16th Annual Expeditionary Warfare Conference

N853 Amphibious Warfare Branch

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Date: 27 October 2011

Amphibious Warfare (N853)

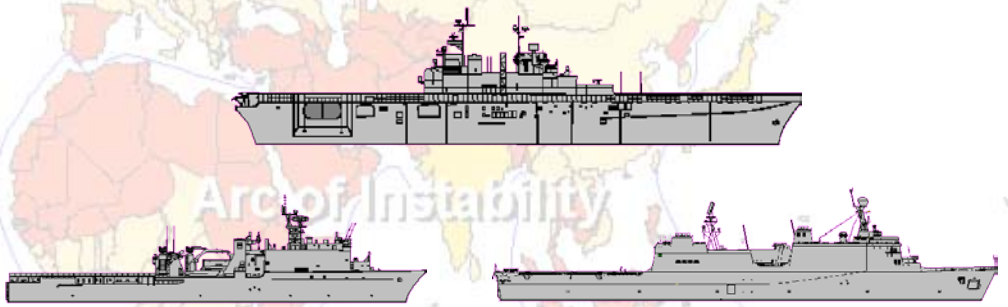
Amphibious Fleet Transformation

- Capability Driven Recapitalization
- Supports Larger/Heavier USMC Footprint
- Full Service Life Ship Modernization
- Supports Joint Strike Fighter Ops
- Supports MV-22 Osprey Ops
- Improved Command & Control
- Improved Self-Defense
- Increased Survivability

Operations from 1- 5 miles off beach → **Sea-Based Operations from 12+ miles**

Balanced Capability

"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



Demand Exceeds Supply

Independent Deployer

Train/Advise/Assist

Relief Operations

Nation Building

Amphibious Readiness Group

Peace Enforcement

Show of Force

Irregular Warfare

NEO

Act of Terrorism

COIN

Civil War

Limited War

Major Combat

Global War

Amphibious Task Force

Frequency

Shaping/ Engagement/ Maritime Security (14-20 days)

Lesser Contingencies (21-28 days)

Major Contingency (40-45 days)

Peacetime and Crisis

Low Intensity Conflict

Mid-Intensity Conflict

High Intensity Conflict

Competition for Expeditionary Warfare

Future demand will only increase!

- **COCOM requirements for MEUs are increasing:**
  - **Based on Global Force management Allocation Plan (GFMAP) baseline data**
  - **Demand (FY12): 4.44 MEUs**
  - **Sourced (FY12): 2.54 MEUs**
- **Increased demand for independent Amphibious ship surge deployments:**
  - **Demand (FY12): 4.41**
  - **Sourced (FY12): 0.93**
- **Unique asset interoperability:**
  - **AFSB / MCM requirements**
- **Ship maintenance / upgrade availability periods**

Budgets will likely continue to decrease!

Table 1: Naval Forces Alignment with the Maritime Strategy

Naval Forces \ Core Capabilities	Forward Presence	Maritime Security	HA/DR	Sea Control	Power Projection	Deterrence
Aircraft Carriers	X		X	X	X	X
Aircraft	X	X	X	X	X	X
Amphibious Ships	X	X	X	X	X	X
SSNs	X	X		X	X	X
SSGNs	X	X			X	X
SSBNs					X	X
Large Surface Combatants	X	X		X	X	X
Small Surface Combatants	X	X		X		
Major Cutters	X	X	X	X		X
Patrol Craft	X	X	X	X		X
Combat Logistics Force	X	X	X	X	X	
Hospital Ships	X		X			
Maritime Prepositioning	X		X		X	
JHSV	X	X	X			
Command and Support	X					
Icebreakers[31]	X	X	X	X		X

"Since 2007 the COCOMs cumulative requests for Naval forces have grown 86% for ARG/MEUs and 53% for individual deployed amphibious ships." NOC 2010

Amphibious Combatant Fleet Transformation

1990 62 Ships

LHD

LHA

LPH

LPD 4

LSD 36

LSD 41

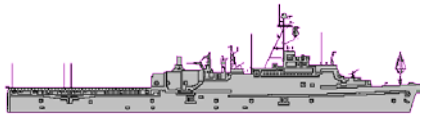
LST 1179

LKA 113

2011 28 Ships

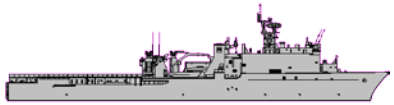
Requirement for 38 ships, risk accepted at fiscally constrained 33 ship force structure

LHA / LHD



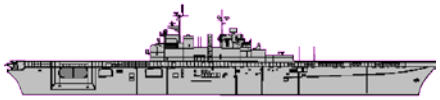
LPD 4

LPD 17



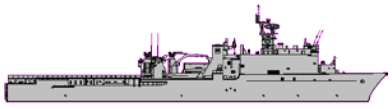
LSD 41 / 49

2021 33 Ships



LHD / LHA (R)

LPD 17



LSD 41 / 49

LSD (X)

Amphibious Combatant Recapitalizations

- **Capability-Based Assessment (CBA) completed covering:**
  - **LSD and LHA/D recapitalization**
  - **Projected USMC lift requirements (2024s timeframe)**
  - **USMC air/ground vehicles are becoming heavier/larger**
- **CBA studied 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 LHA/D Recap**
    - **LHA(R) Flight 0 (existing LHA 6 design)**
    - **LHA(R) Flight 1 Min (with well deck)**
    - **LHA(R) Flight 1 Full (expanded beam/reduced island w/ well deck)**
    - **LHD 8 Restart**
    - **New design (carry 100% of lift requirement)**

CBA approved in March 2011 and is basis for follow-on efforts:

- *LHA(R) Flight 1 Capabilities Development Document revision*
  - *Study to identify Flight 1 ship design completed*
- *LSD(X) Initial Capabilities Document.*

RECAPITALIZING TO PROVIDE MODERN, AFFORDABLE AMPHIB FLEET

Major Program Update

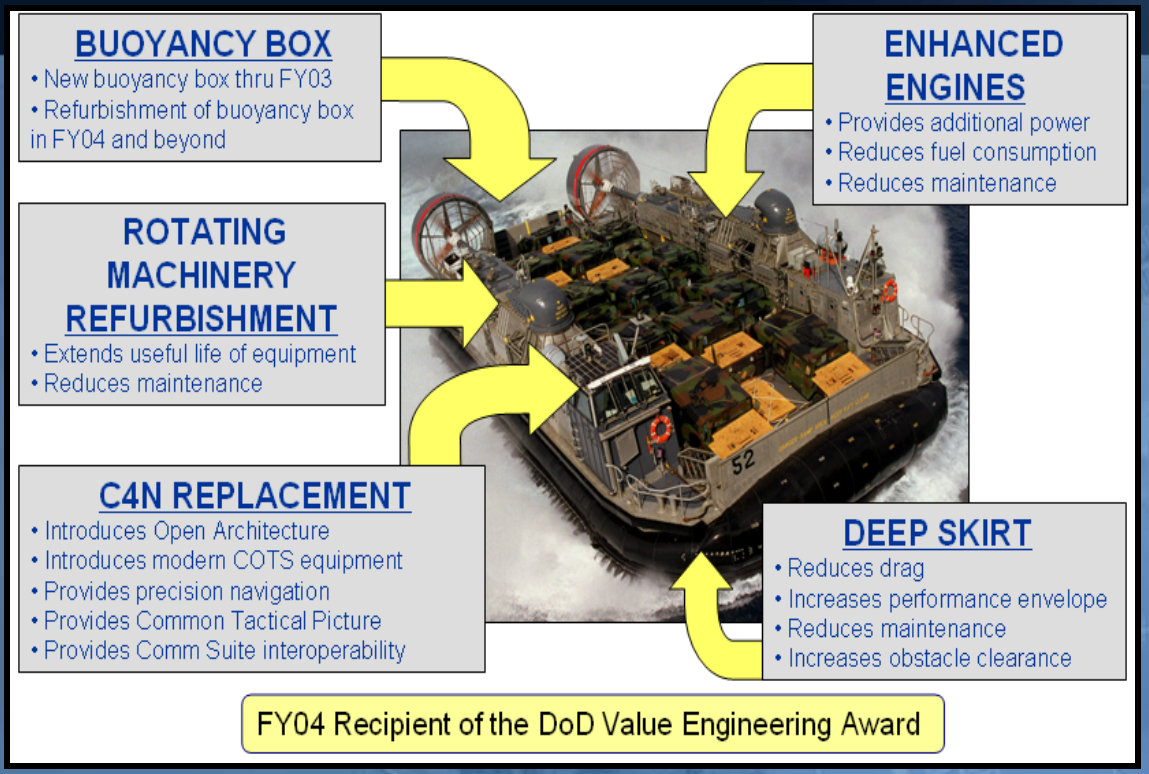
LPD 17

- 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 6 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

LCAC SLEP



- **Preserves amphibious warfare triad (LCAC / EFV/MV-22)**
- **Allows execution of Operational Maneuver From The Sea (OMFTS) and Ship to Objective Maneuver (STOM)**
- **Deferred 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***

SEP 11: 33 of 72 SLEPs complete

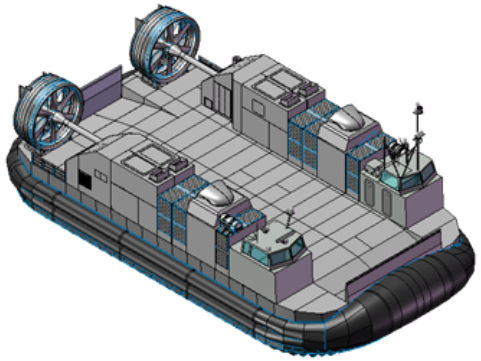
Ship to Shore Connector (SSC) / LCAC 100

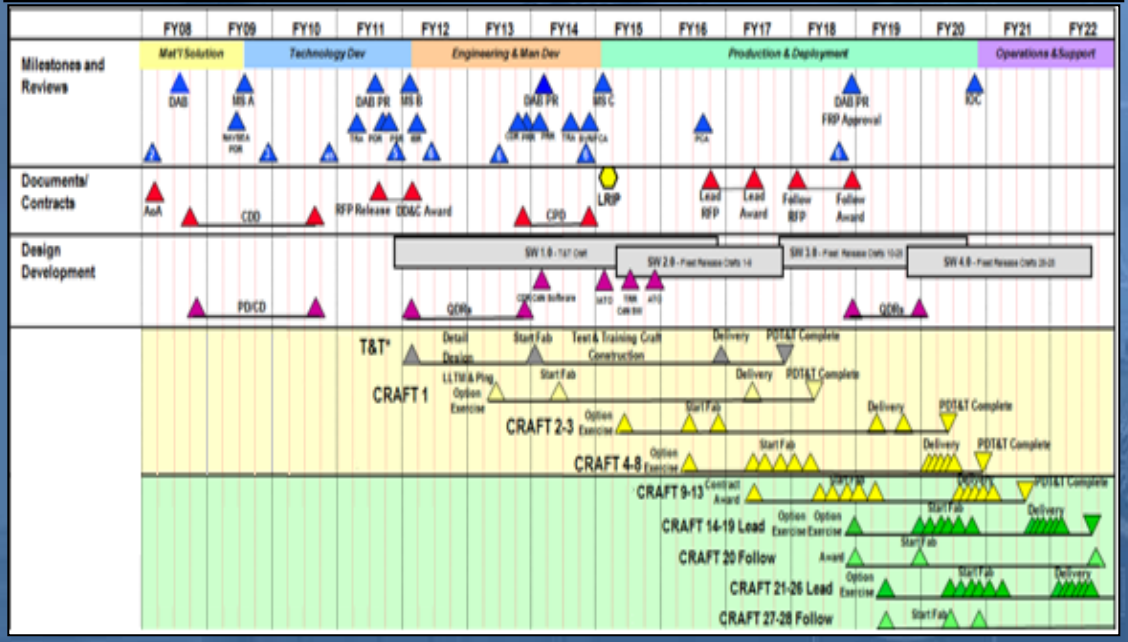
Mission: Land Surface Assault Elements of USMC from ship to shore

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**
- **Detailed Design and Construction Contract Award Pending FY12.**

LCU (RECAPITALIZATION)

"No one craft can do it all."	LCAC (SLEP)	SSC	LCU
High Speed (>25 kts)	🟢	🟢	🔴
Beach landings in Assault Echelon	🟢	🟢	🟡
Access to world beaches	🟢	🟢	🟡
Dry-Well Operations	🟢	🟢	🔴
Heavy-Lift	75 ST*	75 ST*	147 ST
Platform for buoyant hose fuel systems	🟡	🟡	🟢
Beach landings in AFOE	🟢	🟢	🟢
Extended (10 day) Ops (SOF/Riverine)	🔴	🔴	🟢
Independent Operations	🔴	🔴	🟢
Afloat Forward Staging Base (small boats)	🔴	🔴	🟢
Peacetime port operations	🔴	🔴	🟢
Passenger (400 per craft) Ferry	🔴	🔴	🟢

* Limited by temp and sea state

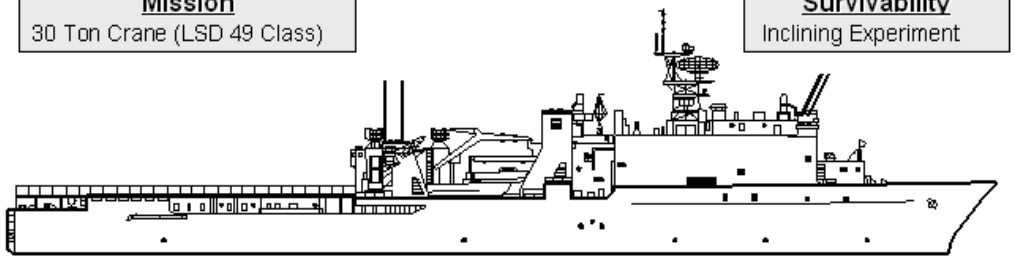
- AMW OAG has ranked this as a top five Fleet need over the last three years
- Current LCU 1600 craft have an average age of 40 years and suffer from obsolescence and increased maintenance costs
- Way Ahead
  - Brief to Naval Capabilities Board for approval to initiate ICD Oct 11.
  - Anticipate ICD completion Jan 12.
  - Analysis of Alternatives (AoA)Summer FY12

LSD MID LIFE

Ensure ships reach expected 40 year service life

Mission
30 Ton Crane (LSD 49 Class)

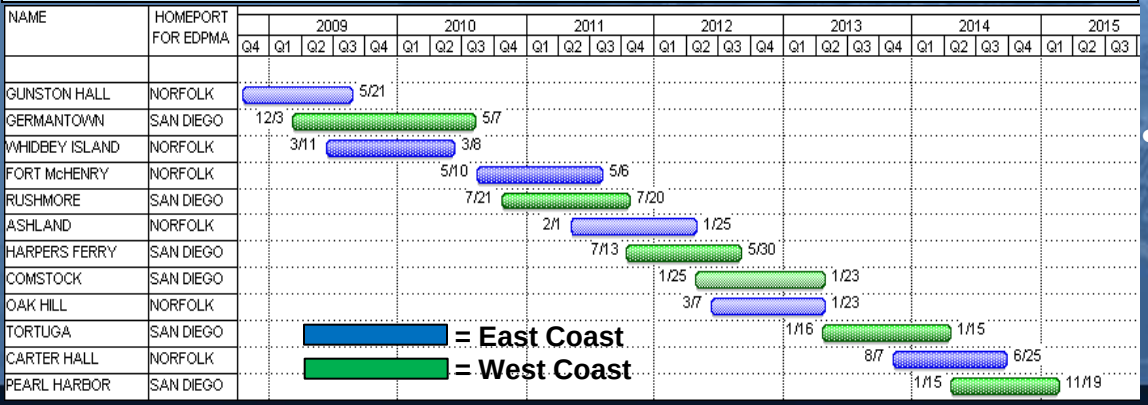
Survivability
Inclining Experiment



Technology Insertion
Advanced Engineering Control System (AECS)
- LAN
- Machinery Monitoring System (MCS)
- Steering Control System (SCS)
- On Board Trainer (OBT)
- DEXTER
- Electronic Gov Act (Digital Fuel Rack Control)

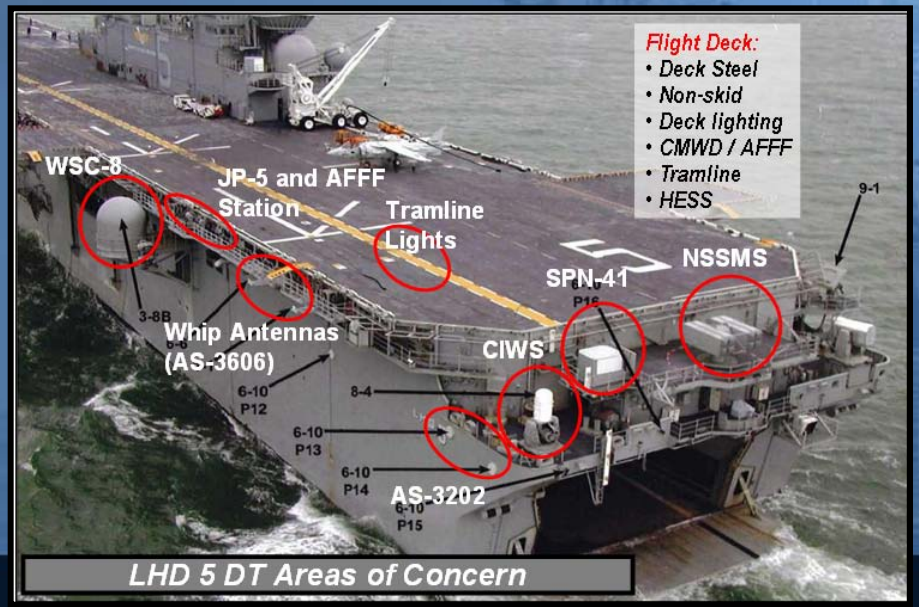
Hull Mechanical & Electrical
Fuel & Engine Maint Savings Sys (PLMU)
All Electric & Distribution Upgrade
Power Mgmt Platform (PMP)
Additional A/C Plant
CW Distribution Mods
SSDG Lube Oil Polisher
LPAC Replacement (LSD 41 Class)
Canned Lube Oil Pump (CLOP)

Installs Per FY: 2 - 2 - 2 - 2 - 2 - 1



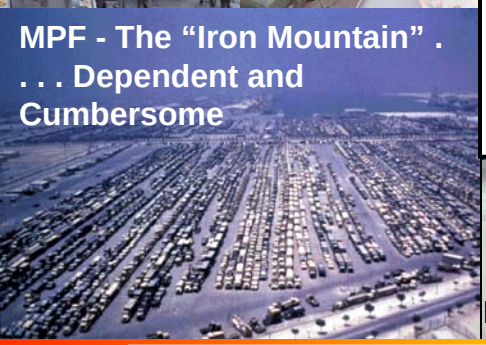
- **Return ships to capable Fleet Asset status; able to meet amphibious mission requirements through 2038**
- **Objective is to**
  - **Improve declining material condition and readiness,**
  - **Replace obsolete equipment and**
  - **Reduce total ownership costs through technology insertion**
- **USS HARPERS FERRY (LSD 49) EDPMA began in Jul. Seventh LSD Class ship to undergo modernization**
- **USS ASHLAND (LSD 48) and USS TORTUGA (LSD 46) will swap homeports (Norfolk/Sasebo)**

LHD MID LIFE AND JSF INTEGRATION

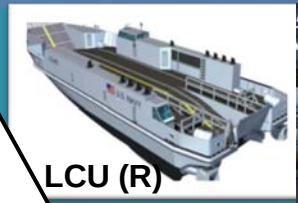


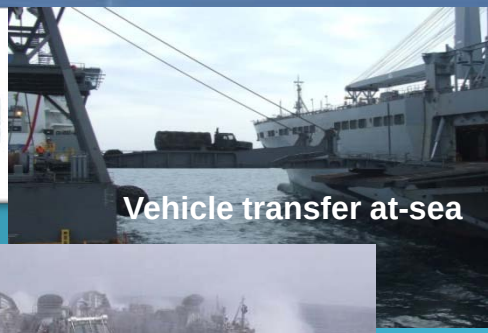
- Essential modernization and mission improvements to reach 40 yr service life
- Nine identified ship changes required for JSF on LHDs funded with fielding plans in place
- Six cornerstone alterations – nine separate SCDs – identified
- Enabler ship alterations
  - MV 22 service and shop mods (hangar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

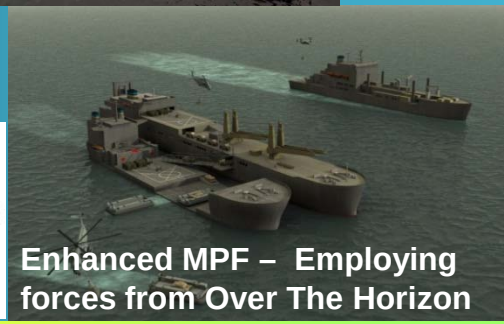
Enhanced MPSRON



- Transfer of equipment at sea in non-anchorage depths
- Delivery of equipment and supplies through restricted access environments
- Selectively offloadable, tailorable force packages
- Afloat warehousing, delivering unitized loads from ship to objective
- Employable in emergent, partnership and combat across complete ROMO







FLEXIBILITY THAT PERMITS INFLUENCING EVENTS ASHORE OR AT SEA, PARTICULARLY WHEN DENIED ACCESS OR A FOOTPRINT ASHORE

MPF Alternative Posture

2 MPSRONS FOS/1 MPSRON ROS

Overview

- DoN submits to SECDEF Afloat Preposition alternative
- OSD approves (RMD 7000) 25 Jan 2011
  Transfers 1 of 3 MPSRONs to a Reduced Operating Status (ROS-5).
- Tethers ROS-5 MPSRON on East Coast
- Two MPSRONs remain forward positioned in USPACOM - Full Operating Status (FOS)
- 1 LMSR (current TRANSCOM asset) to replace 2 legacy ships

Assessment

- POM-12 efficiency realized by reducing MPF Program O&M costs.
- FOS MPSRONs supports presence, crisis response, OPLAN and CONPLAN responsiveness in PACOM and CENTCOM
- ROS MPSRON in addition to supporting MCO provide surge capability to EUCOM, AFRICOM, and SOUTHCOM
- Provides operational flexibility for all CCDRs
- Reorganization must be completed by 1 Oct 2012 (FY13 funding supports 2 FOS/1 ROS)

2 MPSRONs FOS/1 MPSRON ROS-5

20 Ships Total

X 4 [FY12 1 from TRANSCOM]

X 3 [FY14-16]

X 3 [FY12-13]

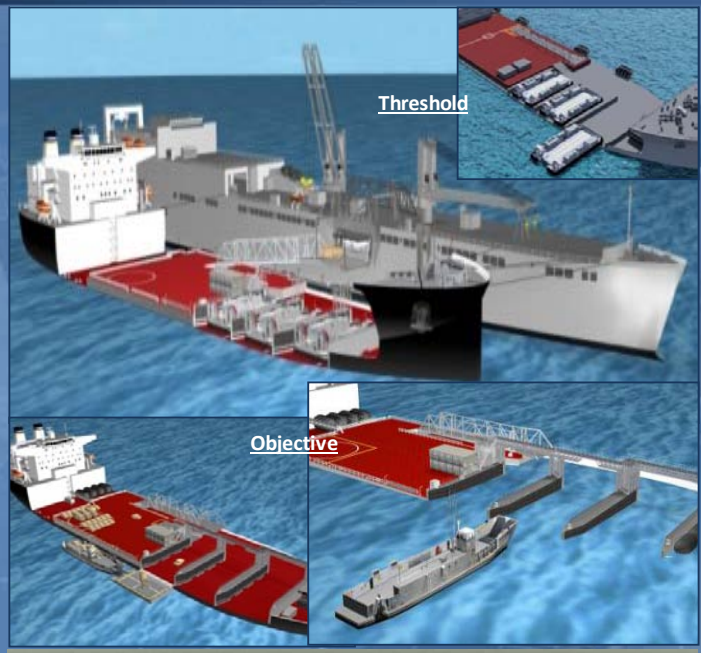
X 6

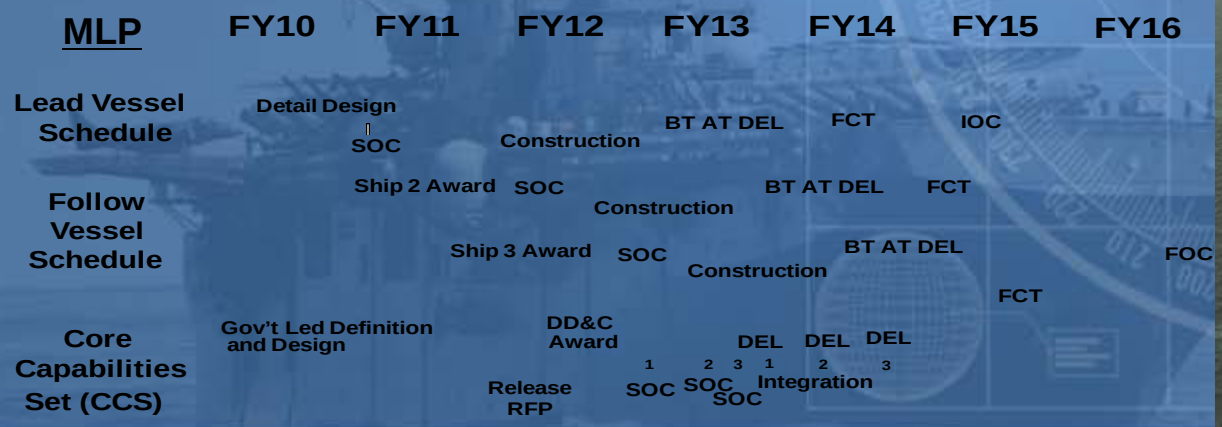
X 3

X 1 Swing Ship

Enhanced Maritime Prepositioning Squadron

- The Enhanced MPSRON will have an added capability for vehicle and equipment at sea transfer between ships and deliver y ashore from over the horizon through restricted access environments, and provide persistent sustainment from ship to objective.
- MLP will provide a surface interface between Large Medium Speed Roll-on/roll-off (LMSR) ships and LCACs. Total MLP procurement is three, two were awarded in FY11 and one is planned for FY12.
- T-AKE will contribute to prepositioning the Baseline MEB's supply stocks and sustaining the forces operating ashore. As a floating warehouse it will minimize the logistic footprint ashore and support vertical replenishment of unitized sustainment direct from ship to the operating forces ashore. Total of three T-AKEs will be transferred from the CLF in FY12/13.






Questions?