Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009

Prepared by:
Director, Warfare Integration (OPNAV N8F)
Office of the Chief of Naval Operations
2000 Navy Pentagon
Washington, DC 20350-2000

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I. Reporting Requirement

This report is submitted in accordance with Chapter 9, Section 231 of Title 10 United States Code, which requires the Secretary of Defense to submit with the Defense Budget, an annual long-range plan for the construction of naval vessels that includes the following:

> (a) ANNUAL NAVAL VESSEL CONSTRUCTION PLAN AND CERTIFICATION – The Secretary of Defense shall include with the defense budget materials for a fiscal year:
>
> > (1) A plan for the construction of combatant and support vessels for the Navy developed in accordance with this section; and
> >
> > (2) A certification by the Secretary that both the budget for that fiscal year and the future-years defense program provide for funding of the construction of naval vessels at a level that is sufficient for the procurement of the vessels provided for in the plan.
>
> (b) ANNUAL NAVAL VESSEL CONSTRUCTION PLAN – Each such naval vessel construction plan shall contain the following:
>
> > (1) A detailed program for the construction of combatant and support vessels for the Navy over the next 30 fiscal years.
> >
> > (2) A description of the necessary naval vessel force structure to meet the requirements of the national security strategy of the United States or the most recent Quadrennial Defense Review (*QDR*).
> >
> > (3) The estimated levels of annual funding necessary to carry out the program, together with a discussion of the procurement strategies on which such estimated levels of annual funding are based.
>
> (c) ASSESSMENT WHEN VESSEL CONSTRUCTION BUDGET IS INSUFFICIENT TO MEET APPLICABLE REQUIREMENTS – If the budget for a fiscal year provides for funding of the construction of naval vessels at a level that is not sufficient to sustain the naval vessel force structure specified in the naval vessel construction plan for that fiscal year under subsection (a), the Secretary shall include an assessment that describes and discusses the risks associated with the reduced force structure of naval vessels that will result from funding naval vessel construction at such a level.

Additionally, the Senate Armed Services Committee has requested an addendum to this report that addresses the Navy's plans for decommissioning ships during the Future Years Defense Plan. Accordingly, the Navy has added the following information to this report:

> *(i) hull numbers of ships that are to be disposed by dismantling or sinking within the future-years defense plan; (ii) hull numbers of ships that are to be decommissioned within the future-years defense plan; (iii) gaps in capability that will occur upon the decommissioning of each ship, including duration of that capability gap; and (iv) disposition proposed for each ship upon decommissioning.*

II. Submission of the Report

The Navy's Fiscal Year (FY) 2009 report reflects the capabilities needed to meet the challenges the nation faces with a reasonable degree of risk. The Chief of Naval Operations has stated that the Navy's 313-ship force structure represents a floor – the minimum number of ships the Navy should maintain in its inventory to provide the global reach; persistent presence; and strategic, operational, and tactical effects expected of Navy forces.

III. Background

The Navy faces many challenges in procuring a force that will be effective over the broad spectrum of naval missions anticipated in the coming decades. At the same time, escalating shipbuilding costs demand that the Navy procure only those ships that are necessary to accomplish critical missions, with the minimum essential capabilities, and in the most efficient and cost effective manner possible. The following sections outline the key factors that the Navy considered in developing its 30-year shipbuilding plan.

The complex configuration and size of naval vessels results in design times that range from two to seven or more years. Similarly, construction time can span up to eight years, and acquisition costs range from hundreds of millions to billions of dollars. Given the capital investment required, principal naval vessels are procured in relatively low numbers which can cause high and low cycles in annual budget requirements. Additionally, because of their size, propulsion plant type, and warfare systems, most Navy ships can only be constructed at a limited number of shipyards. This makes the timing of ship procurement a critical matter to the shipbuilding and combat system industries. Finally, ships' service lives can range from 20 years for smaller ships to 50 years for nuclear-powered aircraft carriers, mandating that ships be designed to accommodate capability upgrades throughout their time in service. Emerging and constantly improving threats drive new requirements. For instance, to ensure success in the Maritime Domain, a capability for Ballistic Missile Defense and full spectrum Anti-Submarine Warfare needs to be incorporated in our new classes of ships.

The Navy's legacy ships, some procured at a rate of four to five ships of a single class per year in the 1980s, are projected to retire during the next 30 years. With the high cost of new construction ships, the Navy cannot recapitalize its legacy ships at the same rate at which they were originally procured and maintain an affordable, balanced procurement plan. This dynamic causes fluctuations in force structure.

Since the Navy's shipbuilding plan spans a long period, it is divided into two phases, *Near-* and *Far-Term*, each with a fundamentally different focus and unique assumptions. A description of each follows:

- **Near-Term:** This period includes the current budget year, Future Years Defense Plan (FYDP), and FY 2014-2020. This phase addresses the Navy's transformation to a 21st Century fighting force with the introduction of several new ship designs, with the objective of minimizing adjustments to the plan in order to balance the mix of ships, unit costs, budgeted resources, and industrial base concerns. The requirements underpinning this balance are based on Defense-wide planning scenarios that are informed by intelligence assessments of future threats and operating environments. Given known ship capability and quantity requirements, the cost estimates are judged reasonably accurate inside the FYDP. The accuracy of the cost estimates diminishes in the FY 2014-2020 timeframe.

- **Far-Term**: This phase encompasses FY 2021 through FY 2038. The requirements during this period are not as well defined as those for the near-term. The number, types and capabilities of ships are estimated based on anticipated Joint and Navy warfighting requirements, and cost estimates are notional due to increasing uncertainty of business conditions affecting the shipbuilding industry. In this report, the far-term phase largely addresses the recapitalization of today's legacy ships.

Overall affordability of the shipbuilding plan remains a challenge if the Navy is to introduce required 21st- Century capabilities and maintain the minimum essential force structure necessary to accomplish critical missions of a global Navy over the long term.

IV. Force Structure Requirement

A. Quadrennial Defense Review

The *FY 2006 Quadrennial Defense Review* (*QDR 06*) developed operational guidance for the national defense and national military strategies and for shaping the future force to address four priorities:

- Defeat terrorist extremists
- Defend the homeland in depth
- Shape the choices of countries at strategic crossroads
- Prevent hostile state and non-state actors from acquiring or using weapons of mass destruction

QDR 06 emphasizes the unique operational demands associated with homeland defense and the Global War on Terror (GWOT), and remains the twenty-year planning basis for the Department of Defense. It focuses on building a Joint portfolio of capabilities with global reach, capability, capacity, and flexibility that can concentrate military power for deterrence, dissuasion, and major combat operations. Additionally, *QDR 06* directs a transition from a force planning construct centered on global or major regional conflicts to one with more emphasis on GWOT and homeland defense - while maintaining the capability to prevail in major regional conflicts. The Navy's FY 2009 shipbuilding plan outlines the major ship construction investments necessary to support *QDR 06*.

B. Maritime Strategy

In October 2007, the Navy, Marine Corps, and Coast Guard issued a unified maritime strategy: *A Cooperative Strategy for 21st Century Seapower*. The new Maritime Strategy recognizes that the security, prosperity, and vital interests of the U.S. are increasingly linked to those of other nations by virtue of a global system comprised of interdependent networks of trade, finance, information, law, people, and governance. The Navy, in this context, must provide regionally concentrated, credible combat power and globally distributed mission-tailored maritime forces to achieve six key strategic imperatives:

- Limit regional conflict with forward deployed, decisive maritime power
- Deter major power wars
- Win our Nation's wars
- Contribute to homeland defense in depth
- Foster and sustain cooperative relationships with more international partners

- Prevent or contain local disruptions before they impact the global system

C. Force Structure

The 313-ship force structure shown in previous versions of this report was compliant with the *QDR 06* and *Strategic Planning Guidance*. In this President's Budget, the Navy has also considered the Maritime Strategy, and concluded that some adjustments should be made to this structure to accommodate essential changes in rotational, amphibious lift and intra-theater mobility requirements. No single mission area is disadvantaged in favor of any other to ensure that the Navy has the correct balance of carriers, submarines, cruisers, destroyers, amphibious and support ships to achieve the effects desired by the Combatant Commanders. However, the force structure depicted in this plan incurs risk in the following areas:

- Sourcing Carrier Strike Group (CSG) /Expeditionary Strike Group (ESG) demands for peacetime presence and warfighting response
- Ballistic Missile Defense
- Sea Shield (Theater Air and Missile Defense, Anti-Submarine Warfare) for CSG/ESG's
- Sourcing attack submarine (SSN) presence to approach Combatant Commanders' demand, and for Intelligence, Surveillance, and Reconnaissance (ISR).
- Meeting the stated Marine Corps Amphibious Lift Requirements
- Supporting the Long War/Global Maritime Security
- Providing a credible strategic deterrent force

Absent additional resources to procure, operate and maintain a larger fleet, the Navy will be compelled to accept the risk inherent in the current plan's minimum essential force structure. While in the main this plan achieves the necessary raw numbers of ships and sustains the shipbuilding industrial base, there are certain time periods where the ship mix, and therefore inherent capability of the force, varies from that required as a result of funding constraints and the timing of legacy fleet service life limits. The proposed force balances risk across mission areas with affordability, probability of need, and time required to recover should the future trend in an unexpected direction.

Table 1. Future Naval Force Structure (FY 2020)

Type/Class	313-Ship Force Structure
Aircraft Carriers	11
Surface Combatants	88
Littoral Combat Ships	55
Attack Submarines	48
Cruise Missile Submarines	4
Ballistic Missile Submarine	14
Amphibious Warfare Ships	31*
Combat Logistics Force Ships	30
Maritime Prepositioning Force (Future) Ships	12
Support Vessels	20

* Note: The DoN is reviewing options to increase assault echelon amphibious lift to 33 ships to meet USMC requirements.

V. Naval Vessel Construction Plan

Table 2 displays the Department of the Navy (DoN) new ship construction procurement and funding plans for FY 2009 and the Future Years Defense Plan (FYDP) as reflected in the FY 2009 President's Budget submission.

Table 2. FY 2009-2013 Shipbuilding Budget

											Total FY (09-13)	
Ship Type	**FY09**	**Qty**	**FY10**	**Qty**	**FY11**	**Qty**	**FY12**	**Qty**	**FY13**	**Qty**	**$ M**	**Qty**
CVN 21[1]	3,926		1,495		1,145		2,513	1	3,172		12,251	1
SSN 774[2]	3,424	1	3,952	1	5,294	2	4,753	2	4,957	2	22,380	8
DDG 1000	2,554	1	2,714	1	2,427	1	2,619	1	2,348	1	12,662	5
CG(X)					3,234	1			3,064	1	6,299	2
LPD 17[3]	103										103	
LCS[4]	920	2	1,380	3	1,380	3	1,840	4	2,760	6	8,280	18
T-AKE[5]	962	2									962	2
MPF(F)-LMSR[5]							1,149	1			1,149	1
MPF(F)- LHA(R)[5,6]	348		1,037	1	1,693				392		3,469	1
MPF(F)- MLP[5]			1,236	1			964	1	998	1	3,197	3
LCC-R[5]							1,924	1			1,924	1
JHSV[7]	175	1	174	1	182	1	188	1	195	1	914	5
Total New Construction	**12,412**	**7**	**11,988**	**8**	**15,355**	**8**	**15,951**	**12**	**17,886**	**12**	**73,591**	**47**

Notes:
1. In FY 2007 Congress provided Authorization to fund nuclear aircraft carrier procurement over a four-year period, which is reflected in the PB09 submission for CVN 78, lead ship of the CVN 21 class. This line item also funds advance procurement for CVN 79 and CVN 80.
2. Funding in FY 2009 - FY 2011 includes Economic Order Quantity funds for ships procured in FY 2010 - FY 2013. Funding in FY 2012 and FY 2013 includes advance procurement funds for submarines planned for procurement in FY 2014 and FY 2015.
3. Funding in FY 2009 represents program closeout costs.
4. Funding does not include LCS mission modules, which are funded in other Navy accounts.
5. Funded in National Defense Sealift Fund (NDSF).
6. Funding in FY2009 and FY2013 is advance procurement.
7. The JHSV Program is a joint Army and Navy program. Quantities reflect Navy procurement of 5 ships in FY 2009-2013.

VI. Long-Range Naval Vessel Construction Plan

The long-range naval vessel construction plan shown in Table 3 displays the projected procurement of 296 ships over the next 30 years, which is required to support the 313-ship minimum force structure outlined in Table 1. The following description of the plan is divided into near- and far-term phases to emphasize the fundamental differences in procurement during those periods.

Table 3. FY 2009-2038 Long-Range Naval Vessel Construction Plan

	Near Term												Far Term																	
Fiscal Year	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
Aircraft Carrier				1				1					1				1				1					1				1
Surface Combatant	1	1	2	1	2	1	2	2	2	2	2	2	2	2	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Littoral Combat Ships	2	3	3	4	6	6	6	6	6	6	4													1		2	5	5	5	5
Attack Submarines	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	1	2	1	2	1	2
Ballistic Missile Submarines											1			1		1	1	1	1	1	1	1	1	1	1					
Amphibious Warfare Ships								1	1	1		2		1	1	1		2		1	1	1		2		1	1	1		2
Combat Logistics Force	1									1		2	2	2	2	2	2	2			1		1	1	1					
Maritime Prepositioning Force (Future)	1	2		2	1	2	1																							
Support Vessels	1	1	1	2	1	2	2		1	1	1	2		2	3	2	2				1	1	1	1	1	1	1			
Total New Construction Plan	**7**	**8**	**8**	**12**	**12**	**13**	**13**	**12**	**12**	**13**	**10**	**10**	**7**	**10**	**9**	**10**	**11**	**10**	**6**	**7**	**9**	**8**	**7**	**11**	**7**	**10**	**11**	**11**	**9**	**13**

A. Near-Term Naval Vessel Construction Plans

- The near-term plan focuses on transformation of the Navy Force structure to address the warfighting requirements of the 21st Century. These transformational ships include DDG 1000, CG(X), LCS, SSN 774, T-AKE, MPF(F) MLP, MPF(F) LMSR, and JHSV.
- The Navy continues to move toward establishing a sustaining production rate for its ship classes to reduce funding peaks in the future. Sustaining production rates will supply new ships at the same rate at which legacy ships reach the end of their planned service lives and have been planned for aircraft carriers, attack submarines, and amphibious ships. Transition to a sustaining rate for other ships where appropriate is addressed in the far-term.
- The Department appreciates Congress' support in the FY 2007 National Defense Authorization Act to fund aircraft carriers over four years. This split funding permits more efficient use of resources and facilitates stability in other shipbuilding programs and the Navy has adopted it in the President's FY2009 budget submission.
- Regarding surface combatants, the planned procurement of the DDG 1000 class will be completed by FY 2013 with a total of seven ships. The CG(X) program procures its first ship in FY 2011 with follow-on construction in FY 2013. The FY 2008 National Defense Authorization Act requires all major combatant vessels of the United States Navy strike forces to be constructed with an integrated nuclear power plant, unless the Secretary of Defense determines this not to be in the best interest of the United States. A nuclear propulsion plant will add to the cost per unit. This increased cost is not included in the current budget. The Navy acknowledges that this statute applies to CG(X). Resulting requirements definition and acquisition plans, including schedule options and associated risks, are being evaluated in preparation for CG(X) Milestone A.
- Table 3 shows the Navy has integrated the changes to the Littoral Combat Ship procurement plan previously reported to Congress.
- The Navy increased procurement to two VIRGINIA class attack submarines per year starting in FY 2011 in an effort to reduce a future inventory shortfall.
- The Navy has delayed MPF(F) procurement ($14 billion) in order to resolve the concept of operations.
- There are two support ship changes. Analysis indicates the T-ATF service life can be extended to 40 years. This permits the Navy to delay starting procurement of the T-ATF replacements until FY 2015. Additionally, beginning in FY 2009, the Navy plans to procure a total of seven Joint High Speed Vessels (JHSV) at a rate of one ship per year to meet Combatant Commanders' demands for intra-theater lift and Theater Security Cooperation support.

B. Far-Term Naval Vessel Construction Plans

- The far-term plan focuses on recapitalizing the Navy's legacy ship inventory. In the period from FY 2021 to 2038, 165 ships will reach the end of their expected service lives – twice the number planned for retirement during the near-term phase. The Navy must manage meticulously the service lives and modernization of legacy ships during this period to prevent block obsolescence from causing unacceptable gaps in capability and capacity. Starting procurement of the next generation ships earlier than might otherwise be needed is an imperative to level the replacement

profile. In the far-term phase, about thirty percent more ships must be procured than in the near-term phase. This procurement, combined with the required sustaining-rate replacement of aircraft carriers, attack submarines and amphibious assault ships, will provide a more stable demand on industry and prevent this cyclic problem from recurring again in the future

- The replacement program for the OHIO class Ballistic Missile submarines is a strategic issue that merits immediate attention. Absent additional resources to recapitalize this national strategic capability, the Navy will be unable to concurrently replace the existing OHIO class submarines and the balance of its force structure requirements in accordance with this shipbuilding plan. In the interim, the Navy will continue to work with US Strategic Command to complete the requirements analyses and systems studies necessary to define the replacement program.

- Plans for recapitalization of the OHIO class submarines that have been converted to SSGN have been deferred until their warfighting utility can be assessed. Should their replacement be required, it will be necessary to integrate their procurement with other ship and submarine recapitalization efforts planned for the post-FY 2020 period.

- Amphibious ship procurement will transition to a sustaining rate in FY 2016, ultimately encompassing a single ship type that will replace today's LSD 41 and LPD 17 classes.

VII. 30-Year Naval Force Size

The 30-year shipbuilding construction plan presented above results in the projected ship inventory shown in Table 4 below. The total inventory of battle force ships and numbers of each type of ship will vary from year to year as a result of the complex relationship between retirements, procurement, affordability, design and construction times, industrial base capacity, warfighting priorities and service life limits of the legacy fleet. The projected numbers of ships in active service shown below are counted as of the end of each fiscal year.

Table 4. FY 2009-2038 Naval Battle Force Inventory

	Near Term												Far Term																	
Fiscal Year	**09**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
Aircraft Carrier	11	11	11	11	10	10	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Surface Combatant	109	111	113	110	107	99	94	92	92	93	93	94	95	94	94	94	93	91	91	89	91	94	96	99	101	100	98	95	94	94
Littoral Combat Ships	2	2	2	3	8	11	14	18	24	30	36	42	48	54	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Attack Submarines	53	52	52	53	54	51	51	49	50	49	50	48	48	47	47	46	45	44	43	41	41	42	44	45	47	49	50	52	53	53
Cruise Missile Submarines	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	1											
Ballistic Missile Submarines	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	12	12	12	12	12	12	12	12	12
Amphibious Warfare Ships	31	32	34	34	33	33	33	33	33	32	32	32	32	32	32	32	33	33	33	33	33	33	33	33	33	33	33	33	33	32
Combat Logistics Force	31	30	28	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Mine Warfare Ships	14	14	14	14	14	14	14	14	13	13	11	10	7	6	2	1														
Maritime Prepositioning Force (Future)					1	1	2	4	6	7	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Support Vessels	17	17	17	18	19	20	21	22	24	26	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Total Naval Force Inventory	**286**	**287**	**289**	**290**	**293**	**287**	**288**	**291**	**301**	**309**	**315**	**319**	**323**	**327**	**324**	**322**	**320**	**315**	**312**	**307**	**309**	**312**	**316**	**320**	**324**	**325**	**324**	**323**	**323**	**322**

The following sections describe the operational implications of ship inventories outlined in Near- and Far-Term phases over the 30-year span of this report.

A. Near-Term Naval Battle Force Inventory

- The minimum aircraft carrier force level requirement remains at 11 ships. However, the Navy is seeking a Congressional waiver to decrease the carrier force to 10 operational carriers between the

inactivation of USS ENTERPRISE (CVN 65) in November 2012 and the delivery of GERALD R FORD (CVN 78) in September 2015. During this 33-month period, Navy will mitigate the operational impact of the shortfall through selective rescheduling of carrier maintenance availabilities and by applying the inherent flexibility of the Fleet Response Plan. This risk mitigation strategy will support presence and surge requirements during this short time period, although it is not sustainable over a long period of time.

- The Littoral Combat Ship procurement profile was adjusted based on a program assessment following LCS-1 and LCS-2 cost increases. Although this assessment resulted in the removal of 13 ships from the FY 2008 President's Budget FYDP, the plan continues procurement to reach the objective of 55 ships by FY 2023.
- New T-AKE ships will replace the aging combat cargo and ammunition ships (T-AFS and T-AE) by FY 2012. This will complete the Navy's transition to a three ship-type combat logistics force, which will improve the overall effectiveness of operational fleet support. The Navy has committed to procure the minimum number of T-AKEs necessary to meet the Combat Logistic Force (CLF) requirement, currently assessed to be 12 T-AKEs. When MPF(F) T-AKE assets are considered in logistics planning for major combat operations, the CLF requirement drops to 11 T-AKEs, enabling the transfer of the 12th CLF T-AKE to the MPF(F).
- Ultimately, the 14-ship MPF(F) squadron will preposition the equipment and supplies of a planned FY 2015 Marine Expeditionary Brigade and will be capable of conducting at sea arrival and assembly operations to combat configure, employ, deliver and sustain Joint forces from over the horizon. MPF(F) ships will also meet Combatant Commander tasking for Theater Security Cooperation, disaster relief and other contingencies. The current budget does not include the 13th or 14th T-AKEs required to meet the MPF(F) structure described above, pending completion of an ongoing MPF(F) concept of operations study. It is expected that the assessment will show that the MPF(F) will need these two T-AKEs .
- JHSV class ships will provide support for intra-theater lift and Theater Security Cooperation at a relatively low cost. Additionally, the inventory of T-AGOS ships has been increased to account for lower operational availability than anticipated which has increased the rotational requirements for this class.

B. Far-Term Naval Battle Force Inventory

- The demand for Aegis ships is expected to increase because of their BMD capability. Achieving full service life from CG 47 class ships, and performing additional maintenance to extend the service life of DDG 51 class ships, is imperative to reduce the impact of rapid post-FY 2020 retirements pending entry of sufficient DDG(X) class ships into active service. A single mid-life modernization is no longer adequate for CG 47 and DDG 51 class ships due to the evolving threat environment, mandating periodic updates to keep them effective and to sustain engineering plant capacity. The current CG and DDG modernization efforts are the foundation for this effort and will serve as the baseline for subsequent upgrades throughout the remainder of their service lives. The impact of extending the service life of DDG 51 class ships five years is reflected in Table 4.
- The Navy faces a shortfall in its attack submarine inventory from FY 2022 through FY 2033. The inventory will reach a minimum of 41 ships in FY 2028-2029. The Navy has identified a strategy to mitigate the impact of this shortfall to include the following: (a) reducing build time of Virginia class attack submarines to 60 months; (b) extending the service life of selected attack submarines based on

technical feasibility and affordability; and (c) extending, as needed, the length of attack submarine deployments from 6 to 7 months to meet operational requirements.

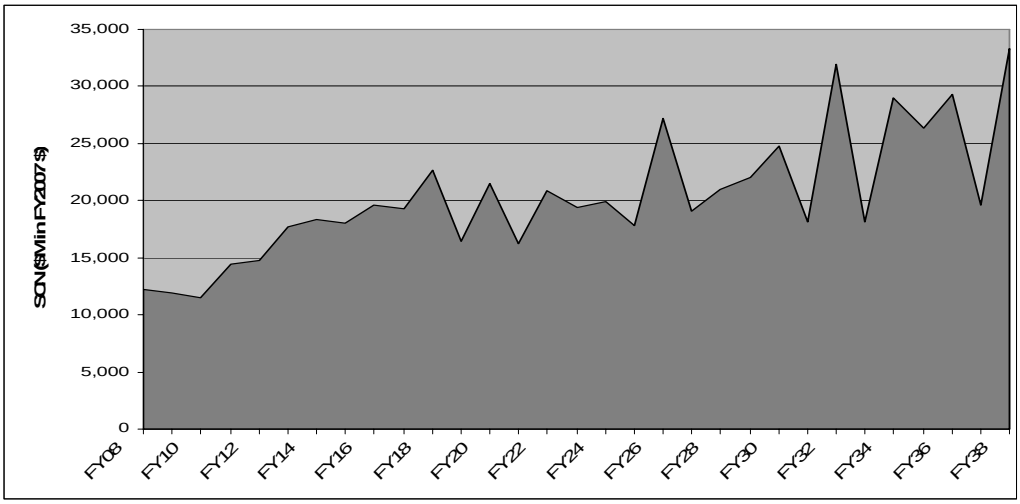
- OHIO class ballistic missile submarines start retiring in FY 2027, requiring construction of a replacement SSBN beginning in FY 2019. Any delay in construction will impact the Navy's ability to meet U.S. Strategic Command's (USSTRATCOM) Sea-Based Strategic Deterrent requirement.
- The Marine Corps requires sufficient Assault Echelon amphibious lift to support 2.0 Marine Expeditionary Brigades (MEB). MPF(F) will reinforce and support a 2.0 MEB Assault Echelon within a Marine Expeditionary Force-level operation by projecting a brigade and its associated support, and by providing the interface between operational and tactical logistics support from the Sea Base.
- Mine warfare ships will be replaced by Littoral Combat Ships configured with the mine warfare mission package. Legacy mine warfare ships will be phased out gradually by FY 2024.

VIII. Estimated Levels of Annual Funding Required for the Long-Range Shipbuilding Program

A. Overall

Figure 1 provides the estimated annual new construction funding requirements in FY 2007 dollars. The Navy recognizes that building the required force structure will largely depend on controlling shipbuilding costs (including combat systems) within an affordable range. This will require the combined efforts of the Navy, and the shipbuilding and combat systems industries. Working with Congress, the Navy is committed to procuring and sustaining the force structure necessary to deliver the effects expected of United States naval forces.

Figure 1. Annual Funding Required for Navy Long-Range Shipbuilding (FY 2009-2038)



Note:
This estimate shows funding required to support construction of the 313-ship minimum force structure over the period of the report. It does not include funding for SSBN recapitalization, CVN Refueling Complex Overhauls, SSBN/SSN Engineered Refueling Overhauls, other conversions, service life extension programs, small craft, or other costs associated with the Navy shipbuilding construction account. Per section VI.A., the estimate will be updated for FY 2010 based on CG(X) Milestone A decision, and in compliance with FY 2008 National Defense Authorization Act.

B. Near-Term Funding Requirements

The average steady-state annual shipbuilding funding required for achieving and sustaining the previous report's minimum 313-ship force structure was approximately $13.4 billion per year in FY 2005 dollars ($14.4 billion in FY 2007 dollars). The Navy's current cost estimate is affected in the near term by such factors as the FY 2006 Pension Protection Act, rising material costs, increasing labor rates, and the cost risk associated with developing and building new ship classes. Additionally, minimal first-tier shipbuilding capacity is devoted to commercial business, placing the overhead burden largely on Navy shipbuilding programs.

An additional complicating factor in ship procurement is the effect of the inflation rate experienced in the shipbuilding industrial sector compared to the Navy's budget. The shipbuilding industry's historical cost inflation rate is approximately 1.5 percent higher than the rate used by the Department of Defense to adjust the budget for year-to-year inflation. Consequently, the Navy's total obligation authority (TOA) has not paced the shipbuilding cost inflation rate. The net result of this mismatch is that resources available to support shipbuilding are eroding.

Accordingly, the Navy has revised the average steady-state annual shipbuilding funding requirement to $15.8 billion per year in FY 2007 dollars through the near-term period (through FY 2020). The $15.8 billion per year investment includes National Defense Sealift Funds (NDSF) and applies only to new construction battle force ships. It does not include funding for SSBN recapitalization, CVN Refueling Complex Overhauls, SSBN/SSN Engineered Refueling Overhauls, other conversions, service life extension programs, small craft, or other costs associated with the Navy shipbuilding construction account.

The Navy is experiencing some success in controlling and reducing shipbuilding costs. The VIRGINIA class SSN program is on track to reduce procurement cost by $400 million per ship (FY 2005 dollars) by FY 2012 through an aggressive cost reduction program. Program elements facilitating this success include increasing production to two submarines per year under multi-year procurement authority, improving construction performance, investing in capital improvements, and implementing design changes to reduce construction costs.

To better control requirements, the Navy's Requirements and Resources Review Board (R3B) and newly instituted acquisition governance process changes are effectively managing adjustments to top-line requirements after programs have been initiated. Future process improvements will exert executive level control over shipbuilding and combat systems technical authority actions which have a large impact on program cost.

C. Far-Term Funding Requirements

The majority of procurement planned beyond FY 2020 is focused on recapitalizing retiring ship classes. Dramatically increased funding is required just to maintain Navy force levels during the post-FY 2020 period, without including funding that may be required to replace retiring non-battle force Strategic Sealift ships. Many of the new replacement ships identified as part of the Navy's 30-year shipbuilding program have not been designed. Cost estimates for these ships will remain a rough order of magnitude until conceptual designs are completed and more accurate cost estimating methods can be applied.

The Navy is emphasizing repeat builds of ships within the same class to reduce new construction costs, provided required warfighting capabilities can be fielded using this approach. This permits longer production runs and resultant cost reductions associated with production improvements and economies of scale. The Navy's shipbuilding plans include incorporation of open architecture for hardware and software systems and increased use of systems modularity. In addition, the Navy is aggressively pursuing opportunities to incorporate standardized components to reduce logistics support costs. These

initiatives will reduce the cost of maintenance and system upgrades, and will facilitate keeping Navy ships in service longer.

The Navy will consider several industrial factors as it pursues operational capability at reduced cost. First, level loading of ship procurements to help sustain minimum employment levels and skill retention will promote a healthy U.S. shipbuilding industrial base. Further, to achieve affordability goals, Navy program managers will make greater use of contract incentives, such as steep share lines combined with performance incentives, multi-year procurement, fixed price contracts (when and where appropriate), and increased use of competition to contribute to real shipbuilding cost containment.

IX. Naval Vessel Construction Risk

Funding for the Navy's shipbuilding requirements meets the needs of the Department and fully funds those ships included in the FY 2009 President's Budget and the Future Years Defense Plan through FY 2013.

X. Summary

Navy continues to analyze operational requirements, ship designs and costs, acquisition plans and tools, and industrial base capacity to further improve its shipbuilding plans, but the near-term shipbuilding plans have remained relatively stable. Although a larger force may reduce the significant major combat operations and Long War risks inherent in the 313-ship minimum force structure depicted, this plan represents an acceptable balance between capability, affordability, and the need to sustain the industrial base.

Full funding and support of this plan is crucial if the Navy is to maintain the minimum essential battleforce necessary to meet the maritime needs of the nation.

Addendum Report
Navy Plans for Decommissioning Ships during Future-Years Defense Plan (FYDP)

I. Introduction

This addendum report is in compliance with the Senate Armed Services Committee request for additional information regarding decommissioning and disposal of Naval vessels:

> *The Committee directs the Secretary of Defense to include, as an addendum to the annual report on the construction of naval vessels, commencing with submission of the report for fiscal year 2009, the future-years defense plan for the Navy's inactive ships. The addendum shall address: (i) hull numbers of ships that are to be disposed by dismantling or sinking within the future-years defense plan; (ii) hull numbers of ships that are to be decommissioned within the future-years defense plan; (iii) gaps in capability that will occur upon the decommissioning of each ship, including duration of that capability gap; and (iv) disposition proposed for each ship upon decommissioning.*

The Secretary of the Navy approves the change in status of all ships, active or inactive, of the United States Navy (including Military Sealift Command) upon recommendations made by the Chief of Naval Operations (CNO). Annually, the CNO reviews the proposed ship decommissioning and deactivation plans, and the composition of the inactive fleet and its material condition, to reassess the number of ships to be held in the various categories of readiness and their disposition if not required for retention.

When determining which ships will be decommissioned or deactivated, several factors are taken into consideration. Maintaining a ship in inventory involves operational cost, manning requirements, maintenance, and system upgrades to ensure the continued interoperability and operational effectiveness. The ship's operational history, including particularly demanding operations in harsh environmental conditions, often impacts its viable service life. Other factors, such as design changes or modifications made to the ship, or a design that is not amenable to a subsequent operational system upgrade, may make it infeasible to continue its service. Since ships operate over periods of decades, sometimes the operational mission of the ship becomes obsolete and there is no continued operational purpose for the ship. Under these conditions, it may sometimes be advantageous to retire a ship despite the Navy's desire to maintain its numbers and avoid recapitalization costs.

The Navy's methods to reduce the inventory of deactivated or decommissioned ships, in priority order, include interagency transfers to the Maritime Administration, United States Coast Guard (USCG) or other government agencies; donations for memorial/museum use by the public; foreign military sales (FMS) transfers; dismantling or scrapping; experimental use; or by sinking in conjunction with critical fleet training exercises, weapons effectiveness testing, or forming artificial reefs. Nuclear-powered ships are dismantled by a special recycling process. Select ships that have completed their useful service lives may be retained in the inactive fleet for a period of time to be available for future mobilization or while awaiting disposal. The longer a ship remains in the inactive fleet, the less likely it will be operationally useful in the future and the more costly its reactivation or disposal becomes.

Two decisions are associated with the disposal of Navy ships. First is the decision to decommission or deactivate the ship from active service, including striking it from the Naval Register. The second is to determine its disposition following its retirement. This report outlines the Navy's plans for ship decommissioning and deactivation within the Future Years Defense Plan (FYDP), and further identifies those ships that will be either sunk or dismantled/disposed of in the same period.

II. Ships planned for decommissioning or deactivation during the Future Years Defense Plan

Table 1 lists, by year, the Navy ships that are to be decommissioned or deactivated within the FYDP. The table identifies the planned disposition for each ship. The description of any potential gap in warfighting capability that might occur when the ship is removed from service is included in the discussion below the table.

Table 1. Ships Planned for Decommissioning or Deactivation[1] during the FYDP

FY	SHIP NAME	HULL NO.	PLANNED DISPOSITION
2009	USNS SATURN	T-AFS 10	SINKEX
	USNS CONCORD	T-AFS 5	SINKEX
	USNS SAN JOSE	T-AFS 7	SINKEX
	USNS HAYES	TAG 195	SINKEX
	USS JUNEAU	LPD 10	Inactive Fleet
	USS NASHVILLE	LPD 13	Inactive Fleet
	USS TARAWA	LHA 1	Inactive Fleet
	USS KITTY HAWK	CV 63	Inactive Fleet
2010	USNS KILAUEA	T-AE 26	SINKEX
	USNS MOUNT BAKER	T-AE 34	SINKEX
	USS MCINERNEY	FFG 8	Foreign Military Sales
	USS LOS ANGELES	SSN 688	Dismantle
	USS PHILADELPHIA	SSN 690	Dismantle
2011	USNS FLINT	T-AE 32	SINKEX
	USNS KISKA	T-AE 35	SINKEX
	USNS SHASTA	T-AE 33	SINKEX
	USS MEMPHIS	SSN 691	Dismantle
2012	USS BOONE	FFG 28	Foreign Military Sales
	USS STEPHEN W GROVES	FFG 29	Foreign Military Sales
	USS JOHN L HALL	FFG 32	Foreign Military Sales
	USS DUBUQUE	LPD 8	Inactive Fleet
	USS CLEVELAND	LPD 7	Inactive Fleet
2013	USS JARRETT	FFG 33	Foreign Military Sales
	USS UNDERWOOD	FFG 36	Foreign Military Sales
	USS CROMMELIN	FFG 37	Foreign Military Sales
	USS DOYLE	FFG 39	Foreign Military Sales
	USS KLAKRING	FFG 42	Foreign Military Sales
	USS DENVER	LPD 9	Inactive Fleet
	USS ENTERPRISE	CVN 65	Dismantle

Note:
1. Military Sealift Command ships are not commissioned ships. They are deactivated when removed from active service.

A. Aircraft Carriers (CV/CVN)

To maintain as constant a force structure as possible, the delivery of new aircraft carriers is planned to coincide with the scheduled decommissioning of carriers reaching the end of their expected service lives. USS KITTY HAWK (CV 63) will be decommissioned in the Spring of 2009, after nearly 48 years of service, at roughly the same time the Navy expects to take delivery of the last NIMITZ-class carrier, GEORGE H W BUSH (CVN 77). This schedule maintains the carrier fleet at 11 operational ships through early FY 2013. However, the delivery of GERALD R FORD (CVN 78) in September 2015 does not align with the inactivation of USS ENTERPRISE (CVN 65) after 51 years of service in November 2012. The Navy is requesting a waiver from Congress to allow the carrier force structure to decline to 10 ships during this 33-month period. Recognizing that this short-term carrier gap will result in increased stress on the remaining carrier force, the Navy has developed a workable strategy; using

deployment cycle lengths, Fleet Response Plan variations, and rescheduled ship maintenance availabilities; to mitigate the operational impacts of a 10-carrier force. The Navy remains committed to an 11 carrier force.

B. Surface Combatants

The FFG 7 class reaches the end of its service life prior to FY 2020. During the period of this report, nine guided missile frigates of the FFG 7 class will be retired at the end of their useful service lives and, provided the Littoral Combat Ships join the fleet as planned, there will be no capability gap.

C. Submarines

With the planned inactivation of USS LOS ANGELES (SSN 688), USS PHILADELPHIA (SSN 690), and USS MEMPHIS (SSN 691) at the end of their planned 33-year service lives, the Navy will have the required numbers of nuclear attack submarines until FY 2022. These SSN 688 class submarines are being replaced by the construction of VIRGINIA class attack submarines. The retirement of these ships will not exacerbate the long-term shortfall in submarine strength since their service lives do not permit their extension beyond FY 2022.

D. Amphibious Ships

The Commandant of the Marine Corps has determined that a minimum of 33 amphibious ships is necessary to support their assault echelon lift requirements; specifically, he has requested a force of 11 aviation capable amphibious ships, 11 LPDs and 11 LSDs. The Chief of Naval Operations supports the Commandant's determination. All of the ships in these classes will retire after 41-45 years of service. This addendum report reflects the service life extension of 2 AUSTIN class LPDs to 45 years and 47 years respectively, and 2 TARAWA class LHAs to 43 years. While the mix of the 33 ships reflected in this plan differs slightly from the USMC requirement, it represents acceptable risk considering the amphibious ships planned for decommissioning are not scheduled for dismantling or sinking to permit mobilization at a later date if required. The decommissioning ships are being replaced with newer more capable LPD 17 and LHA 6 class ships. The Navy will maintain the 33-ship requirement for amphibious shipping through the FYDP while these new ships are integrated into the battleforce. Consequently, there will be no amphibious ship capability gaps through at least FY 2019.

E. Combat Logistics Force (CLF) Ships (T-AFS and T-AE)

Navy has evolved its combat logistics support operational concept to reduce CLF ship requirements to three types, including the Fast Combat Support Ship (T-AOE), Fleet Oiler (T-AO), and Dry Cargo/Ammunition Ship (T-AKE). The Navy plans to retire aging combat cargo and ammunition ships (T-AFS and T-AE) as the new construction T-AKE class ships join active service, thereby maintaining CLF force levels. T-AKE will continue to replace the aging legacy CLF ships through FY 2011. No capability gap will exist within the Combat Logistics Force.

F. Support Ships.

Only one support ship, USNS HAYES T-AG 195, is planned for retirement during this FYDP. This ship is not required to support the Navy's 313-ship minimum force structure requirement.

III. Ships planned for disposal during the Future Years Defense Plan

The Navy recognizes that environmental and safety risks increase as inactive ships deteriorate and their disposal is delayed. The longer retired ships sit in the inactive fleet, the higher the environmental risks

and disposal costs. The Navy's inventory of inactive ships has been reduced from a high of 195 ships in 1997 to 62 ships today.

As indicated earlier, ships not identified for disposal are retained for possible future mobilization, transfer to other government organizations, foreign military sales, logistics support, or donation for use as museums or for public display. When these options are not appropriate, the two primary means of disposal of inactive ships are either by dismantling or sinking. Dismantling is one of the more costly options involving a commercial ship dismantling yard. The process for dismantling nuclear-powered ships is considerably more complex than conventionally-powered ships and requires special disposal of the propulsion plant components. For nuclear ships, dismantling through a special recycling process is the only viable option. Disposal of conventionally-powered ships by sinking will usually be conducted as part of an approved training exercise or to support weapons testing requirements. Inactive ships contribute significantly to the Navy in this role, as these exercises often result in cost savings for developmental programs requiring live-fire testing, provide key learning necessary to improve fleet tactics and weapons design, and provide on-going statistical data to assess weapons performance. Another option for sinking may be to provide an ocean bottom artifact to support fish and marine growth as an artificial reef. In both cases the Navy complies strictly with the Environmental Protection Agency directives of 1996 and 1999.

Specific ship disposition plans are made at the annual Ship Disposition Review Conference. The Ship Disposition Review Conference provides a forum for evaluating operational risk, inventory requirements and other issues to ensure the best possible recommendations for ship disposition are provided to Navy leadership. The Navy establishes its ship disposition plans based on the methods available that are most advantageous to the government.

Table 2. Ships Planned for Disposal by Dismantling

SHIP NAME	HULL NO.	SHIP NAME	HULL NO.
Ex-PUGET SOUND	AD 38	Ex-ANCHORAGE	LSD 36
Ex-CORONADO	AGF 11	Ex-FORT FISHER	LSD 40
Ex-SIMON LAKE	AS 33	Ex-TROUT	SS 566
Ex-L Y SPEAR	AS 36	USS LOS ANGELES	SSN 688
Ex-MCKEE	AS 41	Ex-DRUM	SSN 677
Ex-YORKTOWN	CG 48	Ex-OMAHA	SSN 692
Ex-VINCENNES	CG 49	Ex-CINCINNATI	SSN 693
Ex-THOMAS S GATES	CG 51	Ex-NEW YORK CITY	SSN 696
Ex-INDEPENDENCE	CV 62	Ex-GROTON	SSN 694
Ex-CONSTELLATION	CV 64	Ex-BIRMINGHAM	SSN 695
Ex-AUSTIN	LPD 4	Ex-PHOENIX	SSN 702
Ex-NEW ORLEANS	LPH 11	Ex-BALTIMORE	SSN 704

The Navy will dismantle the ships listed in Table 2 within the FYDP. Specific dates have not been determined as several factors dictate when the ships will be put under contract for their scrapping or recycling in the case of nuclear-powered ships. With the exception of nuclear-powered ships, dismantling is the lowest priority for disposal of ships and is used when other options are not feasible. For nuclear ships the dismantling through a special recycling process is the only viable option. The actual date of dismantlement depends on such factors as the timing of decommissioning or deactivation, the location of the ship and attendant requirements for hull cleaning and transfer to the dismantlement

facility, time available to strip the ship of any salvageable Navy components, any special holds placed on ships while reconsidering dismantlement, and availability of disposal funds.

Table 3. Ships Planned for Disposal by Sinking

FY	SHIP NAME	HULL NO.
2009	Ex-ACADIA	AD 42
	Ex-CONOLLY	DD 979
	USNS HAYES	TAG 195
2010	USNS CONCORD	T-AFS 5
	USNS SAN JOSE	T-AFS 7
	USNS SPICA	T-AFS 9
	USNS NIAGARA FALLS	T-AFS 3
2011	USNS KILAUEA	T-AE 26
	USNS SATURN	T-AFS 10
2012	USNS FLINT	T-AE 32
	USNS SHASTA	T-AE 33
	USNS MOUNT BAKER	T-AE 34
	USNS KISKA	T-AE 35
TBD	Ex-FORRESTAL	AVT 59
TBD	Ex-ARTHUR W RADFORD	DD 968

Table 3 lists the ships that the Navy plans for disposal by sinking as part of fleet training exercises during FY 2009 – 2012. All of these ships will be at or beyond their expected service lives when disposal is completed. Ex-FORRESTAL and Ex-ARTHUR W RADFORD are candidates for sinking to become artificial reefs. Specific dates for these two will not be set until all the prerequisite requirements and authorizations are obtained, and plans are appropriately coordinated with other agencies and Congress.

IV. Summary

This addendum outlines the Navy's plans for retired or retiring ships developed as a result of an annual Ship Disposition Review conducted in December 2007. In developing this plan, the Navy's focus has been on maintaining its 313-ship minimum force structure, cost avoidance by ensuring each ship operates for its full service life, and ensuring ships that might be required for future mobilizations remain in reserve. During the FYDP, the Navy will retire 29 ships with various dispositions including retention, logistics support assets, foreign military sales, donations for public displays, dismantling, and sinking. The Navy plans to dismantle 24 ships and sink 15 ships that have no further use for the Navy.