



Damage Control

OPERATIONAL RISK MANAGEMENT (ORM)

Unit 2.13



ENABLING OBJECTIVES



Describe

- ORM Process
- Hazard Identification Tools
- Hazard Assessment Tools
- Risk Assessment Tools
- DC Roll



PRESENT A VIEW



- WHERE WE ARE TODAY
- WHERE WE WANT TO BE
- HOW WE MIGHT REACH OUR DESIRED END STATE



REFERENCES



- OPNAVINST 3500.39
 - OPERATIONAL RISK MANAGEMENT
- OPNAVINST 5100.19 (series)
 - NAVOSH PROGRAM MANUAL FOR FORCES AFLOAT
- OPNAVINST 5102.1 (series)
 - NAVY & MARINE CORPS MISHAP & SAFETY INVESTIGATION, REPORTING, & RECORD KEEPING MANUAL
- NAVSEA S0400-AD-URM-010/TUM
 - TAG-OUT USERS MANUAL
- COMNAVSURFORINST 3502.1C
 - Surface Force Training Manual
- NAVAL SAFETY CENTER
 - <http://www.safetycenter.navy.mil/>





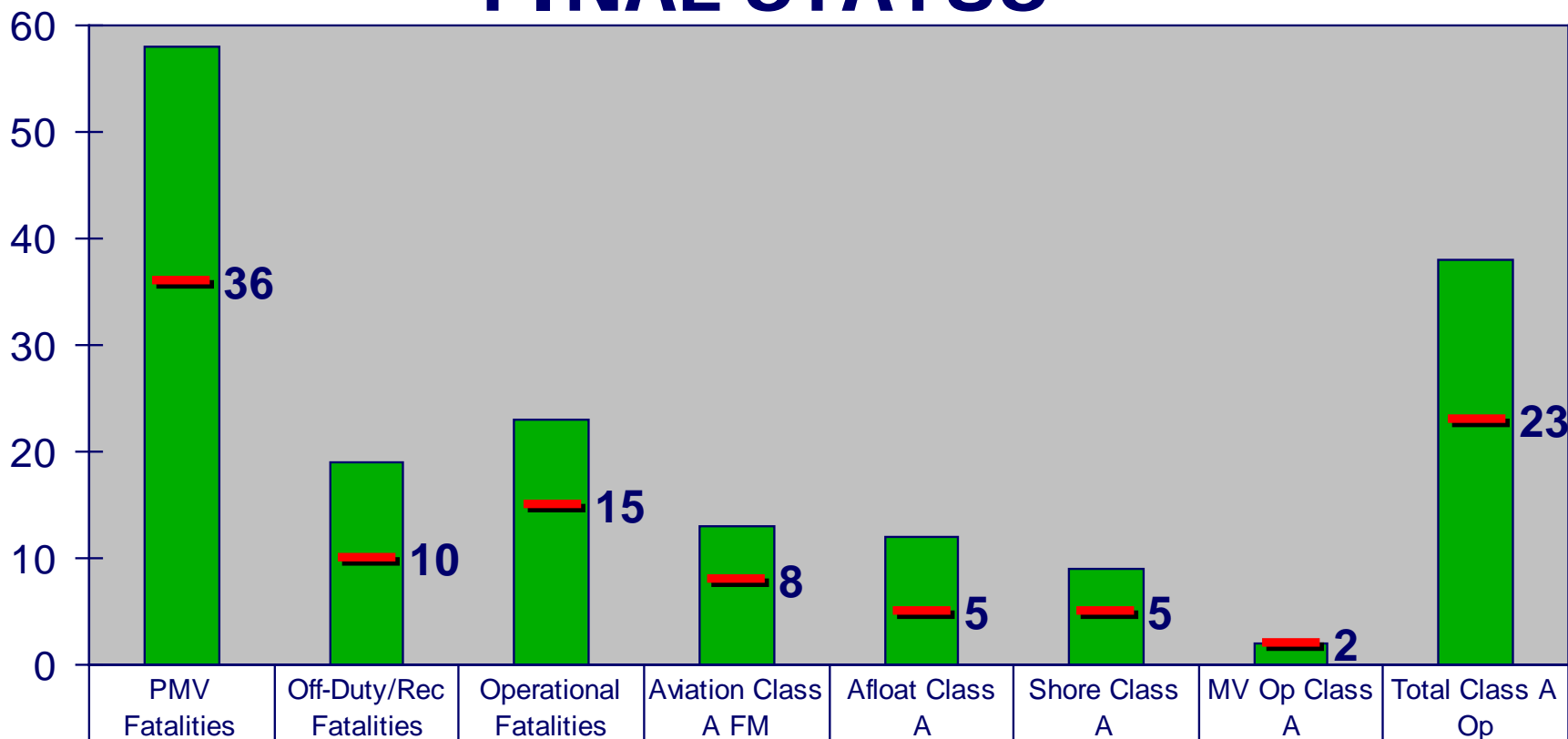
HOW
YOU
DOIN'





WHERE ARE WE TODAY???

NAVY FY05 50% REDUCTION FINAL STATUS



■ FY05	58	19	23	13	12	9	2	38
— FY05 Ceiling	36	10	15	8	5	5	2	23

TODAY



Common Perceptions

- A Safety Program
- Only for On Duty
- Used when doesn't interfere with operations
- Use by higher commands is invisible
- A worksheet drill
- Most feel ORM is not used well

NSC/TYCOM Observations

- Gap between leadership's view of success and junior view of ORM acceptance
- Fleet familiarity vice knowledge
- Widely varying degrees of cultural adoption
- Programs used daily not viewed as RM
- Training is underutilized and not focused on application

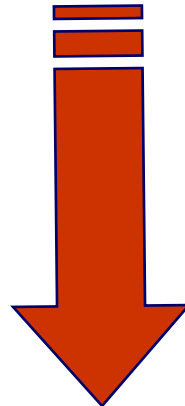


WHERE WE WANT TO BE



- EVERY CMD & EVERY SAILOR

OPERATE OUR FORCES



OFF-DUTY ACTIVITIES



Definitions



✓ **Hazard** - A Condition with the Potential to Cause Personal Injury, Property Damage, or Mission Degradation.



✓ **Risk** - An Expression of Possible Loss in Terms of Severity and Probability.

✓ **Risk Assessment** - The Process of Detecting Hazards and Assessing Associated Risks.

✓ **ORM** - The Process of Dealing with Risk to Include Assessment, Decision-Making, and Control Implementation.



3 Levels of ORM



1. *Time Critical* - "On the Run"
2. *Deliberate* - 5 Step Process
3. *In-Depth* - Complete 5 Step Process With Detailed Analysis



4 Principles of ORM

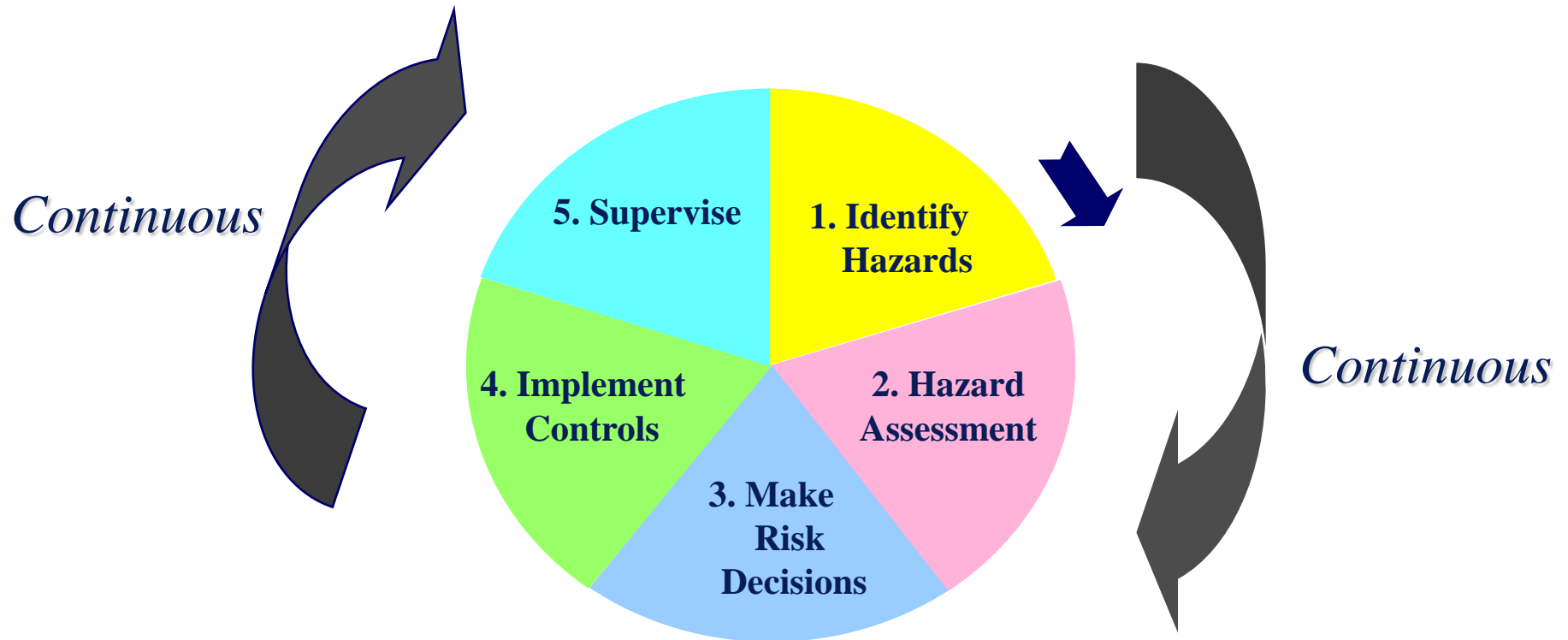


- ✓ Accept Risk if Benefits > Cost.
- ✓ Accept no Unnecessary Risks.
- ✓ Manage by Planning.
- ✓ Make Decisions at Right Level.





O R M



IT IS NOT A PROGRAM. IT IS A PROCESS!!!

1. Identify Hazards



- ✓ Outline Operation's Major Steps
- ✓ Identify Hazard(s) for Each Step and the Possible Cause(s)



2. Assess Hazards



- ✓ Prioritize Identified Hazards by Determining the Potential Losses':
 - *Severity*
 - *Probability*

- ✓ Input Data to Matrix (Table)



3. Make Risk Decisions



- ✓ Consider Risk Controls
 - Start w/ most Serious
 - Pick Controls to Reduce
- ✓ Benefit > Risk?
- ✓ Discuss with Higher Authority
if Necessary



4. Implement Controls



✓ Engineering

- Design Features (Fan Belt Guards, Life Lines)

✓ Administrative

- Signs, EOSS, MLOC, Training

✓ PPE

- Barrier to Further Reduces Loss Potential
- Float Coats, Cranials, Rubber Matting



5. Supervise



✓ Follow up, Ensure Controls...

- ...Remain in Place
- ...Have the Desired Effect

✓ Watch for Changes



US COAST GUARD ORM



7 Step Process vice USN **5 Step**

Very Similar w/ Minor Differences:

Use 2 Separate Models for "Assess Risks" Step

1. **GAR** (**Green**, **Amber**, **Red**)

Considers: Crew Experience,
Environment, Event Complexity,
Supervision, etc.

2. **SPE** (Severity, Probability, Exposure)

**Used for Very Specific
Operations/Hazards**

Risk = S x P x E

If Numbers Exceed Certain Limits...



CHANGE



**"CHANGE IS THE
MOTHER OF ALL
RISKS"**

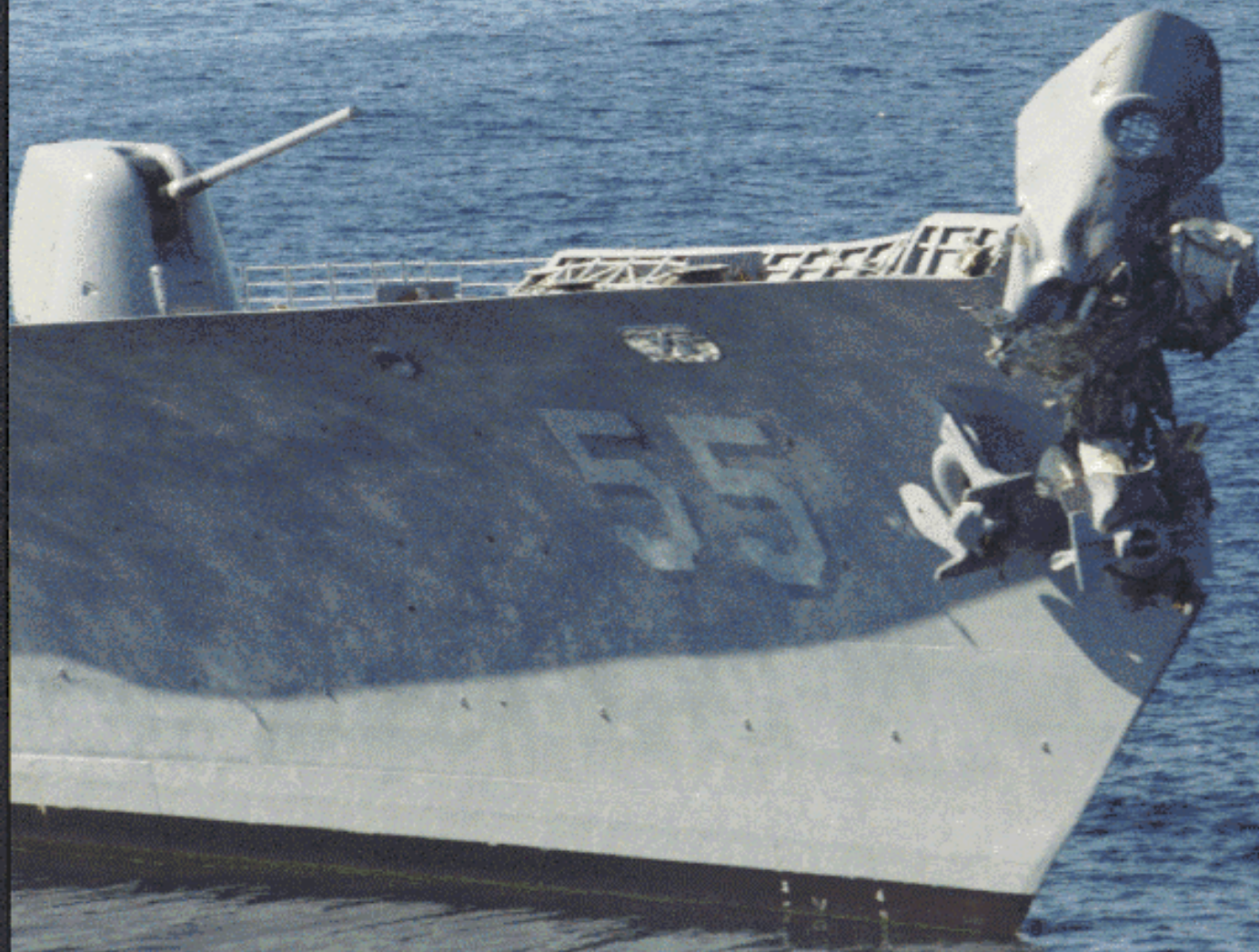
- ✓ **CQ Period**
- ✓ **Change of Command**
- ✓ **Mission Growth**
- ✓ **Mishap**
- ✓ **Compressed Schedule**
- ✓ **Watch Turnover**

- ✧ **Fog**
- ✧ **Getting U/W**
- ✧ **Gun Shoot**
- ✧ **BECCE's**
- ✧ **Night**

- **New Dept Head**
- **Inport**
- **Personal**
- **Holiday Weekend**
- **New Aircrew**



USS LEYTE GULF CG-55



BENEFITS OF RISK MANAGEMENT



- Reduce Serious Injuries
- Reduce Material Damage
- Enhance Mission Accomplishment
- Most Effective When it Becomes **Integral** to Ship's Operations
 - Part of Every Brief



ORM Matrix



- ✓ Matrix (Table) Used to Quantify Risks
- ✓ *Hazard Severity* & *Mishap Probability* = *Risk Assessment Code (RAC)*

Hazard Severity...The "Worst Possible" Result

Mishap Probability...How Likely is it?

Risk Assessment Code...Expression of Risk



ORM Matrix



- **Hazard Severity**

- Category I- Death, Asset Loss, Grave National Interest Damage
- Category II- Severe Injury, Assets Degraded, National Interest Damage
- Category III- Minor Injury, Command / Service / Nat'l Interest Damage
- Category IV- Minimal Threat to Personnel, Property or Cmd / Service / Nat'l Interest



ORM Matrix



- Mishap Probability

- Sub-Cat A- Likely Soon, Frequently to Individual, Continuously to Fleet
- Sub-Cat B- Probable in Time, Often to Individual, Frequently to Fleet
- Sub-Cat C- Maybe in Time, Sometime to Individual, Several Times to Fleet
- Sub-Cat D- Unlikely to Occur



ORM Matrix



- *Risk Assessment Code (RAC)*

- 1- Critical
- 2- Serious
- 3- Moderate
- 4- Minor
- 5- Negligible



Operational Risk Management (ORM) MATRIX

Assess the Hazards

Risk Assessment Code - (RAC)

1 = Critical

2 = Serious

3 = Moderate

4 = Minor

5 = Negligible

CAT I = Death, Loss of asset.

CAT II = Severe injury / degradation of asset.

CAT III = Minor injury/ degradation of asset.

CAT IV = Minimal injury/ degradation of asset.

the Hazards			Probability of Occurrence				
			Likely - Immediate	Probably will occur in time	May occur	Unlikely to occur	
			A	B	C	D	
	S E V E R I T Y	Cat I	1	1	2	3	
		Cat II	1	2	3	4	
		Cat III	2	3	4	5	
		Cat IV	3	4	5	5	
			Risk Levels				
			Risk Assessment Code				

FOUR RULES FOR SAFETY



- IN-BRIEF
- Deckplate Supervision
- Uninvolved Safety Observers
- Proper Tools & Procedures





HOW WE MIGHT REACH OUR DESIRED END STATE



UNIT IMPLEMENTATION



- * INDOC & GMT
- * During briefs
- * Regular Review of Instructions, SOPs
- * Use of Deliberate or In-depth ORM when planning New or unusual operations
- * ORM addressed at qualification boards



BEST PRACTICES 2005



- ✓ **LEADERSHIP BY E-MAIL: NOT!!!**
- ✓ **DEVELOP LEADERS NOW**
- ✓ **Establish MAX Liberty Distances & Flex Leave HRS**
- ✓ **Monitor PMV Safety**
- ✓ **Free Ride program**
- ✓ **Leave Assessments**
- ✓ **Guest Speakers**
- ✓ **Law Enforcement Partnerships**





DC SPECIFIC . . .

- Repairs/PMS to CHT system
- Work on Installed CO₂ /Halon SYS
- GFE Test in Fuel Tanks
- Safety Walkthrough





DC SPECIFIC . . .

- Chem-Bio Drill in the summer
- Casualty Power Drill
- Use of new "tools" for the first time...
i.e. SCBA's, OCENCO EEBD
- OTHER



TRAINING TIME OUT



- A training time may be called in any situation whenever a student or instructor expresses concern for personal safety or a need for clarification of procedures or requirements exist. TTO is also an appropriate means for a student experiencing undue pain, heat stress, or other serious physical discomfort to obtain relief.
- Following a TTO , the training situation shall be examined and additional explanation and instruction will be provided as necessary to allow safe resumption of training.
- The signal to start a TTO can be initiated by calling out " TRAINING TIME OUT " or by using a hand signal



DCTT ORM on Drill Package

Event	Hazard	Cause	Precaution	Hazard Severity	Mishap Probability	RAC	COG
KICK OFF OF DRILL	TRIPPING	RUNNING	WALK TO STATION/DC TT	III	C	4	DCTT
HEAT STRESS	DEHYDRATION	LACK OF FLUIDS	KEEP PERSON HYDRATED	III	C	4	DCTT
HOSE-HANDLING	WILD HOSE	IMPROPER MANNING	FOLLOW SAFETY PRECAUTIONS	II	D	4	DCTT
SHORING	CUTTING BODY PARTS	INATTENTION TO CUTTING SHORE	DCTT TO MONITOR	III	C	4	DCTT
SCBA CHARGING	LACERATION	IMPROPER CHARGING	DCTT MONITOR/ COMPLIANCE	II	D	4	DCTT
PIPE PATCHING	CUTTING BODY PARTS	INATTENTION TO CUTTING WEDGES	DCTT TO MONITOR	III	C	4	DCTT
PORTABLE FF EQUIPMENT	MISSILE HAZARD	NOT LAYING EXTINGUISHER ON DECK	DCTT TO MONITOR	III	C	4	DCTT
SETTING ZEBRA ON HATCHES	PERSONNEL INJURIE	SAILOR MOVING UNDER HATCH/ SCUTTLE	DCTT TO MONITOR	III	C	3	DCTT

ORM Scenario



- MSF Drill sked for 0900 in MER1
- Monday following 72-hour lib
- Freezing Rain- several crewmembers late
- Underway on Wednesday for 1 week
- ATG on board in 3 weeks for "inspection"
- Disgruntled crew- sick of MSF Drills
- "A" fire in MER1 0430
- Yardbirds in MER2, stuff torn up
- 3 Senior DCTT Members on E-leave



CLOSING THOUGHTS ABOUT ORM SURFACE WARFARE



EACH HAVE UNIQUE BEHAVIORS, RISKS, & TERMINOLOGIES. IT IS IMPORTANT TO RECOGNIZE THE CHARACTERISTICS OF EACH IN ORDER TO MAKE RISK DECISIONS TO ENSURE WE REMAIN OPERATIONALLY EFFECTIVE TO ACCOMPLISH THE MISSION...

