OVERVIEW

- Local Area Influences
- Winter Climatology
- Winter Hazards
- Watches / Advisories / Warnings
- Services / Station Operations
- POC’s
Local Area Influences

- Rolling hills with peaks up to 1,500’
- Large lake areas and abundant foliage
  - Act as moisture sources that feed AM fog and lower ceilings
- Isolated weather conditions throughout reservation
  - What looks good at RGAAF can be totally different at HAAF
Winter Climatology

- Degraded Flying Operations
  - Lower AM vis/ceilings due to fog and stratus
    - Can extend into afternoon
    - Induced by upslope conditions
    - Cooler Temps
  - Low Level Icing
    - Can extend down to surface
Winter Synoptic Pattern

- Frontal passages generally occur every 5-7 days
- Polar Front Jet moves further south bringing colder temperatures.
- Decrease in thunderstorm activity but increase in AM fog and lower ceilings.
CEILING AND VISIBILITY CLIMO

- CIG > 015' VIS > 3 MI
- CIG < 010' VIS < 2 MI
- CIG < 002' VIS < .5 MI
Winter Hazards

- Turbulence
- Icing
- Low Level Wind Shear
- Reduced Visibility
- Colder Temps
Turbulence
TURBULENCE

- May occur at any time without warning
  - Faster aircraft = more turbulence
  - Heavier aircraft = less turbulence
  - Greater the wing width = more turbulence
TURBULENCE

- Caused by wind shear
  - Horizontal or vertical
  - In direction or speed (Jet Stream)
- Occurs in patches
- Occurs in Layers
  - May be as thick as 2,000 ft
  - Can be 10 to 40 miles wide
TURBULENCE

- Also caused by strong winds over rough terrain (Ft. Hood is not considered rough terrain)
  - Rougher terrain = More turbulence
  - Higher wind speed = More Turbulence
- Frontal Zone Turbulence
  - Occurs between 1,000 and 30,000 ft
LOW LEVEL WIND SHEAR

- A change in wind speed of 30kts within 2,000ft of the surface
- Causes sudden changes in aircraft performance
  - May gain or lose altitude or deviate from level flight by pitching up or down. Affects glide slope of aircraft
  - Indicated airspeed fluctuates
ICING

Types of Icing

- **Rime**: Rough, milky and opaque. Similar to ice in a refrigerator. Associated with stratus clouds.
- **Clear**: Glossy and clear; formed by slow freezing of large supercooled water droplets. Found in cumulus clouds (Puffy low clouds).
- **Frost**: Light feathery deposit occurring when an aircraft is descending from cold air to warmer air layers.
ICING

- Adds weight, blocks the flow of air into engine
- Destroys the efficiency of the airfoil by altering its shape. When the lifting qualities of the wing are gone, the aircraft can no longer remain airborne!
FOG
Fog

→ Reduces Visibility and Lowers Ceilings

- Patchy Fog
  - Visibility can be severely restricted; 1/4 mile away it can appear unrestricted
  - Usually appears in low lying areas
  - Not very thick
  - Hardest to forecast

- Wide spread Fog
  - Large continuous even fog
  - Usually at least 800 ft thick
W/W/A

- **Watch**: Issued for the *potential* of weather conditions
- **Warning**: Issued for *imminent* occurrence of weather conditions
- **Advisory**: Observed condition affecting area
  - **Terminal**: valid within 5nm of either airfield
  - **Area**: valid within 50nm of 3 Corps HQ
**WARNING**
- TORNADO
- SVR TSTMS
- MDT TSTMS
- WNDS > 50 kt
- WNDS > 35 <50kt
- LTG
- FZ PCPN
- HVY PCPN
- BLIZZARD

**WATCH**
- TORNADO
- SVR TSTMS
- WNDS ≥ 50 kt
- LTG
- FZ PCPN
- HVY PCPN
- BLIZZARD

**TERMINAL ADVISORY**
- WND > 30kt
- WIND CHILL ≤ 10F
- WND GUST SPREAD ≥ 15 kt

**AREA ADVISORY**
- MDT OR GTR TURBC
- MDT OR GTR ICG
- LLWS
PILOT REPORTS (PIREPS)

HIGHLY VALUED!!

- Thunderstorms
- Turbulence
- Icing
- Clouds
- Winds, temperature, etc..

PMSV frequencies: UHF 306.5
FM  41.20
Weather Station Operations

- 24 Hours a day, 7 days a week (RGAAF)
- 24 Hours a day, 7 days a week (Automated Obs HAAF)
- 1 Forecaster location, RGAAF
- What we do for you:
  - Mission Execution Forecast (MEF)
  - Flight weather briefings
  - Weather advisories, watches, and warnings
  - Pilot reports (PIREPS)
  - Pilot to metro service (PMSV) calls

NOT NECESSARILY IN THAT ORDER! Please be patient!
Remember, there are many pilots on Fort Hood, but only one Weather Station and ONE forecaster
FLIGHT WEATHER BRIEFINGS

- Call 288-9620 or 288-9400 (RGAAF)
- E-mail: usarmy.hood.3-asog.mbx.3w3-woc@mail.mil

Please follow up flight weather briefing requests sent via E-mail / Fax with a phone call
26th Operational Weather Squadron (Barksdale AFB, LA) provides:

- 24hr Terminal Aerodrome Forecast TAFs (updated every 8hrs)
  - TAF breakdown can be found in AFH 11-203, Vol. 2, Chap. 3. (http://www.e-publishing.af.mil/)
- 5-Day Forecasts
- Weather briefs to transient aircraft
- Back up if KGRK goes down
Search: Weather
or scroll to
bottom of page
3D Combat Weather Squadron
Homepage

5-Day Forecast

Fort Hood

5-Day Weather Outlook & Effects

<table>
<thead>
<tr>
<th>Day</th>
<th>High</th>
<th>Low</th>
<th>Wind Chill</th>
<th>Heat Index</th>
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<td>Tue 28 Mar 17</td>
<td>82F/28C</td>
<td>63F/17C</td>
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<td>55F/13C</td>
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<td>77F/26C</td>
<td>54F/12C</td>
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<td>59F/15C</td>
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March Climatology
Avg Hi: 73F  Avg Low: 50F  Avg Precip: 2.5 Inches

FOR PLANNING ONLY

FOR HOO D, TX 5-DAY FORECAST
AS OF 0300 HRS LOCAL 28 MAR 17

Integrity - Service - Excellence
### 5-Day Forecast Impacts

#### FOR PLANNING ONLY

<table>
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<tr>
<th>OPERATION</th>
<th>FAVORABLE (No Degradation)</th>
<th>MARGINAL (Some Degradation)</th>
<th>UNFAVORABLE (Significant Degradation)</th>
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<td>CIG 500 - 999 FT</td>
<td>CIG &lt; 500 FT</td>
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<td>VIS &gt;= 4800 METERS</td>
<td>VIS 0800 - 4799 METERS</td>
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<td>UAS</td>
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<td>CIG 3000 - 4900 FT</td>
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<td>VIS 4800 - 6000 METERS</td>
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<td>TEMP 33 - 84 F</td>
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<td>TEMP 01 - 104 F</td>
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<td>VIS 1000 - 3199 METERS</td>
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<td>IR SENSORS</td>
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POCs

- 3 WS Commander: 288-1313
- 3 WS Operations Officer: 287-7397
- Operations Superintendent: 287-2948
- RGAAF Weather Station NCOIC: 288-9166
- RGAAF Weather Station: 288-9620/9400
- HAAF Weather Station: 553-7646/287-1891
- Gray Metro: UHF 306.5
THE END!!

Any Question or comments?