



# 2012 Expeditionary Warfare Conference's Initial Planning Guidance

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# How We Fight



35TH COMMANDANT OF THE MARINE CORPS  
COMMANDANT'S PLANNING GUIDANCE

- *We are forward-deployed and forward-engaged: shaping, training, deterring and responding to all manner of crises*
- *We respond to today's crisis, with today's force ... TODAY.*
- *As part of the Joint Force, the Marine Corps and Navy work together to leverage the significant advantages that amphibious forces provide a maritime power...*



- *Our forward presence will build on and strengthen our partnerships...*
- *Provide offshore options to deter, influence and win in an era of uncertainty*
- *Remain ready to meet current challenges, today*
- *Our primary Joint partner is the U.S. Marine Corps. We must continue to evolve how we will operate and fight as expeditionary warfare partners.*



# OPNAV Re-Organization & Impact to N95

## Resource Sponsor for:

<b>3</b> Type Commanders & Oversight Commands	<b>113</b> Connectors (LCAC + LCU)
<b>46</b> Programs	<b>58,846</b> Personnel (~16% of USN total)
<b>\$8.3B</b> (annual avg across FYDP)	<b>464</b> UICs
<b>43</b> Ships (~10% of USN total)	

## Director, Expeditionary Warfare (N95)

### Naval Special Warfare (N951)

- Warfare Requirements
- Information Warfare



### Mine Warfare (N952)

- Airborne
- Surface
- RMS
- ABS
- Mining
- Unmanned



### Amphibious Warfare (N953)

- In-Service Amphibious ships
- Future Amphibious Ships



### Expeditionary Pre-Positioning (N954)

- MPF(F)
- NBE
- JSF
- AFSB
- LCAC/SSC/LCU



### Naval Expeditionary Combat (N957)

- Naval Construction (SEABEES) 
- Riverine Forces
- Maritime Expeditionary Security
- Expeditionary Logistics



### Manpower & Training (N959)

- All Expeditionary Warfare MPN/RPN
- N95 training responsive to new acquisitions



# MAN, TRAIN, EQUIP, MAINTAIN, SUSTAIN, MODERNIZE



# Amphibious Warfare Fleet Overview



## Status

### **In-Service:** 29 Total

- (1) LHA-1 Class      (7) LPD-17 Class
- (8) LHD-1 Class    (8) LSD-41 Class
- (1) LPD-4 Class    (4) LSD-49 Class

### **Delivery:**

- AMERICA (LHA 6)                      SEP 13
- ANCHORAGE (LPD 23)                SEP 12
- ARLINGTON (LPD 24)                NOV 12
- SOMERSET (LPD 25)                MAY 13
- MURTHA (LPD 26)                    NOV 15
- TBD (LPD 27)                        NOV 16 (NET)

### **Decommissioning:**

- NASSAU (LHA 1)                      2011
- CLEVELAND (LPD 7)                2011
- DUBUQUE (LPD 8)                    2011
- PONCE (LPD 15)                    2012\* AFSB retrofit
- WHIDBEY ISLAND (LSD 41)        2014
- TORTUGA (LSD 46)                2014
- PELELIU (LHA 5)                    2015\*\*
- DENVER (LPD 9)                    2015\*\*

\*\* Considered for AFSB

## Gaps/Fixes

- Command & Control      Heat Mitigation (JSF/MV-22)
- Combat Systems        C4I

## Gaps/Fixes

- Command & Control      Heat Mitigation (JSF/MV-22)
- Combat Systems        C4I

## Way Ahead

- Mid-Life (LSD & LHD)      LHA(R)      LX(R)



# Amphibious Assault Ship (LHA)

## LHA-1

### Status

In-Service: 1 (LHA-5 PELELIU)

Troops:	1713
Vehicles:	25,400 ft <sup>2</sup>
Cargo:	105,900 ft <sup>3</sup>
VTOL:	42
LCAC:	1
LCU:	4



Decommissioning:  
PELELIU (LHA 5) 2015

## LHA-6/7/8

### Status

In-Service: 0

Troops:	1686*
Vehicles:	11,600 ft <sup>2</sup> *
Cargo:	160,000 ft <sup>3</sup> *
VTOL:	57*
LCAC:	0 / 2 (8 only)
LCU:	0 / 1 (8 only)

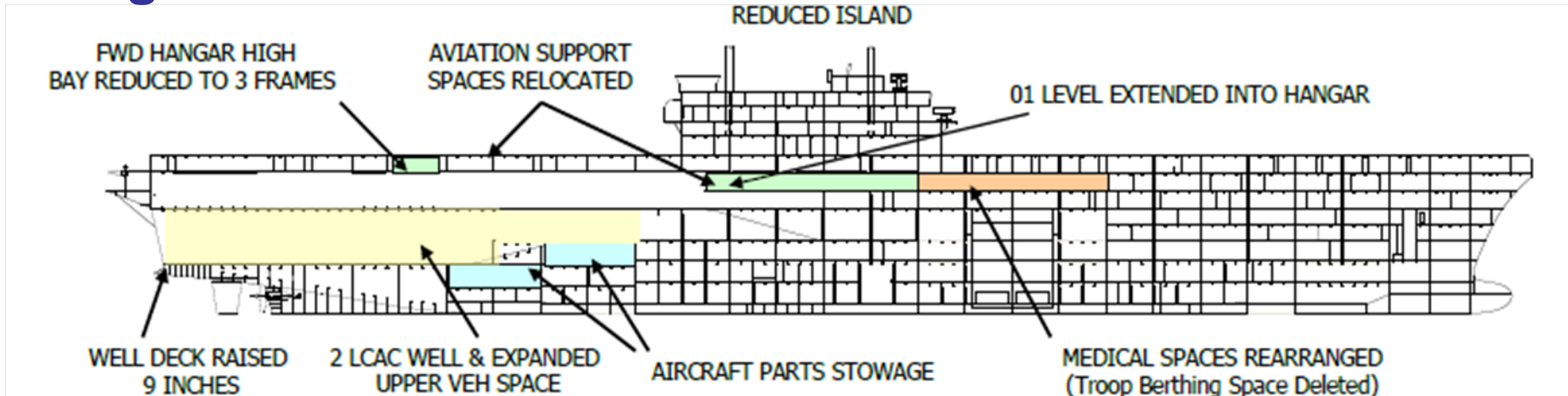


\*Quantities shown for 6/7

### Delivery

PCU AMERICA (LHA 6)	1QFY14
PCU TRIPOLI (LHA 7)	2018
PCU TBD (LHA 8)	2024

## Changes: LHA 6/7 → LHA 8

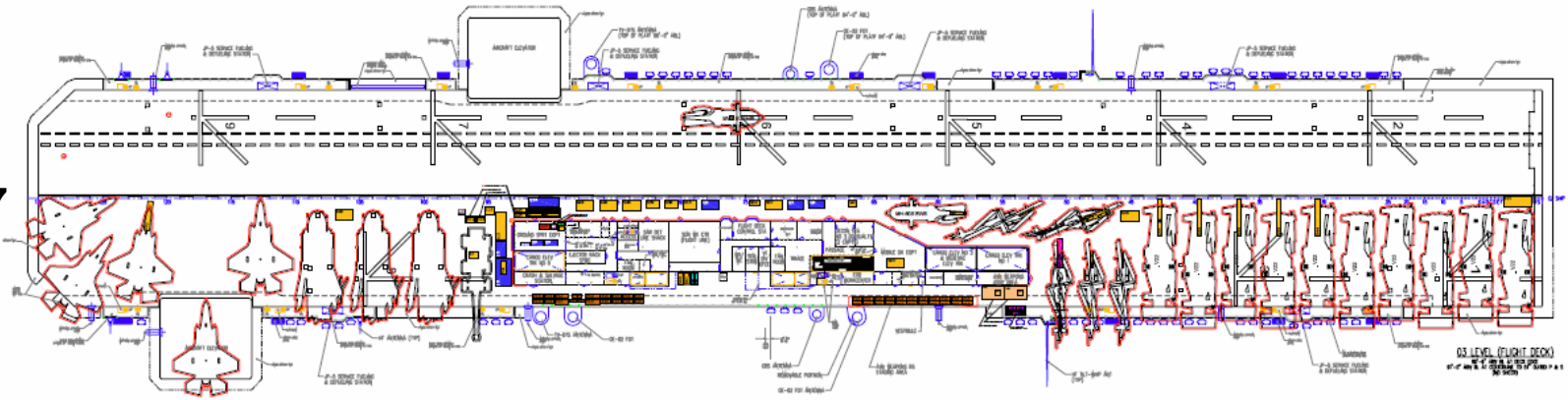




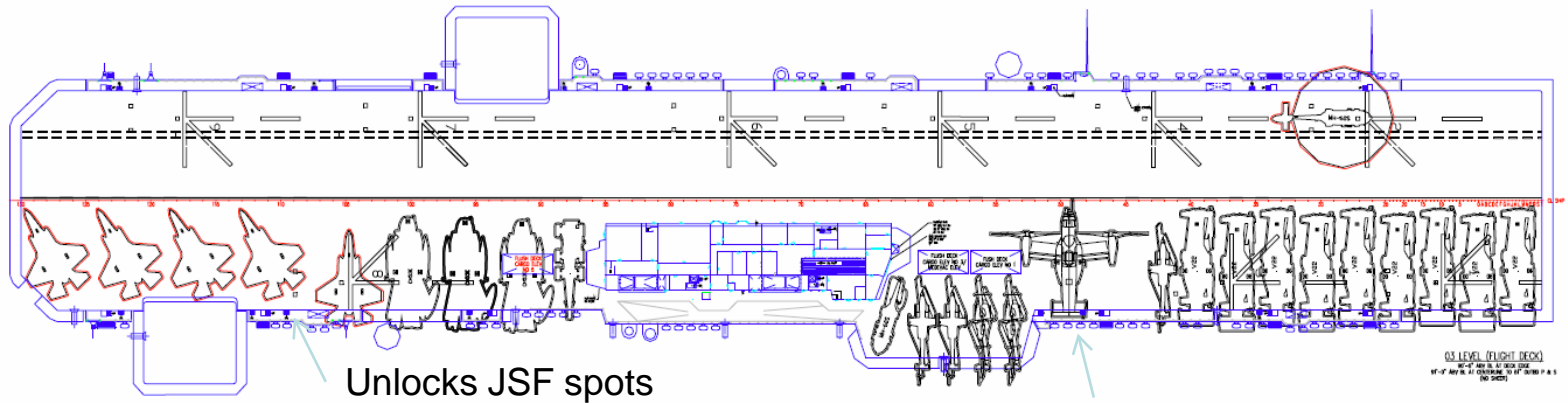
# Aviation Support LHA-6/7 & LHA-8



LHA 6/7



LHA 8



Unlocks JSF spots

Provides MV-22 maintenance spot clear of port side operating area

Aviation Support	LHA 6/7	LHA 8
High Bay	2 Full 49'	1 Full, 1 Small 21'
Hangar (K sq ft)	30.4	30.4
Shop (K sq ft)	20.1-22.1	17.6-22.1
Stores (K sq ft)	19.7-21.7	15.8-21.7

- Increases flight deck parking area
- Minimizes flight deck and hangar re-spots
- Improves maintenance time
- Improves ability to meet air tasking requirements



# Amphibious Assault Ship (LHD)

## Status

8 Ships in-service

Troops:	1686
Vehicles:	20,900 ft <sup>2</sup>
Cargo:	125,000 ft <sup>3</sup>
VTOL:	45
LCAC:	3
LCU:	2

## Gaps/Fixes

Repair/Modernize

Meet 40-year ESL

JSF/MV-22 Alterations

C2/C4I/IC

## LHD-1 Mid-Life Upgrade ~\$140 M Annually (FY16-23)

### Aviation

- PriFly Reconfiguration
- Install SAR DET Facilities
- NVD Compatible Lighting

### Logistics

- Steam Plant obsolescence issues
- Logistics & Training upgrades

### C4I/CS/IC

- IC System obsolescence'
- Combat Systems
- CANES

### Survivability

- Weight & Moment compensation
- Fuel Oil Compensation System
- Damage Control Quarters (DCQ) System

### Assault

- Folding Vehicle Ramp
- Replace LCPL with RHIB (Davit)
- Remove Monorail System
- Upgrade Synthetic Batterboards
- Ballast/Deballast System Improvements

### Propulsion

- Maintenance Drivers
- Radar TLIs
- Boiler System Improvements
- Machinery Monitoring & Control

System

### Hull

- Maintenance Drivers
- Sideport Door Upgrade
- Corrosion control
- Well Deck Stern Gate

Improvement

### Electrical / Auxiliary

- Replace Steam Firepumps
- Electrical System Upgrades (C4I

Support)

- 400 Hz AESS System Upgrades
- Flash Distilling Plant Level Control

& Valves

- HVAC & Firemain System
- Light Systems Upgrade
- Additional A/C Plant
- N2 Plant Installation





# Amphibious Transport Dock (LPD)



## LPD-4

### Status

**In-Service:** 1 (LPD-9 DENVER)

Troops:	788
Vehicles:	11,800 ft <sup>2</sup>
Cargo:	38,300 ft <sup>3</sup>
VTOL:	4
LCAC:	1
LCU:	1



### **Decommissioning:**

PONCE (LPD 15)	2012* (AFSB retrofit)
DENVER (LPD 9)	2015* (AFSB retrofit)

### Gaps/Fixes

ESL (Commissioned 1968)

### Way Ahead

PONCE retrofit as AFSB (2012)  
LPD-17

## LPD-17

### Status

**In-Service:** 7

Troops:	720
Vehicles:	24,600 ft <sup>2</sup>
Cargo:	36,000 ft <sup>3</sup>
VTOL:	6
LCAC:	2
LCU:	1



### **Delivery:**

ANCHORAGE (LPD 23)	SEP 12
ARLINGTON (LPD 24)	NOV 12
SOMERSET (LPD 25)	JUL 13
MURTHA (LPD 26)	NOV 15
TBD (LPD 27)	NOV 16 (NET)

### Issues Fixed

Propulsion

**~\$117M Annually (avg FYDP)**

- Main Propulsion Diesel Engines
- Geislinger Couplings
- Shaft/Train Alignment

C4I

- Network Upgrades from SWAN to SWAN-CANES Hybrid (CANES provides C4I, SWAN provides HM&E)

Auxiliaries

- Ship Service Diesel Generators
- P1/P2 Piping
- Ti Aux SW System Piping
- Stern Gate Issues





# Dock Landing Ship (LSD)

## LSD-41

### Status

In-Service: 8

Troops:	454
Vehicles:	13,500 ft <sup>2</sup>
Cargo:	5,100 ft <sup>3</sup>
VTOL:	0
LCAC:	4
LCU:	3



### Decommissioning (2014) TBD:

WHIDBEY ISLAND (LSD 41)  
TORTUGA (LSD 46)

### Gaps/Fixes

30-year ESL (FY15 for LSD-41)  
LSD Mid-life (5 of 7 complete)  
extends ESL to 40 years (FY25)

### Way Ahead

LX(R) LSD(Replacement)

## LSD-49 (Cargo Variant)

### Status

In-Service: 4

Troops:	454
Vehicles:	16,900 ft <sup>2</sup>
Cargo:	50,700 ft <sup>3</sup>
VTOL:	0
LCAC:	2
LCU:	1



### Gaps/Fixes

30-year ESL (FY25 for LSD-49) LSD Mid-life (0 of 4 complete)  
extends ESL to 40 years (FY35)

## LSD-41/49 Mid-Life Upgrade

### Technology Insertion

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

### Mission

- 30-Ton Crane (LSD 49 Class)

**~\$80 M Annually (~FY14)**

### 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)

### Survivability

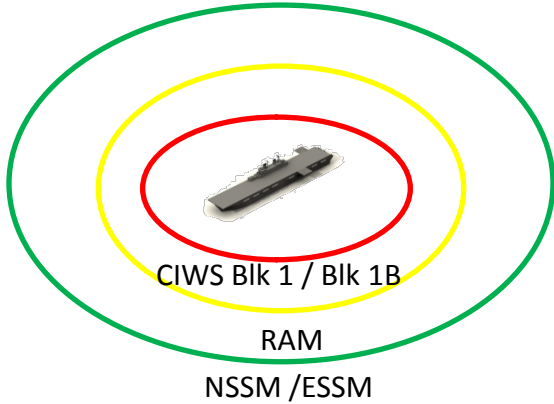
- Inclining Experiment



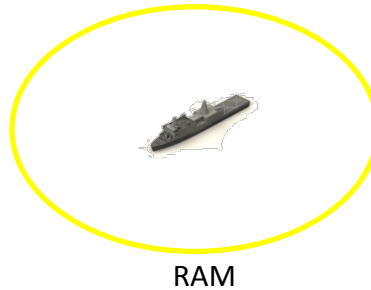
# Amphibious Combatant Self Defense



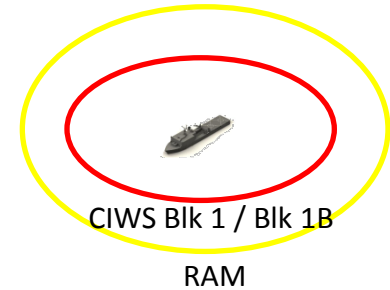
LHD-1 Class



LPD-17 Class



LSD-41/49 Class



***Evolving capabilities to match the threat; Integrating and automating systems for faster response times and improvements in situational awareness / Fleet interoperability.***

## ASCM Defense

Today: SSDS Mk1 (RAM, CIWS); ACDS Blk 0 (NSSM, RAM, CIWS); SSDS Mk2 (NSSM, RAM, CIWS)

Future: SSDS Mk2 (ESSM, RAM, CIWS Blk 1B)

## Electronic Warfare

Today: SLQ-32 V2, SLQ-32 V3

Future: SEWIP Blk2, SEWIP Blk3

## ASUW / FAC FIAC

Today: NSSM, .50, Mk38, LRAD, Dazzler, STALKER

Future: ESSM, CIWS Blk1B, RAM .50, Mk38, LRAD, Dazzler, EOIR

**UNCLASSIFIED**

## Torpedo Defense

Today: NIXIE

Future: Anti Torpedo Defense System (ATTDS): Anti-Torpedo Warning System (AWS), Countermeasure Anti-Torpedo (CAT)

## Command/Control

Today: LINK-11, GCCS-M, SACC-A, CNI, AADS

Future: LINK-11, LINK-16, GCCS-M, CNI, SACC-A, JMPS-E, JBC-P, AADS



# Improving AMW C2

- Lessons learned from Bold Alligator '12 lead to CNO Tasking:
  - Develop a scalable, affordable Amphibious C2 solution set (top level requirements, basic architecture, CONOPS/CONEMP)
    - Integrate Blue/Green Top Level Requirements, architecture to improve shared C2 and shared situational awareness
    - Common across all ships and ashore, capable in all AMW mission subsets from HADR to JFEO & scalable for operations from ARG-MEU to ESG-MEB.
    - Utilize the Naval Amphibious Baseline for requirements validation and prioritization



# Navy & Marine Corps Issues

- How We Fight
- Role & Size of Amphibious Fleet
  - *Fingerprint lift: Reducing footprint / size / WT / #s*
  - *Establish and understand requirements based on realities of “current and future wars”*
- Ship Building Timelines
  - *Embarked equipment changes are faster than ship modernization*
- Operational / Global employment of enhanced MPSRONs
- Fleet utilization and readiness

- Service Priorities  
- Aging Fleet  
- Reduced Budget

The Navy / Marine Corps team will continue to be the service of choice for “Bang for the Buck” investment to meet America’s global engagements



**Questions?**



# Back-up



# Future of Amphibious Warfare Ships

## LSD-41/49 Mid-Life Upgrade Technology Insertion

- Advanced Engineering Control System (AECS)
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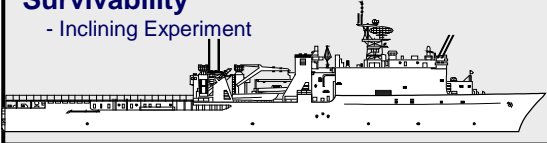
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## Mission

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## LHD-1 Mid-Life Upgrade

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### Survivability

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### Propulsion

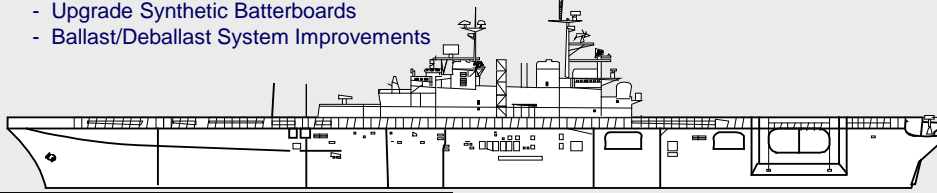
- Maintenance Drivers
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### Hull

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### Electrical / Auxiliary

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## LSD(X) / LX(R)

- Replace LSD 41/49 Class

- LSD-41 Class 40-year ESL reached starting in 2025.

## LHA-6

- No well-deck
- Ideal ARG composition
- Ideal for AOR (CENTCOM vs. PACOM)



Essential maintenance & modernization improvements to reach 40 year service life

## LPD-17 Challenges



### Propulsion

- Main Propulsion Diesel Engines
- Geislinger couplings
- Shaft train alignment

### C4I

- Ship Wide Area Network (SWAN)

### Auxiliaries

- Ship Service Diesel Generators
- P1/P2 Piping
- Ti Aux SW Sys Piping
- Stern Gate Issues

LPD-17 Class Wholeness Task Force addressing common issues

How will our Expeditionary Force Fight the Nation's Wars Tomorrow?



# We are entering a Post-War Era



## Naval Special Warfare

SCAN EAGLE UAS



LEGACY TACTICAL COMMUNICATIONS



LEGACY COMBATANT CRAFT



INLAND OPERATIONS

OIF/OEF Centric

SMALL TACTICAL UAS



COMMON TACTICAL COMMUNICATIONS



COMMON COMBATANT CRAFT



MARITIME/SEA OPERATIONS

Post-OIF/OEF Engagement

- Capability Driven Recapitalization
- Support NSW movement towards SFA
- Ensure NSW compatibility w/ Fleet assets
- Exploit Navy-SOF system commonality
- Improve tactical ISR capabilities
- Improve Command & Control

## Mine Warfare



- Slow / Heavy
- Large footprint
- Stovepiped
- Primarily CONUS-based
- Manpower Training Intensive

- Distributed and Netted
- Unmanned Operations
- Cooperative Behavior
- Computer Aided Detect/Classify
- Common Operational Picture
- Sea Warrior Transformation

**Removing the Sailor from the minefield to increase clearance rates**



- Lethal
- Fast and Agile / Precise
- Modular / Organic
- Optimized Manpower Requirements

Dedicated Assets

Organic Assets

## Amphibious Warfare



CENTCOM FOCUS



PACOM FOCUS

- 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

## Naval Expeditionary Combat

Naval Construction



Maritime Expeditionary Security



Riverine Forces



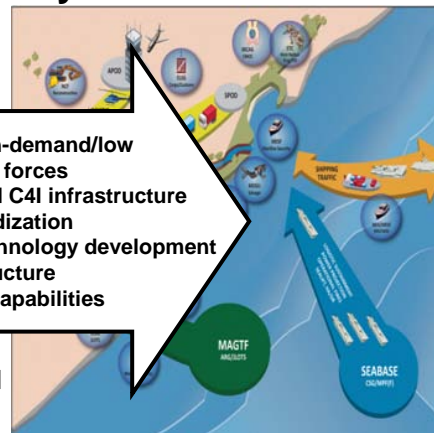
Expeditionary Logistics



NECC Forces link maritime/land domain in littoral battlespace

- Investments in high-demand/low density SFA-capable forces
- Common, upgraded C4I infrastructure
- Small boat standardization
- Continued EOD technology development
- Evolving Force Structure
- Robust non-lethal capabilities

**A fully integrated dual-use force**







# N95 Budget

**MPN/RPN**



**48.2¢**

**\$19.9B**

**OMN/OMNR**



**24¢**

**\$9.9B**

**SCN/NDSF**



**17.4¢**

**\$7.2B**

**OPN**



**5.7¢**

**\$2.3B**

**RDTE**



**3.8¢**

**\$1.6B**

**WPN/PANMC**



**.9¢**

**\$.4B**

- Amphibs/Connectors
- MCMs
- NSW
- NECC
- Beach Groups
- Training

- Ship Ops/ Maint
- LHD Midlife
- LSD Midlife
- LPD 17 Task Force
- MCM sustainment
- Connector Ops/Maint
- NECC Ops

- LHA 8
- MLP 4
- LCAC
- SLEP
- LSD (X)

- LPD TF
- Midlifes
- NECC
- Organic MCM

- Organic MCM
- CMS
- SSC
- EOD

- Gun Ammo
- Small Arms
- Mine neutralizers
- CMS

**OMN/MPN Concentrated**



# LPD-17 Network Modernization



- Directed by N9B via LPD-17 MPCR action memo.
  - Analyze SWAN, determine future LPD-17 Network Architecture and resource sponsorship
  - \$99M in “red-line” SWAN sustainment funding provided across FYDP
- \$1.4M study co-sponsored by N95, N2/N6
  - Led by PMW 160, PMS 317 with stakeholder involvement by USMC, NPS, SEA 21, N96, N12, N15, SEA 05C, SPAWAR 5.0, NCCA, USFF
  - Study finished under budget, in time to inform POM 14.
  - 3 executive-level IPRs, multiple IPTs and weekly study leadership meetings.
- N95-N2N6 concurrence achieved on preferred COA: federated SWAN-CANES hybrid.
  - SWAN provides HM&E network services; CANES provides C4I services
- Resource sponsorship and funding adjudicated at first ever Program Capabilities Group board
- Modernization TOC ~\$500M

***Shared Commitment to Fact Based Analysis, Constant Leadership Engagement***

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