



The Balanced Force

For Complex Joint/Combined Operating Environments

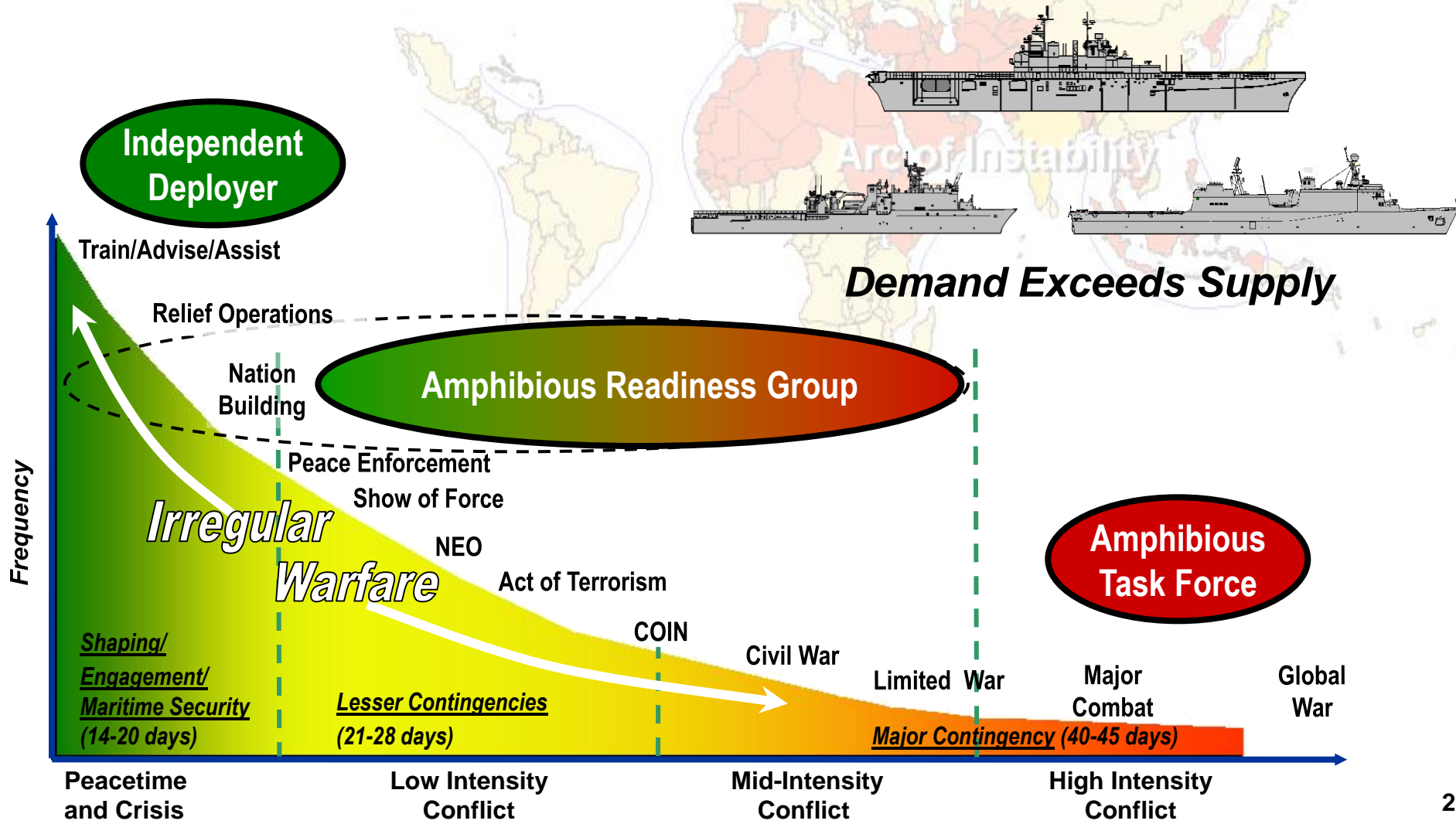


CAPT Walt Towns, USN
Branch Head, Amphibious Warfare



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





Amphibious Combatant Fleet Transformation

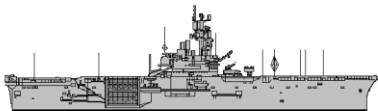
1990 62 Ships



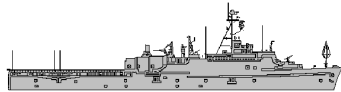
LHD



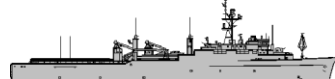
LHA



LPH



LPD 4



LSD 36



LSD 41



LST 1179



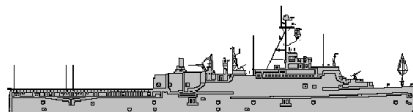
LKA 113

2010 31 Ships

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



LHA / LHD



LPD 4



LPD 17



LSD 41 / 49

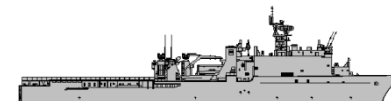
2021 34 Ships



LHD / LHA (R)



LPD 17



LSD 41 / 49



LSD (X)



Amphibious Combatant Recapitalization CBA

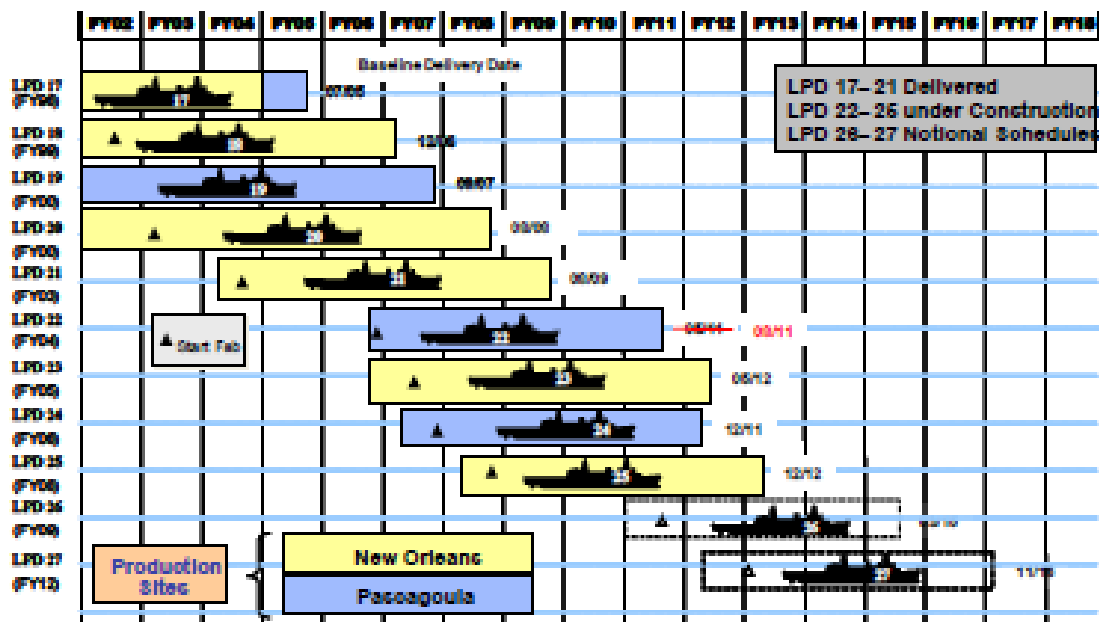
- **Capability-Based Assessment (CBA) considered**
 - **LSD and LHA/D recapitalization**
 - **Projected USMC lift requirements (2024s timeframe)**
 - **USMC air/ground vehicles are becoming heavier/larger**
- **CBA studied Replacement options**
 - **For LSD Recap**
 - **LPD 17 design (repeat or modified 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 signed out by N85 and Deputy CG, MCCDC in Sept 2010 and will serve as the basis for:***
 - *LHA(R) Flight 1 Capabilities Development Document revision*
 - *Study ongoing to identify FY16 Big Deck ship design*
 - *LSD(X) Initial Capabilities Document.*



Major Program Update



LPD 17

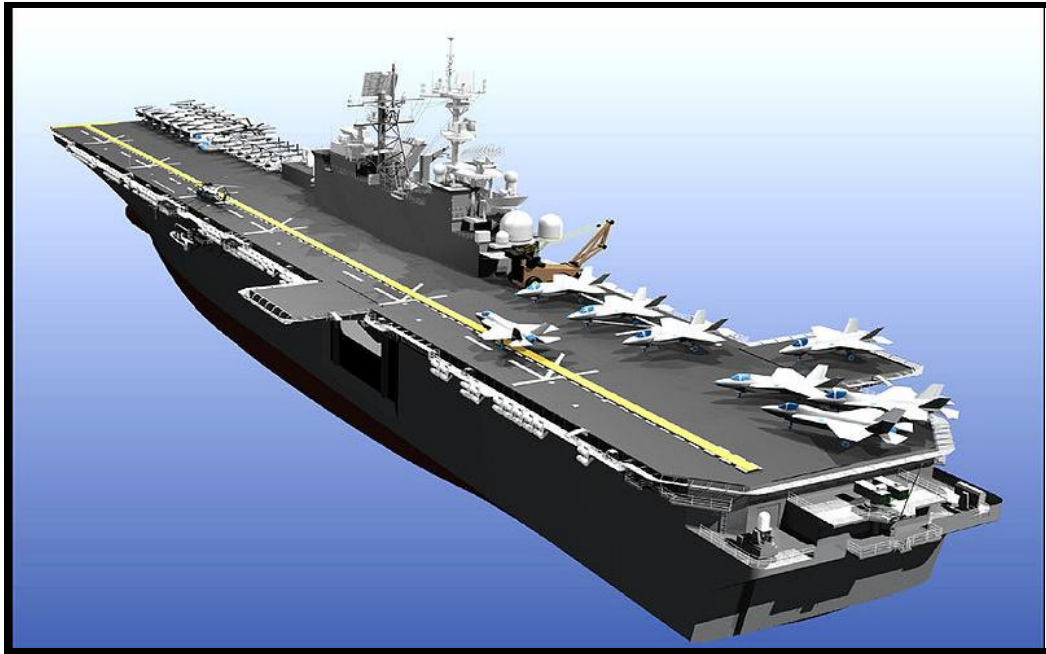


- LPD 17 class are flexible, multi-mission ships
- Functionally replaces LPD 4, LSD 36, LKA 113, and LST 1179 Ship classes
- LPD 17 missions include:
 - Forward Presence,
 - Deterrence,
 - Sea Control,
 - Power Projection,
 - Maritime Security
 - Humanitarian Assistance / Disaster Response





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**



Joint High Speed Vessel (JHSV)

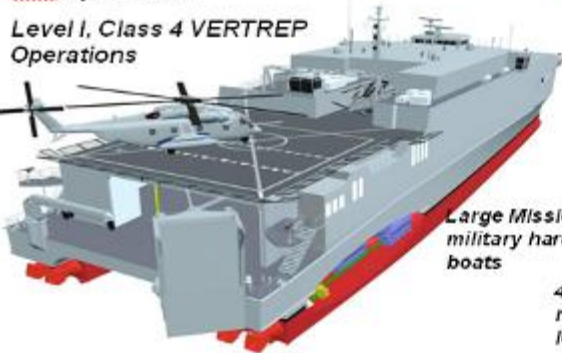
Flexible crew and troop accommodations with lounge, medical and mess facilities



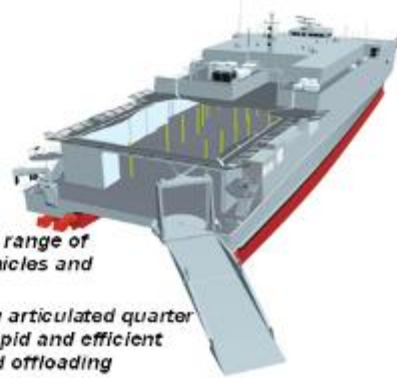
Crew-served weapon mounts fore and aft

Level I, Class 2 for H53/H60 helo operations

Level I, Class 4 VERTREP Operations

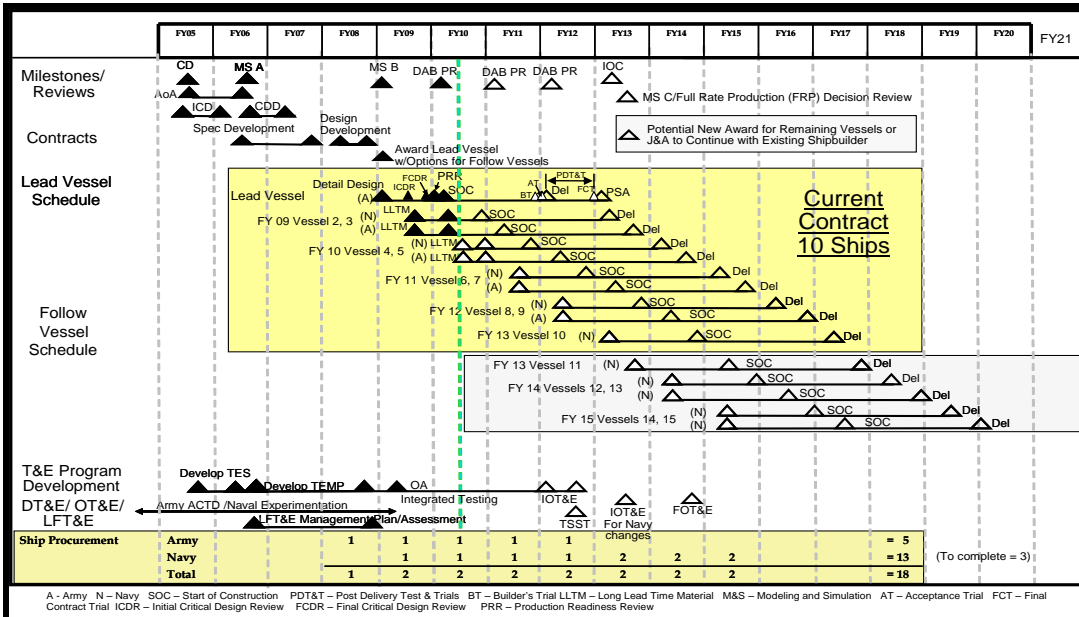


Large Mission Bay for range of military hardware, vehicles and boats



45° slewing articulated quarter ramp for rapid and efficient loading and offloading

- Intra – theater maneuver and littoral lift of cohesive forces or cargo
- Combines speed, range, payload and roll on/off with shallow water/ austere port access
- Bridges the gap between rapid/low volume airlift (C-17/C-130) and slow/high volume sealift (LSV/LMSR/T-AKE)
- Completed keel laying JHSV #1 (Army) Jul 2010, started construction JHSV #2 (Navy) Sep 2010
- PB 11 procures 18 JHSVs (13 Navy / 5 Army)





LCAC SLEP

BUOYANCY BOX

- New buoyancy box thru FY03
- Refurbishment of buoyancy box in FY04 and beyond

ROTATING MACHINERY REFURBISHMENT

- Extends useful life of equipment
- Reduces maintenance

C4N REPLACEMENT

- Introduces Open Architecture
- Introduces modern COTS equipment
- Provides precision navigation
- Provides Common Tactical Picture
- Provides Comm Suite interoperability

ENHANCED ENGINES

- Provides additional power
- Reduces fuel consumption
- Reduces maintenance

DEEP SKIRT

- Reduces drag
- Increases performance envelope
- Reduces maintenance
- Increases obstacle clearance



FY04 Recipient of the DoD Value Engineering Award

SEP 10: 25 of 72 SLEPs complete

- 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*



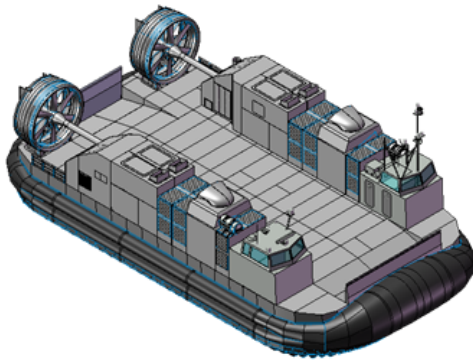
Ship to Shore Connector (SSC) / LCAC 100

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

Description: Landing Craft Air Cushion (LCAC) replacement

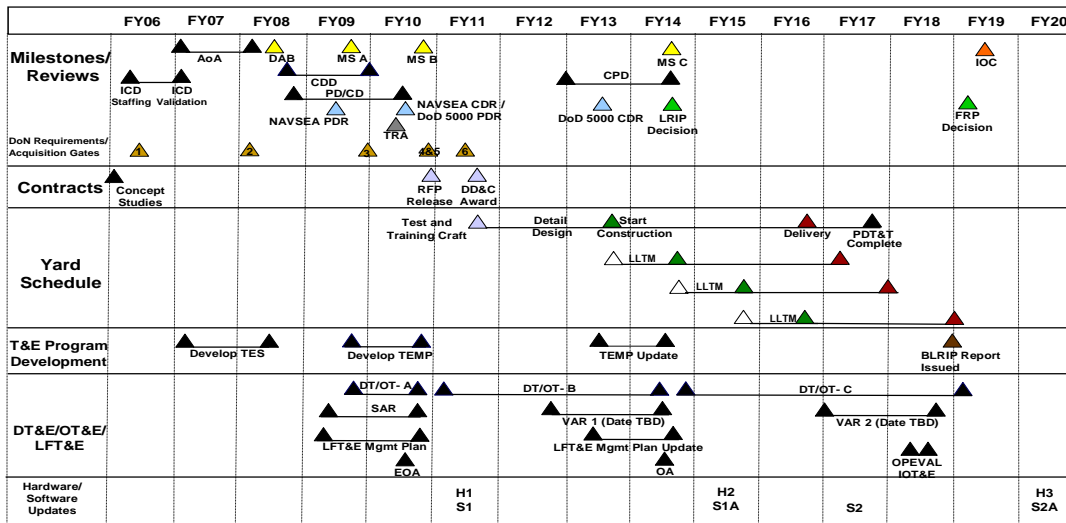
Platforms: Air Cushion Vehicle; Same footprint as LCAC SLEP

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**
- **Formal Requirements Capability Development Document (CDD) approved by the Joint Requirements Oversight Council (JROC) in Jun 2010**

Notional Schedule



* FY11 Craft is Funded with R&D



LCU (RECAPITALIZATION)



- 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 (ICD) is required to proceed through Navy staffing
 - Brief to Naval Capabilities Board in JAN 11 for approval to initiate ICD.

“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



LSD MID LIFE

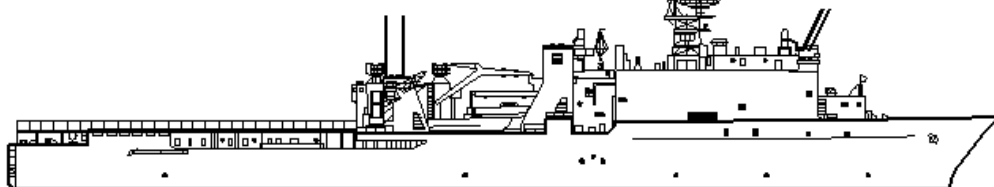
Ensure ships reach expected 40 year service life

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)

- 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 RUSHMORE (LSD 47)** EDPMA began in Jul. Fifth LSD Class ship to undergo modernization

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

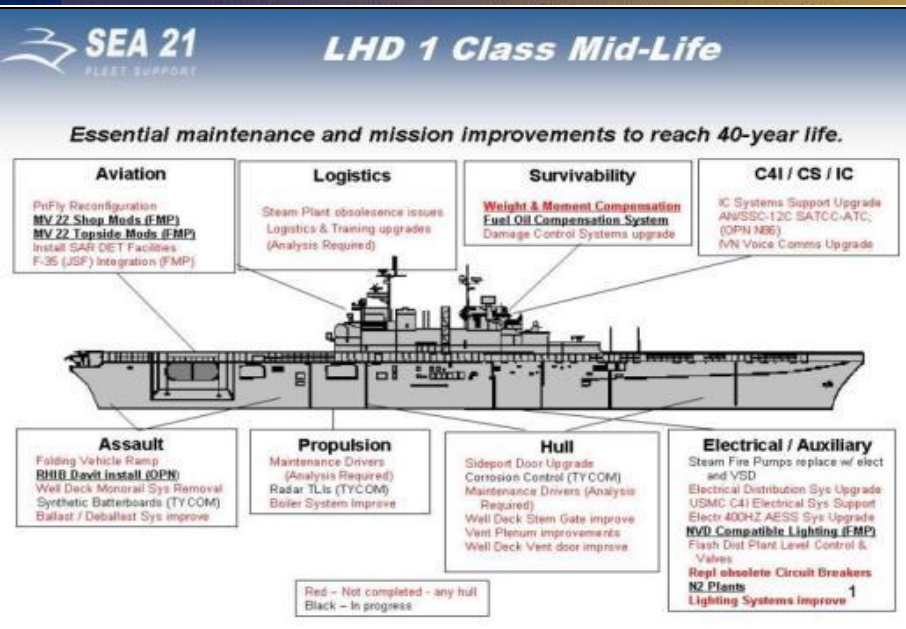
NAME	HOMEPORT FOR EDPMA	2009		2010				2011				2012				2013				2014				2015		
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
GUNSTON HALL	NORFOLK	5/21																								
GERMANTOWN	SAN DIEGO	12/3	5/7																							
WHIDBEY ISLAND	NORFOLK	3/11	3/8																							
FORT McHENRY	NORFOLK	5/10																								
RUSHMORE	SAN DIEGO	7/21																								
ASHLAND	NORFOLK	2/1																								
HARPERS FERRY	SAN DIEGO	7/13																								
COMSTOCK	SAN DIEGO	1/25																								
OAK HILL	NORFOLK	3/7																								
TORTUGA	SAN DIEGO	1/16																								
CARTER HALL	NORFOLK	8/7																								
PEARL HARBOR	SAN DIEGO	1/15																								

█ = East Coast
█ = West Coast

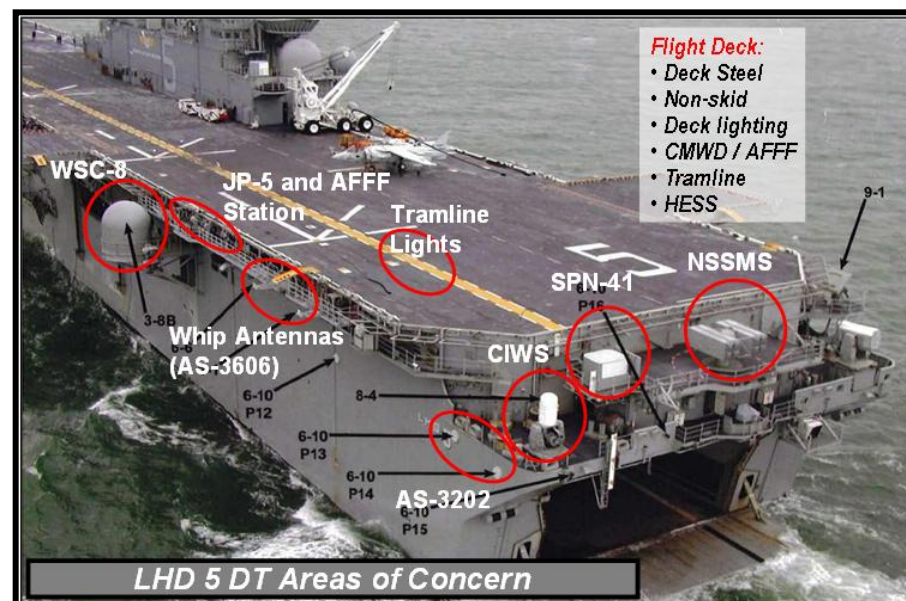
USS GERMANTOWN (LSD 42) and USS HARPERS FERRY (LSD 49) will swap homeports (San Diego/Sasebo) between Jan – Jun 2011



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





Maritime Prepositioning Force Future (MPF(F))

Increment One

- MPF(F) T-AKE
- Auxiliary Cargo and Ammunition Ship
- Contract awards in FY09 & 10

3

Replaced with a De-scoped MLP PR-11

- MPF(F) MLP
- Contract awards in FY10, 12 & 14

3

Increment Two

- MPF (F) LHA(R)
- General Purpose Amphib. Assault Ship Repl.
- Contract awards in FY10, 11 & 12

2

Re-programmed to AEPB-10

- MPF (F) LHD
- Multipurpose Amphibious Assault Ship
- Transitioned from active fleet in FY22

1

Increment Three

Deferred to 2020s

- MPF(F) LMSR
- Contract awards in FY13, 15 & 16

3

- T-AK
- Legacy Sealift Ships (Dense Pack)
- Transition in FY17

2

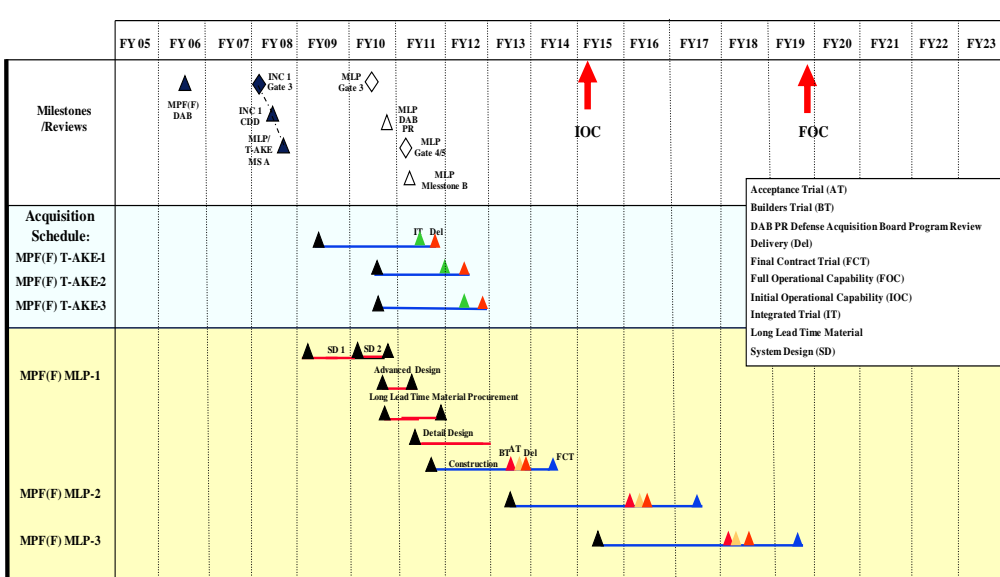
PB10

- Restored funding for 2nd & 3rd T-AKEs removed in PB-09
- Re-programmed MPF(F) big decks to meet the Assault Echelon requirement

PR11

- Defers MLP and LMSR until MPSRON Recap in 2020s
- Keeps T-AKEs in acquisition budget
- OSD/DAWG recommends a reduced capability/cost MLP
 - Based on BP Tanker (FLO/FLO) design
 - Core capability set provides MLP like capabilities

- The Navy plans to procure three Mobile Landing Platforms (MLP). The Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for FY 2011 identifies the ships will be purchased in 2011, 2013 and 2015.
- These ships, along with 3 previously appropriated Auxiliary Dry Cargo/ Ammunition Ships (T-AKE) will enhance the capability of the MPF, improving its utility across the range of military operations.
- The enhanced MPF will be able to transfer vehicles and equipment between ships at sea, deliver vehicles and equipment from over the horizon through restricted access environments, and provide persistent sustainment from ship to objective.





Questions?