



Congress November 3-10
Expo November 6-8
San Diego Convention Center
San Diego, California



US Navy SOH Programs: Reducing Mishaps by 75%!

DeWitt Davis IV, CIH, CSP, CDR USN (Ret.) - Moderator
Marine Consultant

Joy Erdman, MS, CIH, CSP
OPNAV Safety Liaison (N09FB), US Navy

CDR Linda Byrnes, MPH, CIH
OPNAV Safety Liaison (N09FB), US Navy

Mary Anne Chillingworth, MSPH, CIH, CSP
NAVOSH Support, BMT Designers & Planners, Inc.

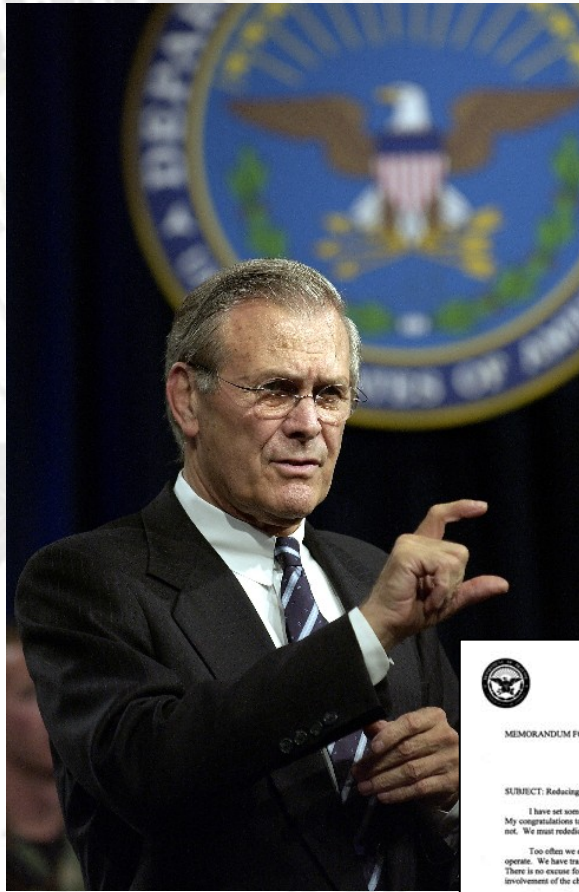





Secretary Rumsfeld's Mishap Reduction Initiatives

Secretary's Guidance

June 22, 2006



 THE SECRETARY OF DEFENSE
1000 DEFENSE BUILDING
WASHINGTON, DC 20301-1000
JUN 22 2006

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
COMMANDERS OF THE COMBATANT COMMANDS
SERVICE CHIEFS

SUBJECT: Reducing Preventable Accidents


I have set some very specific mishap reduction goals for the Department to achieve. My congratulations to those who are progressing toward their respective goals, but others are not. We must rededicate ourselves to those goals – and achieve them.

Too often we excuse mishaps by citing the difficult circumstances in which we operate. We have trained our men and women to operate safely in very trying conditions. There is no excuse for losing lives given proper planning, attention to detail, and the active involvement of the chain of command.

Accountability is essential to effective leadership. I expect all the Department's leaders, from the Commander to the first line supervisors, to be accountable for mishaps under their watch. We simply will not accept status quo.

If we need to change our training, improve our material acquisition, or alter our business practices to save the precious lives of our men and women, we will do it. We will fund as a first priority those technologies and devices that will save lives and equipment. We will retrofit existing systems, and consider these devices as a "must fund" priority for all new systems. We can no longer consider safety as "nice-to-have."

I want to hear what you are doing to improve your safety performance and I want to see the results of your actions.



CSO 09999-06
FORM 100 (11-03)

- “Rededicate ourselves to those goals – and achieve them”
- “There is no excuse for losing lives...”
- “Department’s leaders, ... to be accountable for mishaps under their watch”
- “Fund as a first priority those technologies and devices that will save lives and equipment”
- “I want to see the results of your actions”

Defense Safety Oversight Council Governance Role

- **Ensure personal involvement of the senior leadership**
- **Promote the mishap reduction effort to all levels of the military and civilian leadership**
- **Execute the specific initiatives to reduce accidents and time lost due to injuries**
- **Garner the resources to support the initiatives**
- **Manage progress toward goal**
- **Provide periodic updates to the Secretary**

Department of Defense

DSOC Membership

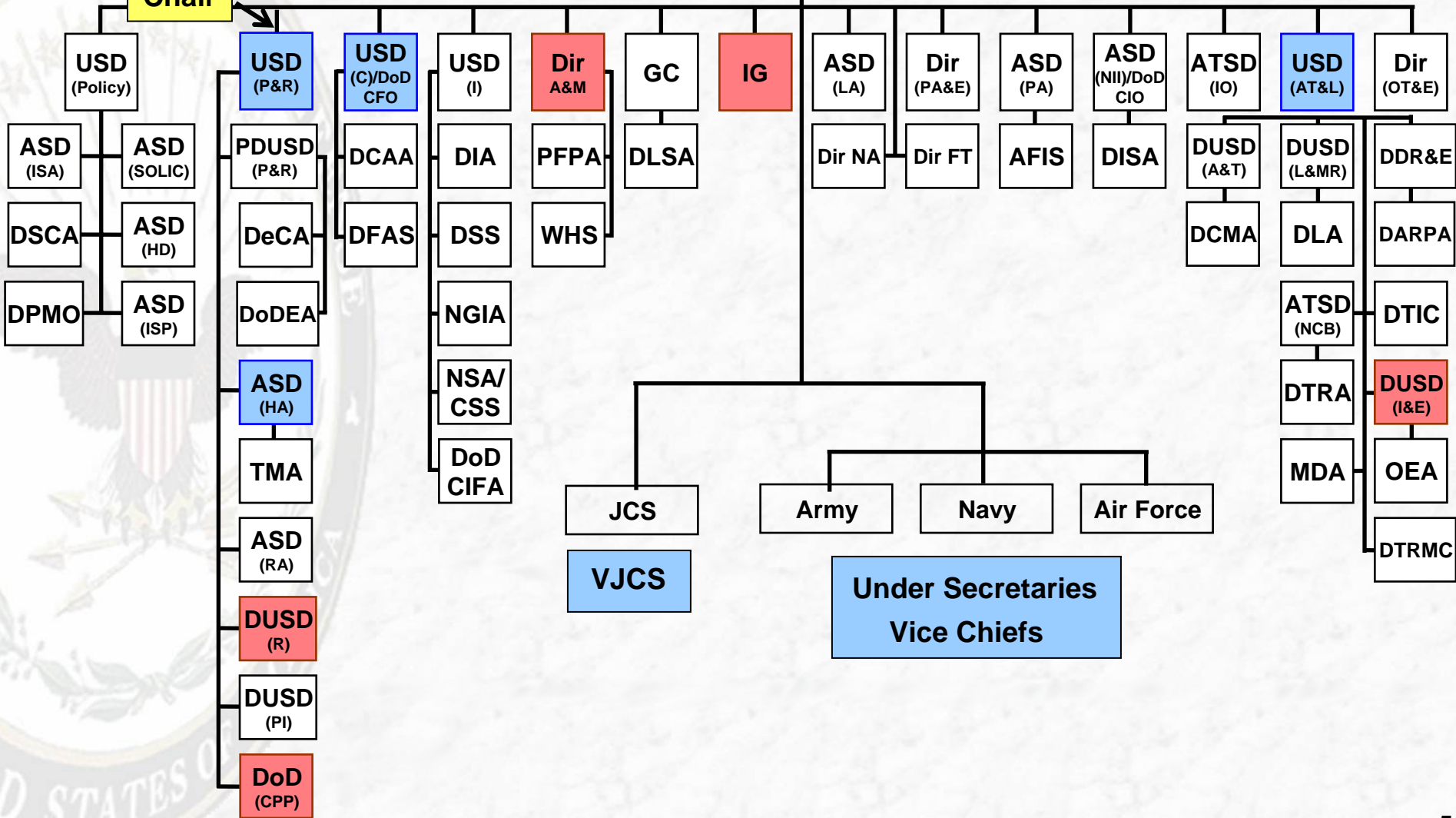
- = Principal Member
- = Associate Member

SecDef
DepSecDef

Exec Sec

White House
Liaison Protocol

Chair



Nine DSOC Task Forces

- **Acquisition and Technology Programs**
- **Aviation Safety Improvements**
- **Deployment and Operations**
- **Enterprise Information System**
- **Installation/Industrial Operations**
- **Military Training**
- **Private Motor Vehicle**
- **Sports Injury Prevention**
- **Workers' Injury Compensation**

Acquisition and Technology Programs TF

- **Integrate system safety training into Defense Acquisition University courses**
- **Expand an existing risk assessment tool to facilitate integration of SOH considerations in the acquisition and systems engineering processes**
- **Develop a software tool to assist the acquisition community in building human performance capabilities into acquisitions with the goal of reducing overexertion injuries and illnesses**

Aviation Safety Improvements TF

- **Develop an on-line joint service safety survey tool to measure organizational climate**
- **Develop Joint National Mid-Air Collision Avoidance Website**
- **Develop Joint Net-Centric Maintenance Resource Management training**

Deployment and Operations TF

- **Develop/build military Humvee (HMMWV) egress training simulators**



Enterprise Information System

The screenshot shows a web browser window titled "DSES - Mozilla Firefox". The browser's address bar and menu bar are visible. The page content includes a header with the DSES logo and the text "Defense Safety Enterprise System". Below the header, the main heading reads "DSES Sign-On".

The main body of the page contains the following text:

Welcome to DSES, the Defense Safety Enterprise System. DSES has been developed to be the DoD's single, authoritative decision support system that provides timely and additional intelligence, analysis, and correlation information and capabilities to all levels of the Department.

Read This: Security of Defense Information Reporting Requirements: Privacy and Accuracy

This is a Department of Defense computer system. This computer system, including all related equipment, software, and network access (collectively including internet access), is provided only for authorized U.S. Government use. DoD computer systems may be monitored for lawful purposes, including to assist that their use is authorized for management of the system, to facilitate, protect against unauthorized access, and to verify security procedures. Accessibility and availability of the system may be monitored, including network traffic by authorized DoD entities. Information collected from the system during monitoring may be examined, recorded, copied, and used for authorized purposes. All information, including personal information, placed on or sent over this system may be monitored. Use of this DoD computer system, authorized or unauthorized, constitutes consent to monitoring of this system. Unauthorized use may subject you to criminal prosecution. DoD entities and authorized personnel may collect and monitor information for administrative or disciplinary or adverse action. Use of this system constitutes consent to monitoring for these purposes.

If you are a new DoDC user then please request an account.

Your name (leave in DSES) and the number of users must be 1 password: 8 digit

User name:

Password:

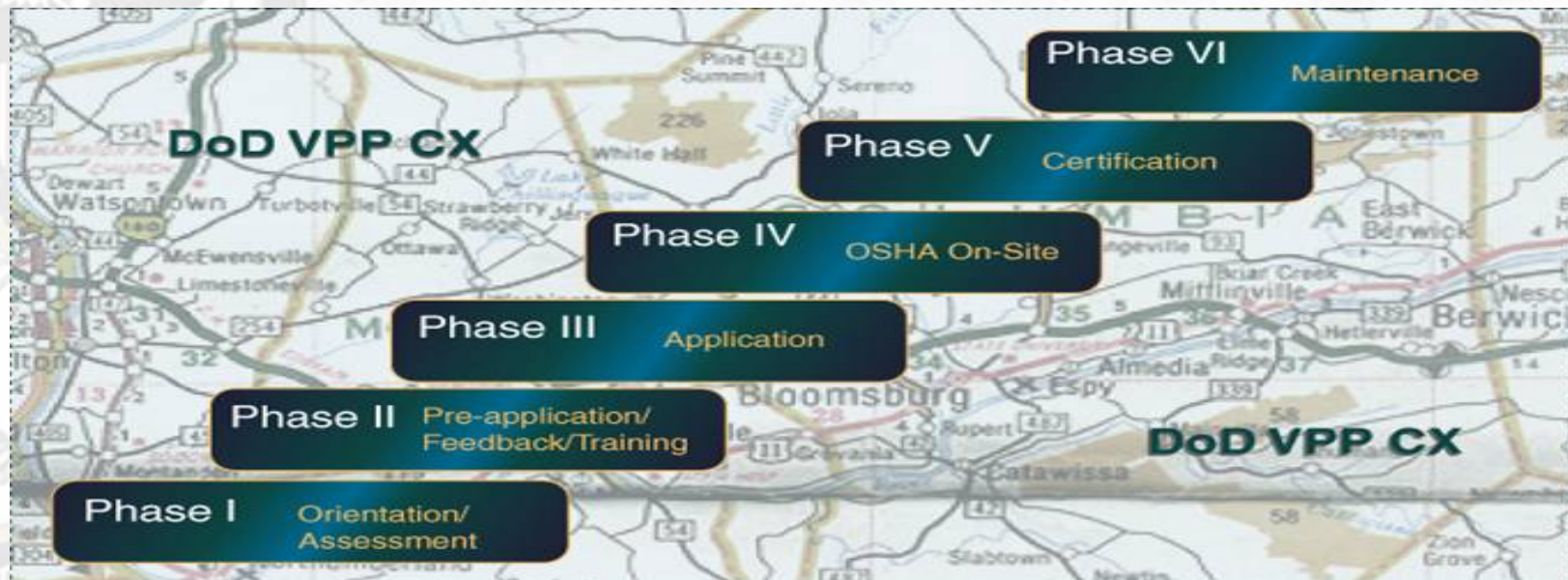
For Evaluation Purposes Only! Content Not Currently Valid for Reporting

DSES-2

Installation and Industrial Operations TF

- Develop advanced safety training technologies to include 3-D safety training
- DoD Voluntary Protection Program Center of Excellence (VPP CX)

Roadmap for Success



DoD VPP CX MISSION

Assist DoD Installation Commanders and Activity Directors in achieving Occupational Safety and Health Administration (OSHA) Voluntary Protection Programs (VPP) Star status

www.vppcx.org



DoD VPP CX Objectives

- **Assist Selected Installations In Attaining OSHA VPP “Star” Status**
 - **Benchmark Current DoD Star Sites**
 - **Assess “Safety Perception” At Each Installation – Team Visit**
 - **Capture Key DoD Civilian Workplace Mishap Metrics**
 - **Lead Installations In VPP Gap Analysis And Action Plan – Team Visit**
 - **Monitor For Success – Virtual And SME Support**
- **Develop And Pilot The DoD VPP Center Of Excellence (CX)**
 - **Capture Industry Best Practices**
 - **Provide A “Virtual” Center – Web Portal**
 - **Provide SME Support**
 - **Develop And Deploy Tools To Support The Installations**
 - **Enable Long-term Maintenance Of Installation VPP Culture**
 - **Become The “Go-To” Place For VPP In DoD**

Military Training TF

- **Evaluate Weapons Safety Programs**
- **Develop Injury Entry Training Injury Tracking and Management System**
- **Conduct OIF/OEF Medical Evacuation Data Analysis**

Private Motor Vehicle TF

- **Revise DoD motorcycle training and registration policy**
- **Revise policy to allow cross service sharing of driving records**

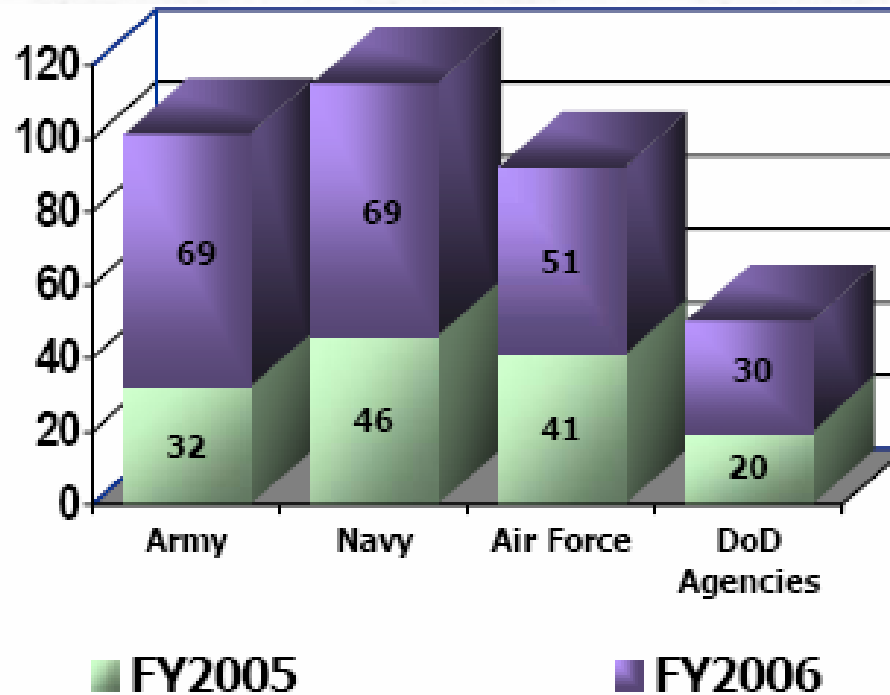
Sports Injury Prevention TF

- **New TF-recently stood up**

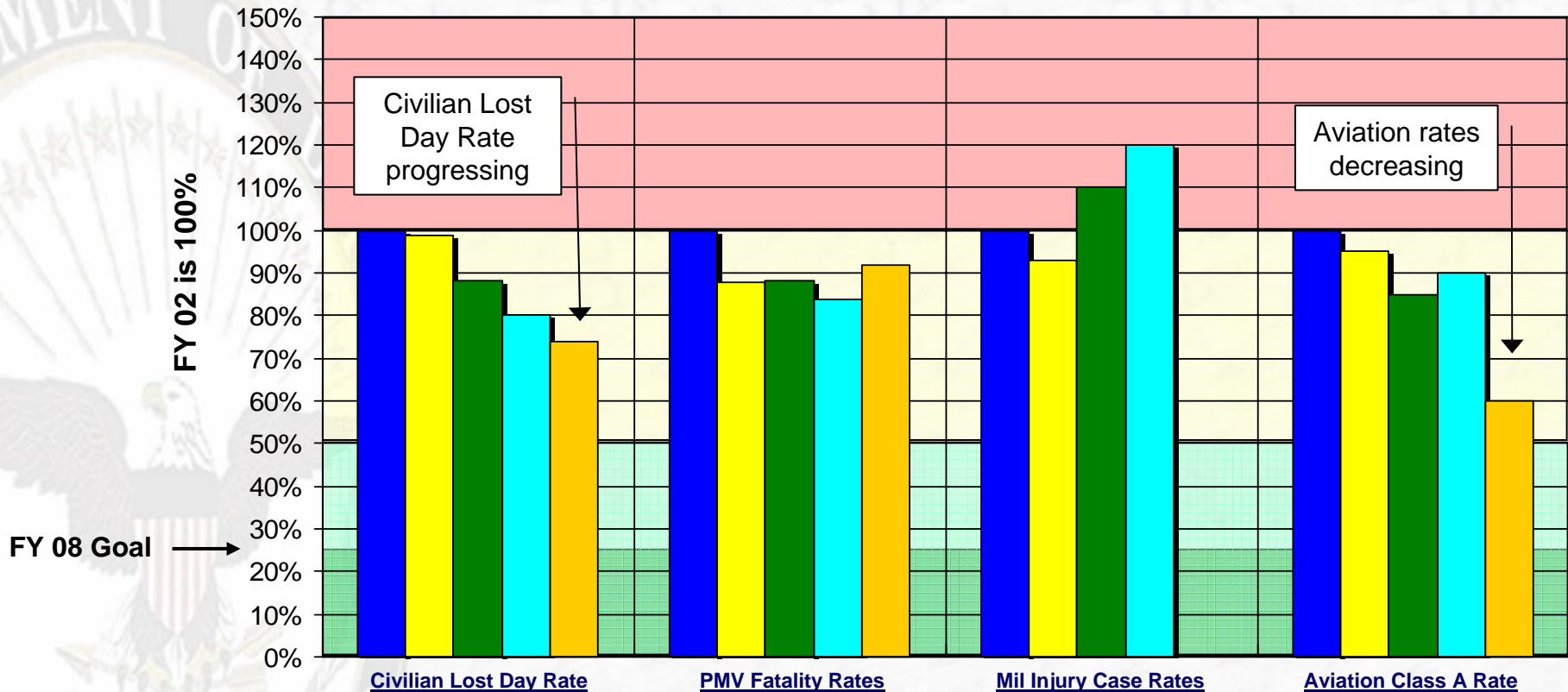


Workers' Injury Compensation TF

- Pipeline Initiative approved by DSOC in 2004
- Reduction in Lost Production Day Rate



Overall DoD DSOC Metrics

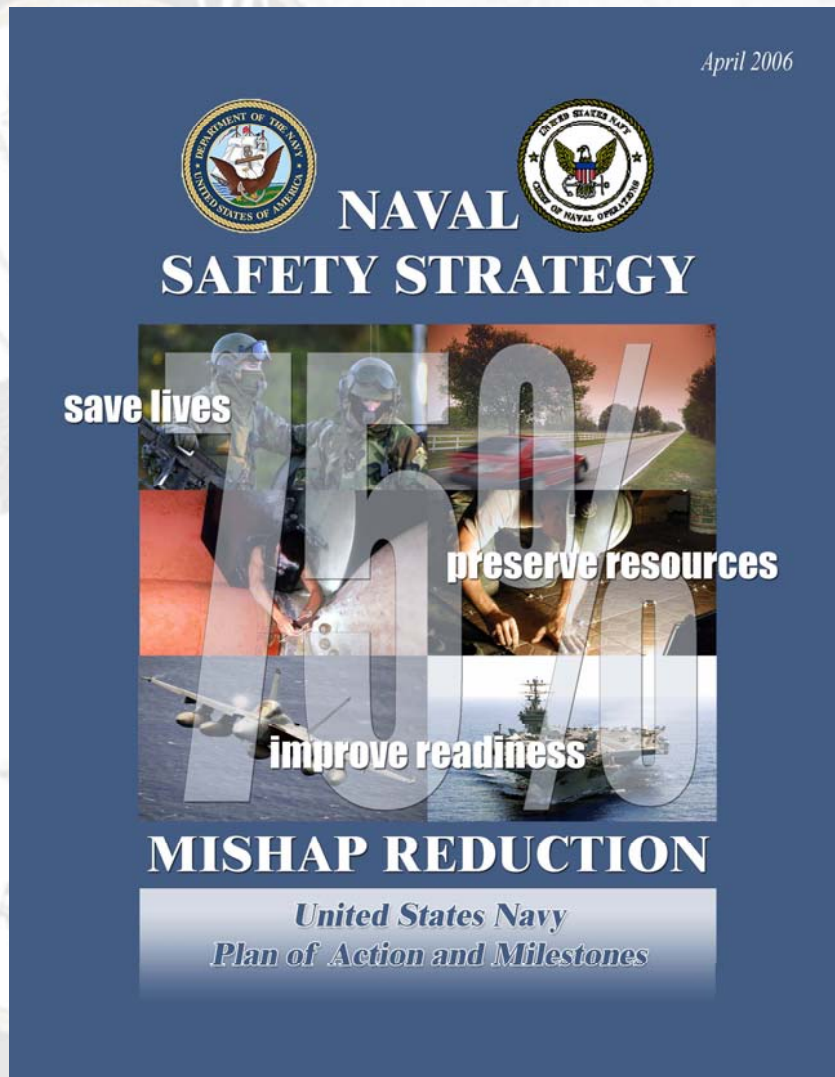


Note: Military Injury Rates being reviewed

Naval Safety Strategy



April 2006



The cover of the Naval Safety Strategy Plan of Action and Milestones, dated April 2006. It features the Department of the Navy and Naval Operations logos. The title "NAVAL SAFETY STRATEGY" is prominently displayed. Below the title, there are three main objectives: "save lives", "preserve resources", and "improve readiness", each accompanied by a small image. At the bottom, it reads "MISHAP REDUCTION" and "United States Navy Plan of Action and Milestones".

NAVAL SAFETY STRATEGY

save lives

preserve resources

improve readiness

MISHAP REDUCTION

*United States Navy
Plan of Action and Milestones*

Plan of Action and Milestones (POA&M)



A screenshot of the Naval Safety Center website. The header includes the "Work, Play, Live ... Safety!" slogan and the "Naval Safety Center" name. Navigation links for "Site Map" and "Search" are present, along with a menu for "Afloat|Ashore|Aviation|Media|OSH|Services|Training|Popular". A "Quick Links" sidebar lists various resources like Checklists, Instructions, News & Articles, Presentations, Safety Awards, Seasonal Resources, and Success Stories. The main content area features a "POA&M Master" section with a "Focus on Safety" list (including Navy ESB, Mishap Reduction, Best Practices, Photo of the Week, Newsletter, Online Reporting, SafeTips, and Risk Management) and a "Services" list (including Online Feedback, NSC FOIA Request, Navy FOIA, Links, Privacy Policy, Secure Site (PKI), and Staff Directory). Below this, there are "Goals" (six in total, ranging from Enhance Naval Readiness to Safety Initiatives Based On ROI) and "Committee POA&M's" (OSC and OSSC). At the bottom, there are links to "Return to NESB Home / NSC Home" and a "Share it!" prompt.

Work, Play, Live ... Safety!
Naval Safety Center

Site Map | Search

Afloat|Ashore|Aviation|Media|OSH|Services|Training|Popular

Quick Links

- [Checklists](#)
- [Instructions](#)
- [News & Articles](#)
- [Presentations](#)
- [Safety Awards](#)
- [Seasonal Resources](#)
- [Success Stories](#)

Focus on Safety

- [Navy ESB](#)
- [Mishap Reduction](#)
- [Best Practices](#)
- [Photo of the Week](#)
- [Newsletter](#)
- [Online Reporting](#)
- [SafeTips](#)
- [Risk Management](#)

Services

- [Online Feedback](#)
- [NSC FOIA Request](#)
- [Navy FOIA](#)
- [Links](#)
- [Privacy Policy](#)
- [Secure Site \(PKI\)](#)
- [Staff Directory](#)

POA&M Master

Goals

- [Goal 1: Enhance Naval Readiness](#)
- [Goal 2: Engage Leadership](#)
- [Goal 3: Imbed Safety and Risk Management Principles](#)
- [Goal 4: Employ Accountability Mechanisms](#)
- [Goal 5: Leverage New Technologies](#)
- [Goal 6: Safety Initiatives Based On ROI](#)

Committee POA&M's

- OSC
- OSSC

Return to
[NESB Home](#) / [NSC Home](#)

Like what you've seen? Share it!
[Send this page to a friend](#)

This is an official
U.S. Navy Web Site
Contact the [Webmaster](#)
or [Public Affairs Officer](#)

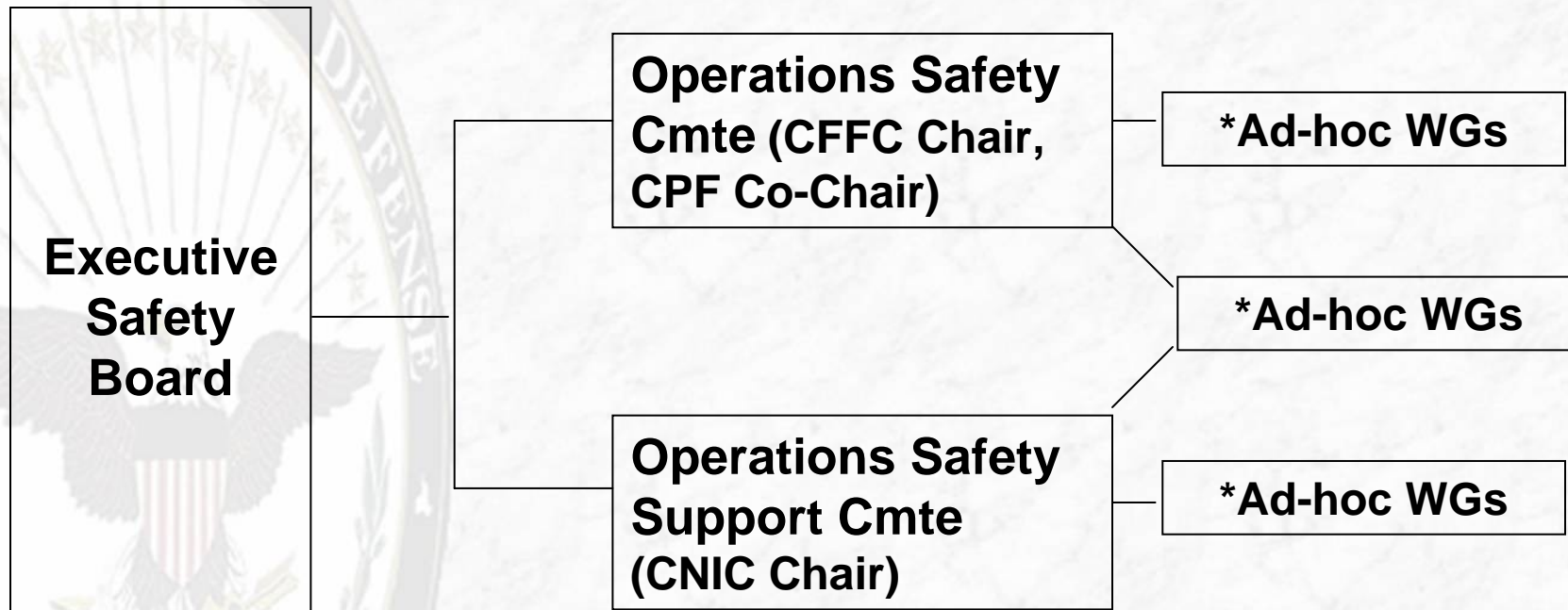
Fiscal Year 2007 Department of the Navy Objectives

The five objectives below reflect the priorities of the Secretary of the Navy, the Chief of Naval Operations, and the Commandant of the Marine Corps. Now based on fiscal-year vice calendar-year to better align with DoN's institutional processes, the following objectives reinforce the 2006 objectives and reflect efforts and successes achieved to date.

1. **Provide a Total Naval Workforce capable and optimized to support the National Defense Strategy that will:**
 - Assure Naval capability and capacity to meet GWOT requirements.
 - Ensure recruiting and retention meets projected Navy and Marine Corps requirements, with particular focus on active and reserve components "low density/high demand" skill sets such as Naval Special Warfare, Seabees, Reconnaissance Marines, EOD, and Medical specialties.
 - Ensure high quality and levels of support services to service members and their families.
 - Develop agile and flexible personnel management through the Force Management Oversight Council Strategic Plan.
 - Implement the National Security Personnel System – Spiral 1.0.
2. **Use the Navy-Marine Corps Team to aggressively prosecute the GWOT).**
 - Provide Combatant Commanders with skilled forces for combat operations, especially in Iraq and Afghanistan.
 - Optimize contribution to SPECOPS Forces and the implementation of Marine Corps SPECOPS Command.
 - Continue to develop and expand the NECC to include its interdependence with the Marine Corps.
 - Provide Combatant Commanders the tools to counter Improvised Explosive Devices.
3. **Build the Navy-Marine Corps Force for Tomorrow.**
 - Strengthen the Navy and Marine Corps role in the Joint/Interagency Team, emphasizing the Naval Services' strengths of access, persistent presence, and small footprint.
 - Establish a Shipbuilding Plan, which has the consensus of the administration, Congress, and contractor teams to build the required type and number of ships.
 - Establish and implement a strategy for Marine Corps modernization/reconstitution programs (ground and aviation)
 - Continue development of the Department of the Navy mission in Homeland Defense/Security including the integration of multi-national and commercial maritime industry support into Maritime Domain Awareness.
4. **Emphasize Safety. Manage risk to improve mission effectiveness and to safeguard the people and resources of the Navy-Marine Corps Team.**
 - Improve safety performance across DON to meet Secretary of Defense Strategic Planning Guidance (SPG) to reduce baseline mishap rates by 75% by the end of FY2008.
 - Deploy a DON-wide web-based Risk Management Information System (RMIS) that will facilitate unit level safety program management and provide aggregate reporting, analysis and tracking of all reportable hazards and mishaps.
 - Establish a corporate risk management and mitigation strategy and ensure that Department leaders and managers use risk-based approaches for planning and problem solving.
5. **Reinforce ethics as a foundation of exemplary conduct within the Department of the Navy.**
 - Continue emphasis on coordination and training of ethics counselors.
 - Teach and enforce ethics and standards of exemplary conduct consistently, starting at the earliest career stages.

For the full 2007 Department of the Navy Objectives please see <http://www.navy.mil>

Navy Executive Safety Board



***Note: Ad-hoc WGs may be formed at the discretion of the Committee chairs. A requirement may exist to form a WG with participants from both committees, for example, Safety Training.**

Navy ESB Membership



- VCNO – Chairman
- DASN(S) (Advisor)
- Dir, HQMC Safety Div (Advisor)
- COMNAVSAFECEN - Executive Agent
- MCPON
- CFFC
- CPF
- CNIC
- COMNAVAIRFOR (Lead - Naval Aviation Enterprise)
- COMNAVSURFOR (Lead - Surface Warfare Enterprise)
- COMNAVSUBFOR (Lead - Undersea Enterprise)
- COMNECC (Lead - Naval Expeditionary Enterprise)
- COMNWC (Lead – Naval Net Warfare Enterprise)
- COMNAVSPECWARCOM
- NETC
- COMNAVSEASYSKOM
- COMNAVAIRSYSKOM

ESB Scope of Activity



- Provide oversight of the Navy's mishap reduction efforts.
- Monitor progress of the Navy's Plan of Action and Milestones in support of the Naval Safety Strategy.
- Analyze mishap and hazard report trends in order to devise improvements to Navy safety programs.
- Evaluate the effectiveness, feasibility and Return on Investment of ongoing safety programs and emerging initiatives.
- Develop, approve and direct implementation of new safety programs and initiatives.
- Coordinate with appropriate OPNAV staff to determine short and long-term funding solutions for new safety initiatives.
- Periodically review best practices for wider Navy applicability.

Questions??

Contact:

CDR Linda Byrnes

linda.byrnes@navy.mil

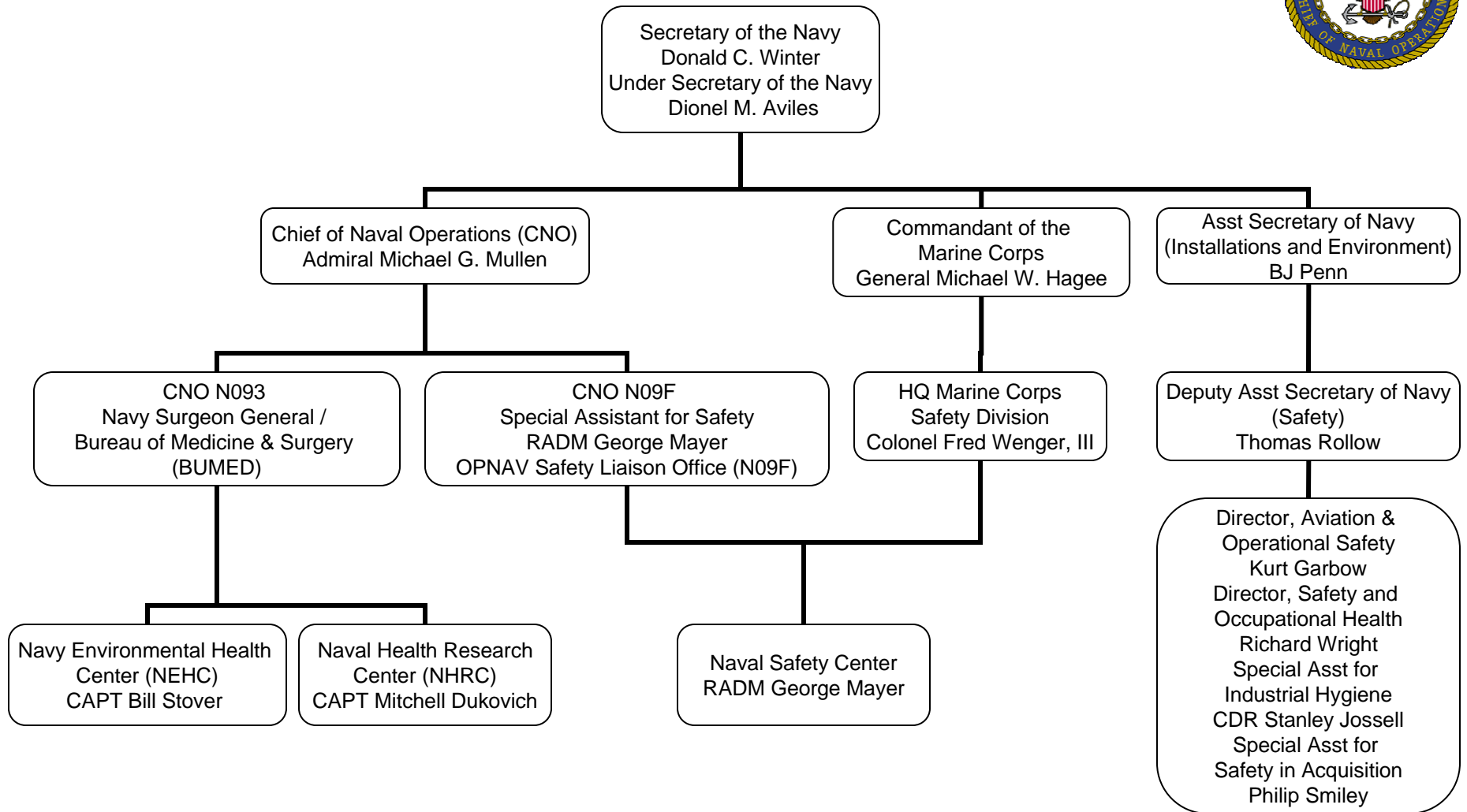


Reducing Mishaps by 75%! Some Navy Focus Areas



- **Navy Safety Leadership**
- **Safety Policies**
- **Acquisition Safety**
- **Emergency Management**
- **2007 Naval Planner**
- **Annual Report to OSHA**
- **Success Stories & ROI**
- **Emerging Technology**
- **Future: Lean Six Sigma**
- **Your Ideas**

Military Departments – Navy Safety & Occupational Health Leadership





Donald C. Winter
Secretary of the Navy



Admiral Robert F. Willard
Vice Chief of Naval Operations



General Robert Magnus
Assistant Commandant of the Marine Corps

The Secretary of Defense has challenged the Navy to achieve a 75% mishap reduction by October 2008. The Department of the Navy is committed to meeting this challenge.

SAFETY LEADERSHIP

Donald C. Winter, Secretary of the Navy

"The Department of the Navy is engaged and dedicated to enhancing our safety performance. Along with the Chief of Naval Operations and the Commandant of the Marine Corps, I have identified safety as one of Navy's five objectives for 2006 - 2007. We are targeting safety improvement with the same focus as the Global War on Terror." (from SECNAV memo to SECDEF 17 Aug 06)

Admiral Robert F. Willard, Vice Chief of Naval Operations

"Over the last three years, we have been engaged in a battle to reduce mishaps. Our enemies in this fight are not terrorists, but mistakes, short-cuts, and poor decisions. We need to concentrate on fighting these threats as passionately as we fight the terrorists. As Chair of the Navy Executive Safety Board, my singular focus will be on protecting our people and equipment from senseless loss." (from VCNO msg R010710Z JUN 06 and VCNO memo 5100 SerN09/6U823040 of 31 May 06)

General Robert Magnus, Assistant Commandant of the Marine Corps

"It's the leader's responsibility, whether as the fire team leader, platoon commander, or company commander, to perform over-watch on less experienced Marines...The idea of warrior preservation is to apply the mindset and core values of a Marine at battle to all life's situations." (from Interview with the ACMC Ground Warrior Magazine vol. 7 Issue 1 2006)

[For more information on Safety Leadership, refer to the Resources page at the back of this Planner.]

January Safety Dates

National Radon Action Month
www.epa.gov/iaq/radon/rmactionmonth.html

National Eye Care Month
www.aao.org

Safety Myth – Leadership is off the hook.

Reality: Safety must be managed by top leaders just as finance and mission are. Leaders must not only "talk the talk," they must "walk the walk" by committing to safety in both words and actions. Safety leadership functions include resourcing safety, setting the culture, making risk acceptance decisions, communicating safety as a value, and monitoring safety performance.

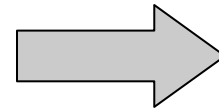
OPNAV Safety Policies

<u>INSTRUCTION#</u>	<u>OWNER</u>	<u>DATE</u>	<u>TITLE</u>
> OPNAV 5100.19D	•CNO (N09F)	•5 October 2000 •(19E underway)	•Navy Occupational Safety and Health Program Manual for Forces Afloat, Vol. I/II/III
> OPNAV 5100.23G	•CNO (N09F)	• <u>30 Dec 2005</u>	•Navy Safety and Occupational Health Program Manual
OPNAV 3500.39B	CNO (N09F)	<u>30 July 2004</u>	Operational Risk Management
OPNAV 3750.6R	CNO (N09F)	1 March 2001	Naval Aviation Safety Program
OPNAV 3750.16C	CNO (N09F)	<u>8 July 2004</u>	Participation in a Military Civil Aircraft Accident Safety Investigation
OPNAV 3590.24D	CNO (N76)	<u>24 January 2004</u>	CNO Afloat Safety Awards Program
OPNAV 5100.8G	CNO (N09F)	2 July 1986 (8H draft)	Navy Safety and Occupational Safety and Health Program
OPNAV 5100.12G	CNO (N09F)	7 February 2001	Navy Traffic Safety Program
OPNAV 5100.24A (Joint with CMC)	CNO (N09F)	3 October 1986 (24B final draft)	Navy System Safety Program
OPNAV 5100.25A	CNO (N09)	25 September 1990 (25B draft)	Navy Recreation, Athletics and Home Safety Program
OPNAV 5102.1D	CNO (N09F)	<u>7 January 2005</u>	Mishap and Safety Investigation Reporting and Record Keeping Manual
OPNAV 5100.28	CNO (N09F)	<u>21 January 2005</u>	Hazardous Material User's Guide (HMUG)
OPNAVINST 5100.27A (Joint with CMC)	CNO (N09F)	24 September 2002	Navy Laser Hazards Control Program
OPNAVINST 1500.75A	CNO (N09F)	<u>18 November 2004</u>	Safety Policy for Conducting High Risk Training

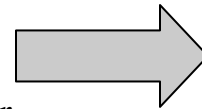
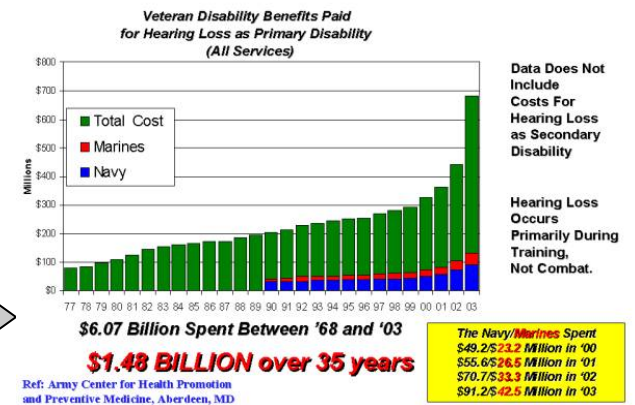
Acquisition Safety



- **Acquisition Safety Website**
(Top 10 80% complete)
 - See <http://safetycenter.navy.mil/acquisition/default.htm>
 - Noise, Vibration, Ergonomics, Confined Space, Fall Protection, Heat Stress, Ventilation, Laser Radiation, and Radiofrequency Radiation done.
 - Electrical, Nanotechnology in progress
- **OPNAVINST 5100.24 Policy**
 - Will more effectively engage NAVSEA & acq community
- **Reduce Military Disability Costs**
 - Hearing Loss (over \$100M/year)
 - CNA '04/'05 study showed clear link between ship exposure and hearing loss
 - Follow-on CNA study in progress in FY06
- **Review acquisition documents**
- **Assist SECNAV (DASN S, CHENG, RDA)**
- **Goal: Save money through better design**
 - (improved productivity for reduced manning, fewer mishaps, better technology)



Steps Must Be Taken to Reverse the Trend



Executive Overview: U.S. Navy's Acquisition Safety Website



OPNAV Safety Liaison Office
(703) 602-2575
<http://www.safetycenter.navy.mil/acquisition>

Summary

1. Acquisition Safety in Navy

2. Website:

<http://www.safetycenter.navy.mil/acquisition>

Noise

Vibration

Ergonomics/Human Factors Engineering

Fall Protection

Confined Space Entry

Ventilation

Heat Stress

Radar

Laser

Nanotechnology

Electrical

3. Summary

□ Vibration – Why?

- Hand Arm Vibration
 - Causes Hand Arm Vibration Syndrome
- Whole Body Vibration
 - Concentrates in lower back

Work, Play, Live ... Safely!
Naval Safety Center

Site Map | Search

Atfloat|Ashore|Aviation|Media|OSH|Services|Training|Popular

Acquisition home | **Vibration home** | Vibration Resources

Quick Links

- [Checklists](#)
- [Instructions](#)
- [News & Articles](#)
- [Presentations](#)
- [Safety Awards](#)
- [Seasonal Resources](#)
- [Success Stories](#)

Focus on Safety

- [Mishap Reduction](#)
- [Good Samaritan](#)
- [Photo of the Week](#)
- [Newsletter](#)
- [Online Reporting](#)
- [Safe Tips](#)
- [Risk Management](#)

Services

- [Online Feedback](#)
- [FOIA](#)
- [Links](#)
- [Plug Ins](#)
- [Privacy Policy](#)
- [Secure Site \(PKI\)](#)
- [Staff Directory](#)


This is an official U.S. Navy Web Site
Contact the [Webmaster](#)
or [Public Affairs Officer](#)

Acquisition Safety Vibration

- [Introduction](#)
- [Background](#)
- [Relevance of Vibration Control to Acquisition](#)
- [Discussion](#)
- [Recommendations](#)
- [Resources](#)

Introduction

The Navy cares deeply about protecting the safety and health of its greatest resource - its people. In today's workplaces, there exist many potentially serious occupational hazards. Some hazards, like noise-induced hearing loss and heat stress, are well known, heavily reported, and well documented. Much less is known about other workplace perils, which can produce serious, irreversible, and unsuspected diseases. *Occupational Vibration*, affecting eight to ten million people in the U.S. alone, is one of these less obvious workplace hazards. Because Navy Leadership is concerned about the safety and health of its military and civilian workers, they are working hard to address this under-recognized occupational health problem through acquisition of safe, cost-effective, and performance-improving designs and equipment. This section of the Acquisition Safety website addresses the vibration issue uniquely and in depth. Included are the potential health effects of uncontrolled vibration and ongoing efforts to control this risk to Navy personnel. Also provided are best business practices and technical assistance for acquisition (research, development, design and procurement) of designs and equipment that will maximize productivity and operational effectiveness while protecting operators and maintainers of this equipment.



Hands of vibrating pneumatic hand-tool operator in later stages of irreversible Hand Arm Vibration Syndrome 1

Copyright 1990, D.E. Wasserman, Inc.; Image of hands (not U.S. Navy worker) used with permission

□ Vibration

- Hand Arm Vibration
 - Hand Tools



Rare case gangrene hands vibrating pneumatic hand-tool operator, terminal stage irreversible Hand Arm Vibration Syndrome. Copyright 1990, D.E. Wasserman, Inc.; Photo (not U.S. Navy worker) used with permission.



Full finger protected AntiVibration gloves meet ANSI/ISO standards

- Whole Body Vibration
 - Trucks
 - Forklifts
 - Hovercraft
 - Aircraft
 - Ships



Whole Body Vibration can cause operator to lose control of a vehicle.



Whole Body Vibration occurs in workers who regularly operate or ride in helicopters.

□ Vibration

Recommendations

- Vehicles with isolating/floating cabs
- “Air Ride Seats” in vehicles
- “Air Ride Seats” in fixed workstation with floor vibration
- Isolators under machinery
- Low vibration tools



Regular exposure to WBV from heavy equipment can lead to lower back pain in equipment operators

Emergency Management Safety

Post 9/11 Efforts

Also called ATFP=(Anti Terrorism Force Protection) and
CBRNE=(Chemical Biological Radiological Nuclear & High Explosive)



- **Completed:**

- Developed Safety policy piece for Navy Emergency Management policy instruction (OPNAVINST 3440.17 of 20 Jul 05)
- Safety policy for emergency management in OPNAVINST 5100.23G "Shore Safety Policy"
- Advised against purchase of escape masks until NIOSH approved (\$10M spent in Pentagon)
- Issued CBRN Respirator Implementation Plan
- Helped engineers with problem of sensors being deployed and alarms sounding (false alarms?)

- **Ongoing:**

- Participate in Monthly Interagency Committee on Federal Workplace Emergencies
- Assist to improve DoD safety coordination with new DoD Homeland Defense office
- Guide implementation of CBRN Respirator Programs



2007 Naval Safety Planner

INTRODUCTION TO THE 2007 NAVY AND MARINE CORPS SAFETY PLANNER

SAFETY IS THE LEADING EDGE OF READINESS



RADM GEORGE MAYER

Special Assistant to the Chief of Naval Operations for Safety Matters/Commander, Naval Safety Center

We have long known that safety isn't something for special occasions. It isn't something you dust off after a mishap or before an inspection. It is a series of careful, well-planned actions that we take every day.

The Navy and Marine Corps are committed to achieving a mishap-free environment for our Sailors, Marines, and civilian employees. We have long realized that effective operational safety and occupational health programs are fundamental to optimizing operational efficiency.

Mishaps resulting from unsafe practices are unacceptable. They detract from our readiness and waste resources. This safety planner is a useful tool in our ceaseless efforts to protect our people from the risks they face around the world.



TOM ROLLOW

Deputy Assistant Secretary of the Navy (Safety)

My role is to provide safety, occupational health, and fire protection policy, oversight, advocacy, and strategy for the Department of the Navy to produce the following results:

- The Department of the Navy safety culture is elevated to a level where risk management is an active and intrinsic process in all decisions we make.
- Safety is universally valued as enhancing operational readiness and successful mission accomplishment.
- The Navy and Marine Corps are undisputed global leaders in conducting effective and safe military operations.

These are lofty, but attainable results. It will take strong leadership commitment, the perseverance of our safety and occupational health professionals, and a unified effort by our Sailors, Marines, DON civilians, agencies, organizations, and people we work with to realize these results.

GUIDING PRINCIPLES

- We think corporately for the good of the Department of the Navy, Department of Defense, and the nation.
- We have a passion for safety.
- We create an environment to attract and retain the best people.
- We promote communication to enhance safety.
- We promote integrating safety and risk management into every action taken and every decision made — every day, all day.
- We are a synergistic team built on diverse individual strengths.
- We create coalitions for safety.
- We focus on achieving our goals.
- We are forward looking, innovative, and quick to react.
- Our bottom line is the safety of our Sailors, Marines and civilian employees, as well as the preservation of resources to ensure Naval readiness.

NAVAL SAFETY STRATEGIES

- Enhance Naval readiness by sustaining and preserving the fighting force through the prevention of mishaps; reduce mishaps by 75% by end of FY 2008 from the FY 2002 baseline.
- Engage leadership at all levels to establish a positive organizational culture based on understanding that safety is a readiness and force multiplier.
- Imbed safety and risk management principles into all levels of policy, operations, acquisition, training and education.
- Employ accountability mechanisms to foster a more vibrant safety climate centered on readiness, mission accomplishment and mishap prevention.
- Leverage new technologies and best practices to support mishap prevention.
- Link safety requirements to resources and prioritize safety initiatives based on their Return on Investment (ROI) and scope of impact.

Will be at: <http://safetycenter.navy.mil/seasonal/calendar/default.htm>

Annual Report to OSHA



- US Navy Annual Report to OSHA
 - At: <http://safetycenter.navy.mil/osh/default.htm>



Navy Safety Success Stories ...125 +

Index

Executive Summary

Cost/Savings

1,001 Safety Success Stories Index

Work, Play, Live ... Safely!

Naval Safety Center

Site Map | Search

Afloat|Ashore|Aviation|Media|OSH|Services|Training|Popular

Success Stories

- [Success home](#)
- [Story Index](#)
- [Story Summaries](#)
- [New Stories](#)
- [Submission Guidelines](#)
- [Submit Your Story](#)

Focus on Safety

- [Mishap Reduction](#)
- [Best Practices](#)
- [Photo of the Week](#)
- [Newsletter](#)
- [Online Reporting](#)
- [Safe Tips](#)
- [Risk Management](#)

Services

- [Online Feedback](#)
- [NSC FOIA Request](#)
- [Navy FOIA](#)
- [Links](#)
- [Privacy Policy](#)
- [Secure Site \(PKI\)](#)
- [Staff Directory](#)

This is an official U.S. Navy Web Site. Contact the [Webmaster](#) or [Public Affairs Officer](#).

1,001 Safety Success Stories Index

Our index is separated into categories to help you find the stories you are most interested in. Files are in PDF format and the size is indicated after the title. Use the drop down menu below to select a subject. [Click here to view executive summaries of each story.](#) In addition, a table is available which highlights the challenges, improvements, and cost, time, and labor savings of selected stories in an easy to read table format with links to the stories. A conservative estimate is that for every dollar invested in safety, the return is between three and ten dollars. [View the Cost/Time Savings Chart.](#)

Select a Subject to View Stories

Asbestos

- [Industrial Hygiene Teams with PWC to Expedite Railcar Restoration at NWS Earle 386K](#)
- [Abated Asbestos Hazard 58K](#)

[\(Back to Top\)](#)

Award Programs/Milestones

- [NAS Sigonella and NSA Naples Presented Safety Excellence Award By Italian Association of Safety, Health and Environmental Professionals \(AIAS\) 238K](#)
- [NSC Marks 50 Years of Service to Navy and Marine Corps 220K](#)
- [Safety Awards Program at SIMA Mayport 111K](#)

[\(Back to Top\)](#)

Chemical Hazards

- [Computerized Data Accelerates Industrial Hygiene Chemical Exposure Risk Assessments at NS Rota 367K](#)
- [Hazardous Waste Rake Prevents Exposures and Injuries at Public Works Center, San Diego 50K](#)
- [Navy Develops HAZWOPER Checklist to Protect Hazardous Waste Site Workers 236K](#)
- [Industrial Hygienists Clear the Air after Pentagon Terrorist Attack 444K](#)

1,001 Safety Success Stories Executive Summaries

Work, Play, Live ... Safely!

Naval Safety Center

Site Map | Search

Afloat|Ashore|Aviation|Media|OSH|Services|Training|Popular

Success Stories

- [Success home](#)
- [Story Index](#)
- [Story Summaries](#)
- [New Stories](#)
- [Submission Guidelines](#)
- [Submit Your Story](#)

Focus on Safety

- [Mishap Reduction](#)
- [Best Practices](#)
- [Photo of the Week](#)
- [Newsletter](#)
- [Online Reporting](#)
- [Safe Tips](#)
- [Risk Management](#)

Services

- [Online Feedback](#)
- [NSC FOIA Request](#)
- [Navy FOIA](#)
- [Links](#)
- [Privacy Policy](#)
- [Secure Site \(PKI\)](#)
- [Staff Directory](#)

This is an official U.S. Navy Web Site. Contact the [Webmaster](#) or [Public Affairs Officer](#).

1,001 Safety Success Stories Executive Summaries

Our executive summaries are listed in order of submission, with the newest stories first. To find a story or topic quickly, use the "find" feature of your browser to search for key words. [Click here for an index of stories by category.](#)

VPP Star Status Awarded to Norfolk Naval Shipyard - In March 2006, Norfolk Naval Shipyard (NNSY) was awarded OSHA Voluntary Protection Program (VPP) Star status in recognition of its success in reducing injury rates and improving safety procedures. The shipyard's On-Duty Total Case Rate (TCR) declined 58% from FY 01 to FY05. This success story presents the goals set by NNSY to achieve VPP Star status, outlines how the shipyard achieved these goals (including use of Lean Six Sigma), and presents specific safety programs NNSY initiated along the road to becoming an OSHA VPP Star site. Additional success story features include information on the OSHA VPP Program, the application process, and how to qualify for membership.






Ergonomics Intervention at COMNAVREG SW San Diego Mail Center Prevents Injuries -- A routine industrial hygiene survey identified several physical risk factors at the Commander Navy Region Southwest (COMNAVREG SW) San Diego Dockside Mail Center. Heavy lifting and working in awkward postures while processing the large volume of mail handled at NAVSTA San Diego Dockside Mail used to put its mail handlers at risk for WMSDs. Funding was provided through the Navy's Hazard Abatement and Mishap Prevention Program (HAMPP) to revamp the mail room service area and purchase ergonomically designed equipment. The estimated savings to the Navy are \$41,433.00 every year for a return on investment in 519 days, or approximately one year and five months.

Puget Sound Naval Shipyard and Intermediate Maintenance Facility Earns OSHA VPP Star Status -- This is the third NAVSEA shipyard selected as a Voluntary Protection Program (VPP) Star site by the U.S. Occupational Safety and Health Administration (OSHA). Out of 1,300 OSHA Star Sites in the country, PSNS & IMF is the second largest industrial facility in the nation, public or private, to achieve Star status. This story explains the steps PSNS & IMF took to qualify for the VPP and provides valuable information on the OSHA VPP Program, the application process, and how to qualify for membership.

Ergonomic Risk Factors Resolved in Microelectronics Shop at Naval Air Station Jacksonville -- A site visit by an ergonomist with the Navy Ergonomics Program revealed ergonomic risk factors for shop technicians who routinely worked in awkward postures and performed tasks that necessitated repetitive motions. Following a Job Requirements and Physical Demands (JR/PD) survey that confirmed these and other ergonomic risk factors, the ergonomist made recommendations for new ergonomically designed work equipment. The Navy's Hazard Abatement and Mishap Prevention Program funded adjustable microscopes, task lighting, and ergonomically designed work benches.

COST/TIME SAVINGS

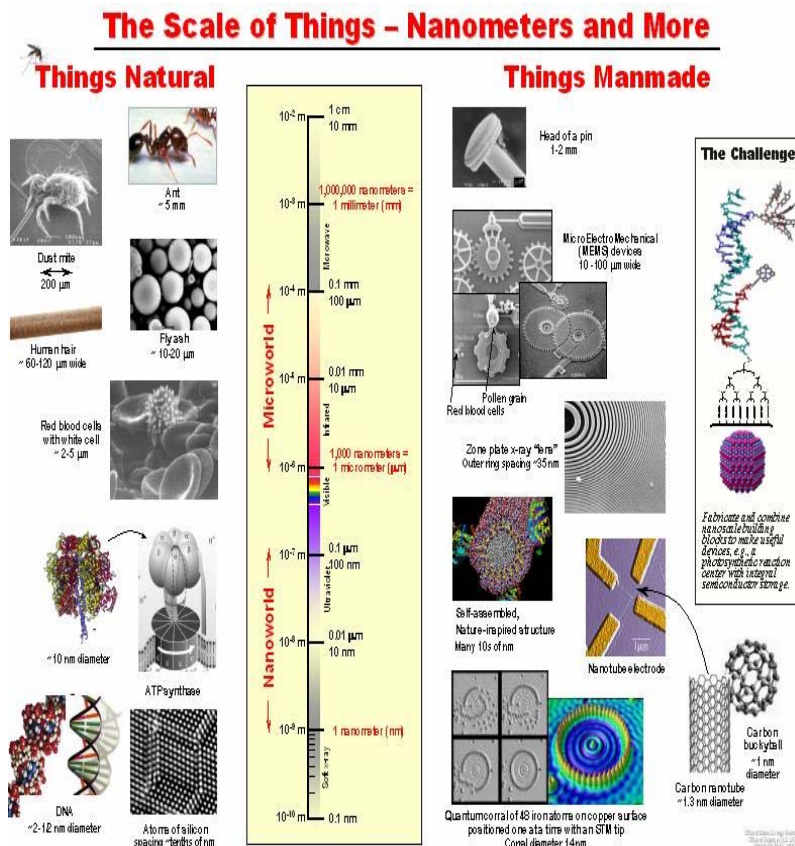
[Click on photos to see corresponding NAVOSH Success Stories]

ACTIVITY	CHALLENGE	IMPROVEMENT	COST SAVINGS	TIME/LABOR SAVINGS
COMNAVREG San Diego, CA	Awkward postures, extended reaches, heavy lifting 	Redesigned work stations, sit/stand stools, scissor lift tables	Reduced risk of WMSDs of the neck, back, arms, and shoulders with resulting workers' compensation costs.	\$41,433.00 every year for a return on investment in 519 days, or approximately one year and five months.
SWRMC San Diego, CA	Awkward postures, lifting overhead, prolonged standing in Sail Shop 	Larger work stations, ergonomic seating, automated storage rack, adjustable frame for sail webbing tasks	Reduced risk of WMSDs of the neck, back, arms, and shoulders with resulting workers' compensation costs.	Fabrication, storage, and removal task time savings. Yearly potential injury averted and productivity cost savings are estimated to be \$306,500.00
PNSY Kittery, ME	Drydock fall protection perimeter in need of update 	Installed new guardrail system that is safer and easier to install and maintain than old post and chain system	Cost saving for manufacturing and installation was about 25%	Decrease in costs over operating/ maintaining outdated system expected to be over 50%. Maintenance cost savings now equal over \$10,000/year
NMC San Diego, CA	Lifting over shoulder height in pharmacy lotion compounding station 	Hydraulic scissors lift table adjusts to height of technician	\$149,000 over ten-year life cycle of table	Increased efficiency and decreased downtime by reducing incidence of WMSDs among pharmacy technicians
NAS JRB, Willow Grove, PA	Deteriorated local exhaust ventilation in spray paint booth 	Removal of paint residues from fans and ductwork. Establishment of formal preventive maintenance plan.	Extended life of paint-spray booth's local exhaust ventilation system. Reduced time ground support equipment out of service.	Decreased time required to remove corrosion and to repaint ground support equipment.

Emerging Technologies



- Nanotechnology:
 - Focus on:
 - Material Safety Data Sheet (MSDS)
 - Toxicology Testing of new nanomaterials
 - Physical properties testing (explosivity, etc.)
 - See Navy Acquisition Safety Website – Nanotechnology section (coming soon!)



Future: Lean Six Sigma



- **Navy expanding use of Lean Six Sigma**
- **Your experience with six sigma safety-related projects**

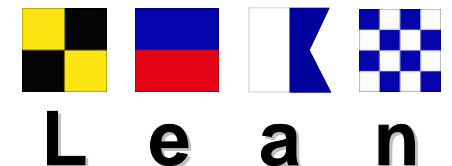


real projects, real people, real results

Big NAVY Alignment

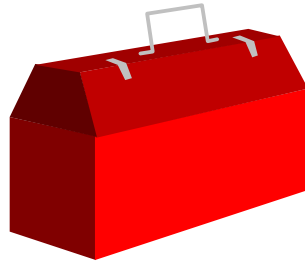
Under sponsorship of ASN RD&A, Lean Six Sigma training standards and certification requirements are being aligned across NAVY.....

NAVSEA, NAVAIR, NAVSUP, NAVFAC, SPAWAR, ONR, etc.

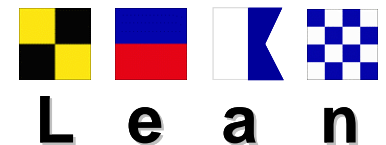


NAVSEA Lean = Lean + Six Sigma + Theory of Constraints “The Toolbox”

- Vision/Mission Development
- Change Management
- Assessment Models
- Balanced Scorecard
- Value Stream Analysis
- Brainstorming
- Win/Win
- Prioritization
- 5 Why's
- Theory of Constraints
- 7 Quality Control Tools
- 7 Management & Planning Tools
- Nominal Group Technique (NGT)
- Team Building & Facilitation
- Project Planning
- Internal Consulting
- Capacity Analysis, Takt Charts



- Process Analysis
- Causal Loop Diagramming
- Process Observation / GEMBA
- Basic Statistics
- Data Analysis Tools
- SPC, Gage R & R
- Sampling Theory
- Root Cause Analysis
- CTQs / CTPs
- Hypothesis Testing
- 5 S / Visual Controls
- Poke-Yoke / Error Proofing
- Process Simplification & Design
- Pull Systems
- Supply Chain Management
- Critical Chain Project Management



Your ideas on Lean Six Sigma... Questions??

Contact:

Joy Erdman

Joy.Erdman@navy.mil



Work, Play, Live ... Safely! Naval Safety Center

[Site Map](#) | [Search](#)

[Afloat](#)|[Ashore](#)|[Aviation](#)|[Media](#)|[OSH](#)|[Services](#)|[Training](#)|[Popular](#)

Resources

- [TRiPS](#) (Travel Risk Planning System)
 - [Navy](#) • [Marines](#)
- [Executive Summary](#)
- [Safety Toolbox](#)
- [75% Mishap Reduction Presentations](#)
- [Traffic Safety Toolbox](#)
- [Success Stories](#)
- [Statistics](#)
- [Seasonal Resources](#)
- [POD Notes, Slogans](#)

Quick Links

- [Photo of the Week](#)
- [Friday Funnies](#)
- [Safety School](#)
- [Acquisition Safety](#)
- [Safety Surveys](#)
- [Culture Workshops](#)
- [Navy / NSC FOIA Request](#)
- [Secure Site \(PKI\)](#)

Staff

- [Biographies / Mission](#)
- [Directory / Contact us](#)

Naval Safety Center
375 A St., Norfolk, VA 23511
Contact the
Webmaster or
Public Affairs Officer

Last Updated: November 3, 2008

Traffic Death Update



At 0130 on October 27, a PFC from 2D Battalion, 6th Marines, 2D MARDIV suffered fatal injuries when the car he was driving veered across three lanes of traffic, struck a traffic barrier, and then veered back across the traffic. Two passengers had minor injuries. The mishap was in Nashua, N.H.

[Full Story](#) | [Full Narrative](#)

Navy and Marine Corps PMV Deaths FY07 to date : **6**

What's New

- New!** • [First scheduled Navy Rider Coach update training held in Norfolk](#)
- [Naval Safety Center Visits Iraq](#)
- ["Steel Hammer" Stays Safe During](#)

- [Nominations Sought for FY06 Adm. Vern Clark and Gen. James L. Jones Safety Awards](#)
- ["You write the caption" contest #11](#)
- New!** • [NHTSA Thanksgiving Planner](#)

New! • [Safety Bulletin: Articulating Boom Platform Accident](#)

• [NSC Website Breach of Information Frequently Asked Questions](#)

[More Articles](#)

Initiatives and Tools



This is an official U.S. Navy Web site.



Please read our [privacy policy](#) | [link disclaimer](#) | [privacy advisory](#) | [accessibility info](#)

<http://safetycenter.navy.mil/osh/default.htm>



Reporting and Recordkeeping

Imagine the Challenge...



SIZE

- U.S. Navy has
 - 175, 569 civilian employees
 - 349,122 military personnel
 - 131,802 reserves
- Located on 118 installations and 280 ships worldwide

REPORTING REQUIREMENTS

- Civilian reporting follows 29 CFR 1904
- Military reporting follows DOD Orders
- Military reporting is 24/7 (on-duty and off-duty)

Navy Categories of Mishaps



- Operational - Aviation
- Operational - Afloat
- Operational – Ashore
- Motor vehicles, on-duty
- Private Motor Vehicles (off-duty) – Military
- Off-duty/Recreation (excludes PMV) – Military
- Physical training – Military
- Explosive Safety
- Laser Safety
- Fire Safety



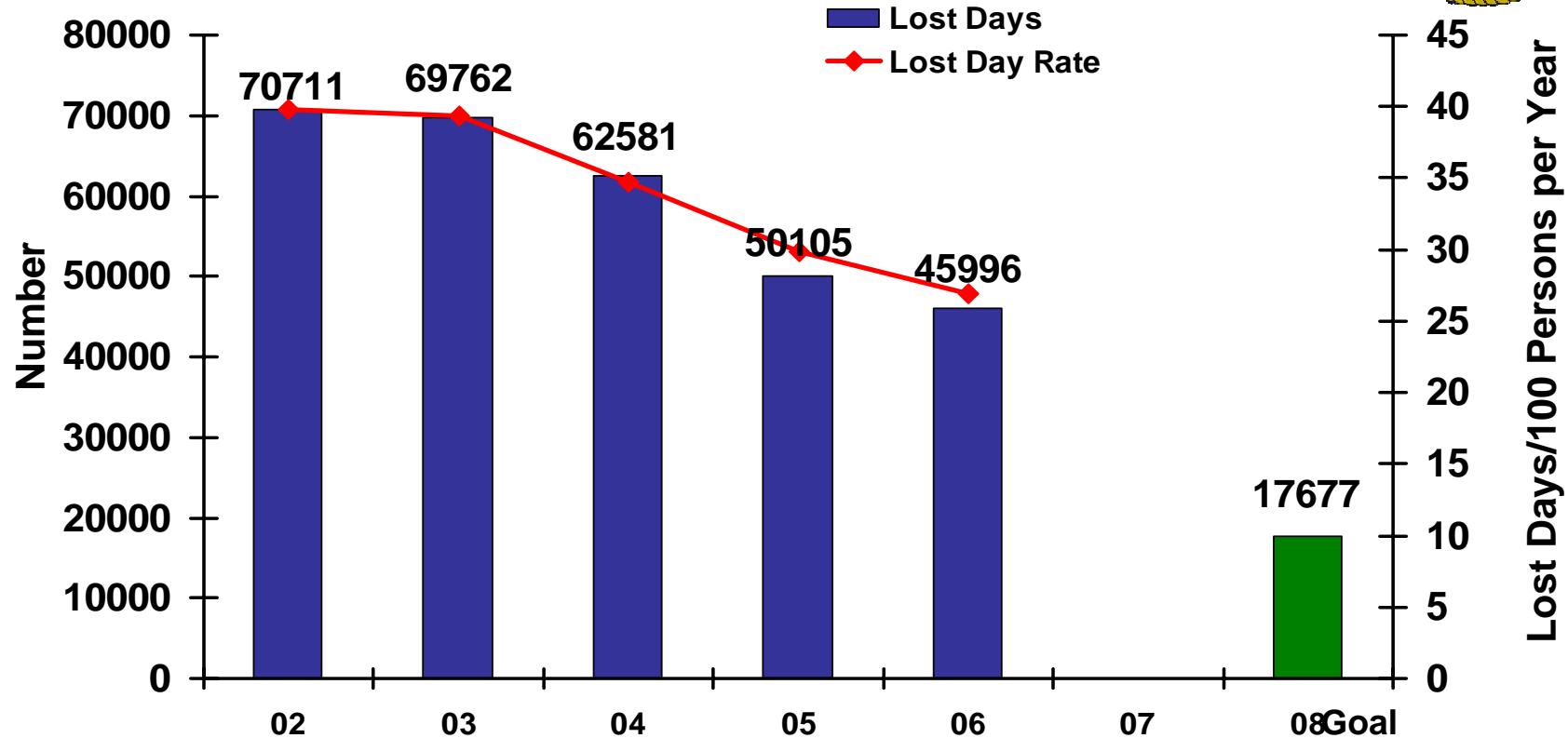
Web Enabled Safety System

WESS



- On-line mishap reporting and data retrieval for Navy and Marine Corps mishaps
- Launched on July 12, 2004
- Password protected
- Produces standardized pre-formatted reports
- Provides automated notifications
- Compatible with other Navy reporting databases

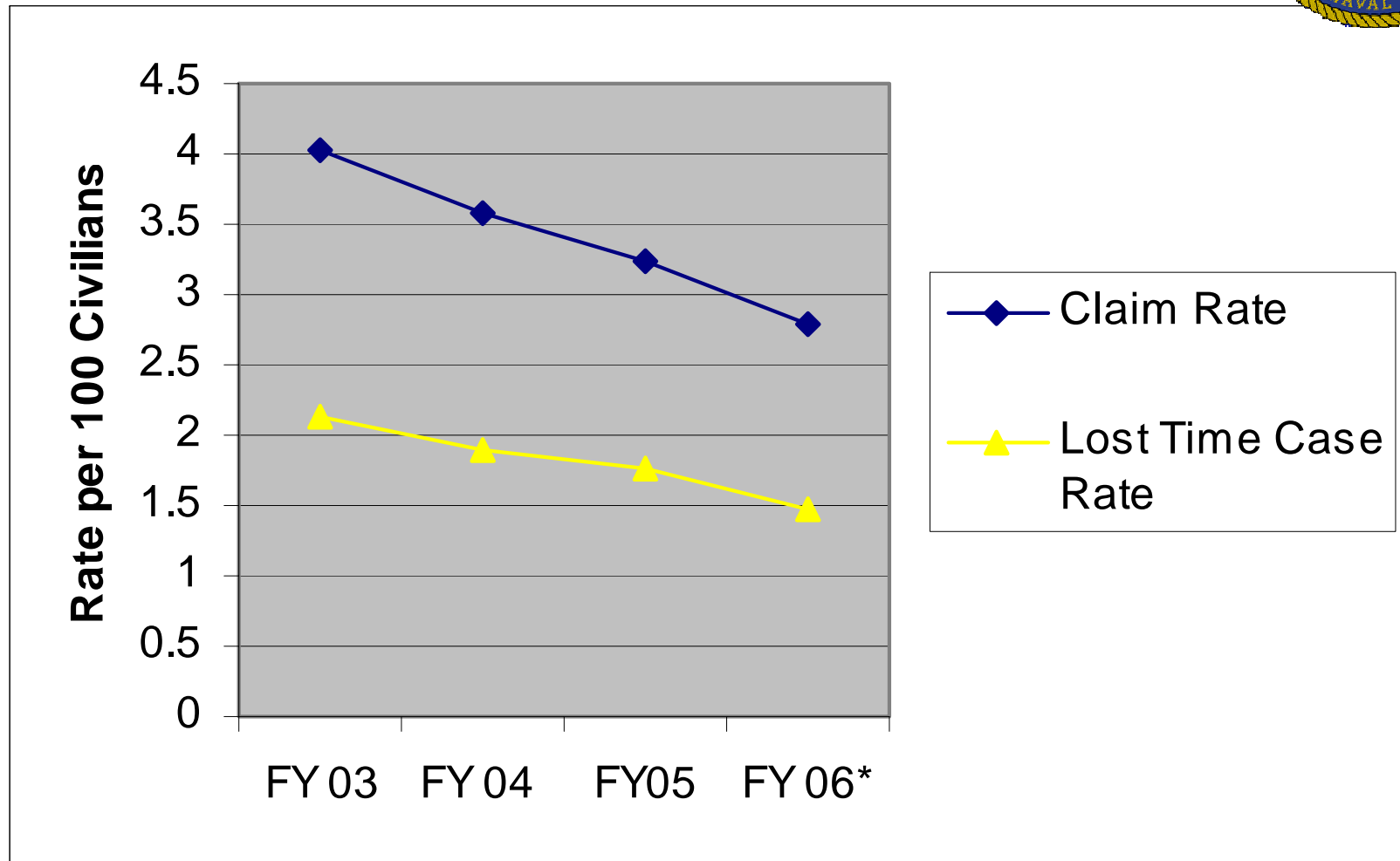
CIVILIAN LOST WORK DAYS



	<u>30 Sep 06</u>	<u>01 Oct 05</u>	<u>Reduction</u>
LOST WORK DAY FY RATE COMPARISON:	26.94	29.92	10%
FY02 LOST WORK DAY RATE:	34.30		21%

Source: Naval Safety Center

Workers' Compensation Claim Rates for Navy Civilians



*FY06 Rates are projected, based on FY 06 1Q, 2Q, 3Q data from Dept. of Labor

Hearing Loss in the Navy



The Challenge

- Almost half of the sailors who complete a career have measurable hearing loss
- VA paid \$200M in hearing loss claims to over 25,000 DoN veterans in 2005
- Noise abatement engineering in new ship design could return 17:1 on investment

Statistical Analysis of Hearing Loss



CNA Findings

- Time spent on surface warships has largest impact on hearing loss
- Time spent on submarine engine and machinery rooms, surface support, and air wings was not significantly different than shore
- Individuals assigned to submarines not in engine and machinery rooms did experience hearing loss
- Probability of surface warship sailor losing hearing is .47; probability of shore sailor losing hearing is .26.

(CNA Statistical Analysis of Hearing Loss Among Navy Personnel, Feb 2005)

Ratings Most At Risk

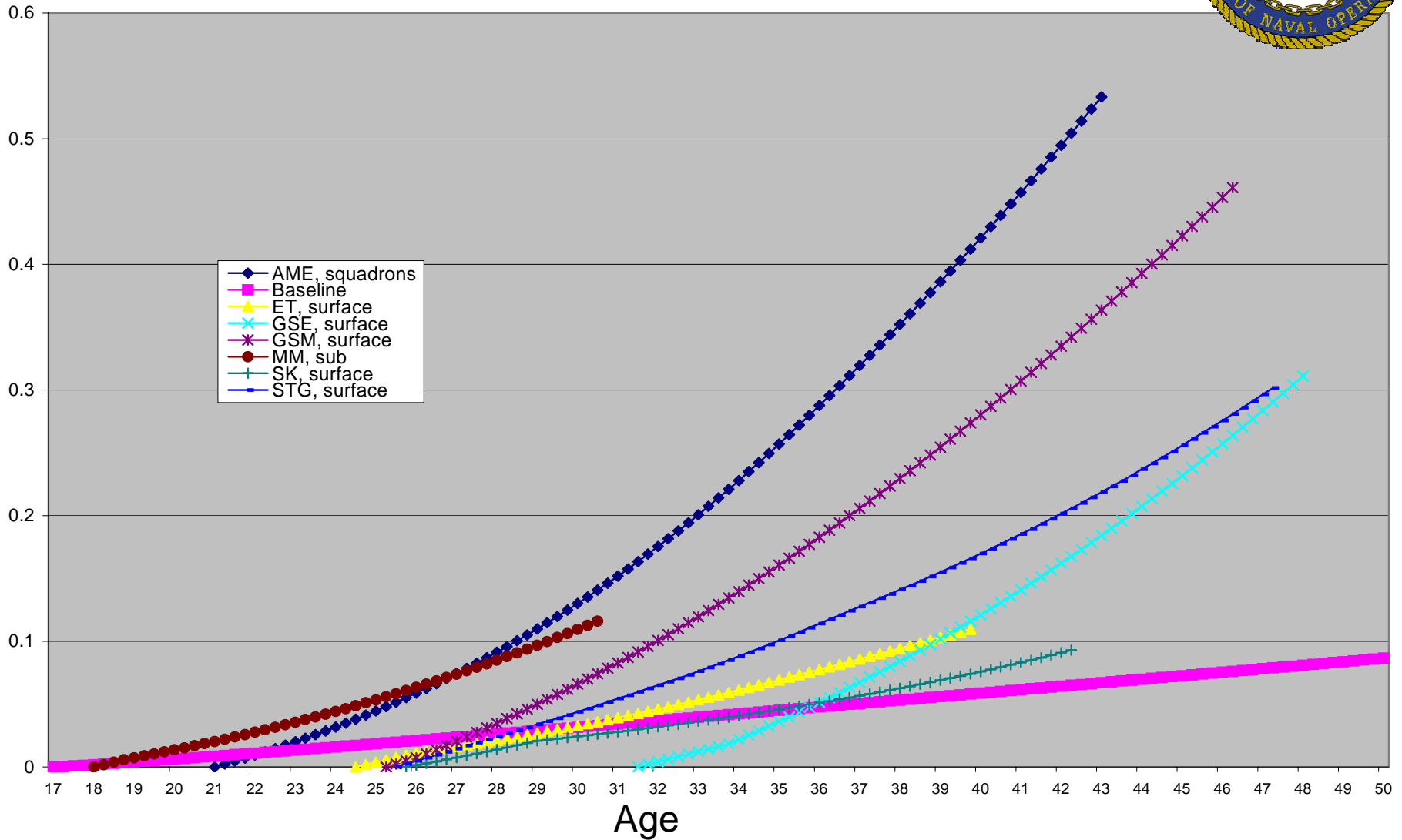


- Gas Turbine Tech (4.9)
- Sonar Tech - Surface (3.7)
- Engineman (3.7)
- Damage Controlman (3.3)
- Gunners Mate (3.3)
- Sonar Tech - Sub (3.3)
- Airman (3.1)
- Electrician's Mate (3.0)
- Seaman (2.9)
- Aviation Support Equip. Tech. (2.9)
- Baseline: Admin (1)

The risk is the hazard ratio, relative to someone in a quiet job.

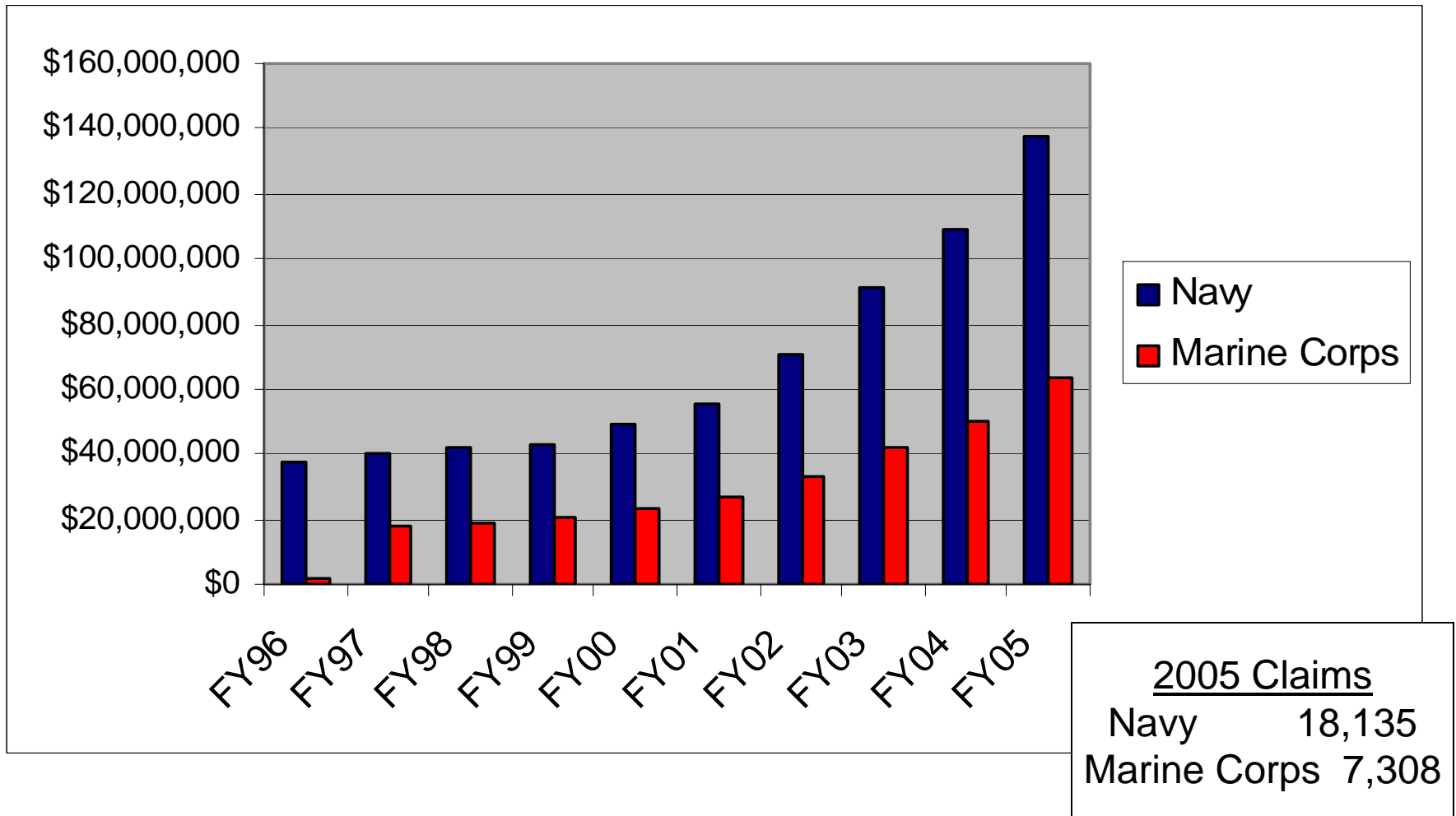
Source: CNA report to Navy, June 30,2006

Probability of Hearing Loss



Source: CNA report to Navy, June 30, 2006

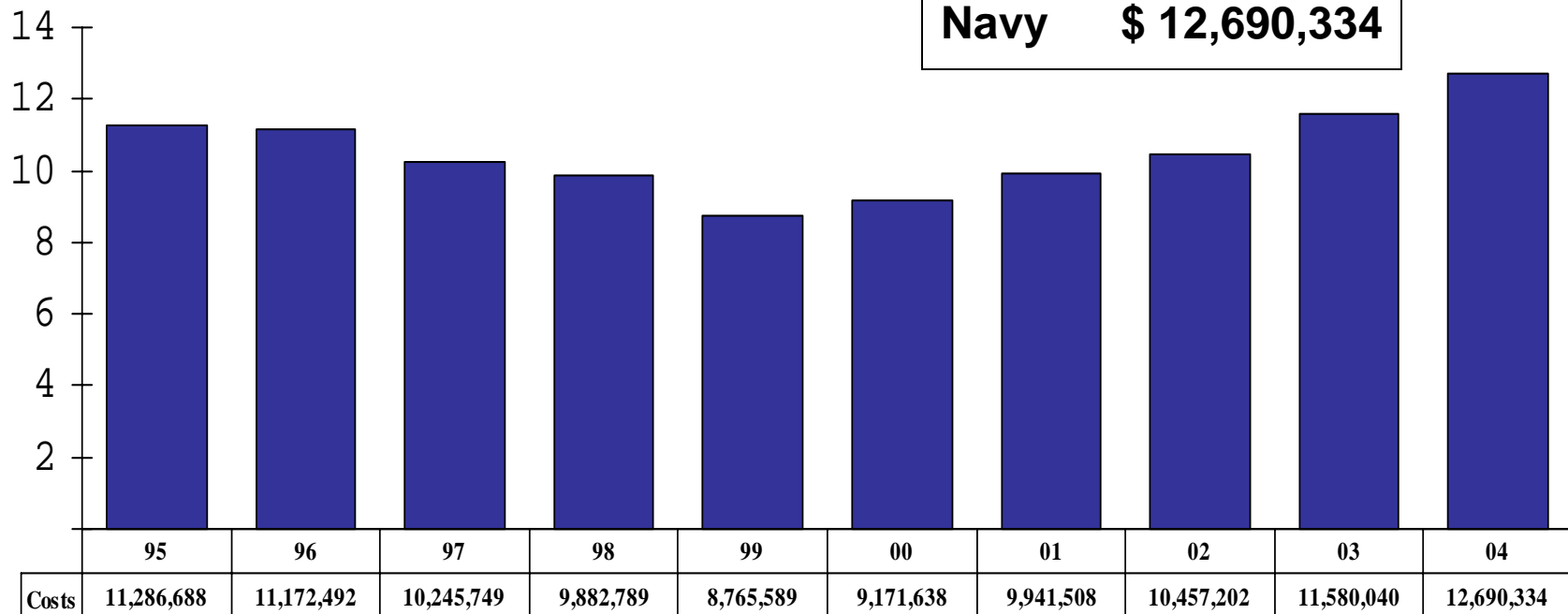
Navy Veterans Hearing Loss Disability Costs 1996-2005



Civilian Hearing Loss Navy Compensation Costs 1995-2004



Millions of Dollars



There were 2915 claimants.

Source: Office of Workers' Compensation Program Claims

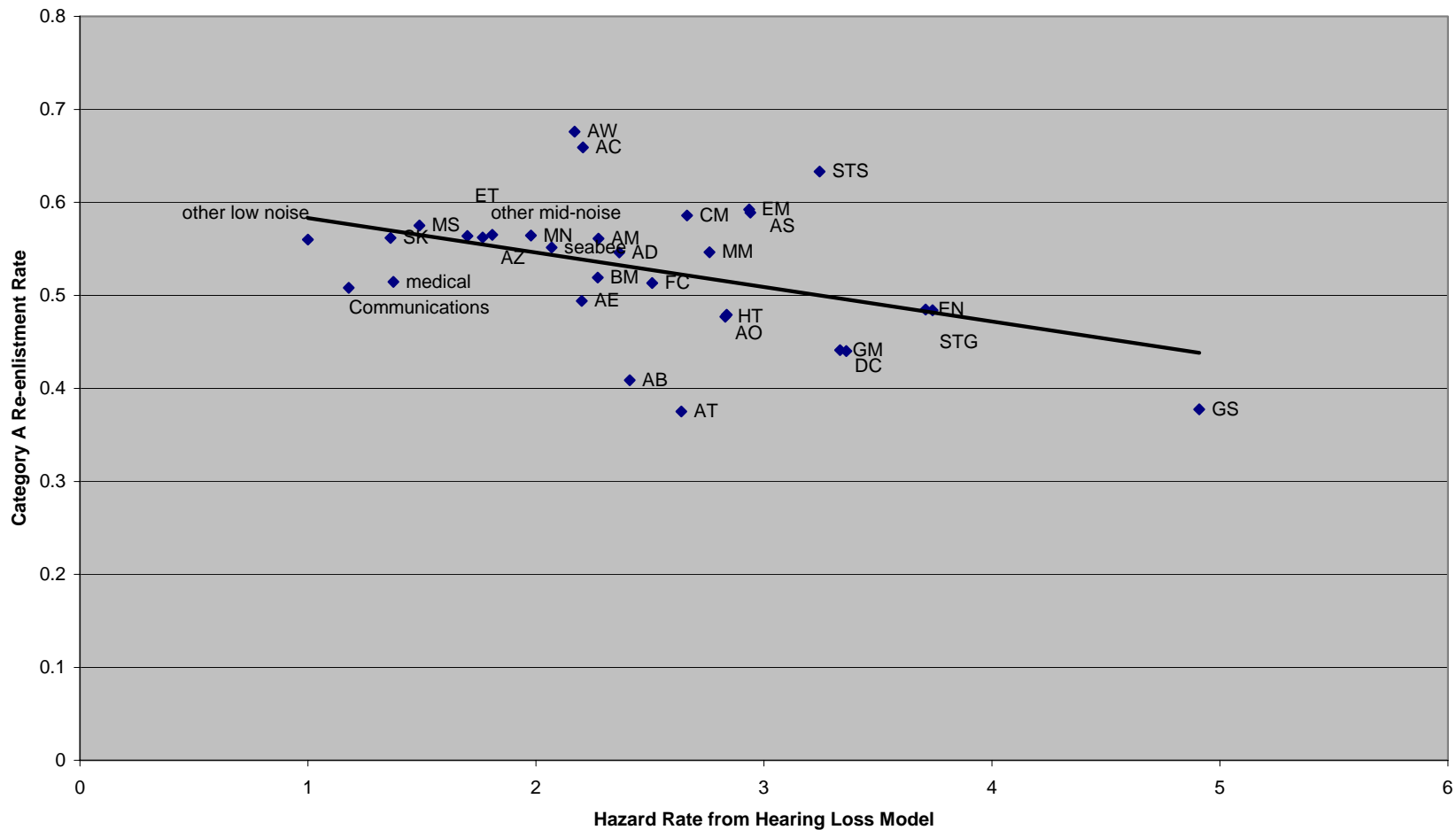
Economic Consequences of Hearing Impairment



- Lost time and decreased productivity,
- Loss of qualified workers through medical disqualification,
- Military disability settlements,
- Retraining, and
- Expenses related to medical treatment, such as for hearing aids.

Noise-induced hearing loss is the Fleet's number one occupational health expense.

Jobs With Higher Probabilities of Hearing Loss Have Lower Re-Enlistment Rates



Source: CNA report to Navy, June 30, 2006

A Prototype Calculator for the Hearing Loss Project

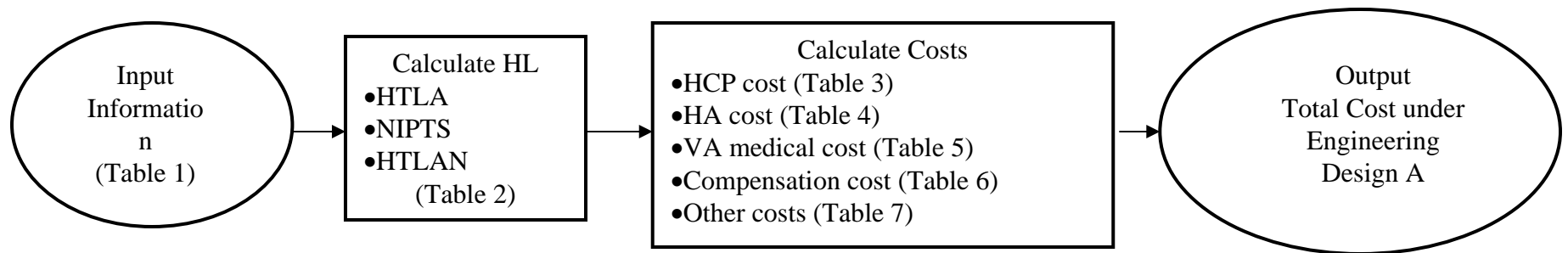


- Evaluate the life cycle costs and benefits (avoided costs) of noise control on Navy ships.
- Recommend specific cost effective ship designs and other actions that take noise reduction measures into account.
- Rank several case studies from best to worst in terms of return on investment.

Calculate the Total Cost of an Engineering Design



- Test Design “A”



Various designs can be compared to select the lowest cost option.

Anticipated Result



- The Hearing Loss Calculator will enable design and acquisition personnel to quantify the benefits of noise reduction in new ship design.
- Total life cycle costs will be calculated.
- Calculator will be available on the Naval Safety Center Website,
<http://www.safetycenter.navy.mil>



Ergonomics



- Naval Facilities Engineering Command (NAVFAC) Ergonomics Center of Expertise offers
 - Ergonomic Evaluations
 - Hazard Abatement Funding
 - Training
 - Technical Support
- Checklists developed and published on the Web.
- Published 40 “Success Stories” on the Web to provide inspiration and “how to”.

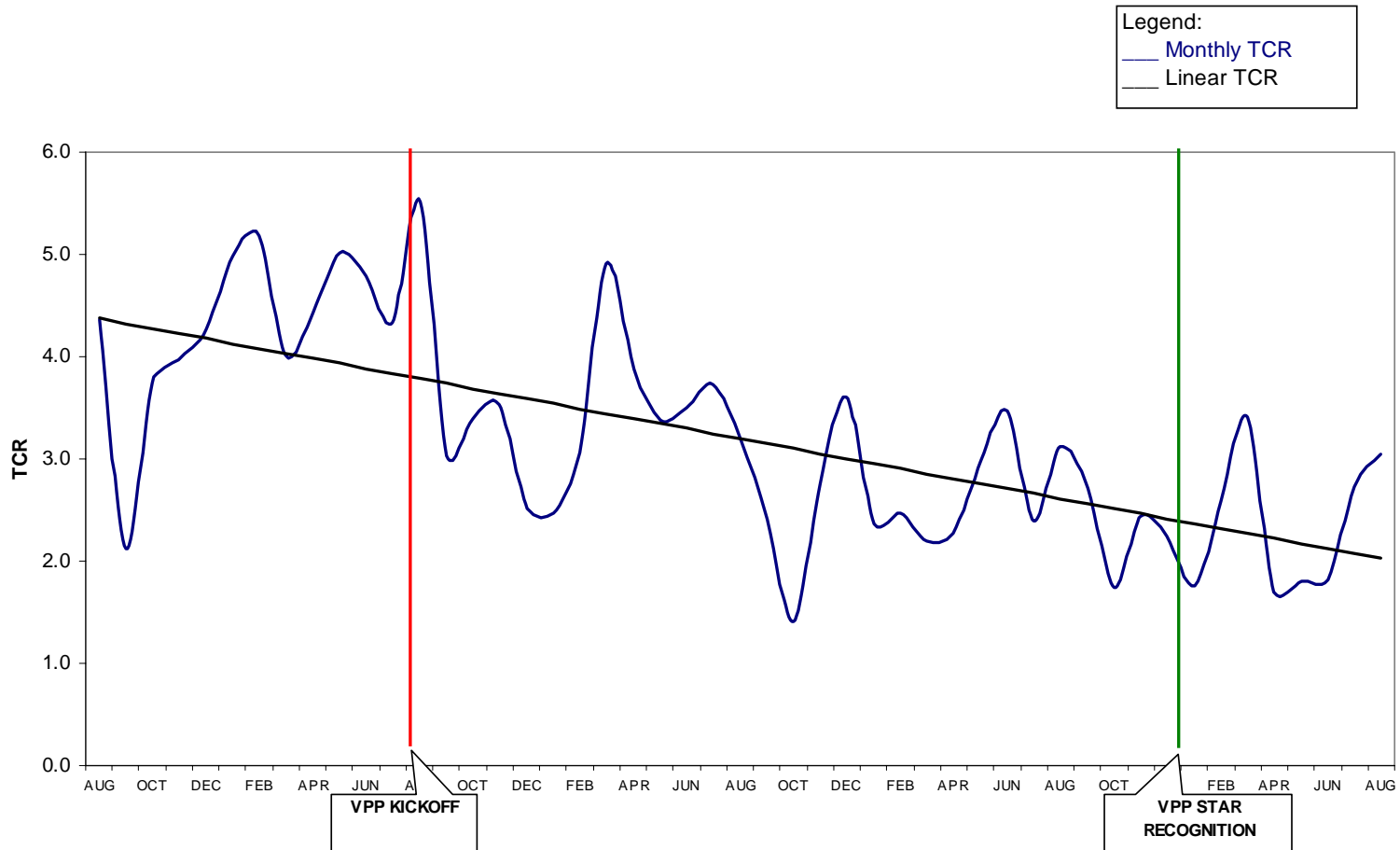


Navy Joins VPP



- Three Navy Shipyards, employing a total of 25,000 civilians, have earned the OSHA VPP Star:
 - Portsmouth Naval Shipyard
 - Norfolk Naval Shipyard
 - Puget Sound Naval Shipyard and Intermediate Maintenance Facility
- Two Naval installations, with 5000 civilian employees, in the Southeast have been recommended for VPP recognition.

Norfolk Naval Shipyard Reduced Injuries by 58%



Integrated Safety Management



- Navy Region Southeast, with 15 installations
- Three year program
- Reduced injuries and lost work days
- Emphasis on Job Hazard Analyses (JHA)
- Two installations enrolled in the OSHA Challenge program and two have just been recommended by OSHA for VPP recognition.

Questions??

Contact:

Mary Anne Chillingworth

maryanne.chillingworth@navy.mil