CAPT Ed Barfield, USN
OPNAV N853
Branch Head, Amphibious Warfare
“The future will be more complex, where all conflict will range along a broad spectrum of operations and lethality, where even near-peer competitors will use irregular or asymmetric tactics, and non-state actors may have weapons of mass destruction, mines, or sophisticated missiles.” - Secretary of Defense Gates
Amphibious Combatant Evolution

ARG - Now

LHD/LHA

Enable Operational Maneuver From the Sea

LPD 4 → LPD 17

ARG - Future

LHD/LHA(R) → LHA(R) Flt 1?

Enable Ship-to-Objective Maneuver

LHD/LHA(R)

Improved:
- Capacity for Larger / Heavier Aircraft/Vehicles
- Self-Defense
- Survivability
- C4I
- Flexibility (Split ARG)
- QOL

LPD 17

LSD 41/49

LSD 41/49 → LPD 17 Flt 1?
Amphibious Combatant Recapitalization CBA

- **Capability-Based Assessment (CBA) considering**
  - LSD and LHD recapitalization
  - Projected USMC lift requirements (2020s timeframe)
  - USMC air/ground vehicles are becoming heavier/larger

- **CBA studying Replacement options**
  - For LSD Recap
    - LPD 17 design (repeat or modified repeat)
    - New design (small--similar to LSD 41/49 size)
    - New design (large--carry 100% of lift requirement)
  - For LHD Recap
    - LHA(R) Flight 0 (existing LHA 6 design)
    - LHA(R) Flight 1 (with well deck)
    - New design (carry 100% of lift requirement)

- **CBA will report to the Resource, Requirements Review Board in Jan 2010**
  - Enable POM12 decision on options (repeat/mod repeat or new design)

RECAPITALIZING TO PROVIDE MODERN, AFFORDABLE AMPHIB FLEET
Major Program Update
LPD 17 class are flexible, multi-mission ships

Functionally replaces LPD 4, LSD 36, LKA 113, and LST 1179 Ship classes

LPD 17 missions include:
- Forward Presence,
- Deterrence,
- Sea Control,
- Power Projection,
- Maritime Security
- Humanitarian Assistance / Disaster Response
LHA 6

- LHA(6) provides flexible, multi-mission platforms
- LHA(R) is a modified LHD 8 design
- Increased aviation capacity to better accommodate JSF/MV-22
- Provide adequate weight and stability margins for 40 year service life
Joint High Speed Vessels (JSHV)

- Intra – theater lift and littoral maneuver
- Combines speed, range, and payload while providing shallow water/austere port access.
- Bridges the gap between rapid/low volume airlift (C-17/C-130) and slow/high volume sealift (LCU-2000/LSV)
**Mission:** Land Surface Assault Elements of USMC from ship to shore

**Description:** Landing Craft Air Cushion (LCAC) replacement

**Platforms:** Air Cushion Vehicle; Same footprint as LCAC SLEP

**Employment:** Ship to shore surface connector in support of STOM and MPF(F)

- Mission: conduct ship-to-shore movement in support of surface assault elements of the MAGTF
- LCAC replacement possesses same footprint as LCAC SLEP
- Draft formal requirements (CDD) and Key Performance Parameters in Joint Review
Preserves amphibious warfare triad (LCAC / EFV/MV-22)

- Allows execution of Operational Maneuver From The Sea (OMFTS) and Ship to Objective Maneuver (STOM)

- Defers requirement to fund next generation LCAC from FY00 to FY10

- Challenges
  - COTS obsolescence, Technology Insertion
  - Growth work increasing due to the degraded condition of the craft entering SLEP availabilities

OCT 09: 24 of 72 SLEPs complete
AMW OAG has ranked this as a top five Fleet need over the last two years.

Current LCU 1600 craft have an average age of 38 years and suffer from obsolescence and increased maintenance costs.

Way Ahead
- Initial Capability Document is required to proceed through Navy staffing.
- Brief to NCB in NOV 09 for approval to proceed to the CBA and ICD.
Return ships to capable Fleet Asset status; able to meet amphibious mission requirements through 2038

Objective is to
- Improve declining material condition and readiness,
- Replace obsolete equipment and
- Reduce total ownership costs through technology insertion

1 of 12 LSD Mid-Life (GUNSTON HALL (Norfolk) completed May 2009)

GERMANTOWN (San Diego) completes in DEC 2009 and WHIDBEY ISLAND (Norfolk) completes in Jan 2010
LHD MID LIFE & JSF INTEGRATION

- Essential modernization and mission improvements to reach 40 yr service life
- Nine identified ship changes required for JSF on LHDs funded with fielding plans in place
- Six cornerstone alterations – nine separate SCDs – identified
- Enabler ship alterations
  - MV 22 service and shop mods (hangar and stowage)
  - Fuel Oil Compensation (stability)
- JSF Integration
  - JSF External Environment mitigation pending technical analysis
Maritime Prepositioning Force Future (MPF (F))

The MPF(F) Program
- Consists of a family of ships that significantly enhances the current Maritime Prepositioning Force (MPF) program
- Key enabler of seabasing, providing "combat ready" forces from over the horizon.
- 3 Increment Acquisition Strategy

Program under significant scrutiny in QDR 12

MPF (F) requirements remain valid
CAPT Ed Barfield  Branch Head  703 614 0385
LtCol Mike Chambers  Deputy Branch Head  703 614 0395
CDR Dan Bryan  In-Service Amphib Combatants  703 614 0393
LtCol Steve Ware  MPF Requirements  703 614 2236
Mr. Marty Bodrog  Future Amphib Requirements  703 695 0917
LCDR Greg Baker  Future Amphib Requirements  703 695 0917

Questions?
Naval Amphibious Baseline (NAB) is a single SCD developed by the Service HQs, Fleet, USMC Operating Forces, and in conjunction with the SYSCOM.

- Standardizes MEU and PHIBRON command and control spaces across LHD 1 class
- Removes obsolete equipment
- Installs modern equipment
- Considers work flow and human factors engineering

- Significant cost avoidance
- DRAFT NAB Charter prepared for staffing
- N85 and PPO (Operations) are proposed to co–chair NAB Boards for future changes
Amphibious Combatant Fleet Transformation

1990 62 Ships
- LHD
- LHA
- LPH
- LPD 4
- LSD 36
- LSD 41
- LST 1179
- LKA 113

2009 31 Ships
- LHA / LHD
- LPD 4
- LHD / LHA 6

2021 33 Ships
- LPD 17
- LSD 41 / 49

Requirement for 38 ships, risk accepted at fiscally constrained 33 ship force structure
## Design Improvements

### SMART TECHNOLOGY
- Ship’s Wide Area Network
- Engineering Control System
- Integrated Bridge System
- Wireless Communications
- Waste Stream Management
- Fire/Smoke Sensing System
- Integrated Condition Assessment System (ICAS)

PLUS
- Fiber Optic Cable Plant
- Radar Cross Section Reduction
- Integrated Product Data Environment
- Advanced Boat Handling
- Medical Complex
- Mixed Gender design for max flexibility

### REDUCED TOC/MAINTENANCE
- Optimized Manning
- Phased Maintenance Concept
- Extended Dry Dock Cycle
- AEMS Mast
- EFV Gun (Mk 46)
- Eliminated internal stowage of MOGAS
- 25% Maintenance Reduction in PM/CM Maintenance Reduction Initiatives
  - High Solids Coatings in tanks and Well Deck Overhead
  - Synthetic Well Deck Planking
  - Corrosion Control Changes
  - Latest WTD Changes
  - Twin Screw Reefer Compressors
  - SCBA vs. OBAs
  - Self Cleaning Lube Oil/Sea Water Strainers

### QUALITY OF LIFE
- AC Plant Capacity
- Modular Berthing
- Sit Up Berths
  - Crew and Troop
- Physical Fitness Centers
- Ship-wide Access to SWAN drops
- Training Department
  - 1 Officer, 4 Enlisted
- Training Spaces
  - Electronic Classroom
  - Learning Resource Center (50 Laptops for checkout)
  - Interactive Coursewear
  - Marine Training Spaces

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**Enhanced Operations - Reduced Workload - Improved QOL**

As of November 2009
30 yrs of responsive and successful employment across the operational spectrum has yielded demand in excess of supply