Amphibious Requirements in Support of Expeditionary Warfare

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24 October, 2007
• Priorities
  – Sustain the Current Force
  – Define the Future Force

• Resources
  – Limited Funds
  – Limitless Considerations

ACCEPT MORE RISK !
DEMAND SIGNALS

• Applications of amphibious capability:
  – Cold War (1946-1989)
  – Post-Cold War (1990-2006)

• Competing global requirements:
  – DESERT STORM competed with crises in:
    • The Philippines
    • Liberia
    • Somalia
    • Southern Turkey / Northern Iraq
    • Bangladesh
  – OEF, OIF, and HOA have competed with crises in:
    • East Timor
    • Kosovo
    • Liberia
    • Haiti
    • Philippines X2
    • Indonesia
    • Sri Lanka
    • US Gulf Coast
    • Pakistan
    • Lebanon

1990: 60 amphibious ships
  30 for DESERT STORM (50%)

2003: 38 amphibious ships
  24 used for OIF I (65%)

73 doctrinal amphibious ops:
  – 4 Assaults
  – 1 Withdrawals
  – 3 Demonstrations
  – 2 Raids
  – 63 “Other Amphibious Ops” such as NEO or HA/DR

12 “such other duties as the President or the Secretary of Defense may direct” (air strikes, destruction of oil platforms, etc.)
• Achieve extended service life through modernization.
  – LPD 4
  – LSD 41 / 49 ML
  – LHA 1
  – LHD ML

• Program Challenges
  – ML requirements exceed current funding.
  – Defining aviation / ship integration issues.
    • Environmental impacts
    • Deck heating
    • Hard mount relocation
  – Matching funding to accomplish within projected schedule.
    • MV-22 Deployments
    • JSF
      – Developmental Test (DT) 2010
      – Operational Test (OT) 2012
      – Initial Operational Capability (IOC) 2012
LHD Systems of Interest
(LHA 6 Similar)

- Non-Skid
- In-deck lighting
- CMW/AFFF
- Flight Deck Steel
- CIWS
- SPN-41
- NSSMS
- RAM Launcher
- NULKA
- TV-DTS
- UHF SATCOM
- TV-DTS
- WSC-8 Liferafts
- WSC-6 on LHA 6
- F=Fueling Stations
- Liferafts
- GBS
- WSC-8 Liferafts
- F=Fueling Stations
- LHA 6 Similar
FUTURE AMPHIBIOUS SHIPS
• Recapitalize amphibious fleet with 21st century ships:
  • LPD 17 class.
  • LHA(R) and LHD(X).
  • LSD(X).

• Requirements Challenges
  – View of nation’s amphibious capability:
    • Overmatch area that can assume reduction/more risk?
      -or-
    • Premier GWOT capability worthy of more force structure?
  – USN - USMC Agreement
  – Role of MPF(F) does it ‘count’ as amphibious lift?

Bottom Line: Affordability
MPF(F) REQUIREMENTS

• Concept
  – Enhance legacy Pre-positioned assets with an operational capability.

• Requirements Challenges
  – Reduce standing Manpower requirements.
  – Create a viable training and employment strategy for MPF(F) crewing.
  – Vehicle & Personnel Transfer system (s)
  – Selective Offload Technology
Connectors

- LCAC Replacement
  - Joint Maritime Assault Connector (JMAC)
- LCU Replacement
  - Functional Needs Assessment
- Joint High Speed Vessel (JHSV)
QUESTIONS
SUMMARY

• Significant Challenges
  – Sustainment
  – Modernization
  – Acquisitions
JOINT HIGH SPEED VESSEL
JHSV Requirements

• Concept
  – Procure high-speed intra-theater medium lift able to operate from austere ports

• Requirements Challenges
  – Cost constraints
  – Balancing sometimes conflicting Joint requirements
  – Non-combatant
  – Commercial, non-developmental
Joint Maritime Assault Connector (JMAC) Requirements

• Concept
  – Ship to Shore Connector to prepare for and conduct movement in support of amphibious lift requirements
  – LCAC Service Life Extension Program (SLEP) reach end of service life starting in 2014

• Requirements Challenges
  – No current air cushioned vehicles in production
  – Payload Weight
  – Technology development
    • Engines (Marine Environment)
    • Human Systems Integration
    • Composites
• **Concept**
  – Enhance C4I capability across Amphibious platforms and Amphibious components.

• **Requirements Challenges**
  – Increase Bandwidth
    • Decrease Antenna Farm
  – Tactical picture
  – Wireless
LSD MID-LIFE PROGRAM

Capability Description

• Return ships to capable Fleet Asset status; able to meet amphibious mission requirements today through 2038.

Improvements

• All Electric (#1 Priority)
• Diesel Engine Improvements
• Fuel & Engine Maintenance Savings System
• Tech Insertion (Console Replacement)
• Survivability
• Amphibious Assault Systems
• A/C & Chilled Water Increase
• Air Compressors (Replace)

Characteristics/Description

• Current Average Age: 15 years
• Based on Fleet priorities, Inspection and Survey (INSURV), Casualty Reports (CASREP) and Planning Yard/ Ship Systems Engineering Station (SSES) studies.
• 36 Week Availability

LSD Mid-Life Fielding Plan

1-2-2-2-2-2-1

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Capability / Improvements

- Maintenance cost drivers being identified and prioritized which, when corrected, will provide systems and/or equipment capabilities equal to, or improvements, on existing systems.
- Selected capability upgrades include – Fuel Oil Compensation System, Aux / Propulsion Sys, Assault Sys, Corrosion Prevention Improvements, Gender Neutral/SAR DET/ESG Berthing improvements Boat Davits

Characteristics / Description

- LHD average age 10 years (LHD 1 is 17 years)
- **M-L:** Phased program to identify Fleet maintenance burdens, engineer cost effective solutions, and implement solutions to overcome maintenance backlog and provide Fleet identified priority capability improvements.
- Model is LHA Mid-Life
- Based on fleet priorities
- **Goal:** Enable LHDs to reach 40-year service

### LHD 1 Class

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Increased Capability

- **MV-22 Integration:**
  - Maintenance shop upgrades
  - Logistics support stowage
  - Topside modifications
  - Aircraft handling Modifications

- **JSF Integration**
  - Maintenance shop upgrades
  - Ordnance support & handling
  - JSF specific servicing systems and aircraft handling
Most commonly used approach paths (AV-8B)

AV-8Bs are permitted to land anywhere along tramline

Bottom Line: Majority of port side deck edge will be exposed