



RISK ASSESSMENT MATRIX

STANDARD FOR AUXILIARY AVIATION

UNITED STATES COAST GUARD AUXILIARY

NATIONAL OPERATIONS DEPARTMENT

AVIATION DIVISION STANDARDIZATION TEAM

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1. SCOPE

A. Purpose

Auxiliary aviation operations are conducted in a variety of environments and support a number of different missions. It is vital to the safety of the crew and to the success of the mission that the pilot and crew understand and evaluate the full impact of risk versus gain for each tasking.

The Final Action Message regarding Coast Guard Class A, R041706Z Jun 03 COMDT COGARD Washington DC, directed the expansion of Auxiliary aviation policy to include an Auxiliary unique Risk Assessment Matrix. This Matrix will assist Air Station Commanding Officers and their pilots and crews in risk management duties/responsibilities while employing the widely varied aircraft and pilot attributes of Auxiliary Aviation.

This document establishes the policy of utilizing the enclosed Auxiliary unique Risk Assessment Matrix (Appendix 1, below) for use in planning for all Auxiliary aviation aircraft operations to assist Auxiliary pilots in quantifying operational risk exposure associated with assigned missions.

B. Application

The policies and procedures in this Standard shall be applicable to all Auxiliary aviation aircraft operations.

C. References

- a. United States Coast Guard Auxiliary Manual, M16790.1 (series)
- b. United States Coast Guard Auxiliary Operations Policy Manual, M16798.3 (series)
- c. Commandant Instruction M16798.1, The Auxiliary Aviation Program
- d. COMDT COGARD Washington DC 041706Z Jun 03 - Final Action Message regarding Coast Guard Class A Aviation Flight Mishap involving an Auxiliary Aviation Aircraft on 01 Feb 01
- e. Commandant Instruction 3500.3, Operational Risk Management

2. DEFINITIONS

Operational Risk Management - A continuous, systematic process of identifying and controlling risk in all activities according to a set of pre-conceived parameters by applying appropriate management policies and procedures. This process includes detecting hazards, assessing risk, and implementing and monitoring risk controls to support effective, risk-based decision-making.

Risk - The chance of personal injury or property damage or loss, determined by combining the results of individual evaluations of specific elements that contribute the majority of risk concerns. Risk generally is a function of Severity, Probability and Exposure (SPE).

3. SPECIFICATION

When Auxiliary aircraft are given a set of orders for a Coast Guard assigned mission, the pilot in command shall, in conjunction with the crew during pre-flight planning, complete the enclosed Auxiliary Risk Assessment Matrix (Appendix 1).

The risk assessment matrix was developed in a generic format, flexible enough to apply to most mission situations. Values in the Matrix are to be mission-based on circumstances unique to District mission events, assets, resources, communications, and flight environment.

Any mission, which results in a numeric risk assessment value (risk assessment vs. gain) greater than 20, or greater than the local Air Station commanding officer established threshold, requires re-evaluation and / or Air Station command approval before launch.

Due to the dynamic nature of our mission and flight environment, pilots and crew should re-evaluate the risks whenever parameters shift from the pre-flight assessment; for example, when a routine patrol turns into a SAR mission.

4. APPENDIX 1

See attachment, U.S.C.G. AuxAir Aviation Risk Assessment, pages 1 and 2.

U. S. C. G. AUXAIR Aviation Risk Assessment

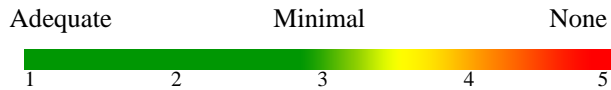
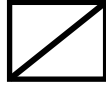
Date: _____ Mission: _____ U.S.C.G. AUXILIARY STANDARD AV-04-4 RISK ASSESSMENT MATRIX

Appendix 1 Page 1

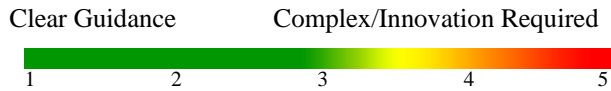
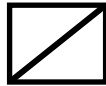
step 1. Risk Assessment

Review questions and circle the score according to currently available information. Score items according to instinct and the examples given. Absence of data automatically sets the score to maximum point value.

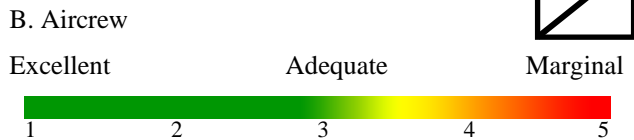
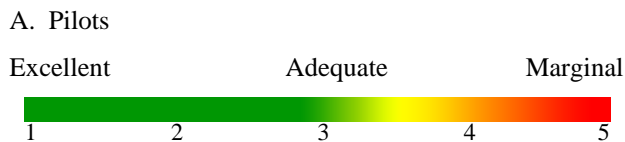
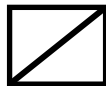
Planning: Thoroughness of pre-mission planning. Factors which increase risk: Launch from B-0, in-flight diversion.



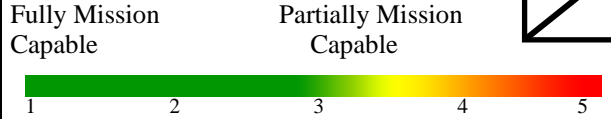
Event: Refers to mission complexity and guidance or doctrine available. Factors which may increase risk: sketchy details or non-standard mission profile.



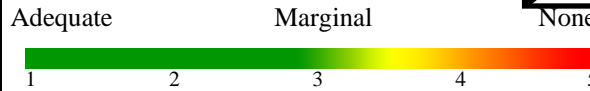
Asset: Selection of appropriate resources. Factors that affect risk: time with qualification, unfamiliar area, fatigue, flight time (total time & time in type), crew rest, requestor's knowledge of asset capabilities.



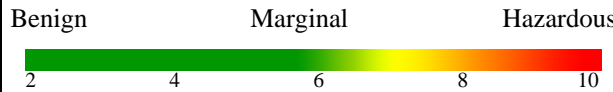
C. Airframe/Resources



Communications: Ability to maintain comms throughout mission. Factors: internal w/command and external w/customer.



Environment: External condition surrounding mission: Weather, night, illumination, seastate, terrain, power lines/structures, alternate airfields, water temp, on-scene cover.



Add the values for each Risk Assessment and plot the final Risk Assessment on graph below (include re-assessment from Step 2).

step 2. Risk Management

Risk Management is the decision to control or reduce hazards. Below are *Control Options* to assist in risk control or reduction. Review the options and reassess the risks as appropriate.

Spread-out – Disperse the risk by launching additional air/surface assets.

Transfer – If practical, locate a better suited asset to conduct the mission i.e. different airframe, surface asset, or crew.

Avoid – Circumvent hazard: Wait for risk to subside i.e.



wait until daylight or weather passes.

Accept – In all cases the benefit must justify the assumption of low risk. The decision to accept risk must be made with the stipulation that risk is reevaluated as the mission progress. (No adjustment to Risk Assessment)

Reduce – Reduce or limit risk exposure: Additional PRECOM/EXCOM, bring in fresh or more experienced crew.

Reassess Step 1 Values

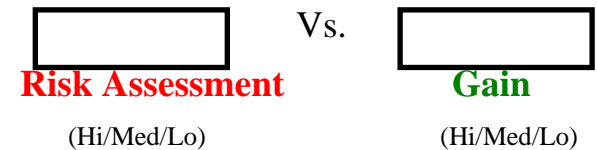
step 3 Risk vs. Gain

Low Gain – Situation with intangible benefits or a low probability for providing concrete results. Examples include passenger transport, non-critical logistics missions, PAO demonstration flight, etc.

Medium Gain – Situation that provides immediate, tangible benefits. Examples include saving property, protecting the environment, deterring illegal operations.

High Gain – Situation that provides immediate, tangible benefits that if ignored could result in loss of life. Examples include Urgent SAR.

Given the mission description above, what is the “Gain” for this mission?



Use the Risk vs. Gain Chart (next page) for recommendations on how to proceed

It is recommended that any mission which results in a Risk Assessment value above 20, requires re-evaluation and/or Command approval.



U. S. C. G. AUXAIR Aviation Risk Assessment

It is recommended that any mission, which results in a Risk Assessment value above 20, requires re-evaluation or Command approval.

This actual value, for any mission or missions, may be set at the discretion of the CGAS Commanding Officer.

<i>Risk</i>	<i>High Gain</i>	<i>Medium Gain</i>	<i>Low Gain</i>
<i>Low Risk</i>	Accept the Mission. Continue to monitor Risk Factors, if conditions or mission changes.	Accept the Mission. Continue to monitor Risk Factors, if conditions or mission changes.	Accept the Mission. Re-evaluate Risk vs. Gain, should Risk Factors change.
Medium Risk	Contact Air Station for guidance. Continue to monitor Risk Factors and employ Control Options when available.	Contact Air Station for guidance. Continue to monitor Risk Factors and employ Control Options when available.	Do not accept the Mission.
High Risk	Do NOT accept High Risk Missions		

NOTE: This Risk Assessment Matrix is intended as a tool to focus attention on items which cause risk when flying Coast Guard Auxiliary missions. Although one could selectively evaluate Risk Factors with a mind toward achieving an acceptable Risk Factor score, doing that would subvert the intent of this tool. This is intended to help everyone on the aircrew shift their thinking from a ground-bound mindset, to the hazards of the aviation environment. All members of the flightcrew should participate in the Risk Assessment scoring. This Risk Assessment process should continue throughout the mission as conditions evolve.

Instructions

1. Complete Step 1, Risk Assessment. Review each of the Risk Factors and assign a numerical score as indicated. Place the score in the upper left-hand portion of the boxes.
 Note: The relative scale provided is a guide to determine how much risk is associated with each factor. If you know or have information not specifically addressed in the example you may want to reference the scale at the bottom of the page. Example: If you feel that the wrong *Asset* is being sent on the case, you may want to score that factor as high risk due to an inappropriate dispatch of an asset. Use your best judgment as YOU see the information developing. Add the values of the boxes together. Use this score to determine the Risk, by applying it to the Risk Scale at the bottom of the page. *Note: The Environmental Risk Factor has a weighted value.*
2. Complete Step 2, Risk Management. If Risk Assessment is determined to be excessive, review the control options and determine if the risks can be reduced or controlled. Reassess each risk factor and enter new value in the lower right hand portion of the box provided. Re-total the values of the boxes and again compare to the Risk Scale at the bottom of the page.
3. Complete Step 3, Determine Potential Gain. Determine the gain by reviewing the assigned mission, apply the definitions as appropriate.
4. Utilize the matrix above to receive a recommendation on whether or how, to proceed with the mission.
5. Communicate the findings with your crew. Continue to re-evaluate Risk Assessment vs. Risk Management throughout all phases of the mission. This process should be an endless loop and continue until the safe completion of the mission.

