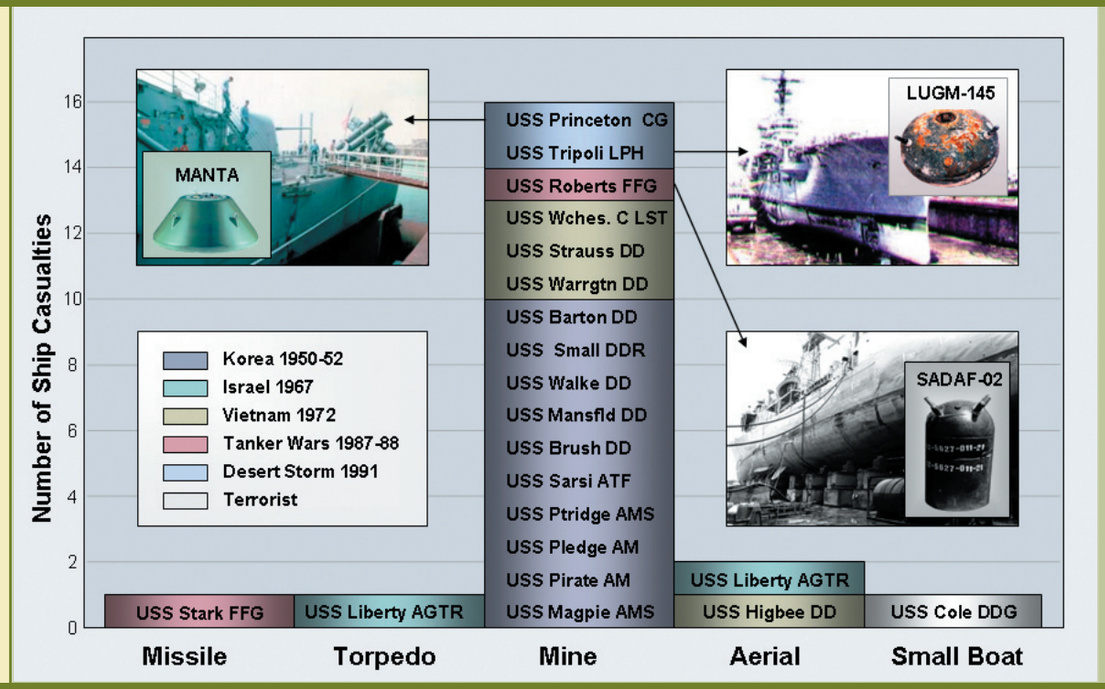
Why Mine Warfare?



U.S. Ship Casualties by Weapon Type Since 1950

The Operational Need

Sea mines are relatively inexpensive weapons being purchased in ever-increasing quantities, by nations seeking to deny the U.S. Navy and its allies access to the world's oceans. The threat these mines pose is real. According to an FBI debriefing of an Iraqi spy, Osama bin Laden asked Saddam Hussein to give him Chinese-made sea mines during a meeting in Sudan in 1995.

Dreadfully Old, *Deadly as Ever*

"We have lost control of the seas to a nation without a navy, using pre-World War I weapons, laid by vessels that were utilized at the time of the birth of Christ."

Rear Admiral Allan E. "Hoke" Smith
(to CNO) Admiral Chester W. Nimitz
October 1950

OPPORTUNITIES FOR INDUSTRY

If your corporation or organization:

- Supports the U.S. defense or national industrial bases,
- Sells goods and services to the various Departments of the Executive Branch of government,
- Advises and/or assists the DoD in the business or technical aspects of government policies and practices concerning:
  - Acquisition,
  - Research and Development,
  - Procurement, and/or
  - Logistics support . . .

. . . The U.S. Navy Needs You!

Do you have an idea for improving the readiness or capability of the Navy's Mine Warfare Branch?

For example, could your company:

- Develop technologies that will enable more efficient and effective localization, identification and neutralization of sea mines?
- Create systems that reduce the risks of mine warfare and that would help keep diver and dolphin out of the minefield?
- Assist in other ways to improve capabilities?

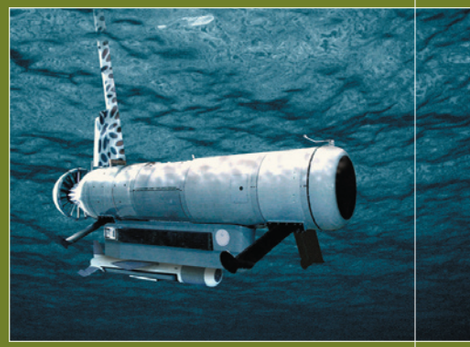
If so, please contact:

Director, Expeditionary Warfare (N85)
2000 Navy Pentagon
Washington, DC 20350-2000

EXPEDITIONARY WARFARE DIRECTORATE

N852

Mine Warfare Branch



Mine Warfare Today

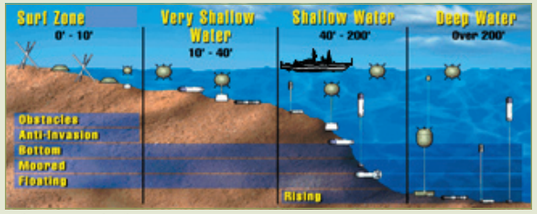
A Dedicated Triad of Surface, Air and Underwater Assets

Mine warfare provides Sea Shield with a capability that assures access and freedom of operations for joint forces throughout the battlespace, and projects a defense around joint, allied and coalition forces. Mine Countermeasures (MCM) missions are driven by the Navy's need to rapidly establish secure operating areas, transit routes and littoral penetration areas.

2 AMCM Squadrons

14 Avenger-class MCM Ships

Naval Special Clearance Team ONE



The Littoral Threat

Mine Countermeasures Vision

Modernize the Current Fleet & Transition to OMCM

The two principle goals of the Navy's MCM vision are to accelerate the MCM process and timeline, and to reduce risk to the joint force. Transformation of MCM Capabilities builds upon existing systems and incorporates new technologies that best fill capability gaps.

The Littoral Combat Ship

The future force built around the Littoral Combat Ship (LCS) supports the continuation of programs of evolving technologies and capabilities that will meet the MCM vision and fill capability gaps. The multi-mission LCS provides the Navy with the capability to address MCM from a modular perspective consistent with the organic concept of employment.

The first MCM systems to deploy on LCS will be the Remote Minehunting System (RMS) and AQS-20A minehunting sonar.

RMS

AQS-20A

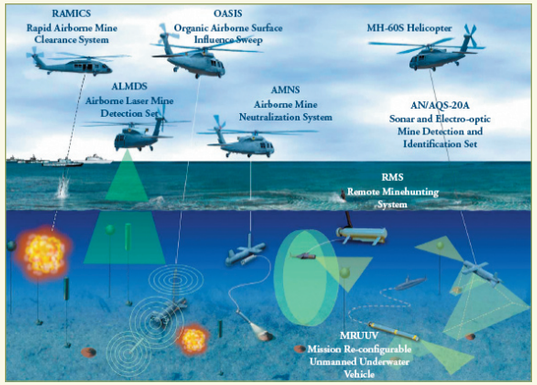
Mine Countermeasures of the Future

Mainstreaming for a Fleet-Wide Warfighting Capability

In the future, mines will remain a significant asymmetric threat presenting anti-access challenges that can disrupt elements of *Sea Power 21*. As seen with the Improvised Explosive Device (IED) and land mine threat in Iraq, sea mines pose a similar threat to naval and commercial vessels by preventing access, negating capability advantages, and disrupting or slowing operations in the littoral battlespace.

Organic Mine Warfare Systems

Organic Mine Warfare is fast becoming a reality with near term deployment of the Remote Minehunting System (RMS) and AQS-20A sonar on LCS. The LCS with Mine Warfare Mission Packages will provide increased responsiveness, flexibility, and capability to operational commanders. The future transformation will take MCM from a platform-centered legacy force to a "capability-centered" force that is distributed and networked with the ability to provide unique influence across the entire maritime domain from blue to brown water. LCS will achieve full MCM capability by 2012.

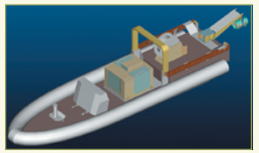


> *"If we didn't have UUVs, you could multiply the time to clear the [Umm] Qasr area by two-and-a-half, an additional 20 days."*
>
> Captain Mike Tillotson, Commander
> Naval Special Operations Task Force 56
> October 2003

Unmanned Vehicles

Continued development of next generation unmanned vehicles and sensors is essential to reduce MCM timelines, increase MCM capacity, and minimize exposure of Sailors and Marines to the mine threat.

SWORDFISH



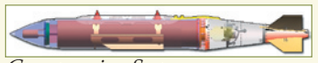
USV SWEEP

SMCM UUV & LFBB

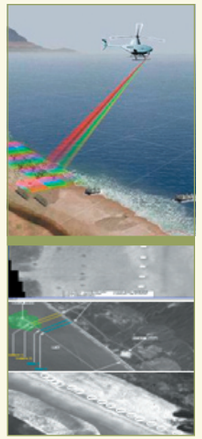
The Assault Breaching System (ABS)

In order to support Operational Maneuver from the Sea (OMFTS) in an anti-access environment, a rapid mine countermeasures capability for the surf zone (0'-10') and beach zone is required. The ABS is the naval approach to fielding a significant capability in this regime.

JDAM Assault Breaching System



Countermine System



Coastal Battlefield Reconnaissance & Analysis (COBRA)