

# **RISK MANAGEMENT**

## **POLICY AND DOCTRINE**

- . DODI 6055.1 OH Safety and Health Program
- . AR 385-10, Army Safety Program
- . FM 101-5, Staff Organizations and Operations
- . FM 100-14, Risk Management
- . FM 3-100.12 Risk Management (Joint FM)

# Terms

- **Risk Management** – The process of identifying and controlling hazards to protect the force.
- **Control** – Action taken to eliminate hazards or reduce their risk.
- **Hazard** – Any real or potential condition that can cause injury, illness, death of personnel, damage to or loss of equipment or property, or mission degradation.
- **Risk** – Chance of hazard or bad consequences; exposure to chance of injury or loss. Risk level is expressed in terms of hazard probability and severity.
- **Exposure** – The frequency and length of time subjected to a hazard.
- **Probability** – The likelihood that an event will occur.
- **Severity** – The expected consequence of an event in terms of degree of injury, property damage, or other mission impairing factors (loss of combat power, adverse publicity, etc.) that should occur.
- **Risk Assessment** – The identification and assessment of hazards (first two steps of the risk-management process).
- **Residual Risk** – The anticipated level of risk remaining after controls have been identified and selected for hazards that may result in loss of combat power.
- **Risk Decision** – The decision to accept or not accept the risk(s) associated with an action; made by the commander, leader, manager, or individual responsible for performing that action.

# RISK MANAGEMENT

The process of identifying, assessing, and controlling hazards arising from operational factors and making decisions that balance the risk costs with mission benefits.

*- Protect the Force Through Risk Management*

Perception of Risk Varies:

- Training
- Personal Experience
- Years of Experience
- Personal Views

## **Risk Cause Factors**

Human Error (80%)

Environment (15%)

Material/Equipment Failure (5%)

# Sources of Cause Factors

INDIVIDUAL 48% Soldier knows & is trained to standard but elects Not to follow standard.  
- Attitude - Fatigue - Overconfidence  
- Haste - Alcohol/drugs

LEADER 18%

Leader does not enforce know Standard.

TRAINING 18%

Soldier not trained to know standard

STANDARDS 8%

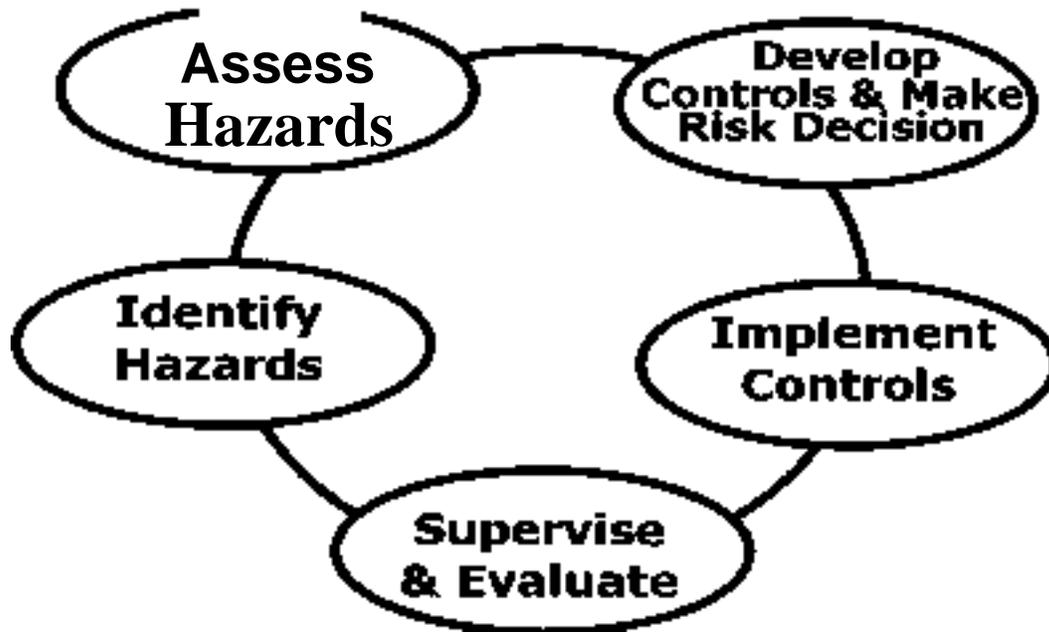
Standards/procedures not clear or practical, or do not exist.

SUPPORT 8%

Equipment improperly designed and/or resources not provided.

# Risk Management Process

*A Continuous Process*



## STEP 1: IDENTIFY HAZARDS

- **Identify Hazards.** Identify hazards to *protect the force*. Consider all aspects of current and future situations, environment, and known historical problem areas.

### *Risk Management Process*



## STEP 2: ASSESS HAZARDS

- **Assess Hazards.** Assess hazards to determine risks. Assess the impact of each hazard in terms of potential loss and cost, based on probability and severity.

### *Risk Management Process*



# **TERMINOLOGY**

## ***Risk Assessment***

The identification and assessment of hazards, the first two steps of the risk management process.



## STEP 3: DEVELOP CONTROLS & MAKE DECISION

- ***Develop Controls and Make Risk Decisions.*** - Develop control measures that eliminate the hazard or reduce its risk to an acceptable level. As control measures are developed, risks are reevaluated until all risks are reduced to a level where benefits outweigh potential cost.

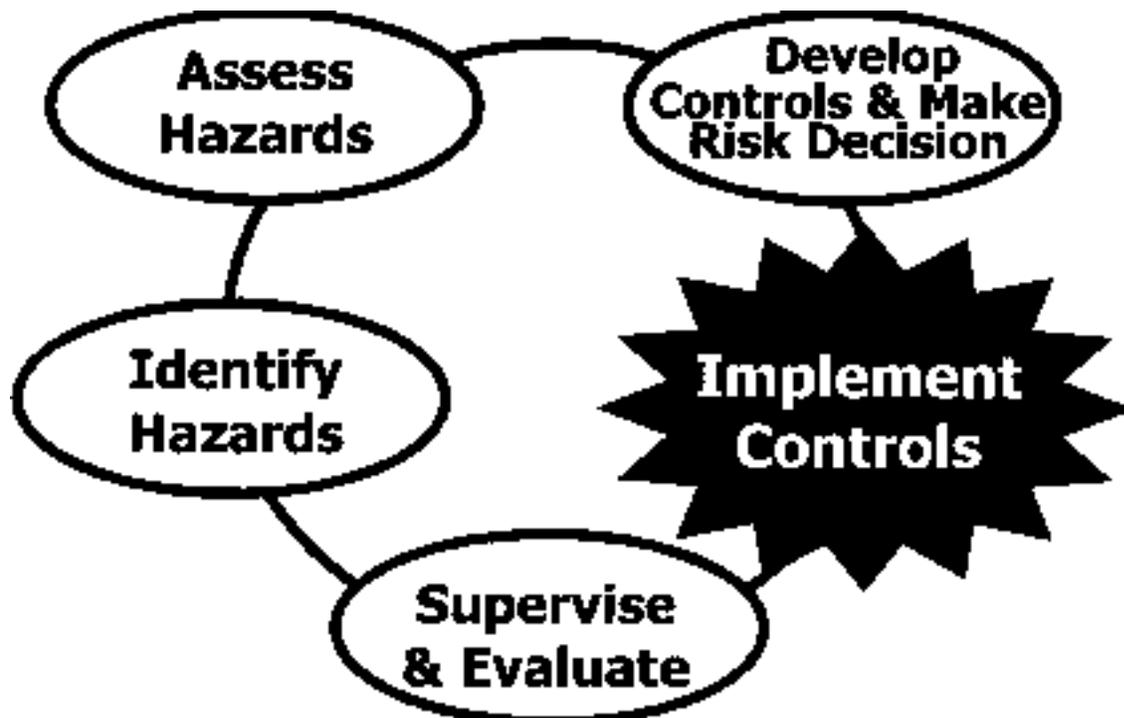
### *Risk Management Process*



## STEP 4: IMPLEMENT CONTROLS

- **Implement Controls.** - Put controls in place that eliminate the hazards or reduce their risks.

### *Risk Management Process*



## STEP 5: SUPERVISE & EVALUATE

- **Supervise & Evaluate.** - Perform to, and enforce standards and controls. Evaluate the effectiveness of controls and adjust/update as necessary.



# JOB HAZARD ANALYSIS

Risk Management Hazard  
Identification Toolbox

## **DEFINITION OF JHA/JSA**

Procedure used to review **job methods & uncover hazards** that:

- May have developed over time
- Resulted from changes in work procedures
- May have been overlooked

Used where activities are performed in a definite sequence to complete a work component.

# **Job Hazard Analysis**

## ***Four Basic Steps***

Select the job

Break down the job

Identify hazards and potential accidents

Develop solutions

# JHA - STEP 1

## *Select the Job*

Prioritize effort based on:

- Frequency of accidents
- Production of disabling injuries
- Severity potential
- New Jobs
- Ergonomic Risk
- Factors:

-Repetitive motion

-Unnatural posture

-Force required

-Tool/equipment vibration

## **JHA - STEP 2**

### ***Break the Job Down***

- Select the right person to observe
- Brief operator on the purpose
- Observe work process
- Record each step in the work process
- Note tools and equipment required

## **JHA - STEP 3**

### Identify Hazards

Note specific hazards and exposures for each step of the operation:

- Danger of striking against, struck by, contact with..?
- Can employee slip or fall?
- Can employee strain himself by pushing, pulling, or lifting?
- Is there a potential for repetitive motion/cumulative trauma injury?

## **JHA - STEP 4**

*Develop Solutions* - Find a new way to do the job

- Procedures
- Design... lift device, conveyer,
- Change the physical conditions
- Eliminate the hazard
- Reduce the job task frequency
- Breaks
- Job rotation

# JOB HAZARD ANALYSIS WORKSHEET

JOB DESCRIPTION			JOB LOCATION		
KEY JOB STEPS	TOOLS, EQUIPMENT, OR MATERIALS	POTENTIAL HEALTH/INJ HAZARD TO WORKER	POTENTIAL HAZARD TO SYSTEM	RECOMMENDATIONS FOR WORKER PROTECTION	SYSTEM COUNTERMEASURE

# **JOB HAZARD ANALYSIS**

## ***Benefits***

**Reduce accidents,damage  
and injuries**

**Accident investigation tool**

**Improve attitude/morale  
about safety**

**Increase output/productivity**

**Reduce waste. Improve job  
methods**

**Tool for instructing new  
personnel**

**Pre-job instruction for  
infrequent tasks**

**Identify PPE requirements  
for SOPs**

**Ergonomic improvements**

**Tool for ADA compliance**

## RISK ASSESSMENT

- . How much of a problem a hazard presents can't be determined until the hazard is converted to a risk.
- . When the hazard is expressed in terms of how likely it is to occur, and how serious the consequences are if it does occur. . .*then the commander can make rational decisions about how to deal with that hazard.*

# RISK ASSESSMENT CODE PROCEDURES

## HAZARD SEVERITY

### CATEGORY 1: CATASTROPHIC

Death or permanent disability, system loss, major property damage.

### CATEGORY II: CRITICAL

Permanent partial disability or temporary disability in excess of three months, major system damage, significant property damage.

### CATEGORY III: MARGINAL

Minor injury, loss worday accident, or comprehensible injury or illness, minor systems damage, minor property damage.

### CATEGORY IV: NEGLIGIBLE

First aid or minor supportive medical treatment, minor systems impairment.

## ACCIDENT PROBABILITY

### LEVEL A: FREQUENT

Likely to occur frequently in the life of system, item, facility, etc.  
Continuously experienced

### LEVEL B: PRABABLE

Will occur several times in life of item.

### LEVEL C: OCCASIONAL

Likely to occur sometime in life of item. Will occur several times.

### LEVEL D: REMOTE

Unlikely but possible to occur in life of item. Unlikely, but can reasonably be expected to occur.

### LEVEL E: IMPROBABLE

So unlikely it can be assumed occurrence may not be experienced.  
Unlikely to occur but possible.

# Risk Management



## Risk Management Matrix

		HAZARD PROBABILITY				
		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
SEVERITY	Catastrophic I	EXTREMELY HIGH	HIGH	MODERATE	LOW	
	Critical II	HIGH	MODERATE	LOW	VERY LOW	
	Marginal III	MODERATE	LOW	VERY LOW	MINOR	
	Negligible IV	LOW	VERY LOW	MINOR	VERY MINOR	

## RISK MANAGEMENT WORKSHEET

<b>Mission or Task:</b>							
<b>Date Prepared :</b>		<b>Prepared By:</b>			<b>Approved By:</b>		
<b>HAZARD</b>	<b>Initial Risk Level</b>	<b>CONTROLS</b>	<b>Residual Risk Level</b>	<b>Decision Matrix</b>	<b>HOW TO IMPLEMENT</b>	<b>WHO WILL SUPERVISE</b>	<b>Control Effective Yes/No</b>

## **RISK MANAGEMENT**

The standard for Risk Management is an informed decision at the appropriate level.

**It is NOT an  
excuse to  
not do a  
mission.**

# Risk Management Process

Risk Management Assists Cmdr/Leader:

- Conserving Lives/Resources
- Making Informed Decision – COA
- ID Control Measures Where Standards Do Not Exist
- Provides Alternatives for Mission Accomplishment

## Risk Management Does Not:

- \* Inhibit Cmdr's Flexibility
- \* Remove Risk Altogether
- \* Require a Go/No-Go Decision
- \* Justify Violating The Law
- \* Remove The Necessity For Standards

# RISK MANAGEMENT PROCESS

## 3 Principles of Risk Management

- Integrate risk management into planning. Accept no unnecessary risks. Accept risks *ONLY if the benefit outweighs the cost.*
- . Make risk decisions at the proper level.

# **Risk Management**

## **Standard**

The standard for risk management is leadership at the appropriate level of authority making informed decisions to control hazards or accept risks. Leaders are responsible and accountable for assessing their operation as a total system and ensuring that planning, risk management decisions, and execution proactively identifies hazards, assesses the associated risks, and identifies control measures necessary to reduce the risks to the level commensurate with their commander's intent.

The degree of risk determines the level of acceptance decision authority. When resources to control a high risk are not available, the risk issue must be elevated to the next higher command. This process continues until the information is presented to the level of command that has the resources and authority to eliminate the hazard or control it to an acceptable level. In this manner, a conscious and informed decision is made to commit the resources to control the hazards or accept the risk.