Marine Corps Shipbuilding Requirements and MPS Enhancement Strategy

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Jim Strock
Director, Seabasing Integration Division
Capabilities Development Directorate
Marine Corps Combat Development Command
Quantico, Virginia 22134
703-784-6094
james.strock@usmc.mil
Agenda

• Amphibious Ship Requirements and Inventory Levels

• Maritime Prepositioning Ships Enhancement Strategy
Key Points

Marine Corps Shipbuilding Requirements

• Warfighting. Attain a minimum 38 ships to support forward presence and engagement, and generate 34 Ao for 2.0 MEB AE

• Stay the course with LPD-17 production. Designate LPD-17 hull form for LSD replacement.

• Return to Big Deck well deck in LHA-8
  – FY16 vs FY17 ship
  – Restore R&D funding now

• Achieve credible seabasing capabilities by enhancing legacy MPS squadrons
  – T-AKEs, LMSRs, MLP Lite, plus technology insertion
  – Restore R&D funding now

• NSFS. Carefully execute and monitor Analysis of Alternatives and assess all hull forms to meet NSFS requirements.
Amphibious Assault Ship Requirements

- 7 Jan 09 SecNav, CNO, and CMC letter stated requirement for 38 amphibious ships fiscally constrained to an inventory minimum of 33

- 33 inventory level accepts risk in MEB support elements
**Assault Echelon Shipping**

31 ships in commission as of 9 Nov 09

<table>
<thead>
<tr>
<th>LHA / LHD (Amphibious Assault Ship)</th>
<th>Location</th>
<th>HP 4 (Amphibious Transport Dock)</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Hull LHA 4  Ship USS Nassau</td>
<td>Norfolk, VA</td>
<td>Hull HP 7  Ship USS Cleveland</td>
<td>San Diego, CA</td>
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<tr>
<td>Hull LHA 5  Ship USS Peleliu</td>
<td>San Diego, CA</td>
<td>Hull HP 8  Ship USS Dubuque</td>
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<td>Hull HP 9  Ship USS Denver</td>
<td>Sasebo, Japan</td>
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<tr>
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<td>Sasebo, Japan</td>
<td>Hull HP 15 Ship USS Ponce</td>
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<td>Hull LHD 8  Ship USS Makin Island</td>
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<tr>
<th>LPD 17 (Amphibious Transport Dock)</th>
<th>Location</th>
<th>LSD 41/49 (Dock Landing Ship)</th>
<th>Location</th>
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<td>Hull LSD 42 Ship USS Germantown</td>
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<td>Hull LSD 43 Ship USS Fort McHenry</td>
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<td>Hull LPD 20  Ship USS Green Bay</td>
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<td>Hull LSD 44 Ship USS Gunston Hall</td>
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<td>Hull LSD 45 Ship USS Comstock</td>
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<td>Hull LSD 51 Ship USS Oak Hill</td>
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<tr>
<td>Hull LSD 43 Ship USS Fort McHenry</td>
<td>Little Creek, VA</td>
<td>Hull LSD 52 Ship USS Pearl Harbor</td>
<td>San Diego, CA</td>
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HMMWV to JLTV

HMMWV (soft doors)
Measured = 109 SqFt

JLTV
Measured = 147 SqFt

30%
BROKEN STOWAGE FACTOR

6 in
86 in
10 in
183 in

6 in
96 in
24 in
220 in
Additional Lashings

MTVR at 39,000 lbs
(unarmored cab with mobile load)
Requires 4 tie-down points

MTVR at 48,000 lbs
(armored cab with mobile load)
Requires 8 tie-down points
MTVR Stowage in LPD 17
Main Vehicle Stow

164”

127”

101”

Maximum stowage in MVS Forward is 151”
Armor/Protection

Significant Impact on Vehicle Height & Ship Stowage Location

Depending on which variant of armored gun mount is added, there is a height increase of 20 to 30 inches per vehicle
Mobile Loads

Extended Bed MTVRs

Short Bed MTVRs
Aviation

“Forward Bone”

“Aft Bone”
Aviation

LHD 5 Hangar Bay

All this and four aircraft
Engineer Equipment

TRAM

- New TAMCN B0063 replaces B2567
- Addition of armor to the cab one key difference
Engineer Equipment

- Various contributors to increases in dimensional data, e.g. spare tire strapped to roof of the TRAM

- Techniques such as this are common practice
Agenda

• Amphibious Ship Requirements and Inventory Levels

• Maritime Prepositioning Ships Enhancement Strategy
Current MPS Configuration

Maersk Termination/Waterman Purchase
- Integrates three LMSRs, a tanker and container ship
- Mitigates T/E Growth and Armoring
- Enables advanced seabasing experiments

LMSR Integration
- 2008
- 2010
- 2011

MPF Equipment Reset Complete
- 2009
- 2011
• **MPS today**
  - Dense packed
  - Integrated with Amphibs during JFEO
  - Requires pier facilities to offload
  - Offload optimized for conventional conflict
  - Optimized for high-end threat
  - Limited Employment Options
  - Limited scalability optimized for MCO

• **MPS tomorrow**
  - Selective offload
  - Integrated into routine, steady state operations
  - In-stream offload
  - Loaded and configured with enablers to address hybrid threats across ROMO
  - Multiple Employment Options
  - Loaded and configured with enablers to address hybrid threats across ROMO
  - Selective offload
  - Integrated into routine, steady state operations
MPS Enhancement Strategy

• Roll-on roll-off cargo ships, coupled with mobile landing platforms, provide key enabling capabilities to fully leverage existing MPS capabilities
  – Selective offload
    • Increased ship stowage capacity allows for reconfigured loads across MPSRON for selective offload
  – In-stream offload of Large, Medium Speed RO/RO (LMSR) with Mobile Landing Platform (MLP Lite)
  – Increased connector lift capacity with MLP Lite
  – Increased ship-to-shore throughput

Notional MLP Lite

T-AKE

LMSR
MPS Employment Options

- Persistent sea based operations from which to coordinate and employ adaptive force packages

- A sea-based force capable enough to prevail against hybrid threats

- MPS can operate in a disaggregated mode for IW/HADR or rapidly aggregate for MCO

Responsive and Tailorable across the full Range of Military Operations
MPS Enhancement Strategy

- Enhance legacy MPS squadrons to improve capabilities and inform MPF(F) development over long term
- CONOPS
  - Modular employment options
  - Steady state amphibious and MPS integration
- Technology insertion
  - JHSV Sea State 3 Ramp Upgrade
  - Pendulation control mod to existing LMSR cranes
  - LCAC integration with Roll-on/Roll-off discharge facility (RRDF)
- Platforms
  - Alaska Class Heavy Lift Ship “MLP Lite”
  - LMSR
  - T-AKE
MPS Enhancements and Concepts

Designed to illuminate MPF(F) capabilities over the long term

Flo-Flo Testing and Demonstration
- Continue at-sea vehicle/equipment transfer and surface interface operations between MPS ships and surrogate Mobile Landing Platform vessels

Joint High Speed Vessel Ramp Upgrade
- Enhance current JHSV ramp design to sea state 3 interface with MPS organic Improved Navy Lighterage System’s Roll-on/Roll-off Discharge Facility

Pendulation Control Mod to Existing Cranes
- Enhance MPF LMSR cranes to operate in sea state 3.

Roll-on/Roll-off Discharge Facility (RRDF)
- Enable MPS RRDF interoperability with LCACs

-- Plus --

Existing STOCKHAM Modifications
- Enhanced command and control, aviation, and berthing capabilities on Maritime Prepositioning Ships ISO SSSP, IW, presence missions

Increased speed, flexibility & versatility for in-stream offloads (no port)
But still requires secure airfield and staging area ashore for MAGTF employment
Proposed MLP Lite

- Allows access to LMSR vehicles when ports are not available or the threat precludes pier side off-load
- Provides improved capability for at-sea selective offload of vehicles and equipment compared to today’s lighterage offload systems
T-AKE

• Convert selected MPSRON containerized supplies/equipment to pallet/QUADCON level and load aboard T-AKE’s
• Gain immediate selective offload capabilities across wide range of MPS sustainment stocks
• Sustain MEB size unit for 1 month
  – Acting as a station ship for shuttle ships could support MEB indefinitely
The addition of the three LMSRs to today’s MPSRON fleet will provide a net increase of over 400,000 square feet, or 18%. Facilitates reconfigured loads across MPSRON and enables selective offload of selected items.

Combined with MLP, LMSR provides for accelerated in-stream vehicle and equipment offload rates.
What’s the Improvement from Today’s MPS?

Near Term:
- Flo-Flo testing & demonstration
- Joint High-Speed Vessel ramp upgrades to sea state 3
- Sea state 3 cargo handling via Pendulation Control System (PCS) crane technology
- Roll-on/Roll-off Discharge Facility (RRDF) interoperability with JHSV and LCAC
- Enhanced command and control, aviation, and berthing via existing USNS STOCKHAM LMSR mods
- T-AKE sustainment selective offload
- Afloat and land-based prepositioned load-out configurations to better support IW missions

Mid Term: In addition to near term MPS improvements, overall enhancements in...
- Flo-Flo sea state 4 at-sea arrival and assembly and vehicle & equipment transfer
- Aviation operations across Flo-Flo, LMSR, T-AKE
- Selective offload & sustainment across T-AKE & LMSR
- Vertical and surface maneuver from the seabase
- C2
- Medical
- Berthing

Long Term:
- MPS recapitalization into MPF(F)
Discipline the Process

Today’s Linear Formula ≠ Integrated Solutions

Long Range Vision
- PPBE Actions and Output
- Marine Corps Impact
- Present
- Unconstrained

Near Term Budgeting
- PPBE Process
- Present
- Constrained

Tomorrow’s Holistic Approach:
Analytically Defendable and Creditable Solutions

Multi-Path Integration ➔ Through MSIC = Integrated Solutions

MSIC
MAGTF-Ship Integration Center

Right Platforms;
Right Transition;
Right Cost

MAGTF
- Equipment Footprint
- Transition Profile

Naval Budget
- Mix
- Design
- Transition Profile
- LRSS
- Procurement
- Sustainment

Ships
- Optimized

ConOps
- Legacy
- InterLeaved
- Future
Integrating M&S for MAGTF-Ship Integration

I
MAGTF Maintenance & Supply Model (M²SM)

II
Flight Deck Model (FDM)

III
Surface Interface Integration Model (SIIM)

MSIC
MAGTF-Ship Integration Center
Endstate: Improved Naval Expeditionary Capabilities
Seabasing Integration Division
Points Of Contact

**ROW WELL...AND LIVE!**

- **Director**
  - Mr. Jim Strock
    - [james.strock@usmc.mil](mailto:james.strock@usmc.mil)
    - Comm: 703-784-6094

- **Deputy Director:**
  - LtCol John Gambrino
    - [John.gambrino@usmc.mil](mailto:John.gambrino@usmc.mil)
    - Comm: 703-784-6884

- **Expeditionary Ship Capabilities Branch:**
  - Mr. Rick Betsinger
    - [richard.betsinger@usmc.mil](mailto:richard.betsinger@usmc.mil)
    - Comm: 703-784-6038

- **MAGTF Planning Branch:**
  - Mr. Jim Horzempa
    - [james.horzempa@usmc.mil](mailto:james.horzempa@usmc.mil)
    - Comm: 703-432-8354

- **Connectors & Doctrine Branch:**
  - Mr. Dave Groves
    - [david.groves@usmc.mil](mailto:david.groves@usmc.mil)
    - Comm: 703-784-6227

- **Futures Branch:**
  - Maj “Atis” Lozano
    - [john.m.lozano@usmc.mil](mailto:john.m.lozano@usmc.mil)
    - Comm: 703-432-8144

- **Requirements & Assessments Branch:**
  - Bob Fitzgerald
    - [robert.a.fitzgerald2@usmc.mil](mailto:robert.a.fitzgerald2@usmc.mil)
    - Comm: 703-432-8180
Questions
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Discussion