



# Civil Air Patrol

## INTERMEDIATE LEVEL OPERATIONAL RISK MANAGEMENT





# Intermediate ORM

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# Intermediate ORM

## OPERATIONAL RISK MANAGEMENT

All CAP missions and our everyday routines involve risk. Our aim is to increase our mission effectiveness while simultaneously reducing the risk to our personnel and our resources. Managing the risks leads to mishap prevention. Preserving our assets and protecting the health and welfare of our members is the goal of operational risk management (ORM).



# Intermediate ORM

## Four Principles of ORM

- Accept no unnecessary risk
- Make risk decisions at the appropriate level
- Accept risk when benefits outweigh the cost
- Integrate ORM into CAP at all levels



# Intermediate ORM

## Four Principles of ORM

### 1. Accept no unnecessary risk

All activities involve risk. You must accept necessary risk to complete a task or mission. Unnecessary risk comes when the potential benefit/achievement is not justified by the potential for risk. ORM assists in making the decision whether to put personnel and resources at possible risk in order to successfully complete the task/mission.



# Intermediate ORM

## Four Principles of ORM

### 2. Make risk decisions at the appropriate level

Those accountable for the success or failure of the task/mission must be included in the risk decision process. They are the ones that can allocate the resources to reduce the risk, eliminate the hazard and/or implement controls.



# Intermediate ORM

## Four Principles of ORM

### 3. Accept risk when benefits outweigh the cost

All benefits and potential costs must be identified and compared. There must be a clear knowledge and understanding that the total benefits exceed the total potential cost. ORM is about identifying and controlling risk, not avoiding all risk.



# Intermediate ORM

## Four Principles of ORM

### 4. Integrate ORM into CAP at all levels

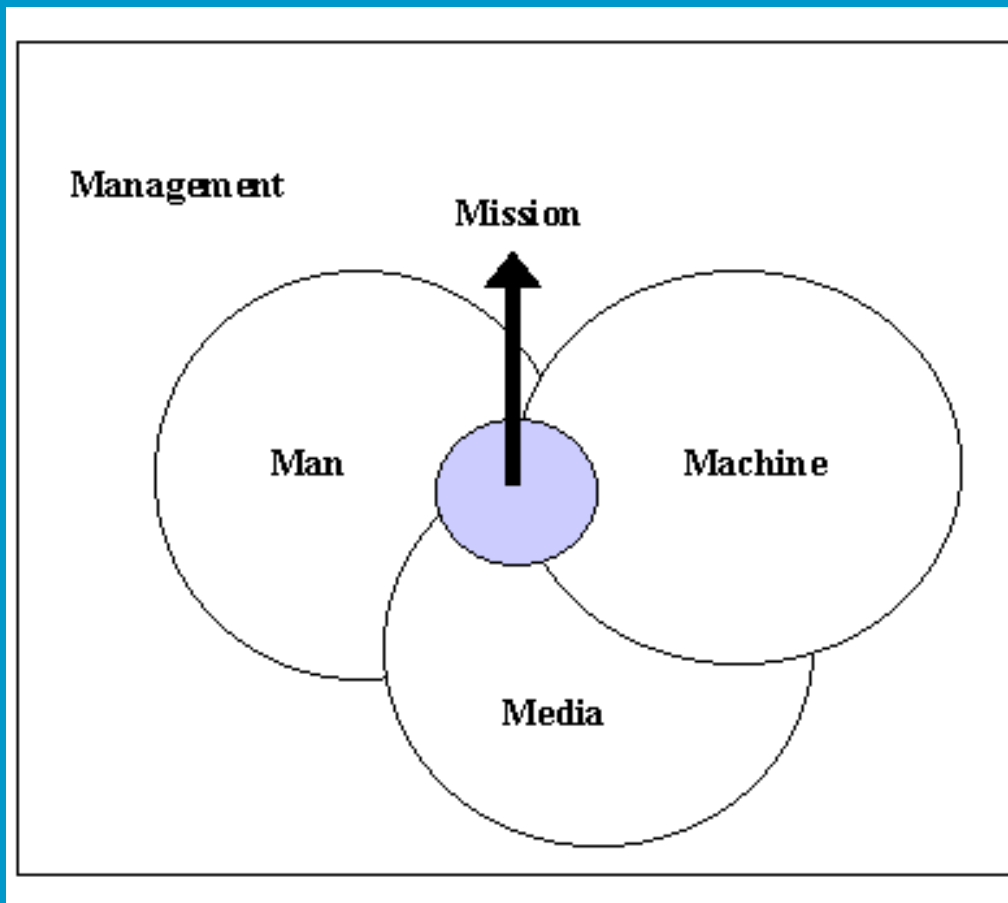
All commanders, activity directors, incident commanders, FROs and staff members for CAP activities must dedicate time and resources to incorporate ORM into both the planning and the day-to-day operational processes.



# Intermediate ORM

## ORM and the Big Picture

### 5M Model





# Intermediate ORM

## 5M Model

- ORM provides safety oversight in all aspects the mission. A mission is a *system* of various resources working together to accomplish a successful outcome or to produce a result.
- The 5M Model looks at the procedures, relationships and interactions between five elements that make up a mission
- The success or failure of a mission is an indicator of how well the *system* is functioning



# Intermediate ORM

## 5M Model

- **Man:** Selection, performance and personal factors of the personnel involved
- **Media:** Climate and environment of mission
- **Machine:** Design, performance, upkeep, maintenance and operational paperwork
- **Management:** Standards, procedures and controls
- **Mission:** Defined objectives



# Intermediate ORM

## Three Levels of ORM

CAP members should develop sufficient proficiency in applying the process that it becomes automatic in all decision making

- **Time-Critical:** ORM “on the run” in a crisis situation or unplanned event
- **Deliberate:** An experienced group brainstorming the planning of upcoming events and reviewing standard procedures
- **Strategic:** Long term planning of complex, multi-unit or wing-level operations or training curriculum



# Intermediate ORM

## ORM Six-Step Process



The ORM six-step process is a continuous cycle and only works if all six steps are followed in sequence as each is a building block for the next step.



# Intermediate ORM

## ORM Six-Step Process

### Step 1. Identify the Hazards

- This is the *foundation* of the entire ORM process
- Any real or potential condition that can cause injury, loss of life, damage to or loss of equipment or property
- Use ORM tools together with common sense and mission knowledge and experience



# Intermediate ORM

## ORM Six-Step Process

### Step 1. Identify the Hazards

- **Mission analysis:** Review the mission's goals, operation procedures, action plans and other guidelines. Identify hazards using brainstorming and the 5M Model.
- List each segment of the mission **in chronological order**
- **List Hazards:** Limit the list to the major or big picture hazards. Track hazards on paper or computer.
- **List Causes:** Refer to the 5M Model to identify root causes



# Intermediate ORM

## ORM Six-Step Process

### Step 2. Assess the Risk

- A risk is a hazard that has been evaluated as to how much it affects the mission
- Each hazard is judged based on:
  - Exposure
  - Severity
  - Probability
- Create a risk assessment matrix that prioritizes the risks then list them in order of most likely to least likely to effect the mission



# Intermediate ORM

## ORM Six-Step Process

### Step 2. Assess the Risk

- **Exposure** has four factors
  - How often the hazard could potentially occur
  - Length of time the participants are exposed to the hazard
  - Number of personnel and/or resources the hazard could affect
  - Distance the hazard is from the resources
- The greater the exposure in any of these four areas, the more likely the hazard will pose a risk to the mission
- Exposure is used to assign levels of severity and probability



# Intermediate ORM

## ORM Six-Step Process

### Step 2. Assess the Risk

- **Severity** and has four categories
  - **Catastrophic:** Complete mission failure, loss of life or resource(s)
  - **Critical:** Major mission breakdown, severe injury or illness, or major resource damage
  - **Moderate:** Minor mission breakdown, injury or illness, or minor resource damage
  - **Negligible:** Less than minor mission breakdown, minimal injury, illness or resource damage



# Intermediate ORM

## ORM Six-Step Process

### Step 2. Assess the Risk

- **Probability** is divided into five levels
  - **Frequent:** Occurs often or continuously
  - **Likely:** Occurs several times in a short period of time or regularly
  - **Occasional:** Will occur sometimes or several times overall
  - **Seldom:** May occur or can be expected to occur
  - **Unlikely:** Unlikely to occur or occurs very rarely



# Intermediate ORM

## ORM Six-Step Process

### Step 2. Assess the Risk

- **Complete Risk Assessment** using the Risk Assessment Matrix (see next slide)
  - Plot Severity and Probability, with exposure levels factored in, for each hazard
  - Whether the hazard falls in Extremely High, High, Medium or Low will determine where resources should be allocated and at which level of management the acceptance of risk will occur



# Intermediate ORM

## ORM Six-Step Process

### ORM Matrix

		Probability				
		Frequent	Likely	Occasional	Seldom	Unlikely
S E V E R E I T Y	Catastrophic	Extremely High				
	Critical		High			
	Moderate		Medium			
	Negligible		Low			



# Intermediate ORM

## ORM Six-Step Process

### Step 2. Assess the Risk

- When assessing risks, be aware of pitfalls
  - Be objective
  - Prevent misrepresentation of data
  - Give all data equal weight
  - Avoid bad or inaccurate data
- Make a list of the risks in order from the most serious to the least serious threat to mission success
- This Risk Priority List will be used in step 3



# Intermediate ORM

## ORM Six-Step Process

### Step 3. Analyze Risk Control Measures

- After prioritizing the list of identified hazards, there are three actions to analyze hazard control measures:
  - Identify control options
  - Determine control effects
  - Prioritize risk control methods



# Intermediate ORM

## ORM Six-Step Process

### Step 3. Analyze Risk Control Measures

- **Identify Control Options** beginning with highest priority risk and explore all available options to manage the risk
- Risk control options may include:
  - Reject the risk
  - Avoid the risk
  - Delay
  - Transfer the activity
  - Spread the exposure
  - Compensate for the risk
  - Reduce the risk
  - Accept the risk
- Ways to reduce risk include reengineer, guard, redesign, limit exposure, personnel selection, training, warnings, motivate, reduce effects and rehabilitate



# Intermediate ORM

## ORM Six-Step Process

### Step 3. Analyze Risk Control Measures

- **Determine Control Effects** of each control on each risk
- Use the spreadsheet or matrix to (1) list the risk (2) list the control option(s) (3) list ways to reduce the risk and (4) see what effect this will have on the associated hazard
- Re-estimate values for severity and/or probability after implementing control option(s)



# Intermediate ORM

## ORM Six-Step Process

### Step 3. Analyze Risk Control Measures

- **Prioritize Risk Control Measures** that will reduce the risk to an acceptable level
- The best controls balance mission success with the most effective and efficient use of resources
- Controls should only be used on activities and personnel actually at risk



# Intermediate ORM

## ORM Six-Step Process

### Step 4. Make Control Decisions

- From the list of controls in step 3, *Risk Control*, pick the one that will make the risk acceptable for the mission
- The benefits of the mission must outweigh the risk
- The person(s) who controls the resources and who will be held accountable for any type of loss, injury or damage to resources during the mission, makes the **Risk Decision**



# Intermediate ORM

## ORM Six-Step Process

### Step 5. Implement Risk Controls

- After selecting the proper combination of risk controls, successful implementation requires three actions
  - Make Implementation Clear
  - Establish Accountability
  - Provide Support



# Intermediate ORM

## ORM Six-Step Process

### Step 5. Implement Risk Controls

- **Make implementation clear** with a detailed action plan with input from personnel effected by the risk controls. Include:
  - Necessary manpower and resources
  - Cost estimates
  - Task assignments with due-dates
  - Training syllabus
  - Checklists and operating procedures



# Intermediate ORM

## ORM Six-Step Process

### Step 5. Implement Risk Controls

- **Establish accountability** by generating command level involvement and assigning persons to be responsible for completing each control measure
- **Provide Support** to each control by providing the needed personnel and resources to finish the job as described in the detailed action plan



# Intermediate ORM

## ORM Six-Step Process

### Step 6. Supervise and Review

- The final step determines the actual effectiveness of the risk controls during the mission. The three actions are:
  - Supervise
  - Review
  - Feedback



# Intermediate ORM

## ORM Six-Step Process

### Step 6. Supervise and Review

- **Supervise** and monitor the mission to see if the controls are in place, are working, and if any changes need to be made. Reevaluate as necessary.
- **Review** the effectiveness and efficiency of risk controls on the mission. Examine cost vs. benefit and compare with expectations and goals. Study mishap reports (if any) to determine any risk analysis errors.



# Intermediate ORM

## ORM Six-Step Process

### Step 6. Supervise and Review

- **Feedback** is essential to ensure correct hazard identifications and risk control decisions were made
- After action reports, briefings and other documentations of lessons learned about the effectiveness of risk control and the success of the mission will make the next ORM process easier and more effective



# Intermediate ORM

## ORM Six-Step Process

### Step 6. Supervise and Review

For maximum benefit from the ORM process

- Apply and complete the steps in sequence as each is a building block for the next step
- Allocate sufficient time and resources to each step
- The process is a cycle that generates continuous improvement and continually reevaluates the risk
- Involve all the people that will be included in mitigating the risk



# Intermediate ORM

## ORM Six-Step Process

### Final Thoughts

ORM does not eliminate risk, or try to create the least level of risk, but aims to have the best combination of acceptable risk and overall mission success.

To complete the Intermediate ORM Test,  
[Click Here.](#)



# Intermediate ORM

## References

- Air Force Policy Directive 90-9, *Operational Risk Management*
- Air Force Instruction 90-901, *Operational Risk Management*
- Air Force Pamphlet 90-902, *Operational Risk Management (ORM) Guidelines and Tools*