



# OPERATIONAL RISK MANAGEMENT MATRIX INSTRUCTIONS FOR USE



**INSTRUCTIONS:** Assign a value to each of the stated risk factors, and place in the appropriate box on the right-hand side of the page. When all categories have a risk value assigned, calculate total and place in the box labeled “**Total Calculated Risk Assessment**”. Based upon your judgment and the values stated in the table labeled “**Overall Risk Assessment**”, take whatever steps necessary to either fly, correct the unsafe conditions within your control, or cancel the flight, as appropriate.

**RISK LEVELS:**  
Low — 0 - 75  
Moderate — 76 - 150  
High — 151 +

## MAN — SUGGESTED RISK VALUES:

**Experience / Training:** High time pilots are statistically less likely to have accidents.  
**Pilot Currency:** Recency of pilot experience also lowers possibility of accidents.  
**Health / Crew Rest:** Fatigue or health problems can and will degrade a pilot’s skills.

## MACHINE — SUGGESTED RISK VALUES:

**Maintenance Factors:** Awareness of mechanical flaws vital to safety of mission.  
**Performance Factors:** Lowest search altitudes increase chance of hitting tall objects; Highest introduces chance of hypoxia; Intermediate altitudes statistically the safest.  
**Communications:** Spotty comms or blind spots distract crew, prevent them from watching for traffic and add to pilot workload.



## MISSION — SUGGESTED RISK VALUES:

**Operations Tempo:** The more aircraft involved, the greater the chance for collision.  
**Search Complexity:** High workload caused by unfamiliar tasks can add to distractions.

## ENVIRONMENT — SUGGESTED RISK VALUES:

**Weather:** Icing - Even the possibility of light icing in the forecast is a no-go.  
Ceiling - Marginal VFR adds to risk; Hard IFR increases risk substantially.  
Hazards - Turbulence, thunderstorms all require careful pilot judgment.  
Winds - Winds greater than 15 kts increase the risk of landing accidents.  
Visibility - Low visibilities add to risk of collision, disorientation or IFR.  
**Terrain:** The higher the land, the greater the possibility of controlled flight into terrain.  
**Night Ops:** Night VFR is higher risk than day; Night IFR is statistically the riskiest of all.  
**Airfield:** More incidents occur at airfields unfamiliar to the pilot than at the home field.

## ADDITIONAL CIRCUMSTANCES — SUGGESTED RISK VALUES:

**CAPF 5 & 91:** Forced landing simulations or engine cuts add greatly to checkride risk.  
**Overwater:** Being further than gliding distance increases the hazard of the mission.  
**CD Overwater:** Lack of an immersion suit makes long overwater trips a no-go in cold water.



— Use Values Assigned As Maximums — Assign Lower As Appropriate —



# CAP AVIATION OPERATIONAL RISK MANAGEMENT WORKSHEET



Pilot Name: \_\_\_\_\_ Date: \_\_\_\_\_ Mission #: \_\_\_\_\_ A/C #: \_\_\_\_\_ Sortie: \_\_\_\_\_

HAZARD	LOW RISK	PTS.	MODERATE RISK	PTS.	HIGH RISK *	PTS.	VALUE
<b><u>HUMAN</u></b>							
<b>Experience / Training</b>	≥ 1,000 hours PIC ≥ 50 hours mission time	0	≥ 250 < 1,000 hours PIC ≥ 25 < 50 hours mission time	10	< 250 hours PIC < 25 hours mission time	20	
<b>Pilot Currency</b>	≥ 10 hours within last 30 days	0	≥ 5 < 10 hours within last 30 days	10	< 5 hours within last 30 days	20	
<b>Health / Crew Rest</b>	Good health and proper crew rest	0	Fair health with adequate crew rest	10	Poor health or signs of fatigue	No Go	
<b><u>MACHINE</u></b>							
<b>Maintenance Factors</b>	Fully Functional	0	Partially Non-Functional	15	Fully Non-Functional	No Go	
<b>Performance Factors</b>	≤ 5,000' Density Altitude	0	> 5,000' ≤ 8000' Density Altitude	10	> 8,000' Density Altitude	20	
<b>A/A &amp; A/G Comms</b>	Good comms and/or high bird available	0	Some blind spots or faulty comms and no high bird	10	Poor comms and no high bird	15	
<b><u>MISSION</u></b>							
<b>Operations Tempo</b>	1 - 2 total mission aircraft	0	3 - 4 total mission aircraft	10	> 4 total mission aircraft	20	
<b>Search Complexity</b>	Simple tasks, no new technology	0	Complex tasks, no new technology	10	Complex tasks, new technology	20	
<b><u>ENVIRONMENT</u></b>							
<b>Weather (current &amp; forecast)</b>	Icing: none Turbulence: none X-Winds: ≤ 5 kts.	0 0 0	Icing: none Turbulence: lite.-mod. X-Winds: > 5 ≤ 10 kts.	0 10 5	Icing: ≥ light Turbulence: severe. X-Winds: > 10 kts.	No Go No Go 50	
<b>VFR Flight ceiling/vis</b>	≥ 3000 agl And ≥ 5 sm	0	≥ 1,000 agl < 3,000 agl And / or ≥ 3 < 5 sm	25	< 1,000 agl and / or < 3 sm visibility	No Go	
<b>IFR Flight ceiling/vis</b>	≥ 500 agl < 1,000 agl and/or ≥ 1 sm < 3 sm visibility	25	< 500 agl and/or < 1 sm visibility	50	Below departure airport approach minimums	No Go	
<b>Terrain</b>	Low, flat	0	Foothills / featureless	15	Mountainous	30	
<b>Night Ops</b>			VFR	25	IFR	75	
<b>Airfield</b>	Familiar	0	Unfamiliar	25			
<b><u>ADDITIONAL FACTORS</u></b>							
<b>CAPF 5 &amp; 91</b>	No forced landings or simulated engine cuts	0	Forced landings and/or simulated engine cuts	50			
<b>Overwater</b>			Within gliding distance of land	50	Outside gliding distance of land	100	
<b>Extended Overwater</b>			With immersion suit Water temp < 60° F	75	Without immersion suit Water temp < 60° F	No Go	
<b>TOTAL CALCULATED RISK ASSESSMENT:</b>							
<b>OVERALL RISK ASSESSMENT</b>						<b>Initials</b>	<b>Date / Time</b>
Low Risk = 0 — 75 <sup>†</sup> <span style="float: right;">FRO</span>							/
Moderate Risk = 76 — 150 <sup>†</sup> <span style="float: right;">Squadron DO / DOS / CC or AOBD</span>							/
High Risk = > 151 <sup>†</sup> <span style="float: right;">Wing DO / DOS / CC or IC</span>							/
No Go <span style="float: right;">Mission can be rejected by any direct participant at any level</span>							/

Notes: \* Implement suitable controls for any item in the high range. † Approvals are granted in ascending order of command and only with PIC concurrence. All approvals are optional, based upon local procedures and established Wing policies.