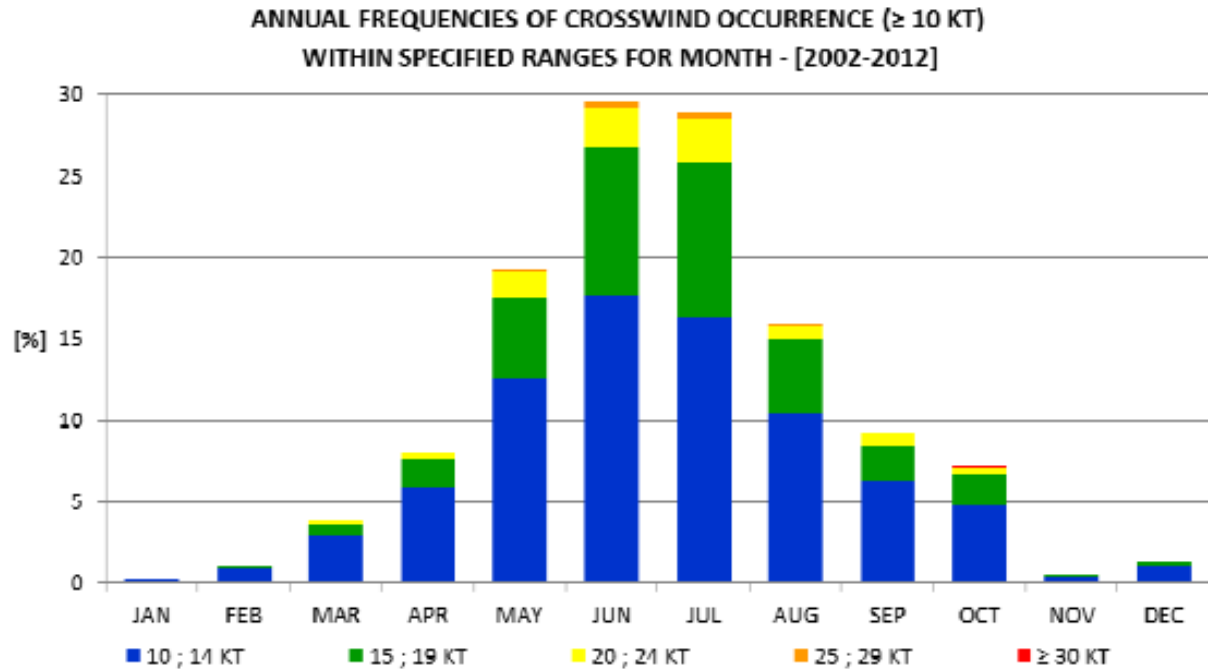
Organizations are responsible to:

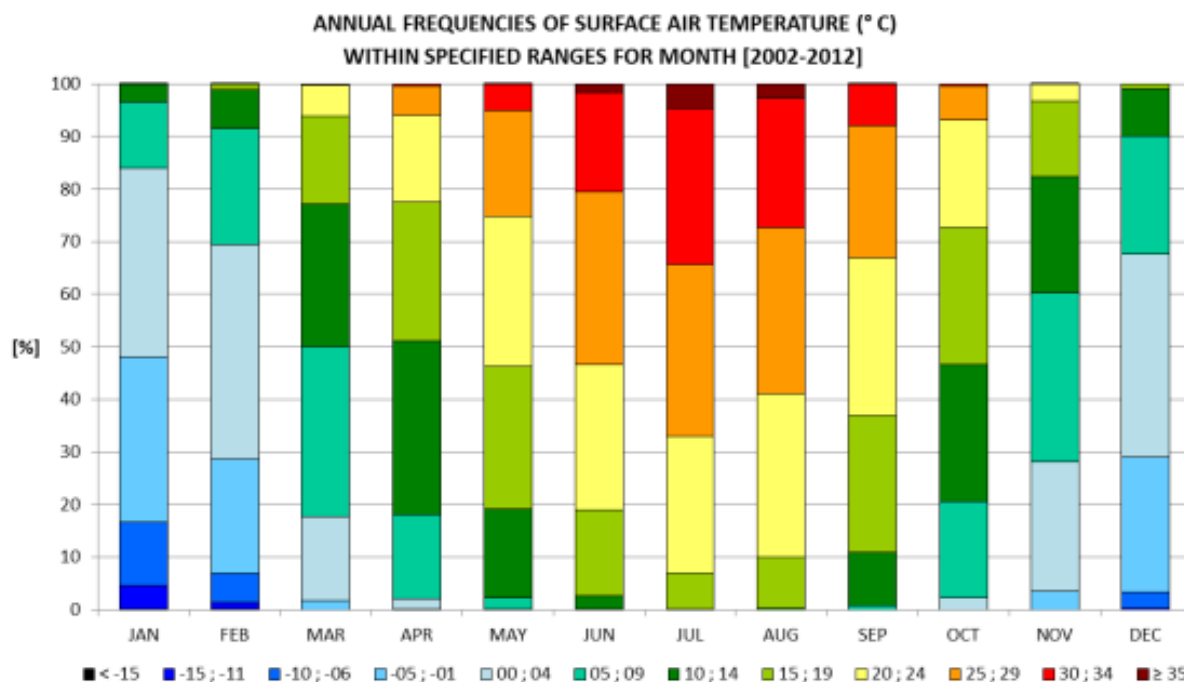
- I. Consider at the utmost priority safety of their staff during adverse weather conditions.
- II. Establish specific procedures to face adverse weather phenomena in accordance with the guidelines provided in this document and best industry practices.
- III. Disseminate and train the staff to react appropriately during adverse weather conditions.
- IV. Establish internal notification procedures to ensure airside staff are aware of relevant meteorological phenomena which can affect the normal operations.
- V. Obtain Kabul meteorological information and plan airside operations accordingly.
- VI. Cooperate with ASO in the improvement of the AOP 04.
- VII. Provide their personnel with required PPE.



5. Kabul Weather Conditions Overview

The climate at Kabul is semiarid, with cold winters and mild summers. The following charts illustrate the meteorological data for the period between 2002 and 2012.





6. Adverse Weather

6.1. For the purpose of this AOP 04 and in accordance with the Kabul meteorological particularities, adverse weather conditions are considered to be:

- I. Lightning: the abrupt electric discharge from cloud to cloud as well as from cloud to earth.
- II. Strong Winds: winds whether steady or gusting in excess of 30 knots. Prevailing winds are from northern quadrant and often producing phenomena such as sand/dust storm.
- III. Ground icing: presence of snow and water on the airside surfaces which can produce ground icing due to the ground temperatures and wind chills.
- IV. Low Visibility: reduction of the visibility to less than 800 meters (0.5NM) due to snow, heavy rain, fog or sand/dust storms.

7. Notification Procedures

7.1. ASO will forward via e-mail to the organizations' Operations Center the Weather Warnings received from METEO office.

The list of Warnings issued by the METEO office can be found in Attachment A.

7.2. Additionally, ATC Tower will broadcast the Weather Warnings for lightning via the Ramp Net. The broadcast will ensure all airside personnel on the Ramp Net become aware of the presence of lightning over and in the vicinity of the airport.

7.3. A first message "**ALERT PHASE**" is broadcasted as "Lightning Alert" when lightning has been observed in the vicinity of the airport but outside 5NM (9 Km) and there is potential for lightning within 5NM (9 Km) of the airport is likely to occur in the next 30 minutes.

"ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL. LIGHTNING ALERT, LIGHTNING ALERT. ALL PERSONNEL TAKE APPROPRIATE MEASURES"

7.4. A second message "**WARNING PHASE**" is broadcasted as "Lightning Warning" when lightning has been observed within 5NM (9 Km) of the airport.



“ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL. LIGHTNING WARNING, LIGHTNING WARNING. STOP OPERATIONS, STOP OPERATIONS”

7.5. A third message **“ALL CLEAR”** is broadcasted as “All Clear” when the lightning has moved beyond 5NM (9 Km) and is moving away from the airport.

“ATTENTION ALL PERSONNEL, ATTENTION ALL PERSONNEL. ALL CLEAR, ALL CLEAR. RESUME NORMAL OPERATIONS, RESUME NORMAL OPERATIONS”

8. Lightning

8.1. When the ALERT PHASE is broadcasted, airside personnel shall start preparing for the WARNING PHASE and consequently to stop/suspend activities. The following actions shall be taken:

- I. Suspend non-essential activities in open areas.
- II. Reduce fueling pressures to avoid the accumulation of static charges.
- III. Ensure any staff using or about to use headsets are informed of the alert.
- IV. Avoid using highly conductive equipment.

8.2. When the WARNING PHASE is broadcasted, all airside activities shall be stopped until the ALL CLEAR message is issued. The following actions shall be taken:

- I. Suspend all fueling activities.
- II. Suspend marshalling service.
- III. Suspend construction and maintenance in open areas.
- IV. Suspend passenger embarkation and disembarkation both on loading bridges and on remote stands.
- V. Discontinue communications by headset between ground staff and aircraft.
- VI. Stop all ramp activities and clear the ramp.
- VII. Suspend the circulation of vehicles without cabin cover.
- VIII. Seek shelter inside building or inside metal bodied vehicles

Be aware that no one should seek shelter under any part of an aircraft, loading bridge, near light poles, fences or under trees.

8.3. During the WARNING PHASE, the following procedures shall be followed in regard to embarking and disembarking passengers:

- I. If passengers have not started boarding, they must be kept in the gate lounges.
- II. If boarding has started, stop the process and leave the passengers already boarded in the aircraft.
- III. Passengers and staff shall clear the loading bridge.
- IV. If an aircraft has just arrived, it should be held off the gate until the WARNING is cancelled. The aircraft doors shall remain closed.

8.4. Airside operations will resume only after the **“ALL CLEAR”** message is broadcasted in the Ramp Net.

9. High Winds

9.1. As the measures to be taken in the event of high winds may require a lot of preparation, organizations operating on the airside shall monitor the meteorological information and adopt a proactive approach.

In case of forecasted winds above 30 knots, the following procedures shall be considered and implemented based in a continuous risk assessment.



9.1.1 Secure aircraft

Aircraft should be appropriately secured per manufacturer's specifications. The following measures shall be considered and implement when practicable:

- I. Place additional chocks.
- II. Park aircraft into the wind if feasible.
- III. Tie down or ballast aircraft.
- IV. Set aircraft parking brakes.
- V. Close all doors, cockpit windows and service panels.
- VI. Lock control surfaces in accordance with maintenance manuals.
- VII. Secure aircraft nose gear torsion links.
- VIII. Hook up tow bar and attach tug when feasible, and install by-pass pins.
- IX. Secure engine and tubes covers.

9.1.2 Secure Ground Support Equipment

Ground Support Equipment shall be appropriately secured and stored in such way that the possibility of being damage or damaging other equipment is reduced to a minimum. The following measures shall be considered and implemented when practicable:

- I. Disengage non-essential GSE from aircraft.
- II. Remove non-essential GSE from the apron.
- III. Position equipment away from the aircraft and outside the path of possible aircraft movement.
- IV. Equipment left outside must be secured with breaks set and/or tie down.
- V. Disconnect strings of carts and dollies so each conveyance is held by its own brake or attach a vehicle to them.
- VI. Ensure all containers are locked on dollies or transporters with doors and curtains secured.
- VII. Remove all empty loose containers from areas around aircraft. If possible store them indoors.
- VIII. Ballast empty ULDs and containers if they are stored on the airside or tie them down to a firm structure.
- IX. Lower all high-reach equipment (loaders, steps, catering trucks). Park the equipment into the wind and deploy stabilizers when so equipped.
- X. Remove and store any loose equipment (ladders, cones).
- XI. Retract loading bridges.
- XII. Set vehicle's parking breaks or chock vehicle.
- XIII. Confirm all skips or other litter/FOD receptacles are covered/closed.
- XIV. Reduce vehicle speed accordingly.
- XV. Use Extreme caution when towing (aircraft steps etc.) or operating high sided vehicles especially scissor-lifts (do not raise any lift if the wind speed exceeds the operational limit of the vehicle).
- XVI. Use extra care whilst servicing aircraft, when maneuvering vehicles or equipment adjacent to aircraft. Brakes should be securely applied, and/or chocks used, at all times when the vehicle is stationary.

9.1.3 Airside Staff

As operations continue during periods of high winds, airside staff is exposed mostly to the dust and sand blasted by the wind. Staff operating in airside open areas shall:

- I. Seek shelter if feasible.
- II. Protect eyes, nose and mouth if continuing operations on airside open areas.
- III. Report immediately any hazards produced by wind to ATC or ASO Office.



10. Operations during Snow and Icy conditions

Extra care should be taken when operating airside during period of snow or in icy conditions.

Organizations shall implement their own procedures and respective staff shall endeavor all efforts to minimize the risks associated with snow and ice operation and. The following procedures shall be adopted:

10.1. Airside Staff

- I. Use appropriate clothing for low temperatures.
- II. Use adequate footwear to minimize the risk of skidding.
- III. Do not wash aircraft or equipment on airside to minimize the risk of icy floor
- IV. Transport passengers in buses between terminals and aircraft.
- V. Remove snow around working areas and apply adequate de-icing/anti-icing products to avoid icy ground.

10.2. Vehicle Operators

- I. Reduce vehicle's speed accordingly.
- II. Keep the vehicles' windows clean.
- III. Ensure that attention is given to vehicle inspection prior to use.
- IV. Check that vehicles are adequately prepared to operate in low temperatures.
- V. Use extreme caution when approaching aircraft.

Note: Refer to Airside Operating Procedures 05 – *Winter Operations* for additional guidance.

11. Low visibility

11.1. Low visibility occurs as a result of heavy rain, snow, sandstorm, fog, or a condition when the visibility is typically less than 800m (0.5 miles).

11.2. During low visibility operations the following precautions should take by airside personnel:

- I. Reduce the vehicle operations to the minimum possible to conduct the required services.
- II. Reduce the equipment operating speed considerably.
- III. Motorized equipment should have all running lights on during low visibility operations.
- IV. Equipment operators must take extra caution at all intersections and apron taxi-lane crossings.
- V. Take extra care at all intersections and aprons taxi-line crossing.
- VI. Take additional care to ensure that vehicle windshield is clean.
- VII. Clearance shall be obtained from ATC to cross the GSE road between Apron 3 and Apron 1 when the visibility is less than 300 meters.

12. Working on extreme temperature

12.1. Extreme temperatures might affect personnel's safety performance depending on time of exposure, personal protection, activity and work rotation.

Organizations shall establish adequate procedures to mitigate the impact extreme temperatures might have in the staff. Medical advice should be sought in the event of extreme temperature.

12.2. Heat stress

Will result in poor performance, lack of concentration, dehydration, and in most severe cases hospitalization. Heat stress injuries can be reduced by applying the following preventive measures:



- I. Allow adequate breaks, ventilation and shelter between activities to reduce exposure to sunrays.
- II. Provide ample supply of drinking water located near to work area.
- III. Wear loose and appropriate clothing.
- IV. Monitor the work rotation and reduce if applicable the duty hours during the hotter period.

12.3. Cold Stress

Affects human performance such as loose of feeling in extremities, fatigue, and muscle seizures, loose of awareness, poor concentration and in severe cases might result in hospitalization. Heat stress injuries can be reduced by applying the following preventive measures:

- I. Allow adequate breaks and warmed shelter between activities to allow body temperature to rise.
- II. Provide hot fluids located near to work area.
- III. Wear appropriate winter clothing.
- IV. Monitor the work rotation and reduce if applicable the duty hours during the colder period.

13. Airside Staff Health and Safety

Adverse weather conditions affect human's performance.

Airside staff shall be prepared to respond to adverse weather conditions, safeguarding their health and safety.

- (i) Refer to *Airside Operating Procedure 02 – Airside Safety* for additional information.



14. Contacts

Any reporting for improvement of this procedure will be highly appreciated;

ASO address: TWR Building, Third floor

ASO Net: oakbflightsafety@gmail.com

- **ASO landline:** 020 231 1803
- **ASO Mobile:** 0784101263
- **TWR Mobile:** 0786308480, 0787969036
- **Operation Deputy Mobile:** 0786050102, 0790007555
- **Airport President Mobile:** 0793203004



15. References

1. ICAO Annex 3
2. ACI Airside Safety Handbook
3. IATA Ground Handling Operation Manual



Attachment A

Meteorological Phenomena Warning Report

- Crosswinds \geq 30 Knots
- Sustained Wind \geq 35 Knots
- Wind Gusts \geq 45 Knots
- Wind Gusts \geq 60 knots
- Visibility/Ceiling $<$ 1500 meters/500 feet
- Visibility/Ceiling $<$ 800 meters/500 feet
- Visibility $<$ 200 meters
- Thunderstorm within 5 miles
- Hail
- Freezing Precipitation
- Snow
- Moderate/Severe Turbulence $<$ 10 000 feet
- Moderate/ Severe Icing $<$ 10 000 feet
- Temperature \geq 33°
- Temperature \geq 40°
- Temperature \leq 0°
- Wind Chill Temp \leq -18°
- Sind chill temp