
# Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress

**Ronald O'Rourke**
Specialist in Naval Affairs

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# Summary

The planned size of the Navy, the rate of Navy ship procurement, and the prospective affordability of the Navy's shipbuilding plans have been matters of concern for the congressional defense committees for the past several years.

The Navy in February 2006 presented to Congress a goal of achieving and maintaining a fleet of 313 ships, consisting of certain types and quantities of ships. The Navy in subsequent years changed its desired quantities for certain ship types, and by mid-2011 the Navy's desired fleet appeared to have grown to a total of 328 ships. In September 2011, the Navy began briefing congressional offices on a new 313-ship plan that incorporates some of the changes that the Navy made over the years to the 313-ship plan of February 2006 while staying within the overall total of 313 ships. Among other things, the 313-ship plan of September 2011 reduces the planned number of Joint High Speed Vessels (JHSVs) to 10, compared to a previously planned total of 21.

Press reports in September and October 2011 state that the Navy, in response to anticipated reductions in planned levels of defense spending, is examining options for maintaining a fleet with considerably fewer than 300 ships; for retiring certain ships in the near term, well before the ends of their expected service lives; and for deferring or cancelling certain planned procurements.

The Navy's proposed FY2012 budget requests funding for the procurement of 10 new battle force ships (i.e., ships that count against the 313-ship goal). The 10 ships include two Virginia-class attack submarines, one DDG-51 class Aegis destroyer, four Littoral Combat Ships (LCSs), one LPD-17 class amphibious ship, one Mobile Landing Platform (MLP) ship (i.e., a maritime prepositioning ship), and one Joint High Speed Vessel (JHSV). The Navy's five-year (FY2012-FY2016) shipbuilding plan, submitted to Congress in conjunction with the Navy's proposed FY2012 budget, includes a total of 55 new battle force ships, or an average of 11 per year. Of the 55 ships in the plan, 27, or almost half, are relatively inexpensive LCSs or JHSVs.

The Navy's FY2012 30-year (FY2012-FY2041) shipbuilding plan, submitted to Congress in late May 2011, includes 276 ships. The FY2012 30-year plan does not include enough ships to fully support all elements of the Navy's 313-ship goal over the long run. Among other things, the Navy projects that the cruiser-destroyer and attack submarine forces would drop substantially below required levels in the latter years of the 30-year plan.

A June 2011 Congressional Budget Office (CBO) report on the cost of the Navy's FY2012 30-year (FY2012-FY2041) shipbuilding plan estimates that the plan would cost an average of $18.0 billion per year in constant FY2011 dollars to implement, or about 16% more than the Navy estimates. CBO's estimate is about 7% higher than the Navy's estimate for the first 10 years of the plan, about 10% higher than the Navy's estimate for the second 10 years of the plan, and about 31% higher than the Navy's estimate for the final 10 years of the plan. Some of the difference between CBO's estimate and the Navy's estimate, particularly in the latter years of the plan, is due to a difference between CBO and the Navy in how to treat inflation in Navy shipbuilding.

Issues for Congress include the appropriate future size and structure of the Navy in light of changes in strategic and budget circumstances, the sufficiency of the Navy's FY2012 30-year shipbuilding plan for achieving and maintaining the Navy's 313-ship goal, and the affordability of the FY2012 30-year shipbuilding plan.

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# Introduction

This report provides background information and presents potential issues for Congress concerning the Navy's ship force-structure goals and shipbuilding plans. The planned size of the Navy, the rate of Navy ship procurement, and the prospective affordability of the Navy's shipbuilding plans have been matters of concern for the congressional defense committees for the past several years. Decisions that Congress makes on Navy shipbuilding programs can substantially affect Navy capabilities and funding requirements, and the U.S. shipbuilding industrial base.

# Background

## Navy's 313-Ship Force Structure Plan of September 2011

The Navy in February 2006 presented to Congress a goal of achieving and maintaining a fleet of 313 ships, consisting of certain types and quantities of ships. The Navy in subsequent years changed its desired quantities for certain ship types, and by mid-2011 the Navy's desired fleet appeared to have grown to a total of 328 ships. In September 2011, the Navy began briefing congressional offices on a new 313-ship plan that incorporates some of the changes that the Navy made over the years to the 313-ship plan of February 2006 while staying within the overall total of 313 ships. Among other things, the 313-ship plan of September 2011 reduces the planned number of Joint High Speed Vessels (JHSVs) to 10, compared to a previously planned total of 21.

Navy officials sometimes refer to the figure of 313 ships as a "floor," meaning a minimum required number. The Navy states that the new 313-ship plan of 2011 "will provide the capability and capacity to meet projected future missions with acceptable risk."[1]

**Table 1** compares the new 313-ship goal of September 2011 to earlier Navy ship force structure plans.

[1] Source: Navy briefing slide on new (2011) 313-ship plan provided to CRS by Navy Office of Legislative Affairs on October 7, 2011.

**Table 1. Navy Ship Force Structure Plans Since 2001**

| Ship type | New 313-ship plan of September 2011 | Changes to February 2006 313-ship plan announced through mid-2011 | February 2006 Navy plan for 313-ship fleet | Early-2005 Navy plan for fleet of 260-325 ships | | 2002-2004 Navy plan for 375-ship Navy[a] | 2001 QDR plan for 310-ship Navy |
|---|---|---|---|---|---|---|---|
| | | | | 260-ships | 325-ships | | |
| Ballistic missile submarines (SSBNs) | 12[b] | 12[b] | 14 | 14 | 14 | 14 | 14 |
| Cruise missile submarines (SSGNs) | 4 | 0[c] | 4 | 4 | 4 | 4 | 2 or 4[d] |
| Attack submarines (SSNs) | 48 | 48 | 48 | 37 | 41 | 55 | 55 |
| Aircraft carriers | 11[e] | 11[e] | 11[f] | 10 | 11 | 12 | 12 |
| Cruisers and destroyers | 94 | 94[g] | 88 | 67 | 92 | 104 | 116 |
| Frigates | 0 | 0 | 0 | 0 | 0 | 0 | |
| Littoral Combat Ships (LCSs) | 55 | 55 | 55 | 63 | 82 | 56 | 0 |
| Amphibious ships | 33 | 33[h] | 31 | 17 | 24 | 37 | 36 |
| MPF(F) ships[i] | 0[j] | 0[j] | 12[i] | 14[i] | 20[i] | 0[i] | 0[i] |
| Combat logistics (resupply) ships | 30 | 30 | 30 | 24 | 26 | 42 | 34 |
| Dedicated mine warfare ships | 0 | 0 | 0 | 0 | 0 | 26[k] | 16 |
| Joint High Speed Vessels (JHSVs) | 10[l] | 21[l] | 3 | 0 | 0 | 0 | 0 |
| Other[m] | 16 | 24[n] | 17 | 10 | 11 | 25 | 25 |
| **Total battle force ships** | **313** | **328** | **313** | **260** | **325** | **375** | **310 or 312** |

**Sources:** Table prepared by CRS based on U.S. Navy data. Source for new 313-ship plan of September 2011: Navy briefing slide on new (2011) 313-ship plan provided to CRS by Navy Office of Legislative Affairs on October 7, 2011.

**Note:** QDR is Quadrennial Defense Review.

a. Initial composition. Composition was subsequently modified.

b. The Navy plans to replace the 14 current Ohio-class SSBNs with a new class of 12 next-generation SSBNs. For further discussion, see CRS Report R41129, *Navy Ohio Replacement (SSBN[X]) Ballistic Missile Submarine Program: Background and Issues for Congress*, by Ronald O'Rourke.

c. Although the Navy plans to continue operating its four SSGNs until they reach retirement age in the late 2020s, the Navy does not plan to replace these ships when they retire, and the 328-ship presentation reflected the post-2020s force level of zero SSGNs.

d. The report on the 2001 QDR did not mention a specific figure for SSGNs. The Administration's proposed FY2001 Department of Defense (DOD) budget requested funding to support the conversion of two available Trident SSBNs into SSGNs, and the retirement of two other Trident SSBNs. Congress, in marking up this request, supported a plan to convert all four available SSBNs into SSGNs.

e. With congressional approval, the goal will temporarily be reduced to 10 carriers during 33-month period between the retirement of the carrier Enterprise (CVN-65) in November 2012 and the scheduled entry into service of the carrier Gerald R. Ford (CVN-78) in September 2015.

f. For a time, the Navy characterized the goal as 11 carriers in the nearer term, and eventually 12 carriers.

g. The 94-ship goal was announced by the Navy in an April 2011 report to Congress on naval force structure and missile defense.

h. The Navy acknowledges that meeting a requirement for being able to lift the assault echelons of 2.0 Marine Expeditionary Brigades (MEBs) would require a minimum of 33 amphibious ships rather than the 31 ships

shown in the February 2006 plan. For further discussion, see CRS Report RL34476, *Navy LPD-17 Amphibious Ship Procurement: Background, Issues, and Options for Congress*, by Ronald O'Rourke.

i. Today's Maritime Prepositioning Force (MPF) ships are intended primarily to support Marine Corps operations ashore, rather than Navy combat operations, and thus are not counted as Navy battle force ships. The MPF (Future) ships, however, would have contributed to Navy combat capabilities (for example, by supporting Navy aircraft operations). For this reason, the ships in the planned MPF(F) squadron were counted by the Navy as battle force ships.

j. The Navy no longer plans to acquire an MPF(F) squadron. The Navy, however, has procured or plans to procure six ships that were previously planned for the MPF(F) squadron—three modified TAKE-1 class cargo ships, and three Mobile Landing Platform (MLP) ships. These six ships are now included in the total shown for "Other" ships.

k. The figure of 26 dedicated mine warfare ships includes 10 ships maintained in a reduced mobilization status called Mobilization Category B. Ships in this status are not readily deployable and thus do not count as battle force ships. The 375-ship proposal thus implied transferring these 10 ships to a higher readiness status.

l. Totals shown include 5 ships transferred from the Army to the Navy and operated by the Navy primarily for the performance of Army missions.

m. This category includes, among other things, command ships and support ships.

n. The increase in this category from 17 ships under the February 2006 313-ship plan to 24 ships under the apparent 328-ship goal includes the addition of one TAGOS ocean surveillance ship and the transfer into this category of six ships—three modified TAKE-1 class cargo ships, and three Mobile Landing Platform (MLP) ships—that were previously intended for the planned (but now canceled) MPF(F) squadron.

# Navy's FY2012 Five-Year and 30-Year Shipbuilding Plans

## Five-Year (FY2012-FY2016) Shipbuilding Plan

**Table 2** shows the Navy's FY2012 five-year (FY2012-FY2016) shipbuilding plan.

**Table 2. Navy FY2012 Five-Year (FY2012-FY2016) Shipbuilding Plan**

(Battle force ships—i.e., ships that count against 313-ship goal)

| Ship type | FY12 | FY13 | FY14 | FY15 | FY16 | Total |
|---|---|---|---|---|---|---|
| Ford (CVN-78) class aircraft carrier | | 1 | | | | 1 |
| Virginia (SSN-774) class attack submarine | 2 | 2 | 2 | 2 | 2 | 10 |
| Arleigh Burke (DDG-51) class destroyer | 1 | 2 | 2 | 2 | 1 | 8 |
| Littoral Combat Ship (LCS) | 4 | 4 | 4 | 4 | 3 | 19 |
| San Antonio (LPD-17) class amphibious ship | 1 | | | | | 1 |
| LHA(R) amphibious assault ship | | | | | 1 | 1 |
| Fleet tug (TATF) | | | | 1 | | 1 |
| Mobile Landing Platform (MLP) ship | 1 | 1 | | | | 2 |
| Joint High Speed Vessel (JHSV) | 1 | 2 | 2 | 2 | 1 | 8 |
| TAO(X) oiler | | | 1 | 1 | 1 | 3 |
| TAGOS ocean surveillance ship | | 1 | | | | 1 |
| **TOTAL** | **10** | **13** | **11** | **12** | **9** | **55** |

**Source:** FY2012 Navy budget submission.

**Notes:** The FY2012-FY2016 shipbuilding plan also includes, in FY2012, an oceanographic ship that does not count against the 313-ship goal. JHSVs are being procured by both the Navy and the Army. The Army is procuring a second JHSV in FY2012; this ship is included in the Army's budget.

Observations that can be made about the Navy's proposed five-year (FY2012-FY2016) shipbuilding plan include the following:

- The FY2012-FY2016 plan includes a total of 55 battle force ships, or 5 more than the FY2011-FY2015 plan. The net increase of five ships includes the addition of six ships and the subtraction of one previously planned ship. The six added ships include a second DDG-51 in FY2014, a fourth Littoral Combat Ship (LCS) in FY2012, three TAO(X) oilers in FY2014-FY2016, and a TAGOS ocean surveillance ship in FY2013. The ship that was subtracted was a second JHSV that was previously planned for FY2016.
- The FY2012-FY2016 plan includes an average of 11 battle force ships per year, making this the second year in a row that the Navy has presented a five-year shipbuilding plan showing an average of 10 or more battle force ships per year. Given the single-digit numbers of battle force ships that have were procured from FY1993 through FY2010, shipbuilding supporters for some time have wanted to increase the shipbuilding rate to 10 or more battle force ships per year. A rate of 10 battle force ships per year is above the steady-state replacement rate for a fleet of 313 ships with an average service life of 35 years, which is about 8.9 ships per year. The average shipbuilding rate since FY1993 has been substantially below 8.9 ships per year (see **Appendix C**).
- Although LCSs and JHSVs account for about 21% of the ships in the Navy's planned force structure (65 of 313 ships), they account 49% of the ships in the FY2012-FY2016 shipbuilding plan (27 of 55 ships). In this sense, these relatively inexpensive ships are overrepresented in the five-year shipbuilding plan relative to their portion of the 313-ship goal, making it easier to procure an average of 11 ships per year within available resources. Starting a few years from now, when the LCS and JHSV programs are no longer overrepresented in the shipbuilding plan, and particularly when procurement of next-generation SSBN(X) ballistic missile submarines begins, procuring an average of 10 or more ships per year will become a considerably more expensive proposition. In this sense, the FY2012-FY2016 shipbuilding program's average of 11 ships per year does not necessarily imply that the Navy has solved the challenge it faces concerning the long-term affordability of its shipbuilding plans.
- The addition of the fourth LCS in FY2012 brings planned annual LCS procurement quantities into line with those called for in the dual-award acquisition strategy that Congress approved in December 2010 for the LCS program.[2]
- The San Antonio (LPD-17) class amphibious ship planned for FY2012 is to be the 11th and final ship in the class. The 33-ship force-structure goal for amphibious ships includes 11 LPD-17s.[3]

[2] For further discussion, see CRS Report RL33741, *Navy Littoral Combat Ship (LCS) Program: Background, Issues, and Options for Congress*, by Ronald O'Rourke.

[3] For further discussion, see CRS Report RL34476, *Navy LPD-17 Amphibious Ship Procurement: Background, Issues,* (continued...)

- The FY2011-FY2015 plan requested the first of three planned Mobile Landing Platform ships (MLPs) in FY2011, and the second and third MLPs in FY2012 and FY2013. As part of its action on the FY2011 defense budget, Congress funded the procurement of two MLPs in FY2011 (i.e., one more than requested). Congress completed its action on the FY2011 budget after the Navy submitted its proposed FY2012 budget, and the FY2012 budget submission does not account for the funding of a second MLP in FY2011. The Navy states that since two MLPs were funded in FY2011, the Navy no longer plans to request an MLP in FY2013.
- The addition of the three TAO(X) oilers in FY2014-FY2016 reflects an acceleration of the start of this program from FY2017 to FY2014. This acceleration was one of a series of measures that the Navy announced on September 17, 2010, for sustaining the shipbuilding capability in Louisiana.[4] The Navy plans to compete the TAO(X), so it is not certain that the program will be awarded to a shipyard in Louisiana, such as the Avondale shipyard near New Orleans that forms part of Huntington Ingalls Industries (HII). National Steel and Shipbuilding Company (NASSCO) of San Diego, CA, is generally considered to be a likely competitor for the program.

## 30-Year (FY2012-FY2041) Shipbuilding Plan

The Navy did not submit an FY2012 30-year (FY2012-FY2041) shipbuilding plan in February 2011, in conjunction with the proposed FY2012 budget.[5] At the request of the House Armed Services Committee, the Navy submitted the FY2012 30-year (FY2012-FY2041) shipbuilding plan in late May 2011.[6] **Table 3** shows the Navy's proposed FY2012 30-year (FY2012-FY2041) shipbuilding plan. The first five years of this plan include the same ships as those in the FY2012

(...continued)

*and Options for Congress*, by Ronald O'Rourke.

[4] For the text of the Navy's announcement, see http://www.wwltv.com/news/Sec-of-Navy-remarks-on-shipyard-in-Avondale-103150169.html.

[5] Section 1023 of the FY2011 defense authorization act (H.R. 6523/P.L. 111-383 of January 7, 2011) amended the law (10 U.S.C. 231) that had required DOD to submit a 30-year shipbuilding plan each year. As amended by §1023, 10 U.S.C. 231 now requires DOD to submit a 30-year shipbuilding plan once every four years, in the same year that DOD submits a Quadrennial Defense Review (QDR). Regarding the three years between each QDR, the joint explanatory statement of the House and Senate Armed Services Committees on H.R. 6523 stated:

> The committees expect that, following the submission of the President's budget materials for a fiscal year, the Secretary of the Navy, at the written request of one of the congressional defense committees, will promptly deliver the Navy's long-term shipbuilding plan used to develop the President's budget request for that fiscal year, as well as a certification from the Secretary of the Navy that both the President's budget request for that fiscal year and the budget for the future-years defense program is sufficient to fund the construction schedule provided in that plan. The committees expect that such a plan would include the quantity of each class of ship to be constructed in that fiscal year and the nine following fiscal years.

[6] The Navy's cover letter for the plan is dated May 23, 2011. CRS received the plan on May 24, 2011. The Navy's cover letter states that the plan was submitted in response to a letter dated February 15, 2011, from Representative Todd Akin, the chairman of the Seapower and Projection Forces subcommittee of the House Armed Services Committee, requesting a 30-year plan.

five-year (FY2012-FY2016) shipbuilding plan shown in **Table 2**. The FY2012 30-year (FY2012-2041) plan includes a total of 276 ships.[7]

**Table 3. Navy FY2012 30-Year (FY2012-FY2041) Shipbuilding Plan**

| FY | CVN | LSC | SSC | SSN | SSBN | AWS | CLF | Supt | Total |
|---|---|---|---|---|---|---|---|---|---|
| **12** | | 1 | 4 | 2 | | 1 | | 2 | **10** |
| **13** | 1 | 2 | 4 | 2 | | | | 4 | **13** |
| **14** | | 2 | 4 | 2 | | | 1 | 2 | **11** |
| **15** | | 2 | 4 | 2 | | | 1 | 3 | **12** |
| **16** | | 1 | 3 | 2 | | 1 | 1 | 1 | **9** |
| **17** | | 2 | 3 | 2 | | 1 | 1 | 3 | **12** |
| **18** | 1 | 1 | 3 | 1 | | | 1 | 3 | **10** |
| **19** | | 2 | 3 | 2 | 1 | 1 | 1 | 2 | **12** |
| **20** | | 1 | 2 | 2 | | | 1 | 2 | **8** |
| **21** | | 2 | 2 | 2 | | 2 | 1 | | **9** |
| **22** | | 1 | 2 | 2 | 1 | | 1 | 2 | **9** |
| **23** | 1 | 2 | 2 | 1 | | 1 | 1 | 3 | **11** |
| **24** | | 1 | 2 | 1 | 1 | | 1 | 2 | **8** |
| **25** | | 1 | 1 | 1 | 1 | 2 | 1 | 1 | **8** |
| **26** | | 2 | 2 | 1 | 1 | | 1 | | **7** |
| **27** | | 2 | 1 | 1 | 1 | 1 | 1 | | **7** |
| **28** | 1 | 1 | 2 | 1 | 1 | | 1 | 1 | **8** |
| **29** | | 2 | 1 | 1 | 1 | 2 | 1 | 2 | **10** |
| **30** | | 1 | 2 | 1 | 1 | | 1 | 2 | **8** |
| **31** | | 2 | | 1 | 1 | 1 | 1 | 2 | **8** |
| **32** | | 2 | 2 | 1 | 1 | | 1 | 2 | **9** |
| **33** | 1 | 2 | | 1 | 1 | 2 | | 3 | **10** |
| **34** | | 2 | 2 | 1 | | | | 2 | **7** |
| **35** | | 2 | 2 | 2 | | 1 | | 2 | **9** |
| **36** | | 3 | 3 | 1 | | | | 1 | **8** |
| **37** | | 2 | 3 | 2 | | 2 | | 2 | **11** |
| **38** | 1 | 2 | 3 | 1 | | | | 2 | **9** |
| **39** | | 2 | 3 | 2 | | | | 1 | **8** |
| **40** | | 2 | 3 | 1 | | 1 | | | **7** |
| **41** | | 2 | 3 | 2 | | 1 | | | **8** |

**Source:** U.S. Navy data provided to CRS on May 24, 2011.

**Key: FY** = Fiscal Year; **CVN** = aircraft carriers; **LSC** = surface combatants (i.e., cruisers and destroyers); **SSC** = small surface combatants (i.e., Littoral Combat Ships [LCSs]); **SSN** = attack submarines; **SSGN** = cruise missile submarines; **SSBN** = ballistic missile submarines; **AWS** = amphibious warfare ships; **CLF** = combat logistics force (i.e., resupply) ships; **Supt** = support ships.

[7] The total of 276 ships includes a Mobile Landing Platform (MLP) ship in FY2013. The Navy says that, as a result of Congress funding two MLPs in FY2011, or one more than the Navy requested for FY2011, the Navy no longer plans to request an MLP in FY2013. Subtracting this MLP from the plan would leave a total of 275 ships.

## Navy's Projected Force Levels Under 30-Year (FY2012-FY2041) Shipbuilding Plan

**Table 4** shows the Navy's projection of force levels for FY2012-FY2041 that would result from implementing the FY2012 30-year (FY2012-FY2041) shipbuilding plan shown in **Table 3**.

**Table 4. Projected Force Levels Resulting from FY2012 30-Year (FY2012-FY2041) Shipbuilding Plan**

| | CVN | LSC | SSC | SSN | SSGN | SSBN | AWS | CLF | Supt | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Goal in 313-ship plan** | **11** | **94** | **55** | **48** | **4** | **12** | **33** | **30** | **26** | **313** |
| **FY12** | 11 | 84 | 41 | 54 | 4 | 14 | 30 | 31 | 21 | **290** |
| **FY13** | 10 | 84 | 35 | 55 | 4 | 14 | 30 | 30 | 25 | **287** |
| **FY14** | 10 | 85 | 30 | 55 | 4 | 14 | 30 | 30 | 28 | **286** |
| **FY15** | 11 | 86 | 26 | 54 | 4 | 14 | 30 | 30 | 31 | **286** |
| **FY16** | 11 | 90 | 31 | 52 | 4 | 14 | 31 | 30 | 34 | **297** |
| **FY17** | 11 | 91 | 32 | 50 | 4 | 14 | 33 | 29 | 37 | **301** |
| **FY18** | 11 | 93 | 36 | 50 | 4 | 14 | 33 | 30 | 40 | **311** |
| **FY19** | 11 | 95 | 36 | 51 | 4 | 14 | 33 | 30 | 42 | **316** |
| **FY20** | 12 | 97 | 40 | 49 | 4 | 14 | 33 | 30 | 43 | **322** |
| **FY21** | 12 | 97 | 40 | 49 | 4 | 14 | 34 | 30 | 44 | **324** |
| **FY22** | 12 | 96 | 42 | 48 | 4 | 14 | 34 | 30 | 45 | **325** |
| **FY23** | 11 | 95 | 40 | 48 | 4 | 14 | 36 | 30 | 47 | **325** |
| **FY24** | 11 | 95 | 41 | 46 | 4 | 14 | 36 | 30 | 47 | **324** |
| **FY25** | 12 | 93 | 42 | 45 | 4 | 14 | 36 | 30 | 45 | **321** |
| **FY26** | 12 | 90 | 44 | 44 | 2 | 14 | 36 | 30 | 44 | **316** |
| **FY27** | 12 | 88 | 46 | 43 | 1 | 13 | 36 | 30 | 45 | **314** |
| **FY28** | 11 | 86 | 47 | 41 | 0 | 13 | 36 | 30 | 45 | **309** |
| **FY29** | 11 | 82 | 49 | 40 | 0 | 13 | 35 | 30 | 45 | **305** |
| **FY30** | 12 | 78 | 50 | 39 | 0 | 12 | 33 | 30 | 45 | **299** |
| **FY31** | 12 | 74 | 52 | 41 | 0 | 12 | 34 | 30 | 45 | **300** |
| **FY32** | 11 | 72 | 53 | 41 | 0 | 12 | 32 | 30 | 45 | **296** |
| **FY33** | 11 | 70 | 54 | 42 | 0 | 12 | 32 | 30 | 45 | **296** |
| **FY34** | 11 | 68 | 54 | 43 | 0 | 12 | 33 | 30 | 45 | **296** |
| **FY35** | 12 | 69 | 55 | 44 | 0 | 12 | 31 | 30 | 45 | **298** |
| **FY36** | 11 | 71 | 55 | 45 | 0 | 12 | 30 | 30 | 45 | **299** |
| **FY37** | 11 | 73 | 55 | 46 | 0 | 12 | 30 | 30 | 45 | **302** |
| **FY38** | 11 | 75 | 57 | 45 | 0 | 12 | 29 | 30 | 45 | **304** |
| **FY39** | 11 | 77 | 58 | 45 | 0 | 12 | 30 | 30 | 43 | **306** |
| **FY40** | 11 | 77 | 58 | 45 | 0 | 12 | 30 | 30 | 43 | **306** |
| **FY41** | 11 | 78 | 56 | 45 | 0 | 12 | 30 | 30 | 43 | **305** |

**Source:** U.S. Navy data provided to CRS on May 24, 2011.

**Note:** Figures for support ships include five JHSVs transferred from the Army to the Navy and operated by the Navy primarily for the performance of Army missions.

**Key: FY** = Fiscal Year; **CVN** = aircraft carriers; **LSC** = surface combatants (i.e., cruisers and destroyers); **SSC** = small surface combatants (i.e., frigates, Littoral Combat Ships [LCSs], and mine warfare ships); **SSN** = attack submarines; **SSGN** = cruise missile submarines; **SSBN** = ballistic missile submarines; **AWS** = amphibious warfare ships; **CLF** = combat logistics force (i.e., resupply) ships; **Supt** = support ships.

## Press Reports of Navy Examining Options for Force Structure and Procurement Reductions

Press reports in September and October 2011 state that the Navy, in response to anticipated reductions in planned levels of defense spending, is examining options for maintaining a fleet with considerably fewer than 300 ships; for retiring certain ships in the near term, well before the ends of their expected service lives; and for deferring or cancelling certain planned procurements.

A September 1, 2011, press report stated that the Navy is considering the following options, among others:

- reducing the Navy to a 250-ship fleet that includes 10 aircraft carriers or a 240-ship fleet that includes 8 aircraft carriers (a fleet with 9 carriers is another option);
- retiring (rather than performing a nuclear-refueling overhaul on) the aircraft carrier *George Washington* (CVN-73), which would be one measure for reducing the size of the carrier force;
- delaying the procurement of the aircraft carrier *John F. Kennedy* (CVN-79) by two years, to FY2015 (an option that was first reported in July 2011[8]);
- eliminating six aircraft squadrons;
- retiring at least some of the Navy's 22 Ticonderoga (CG-47) class Aegis cruisers;
- reducing the planned number of next-generation Ohio replacement ballistic missile submarines (SSBN[X]s) by two boats, from 12 to 10, and consequently delaying the procurement of the first SSBN(X), perhaps by two years; and
- maintaining funding for procurement of two Virginia-class submarines per year, and for Arleigh Burke (DDG-51) class Aegis destroyers and Littoral Combat Ships (LCSs).[9]

An October 6, 2011, press report similarly stated that the Navy is examining the option of retiring the rather than performing a mid-life refueling on the aircraft carrier *George Washington* (CVN-73).[10]

[8] See Christopher P. Cavas, "U.S. May Delay Next Carrier," *Defense News*, July 11, 2011: 1.

[9] Christopher J. Castelli, "Navy Of Tomorrow Could Have Fewer Cruisers, Aircraft Carriers," *Inside the Pentagon*, September 1, 2011.

[10] Christopher P. Cavas, "U.S. Navy May Cut Carrier's Life In Half To Save Money," *DefenseNews.com*, October 6, 2011.

An October 14, 2011, press report stated that the Navy is considering retiring four Aegis cruisers in FY2013, another five Aegis cruisers in FY2014, and three *Whidbey Island/Harpers Ferry* (LSD-41/49) class amphibious ships in FY2014. The report also mentioned the option of retiring rather than performing a mid-life refueling on the aircraft carrier *George Washington* (CVN-73), the option of delaying the procurement of the *John F. Kennedy* (CVN-79) to FY2015, and the option of shifting carrier procurement generally to seven-year intervals.[11]

A September 4, 2011, press report concerning proposals such as those discussed above stated:

> Pentagon leaders expect U.S. lawmakers to cleave up to $30 billion from the 2012 defense budget request.
>
> "We were originally thinking we would start at $553 billion in '12 and then go up, but we'll start potentially as much as $30 billion below that," Navy Undersecretary Robert Work said Sept. 1.
>
> That's just part of the uncertainty that has planners looking at hundreds of "what if" scenarios, gearing up to move nimbly as new guidance comes in.
>
> For one thing, the Obama administration's goal for cutting defense spending over the next decade recently took a big jump—to at least $464 billion, according to one knowledgeable source. In April, the president set the savings goal at $400 billion over 12 years.
>
> In an interview in his Pentagon office, Work acknowledged that the number had risen "When you add it all up, it's more than $450 billion over a 10-year period," he said.
>
> Moreover, planners have been instructed to base their 2013 spending plans on the 2012 budget, which Congress will take up after lawmakers return from summer recess on Sept. 6.
>
> And yet more guidance will arrive in the form of DoD's ongoing "comprehensive review," which is taking longer than expected and may not be completed for several months, the knowledgeable source said.
>
> That will leave little time before the 2013 budget proposal is due to Congress in February….
>
> For now, Work said, worrying about the so-called Sword of Damocles cuts will have to wait. Planners have enough to do preparing for the near term.
>
> "It's up to Congress to decide where those cuts will be taken" in the 2012 budget, Work said.
>
> The need to know the 2012 numbers is crucial.
>
> "Anything Congress does in '12 will have cascading effects that we will have to consider in the fall," Work said.

[11] Carlo Munoz, "Navy Delays Carrier, Cuts Cruisers, Amphibs In Draft Budget," *AOL Defense* (http://defense.aol.com), October 14, 2011. A blog entry identified the four cruisers that would be retired in FY2013 as *Normandy* (CG-60), *Anzio* (CG-CG-68), *Vicksburg* (CG-69), and *Cape St. George* (CG-71), the five cruisers that would be retired in FY2014 as *Princeton* (CG-59), *Cowpens* (CG-63), *Gettysburg* (CG-64), *Chosin* (CG-65), and *Hue City* (CG-66), and the four amphibious ships that would be retired in FY2014 as *Whidbey Island* (LSD-41), *Fort McHenry* (LSD-43), and *Tortuga* (LSD-46). ("ALT POM Early Decommission Plans," *Information Dissemination (www.information diseemination.net)*, October 17, 2011.)

"But now, in September, we're trying to adjust to what-if numbers, and we're waiting for the final numbers" for the budget years from 2014 to 2017 from the Office of Management and Budget in the White House, he said.

Those numbers, which will also apportion cuts for the various departments within the Pentagon, "could come soon or they could come late in the game, like they generally do," he said.

The Navy department—like the other military service departments—has been examining hundreds, perhaps thousands, of scenarios to understand the impact of a vast array of potential decisions.

"We're doing what-if drills on ships, aircraft, munitions, force structure, people, every single program in the department," Work said.

Some scenarios could actually come true; others are being studied simply to inform potential moves.

That the Navy is looking at particular scenarios does not necessarily indicate the move is being considered, Work said.

"If we weren't doing what-if drills, they would accuse us of being idiots," he said….

Press leaks of the discussions are expected, Work said, but he cautioned against quick assumptions.

"I tell people all the time, when they see these leaks, they shouldn't get too excited," Work said. "Everything's on the table, everything's being discussed. There are all sorts of scenarios. We're looking at every aviation program, every shipbuilding program. We're trying to wring out cost wherever and whenever we can find it. "Everybody is focused," he said, "on maintaining the highest number of ships possible, the highest number of aircraft, the highest number of sailors and Marines."

That approach "is uniformly held, across the services."

Work said leaders are striving to avoid mistakes of previous generations.

"We would much rather have a smaller force than a larger, hollow force. So what everybody's doing in these what-if drills is how we keep the best capability for the least amount of money," he said.

One program that received recent media attention is the F-35 Joint Strike Fighter (JSF). The Pentagon's most expensive weapon program is working to field Air Force F-35A, Marine Corps F-35B and Navy F-35C versions. In a July 7 memo, Work directed his planners to run what-if studies on various JSF scenarios, including canceling one or more variants. "People read the thing and said, 'This is an attack against the F-35 program,'" Work said of the memo. "But it's nothing more than one of these long series of what-if drills."

He acknowledged an easy way to save money would be to cancel the JSF program.

"That would save a lot of money, but nobody is arguing that," Work said. "We need a fifth-generation strike fighter. The question is not, 'Are we going to buy the JSF?' It's 'How many are we going to buy?'" The Pentagon looked at buying only one JSF model, and the Navy

Department looked at buying only the carrier-based Navy version or the Marine Corps version, he said.

"You'd get all sorts of efficiencies on the learning curve and have one variant that everybody flies. But the Department of the Navy isn't arguing that," he said.

The whole effort, he said, was designed to "get the really smart aviators in the department—Naval Air Systems Command, chief of naval air forces, the Marines' deputy commandant for aviation, the N88 requirements office, the guys who live and breathe aviation—to tell me the best mix of F-35Bs, F-35Cs and F/A-18 Es, Fs, and Gs. What is the best capability we can buy for the least amount of money?" Rather than buying fewer types of aircraft, Work said, "the answer that kept coming back is that a mix of Bs, Cs, Es, Fs and Gs is the right way to go. "The question is, 'How many can you afford to buy? What's the best mix?' We're still in the process of trying to figure that out, and we'll continue to work this through the fall."

The effort is not unique to strike aircraft, he said.

"This type of memo is being played out in the number of cruisers and destroyers we want to buy. How many submarines. The number of air wings. How many V-22s, MH-60Rs and Ss? How many P-8s? "Every single thing is being looked at. That's why I say that people should not get too upset [when they hear] that we're looking at every single thing."

Media reports also have surfaced that the Navy may change its carrier force structure or build rate.

"I can't talk to you about any specific shipbuilding program right now," Work said. "But carriers cost a lot of money, and they're being looked at just like JSF. Submarines cost a lot of money too."

Consideration for the industrial base is a key element in the decisions, he said.

"We're trying to meet the requirement at the minimum cost and with the minimum impact on our industrial base. And it's a hard juggling act. This is going to be tough."…

Unlike the Air Force and Army, the Navy is not considering shrinking its civilian workforce any further. The service already is working to freeze the number of civilians at 2010 levels.

"Right now, that is the focus of our effort," Work said. "Re-adjusting our civilian workforce, because we had planned on higher levels of growth in our civilian workforce."

And while the service is actively looking for ways to consolidate commands and operations—"Some of these things can add up to hundreds of millions" over five or six years—no consideration is being given to base closures.

Work said the Navy was "really aggressive" in the last round of base closures.

"We had approximately 150 bases and we have about 70 now. The Marine Corps already has an extremely lean infrastructure," he said.

Savings from base closures often take years to take effect, he noted, and may show up beyond the planning period.

"We're really chasing a 10-year [savings] target," he said….

> Taking a step back, Work noted that the severely compressed pace at which major decisions are about to be made is a rare opening.
>
> "Opportunities like this only happen only once every 20 years or so," he said. "If you're going to be in government, this is the time to be in. The decisions we make over the next six to eight months are going to have an enormous impact on the way the Department of Defense looks over the next 10, 15, 20 years.
>
> "It really is an exciting time," he said. "A time for our best and brightest to come up with good ideas, because we sure need them."[12]

# Oversight Issues for Congress

## Future Size and Structure of Navy in Light of Changes in Strategic and Budgetary Circumstances

Changes in strategic and budgetary circumstances have led to a broad debate over the appropriate future size and structure of the military, including the future size and structure of the Navy. Changes in strategic circumstances include, among other things, the winding down of U.S. combat operations in Iraq, the planned winding down of such operations in Afghanistan, and the growth of China's military capabilities.[13] Changes in budgetary circumstances center on reductions in planned levels of defense spending resulting from the Budget Control Act of 2011 (S. 365/P.L. 112-25 of August 2, 2011).

The winding down of U.S. combat operations in Iraq, the planned winding down of such operations in Afghanistan, and the growth of China's military capabilities have led some observers to anticipate or argue in favor of a shift in U.S. defense strategy toward a reduced emphasis on planning for operations the Persian Gulf and Central Asia and an increased emphasis on planning for operations in the Western Pacific. Since operations in Iraq and Afghanistan have involved substantial numbers of ground forces, while the Western Pacific is, for the United States, more of a maritime and aerospace theater, some of these observers argue that such a shift in U.S. defense strategy would lead to a reduced emphasis on ground forces and an increased emphasis on the Navy and Air Force. Other observers, however, disagree that such a shift in U.S. defense strategy will or should occur, given continued concerns over Iran and the Persian Gulf region generally, as well as past difficulties in predicting the location of future U.S. combat operations.

As mentioned earlier (see Press Reports of Navy Examining Options for Force Structure and ), the Navy, in response to anticipated reductions in planned levels of defense spending, reportedly is discussing options for maintaining a fleet with considerably fewer than 300 ships, such as a 250-ship fleet that includes 10 aircraft carriers or a 240-ship fleet that includes 8 aircraft carriers.

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[12] Christopher P. Cavas, "DOD Braces for $30B Cut in '12," *DefenseNews.com*, September 4, 2011. Material in brackets as in original.

[13] For more on the growth in China's military (particularly naval) capabilities and its potential implications for required U.S. Navy capabilities, see CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, by Ronald O'Rourke

In addition to these reported Navy options, some study groups have made their own proposals for Navy ship force structure. **Table 5** shows some of these proposals. For purposes of comparison, **Table 5** also shows the Navy's 313-ship goal of September 2011.

In assessing proposals for the future size and structure of the Navy, Congress may consider various factors, such as potential future defense spending levels, U.S. interests and potential threats to those interests, the value of naval forces in defending those interests, and the relative cost-effectiveness of various ship types for performing various missions.[14]

[14] Another possible method for assessing proposals for the future size and structure of the Navy is to compare them to historical figures for total Navy fleet size. As discussed in **Appendix A**, however, historical figures for total fleet size might not be a reliable yardstick for assessing the appropriateness of proposals for the future size and structure of the Navy, particularly if the historical figures are more than a few years old, because the missions to be performed by the Navy, the mix of ships that make up the Navy, and the technologies that are available to Navy ships for performing missions all change over time.

**Table 5. Recent Study Group Proposals for Navy Ship Force Structure**

| Ship type | Navy's 313-ship goal of September 2011 | Heritage Foundation (April 2011) | Cato Institute (September 2010)[a] | Independent Panel Assessment of 2010 QDR (July 2010) | Sustainable Defense Task Force (June 2010) | Center for a New American Security (CNAS) (November 2008) | Center for Strategic and Budgetary Assessments (CSBA) (2008)[b] |
|---|---|---|---|---|---|---|---|
| *Submarines* | | | | | | | |
| SSBN | 12 | 14[c] | 6 | 14 | 7 | 14 | 12 |
| SSGN | 4 | 4 | 0 | 4 | 4 | 0 | 2 |
| SSN | 48 | 55 | 40 | 55 | 37 | 40 | 41 |
| *Aircraft carriers* | | | | | | | |
| CVN | 11 | 11 | 8 | 11 | 9 | 8 | 11 |
| CVE | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| *Surface combatants* | | | | | | | |
| Cruiser | 94 | 88 | 22 | n/a | 85 | 18 | 14 |
| Destroyer | | | 65 | n/a | | 56 | 73 |
| Frigate | 0 | 28[d] | 14 | n/a | 0 | 0 | 9[e] |
| LCS | 55 | | 4 | n/a | 25 | 48 | 55 |
| SSC | 0 | 0 | 0 | n/a | 0 | 40 | 0[f] |
| *Amphibious and Maritime Prepositioning Force (Future) (MPF[F]) ships* | | | | | | | |
| Amphibious ships | 33 | 37 | 23 | n/a | 27 | 36 | 33 |
| MPF(F) ships | 0 | 0 | 0 | n/a | n/a | 0 | 3[g] |
| LSD station ships | 0 | 0 | 0 | n/a | n/a | n/a | 7[h] |
| *Other: Mine warfare (MIW) ships; Combat logistics force (CLF) ships (i.e., at-sea resupply ships), and support ships* | | | | | | | |
| MIW | 0 | 14 | 11 | 0 | 0 | 0 | 0 |
| CLF ships | 30 | 33 | 21 | n/a | 36 | 40 | 31 |
| Support ships | 26 | 25 | 27 | n/a | | | 31 |
| **TOTAL battle force ships** | **313** | **309** | **241** | **346** | **230** | **300** | **326**[i] |

**Source:** Table prepared by CRS based on the following sources: **For Heritage Foundation**: *A Strong National Defense[:] The Armed Forces America Needs and What They Will Cost*, Heritage Foundation, April 5, 2011, pp. 25-26. **For Cato Institute**: Benjamin H. Friedman and Christopher Preble, *Budgetary Savings from Military Restraint*, Washington, Cato Institute, September 23, 2010 (Policy Analysis No. 667), pp. 6, 8-10, and additional information provided by Cato Institute to CRS by e-mail on September 22, 2010. **For Independent Panel Assessment**: Stephen J. Hadley and William J. Perry, co-chairmen, et al., *The QDR in Perspective: Meeting America's National Security Needs In the 21st Century, The Final Report of the Quadrennial Defense Review Independent Panel*, Washington, 2010, Figure 3-2 on pages 58-59. **For Sustainable Defense Task Force**: *Debt, Deficits, and Defense, A Way Forward[:] Report of the Sustainable Defense Task Force*, June 11, 2010, pp. 19-20. **For CNAS**: Frank Hoffman, *From Preponderance to Partnership: American Maritime Power in the 21st Century.* Washington, Center for a New American Security, November 2008. p. 19 (Table 2). **For CSBA**: Robert O. Work, *The US Navy[:] Charting a Course for Tomorrow's Fleet.* Washington, Center for Strategic and Budgetary Assessments, 2008. p. 81 (Figure 5).

**Notes: n/a** is not addressed in the report. **SSBN** is nuclear-powered ballistic missile submarine; **SSGN** is nuclear-powered cruise missile and special operations forces submarine; **SSN** is nuclear-powered attack submarine; **CVN** is large nuclear-powered aircraft carrier; **CVE** is medium-sized aircraft carrier; **LCS** is Littoral Combat Ship; **SSC** (an acronym created by CRS for this table) is small surface combatant of 1,000+ tons displacement—a ship similar to late-1990s Streetfighter concept; **MPF(F)** is Maritime Prepositioning Force (Future) ship; **LSD** is LSD-41/49 class amphibious ship operating as a station ship for a formation like a Global Fleet Station (GFS); **MIW** is mine warfare ship; **CLF** is combat logistics force (i.e., resupply) ship.

a. Figures shown are for the year 2020; for subsequent years, reductions from these figures would be considered.

b. Figures shown are for the year 2028.

c. The report calls for a force of 280 SLBMs, which appears to equate to a force of 14 SSBNs, each with 20 SLBM tubes.

d. The report calls for a force of 28 small surface combatants, and appears to use the term small surface combatants the same way that the Navy does in the 30-year shipbuilding plan—as a way of collectively referring to frigates and LCSs. The small surface combatants (SSCs) called for in the November 2008 CNAS report are separate from and smaller than the LCS.

e. Maritime Security Frigates.

f. Plan includes 28 patrol craft (PCs) of a few hundred tons displacement each, as well as 29 boat detachments and seven riverine squadrons.

g. Plan shows three Mobile Landing Platform (MLP) ships that the Navy currently plans for the MPF(F) squadron, plus 16 existing current-generation maritime prepositioning force (MPF) ships and 17 existing prepositioning ships for Army and other service/agency equipment. Plan also shows 67 other DOD sealift ships.

h. T-LSDs, meaning LSDs operated by the Military Sealift Command (MSC) with a partly civilian crew.

i. The CSBA report shows a total of 488 units by including 162 additional force units that do not count toward the 313-ship goal under the battle force ships counting method that has been used since the early 1980s for public policy discussions of the size of the Navy. These 162 additional force units include 16 existing current-generation maritime prepositioning force (MPF) ships and 17 existing prepositioning ships for Army and other service/agency equipment, 67 other DOD sealift ships, 28 PCs, 29 boat detachments, and certain other small-scale units. The CSBA report proposes a new counting method for naval/maritime forces that includes units such as these in the total count.

# Issues Relating to Current 313-Ship Force-Level Objective

## Sufficiency of FY2012 30-Year Shipbuilding Plan

One potential oversight issue for Congress concerns the sufficiency of the FY2012 30-year (FY2012-FY2041) shipbuilding plan. As shown in **Table 4**, the plan does not include enough ships to fully support all elements of the 313-ship goal over the long run:

- The Navy projects that if the 30-year shipbuilding plan were fully implemented, the fleet would grow from 290 ships in FY2012 to a peak of 325 ships in FY2022-FY2023, decline to 296 ships in FY2032-FY2034, and then increase back to 305 ships by FY2041.
- The Navy projects that the attack submarine and cruiser-destroyer forces will drop substantially below required levels in the latter years of the 30-year plan. The projected number of cruisers and destroyers drops below the required level of 94 ships in 2025, reaches a minimum of 68 ships in FY2034, and remains below 94 ships through FY2041. The projected number of attack submarines

drops below the required level of 48 boats in FY2024, reaches a minimum of 39 boats in FY2030, and remains below 48 boats through 2041.

- There would also be shortfalls in certain years in small surface combatants (i.e., frigates and LCSs) and amphibious ships.

The projected shortfalls in cruisers and destroyers, attack submarines, and other ships could make it difficult or impossible for the Navy to fully perform its projected missions, particularly during the latter years of the 30-year plan. In light of the projected shortfalls in cruisers-destroyers and attack submarines, policymakers may wish to consider two options:

- increasing planned procurement rates of destroyers and attack submarines, perhaps particularly in years prior to the start of SSBN(X) procurement, and
- extending the service lives of older destroyers to 40 or 45 years, and refueling older attack submarines and extending their service lives to 40 or more years.

Regarding the second option above, possible candidates for service life extensions include the first 28 DDG-51 destroyers (i.e., the Flight I/II DDG-51s), the final 23 Los Angeles (SSN-688) attack submarines (i.e., the Improved 688s), and the 3 Seawolf (SSN-21) class attack submarines. Whether such service life extensions would be technically feasible or cost-effective is not clear. Feasibility would be a particular issue for the attack submarines, given limits on submarine pressure hull life.

Extending the service lives of any of these ships could require increasing funding for their maintenance, possibly beginning in the near term, above currently planned levels, so that the ships would be in good enough condition years from now to remain eligible for service life extension work. Such funding increases would be in addition to those the Navy has recently programmed for ensuring that its surface ships can remain in service to the end of their currently planned service lives.

## Affordability of FY2012 30-Year Shipbuilding Plan

Another potential oversight issue for Congress concerns the prospective affordability of the FY2012 30-year (FY2012-FY2041) shipbuilding plan. In assessing this issue, a key factor to consider is the estimated cost to implement the plan. In recent years, the Congressional Budget Office (CBO) has estimated that the Navy's 30-year shipbuilding plan would cost more to implement than the Navy has estimated, and this is again the case for the Navy's FY2012 30-year shipbuilding plan. A June 2011 CBO report on the cost of the Navy's FY2012 30-year (FY2012-FY2041) shipbuilding plan estimates that the plan would cost an average of $18.0 billion per year in constant FY2011 dollars to implement, or about 16% more than the Navy estimates. CBO's estimate is about 7% higher than the Navy's estimate for the first 10 years of the plan, about 10% higher than the Navy's estimate for the second 10 years of the plan, and about 31% higher than the Navy's estimate for the final 10 years of the plan.[15] Some of the difference between CBO's estimate and the Navy's estimate, particularly in the latter years of the plan, is due to a difference between CBO and the Navy in how to treat inflation in Navy shipbuilding. **Table 6** summarizes

[15] Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2012 Shipbuilding Plan*, June 2011, Table 2 (page 9).

the Navy and CBO estimates of the FY2012 30-year shipbuilding plan, as presented in the June 2011 CBO report.

**Table 6. Navy and CBO Estimates of Cost of FY2012 30-Year (FY2012-FY2041) Shipbuilding Plan**

Funding for new-construction ships, in billions of constant FY2011 dollars

| | First 10 years (FY2012-FY2021) | Next 10 years (FY2022-2031) | Final 10 years (FY2032-FY2041) | Entire 30 years (FY2012-FY2041) |
|---|---|---|---|---|
| Navy estimate | 14.6 | 17.2 | 14.7 | 15.5 |
| CBO estimate | 15.7 | 19.0 | 19.2 | 18.0 |
| % difference between Navy and CBO estimates | 7% | 10% | 31% | 16% |

**Source:** Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2012 Shipbuilding Plan*, June 2011, Table 2 (Page 9).

The June 2011 CBO report also estimates the cost of a revised 30-year shipbuilding plan created by CBO that would fully meet the various force-level goals in the apparent 328-ship force-level objective of mid-2011. Compared to the Navy's FY2012 30-year plan, this revised 30-year plan would include 24 additional destroyers, 5 additional attack submarines, and 2 additional large-deck (i.e., LHA-type) amphibious assault ships. CBO estimated the cost of implementing this revised plan at an average of $19.7 billion per year in constant FY2011 dollars, including an average of $19.1 billion per year for the first 10 years of the plan, an average of $21.3 billion per year for the second 10 years of the plan, and an average of $18.6 billion per year for the final 10 years of the plan.[16]

As mentioned earlier, the Navy was able to assemble a five-year (FY2012-FY2016) shipbuilding plan with a total of 55 ships, or an average of 11 per year, within available resources in part because almost half of those ships are relatively inexpensive LCSs and JHSVs. Starting a few years from now, when the LCS and JHSV programs are no longer overrepresented in the shipbuilding plan, and particularly when procurement of next-generation SSBN(X) ballistic missile submarines begins, procuring an average of 10 or more ships per year will become a considerably more expensive proposition.

The Navy wants to procure 12 SSBN(X)s, and is working to reduce the estimated unit procurement cost of ships 2 through 12 in the program to $4.9 billion in FY2010 dollars.[17] To help pay for the SSBN(X)s without reducing other shipbuilding programs, the shipbuilding funding profile in the Navy's FY2011 30-year shipbuilding plan included a "hump" of approximately $2 billion per year in constant FY2010 dollars during the years (FY2019-FY2033) when the 12 SSBN(X)s are to be procured. The Navy's report on the FY2011 30-year plan, however, contained little explanation of how this $2-billion-per-year hump in shipbuilding funding would be realized, particularly if the Navy's budget experiences little or no real growth in

[16] Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2012 Shipbuilding Plan*, June 2011, Table 2 (page 9).

[17] For more on the SSBN(X) program, see CRS Report R41129, *Navy Ohio Replacement (SSBN[X]) Ballistic Missile Submarine Program: Background and Issues for Congress*, by Ronald O'Rourke

coming years. If the $2-billion-per-year hump were not realized, the total number of ships of various kinds procured in FY2019-FY2033 could be less than the figures shown in the FY2011 30-year plan. If so, the shortfalls projected for cruisers and destroyers, attack submarines, and other categories of ships could be larger than those shown in **Table 4**.

## Efficacy of 30-Year Shipbuilding Plan

Another potential oversight issue for Congress concerns the efficacy of the 30-year shipbuilding plan. On June 1, 2011, the Oversight and Investigations subcommittee of the House Armed Services Committee held a hearing on the efficacy of the Department of Defense's 30-year aviation and shipbuilding plans. Witnesses at the hearing included representatives from the Office of the Secretary of Defense, the Air Force, the Navy, the Marine Corps, CBO, CRS, and the Heritage Foundation.[18]

# Legislative Activity for FY2012

## FY2012 Funding Request

The Navy's proposed FY2012 budget requests funding for the procurement of 10 new battle force ships (i.e., ships that count against the 313-ship goal). The 10 ships include two Virginia-class attack submarines, one DDG-51 class Aegis destroyer, four Littoral Combat Ships (LCSs), one LPD-17 class amphibious ship, one Mobile Landing Platform (MLP) ship (i.e., a maritime prepositioning ship), and one Joint High Speed Vessel (JHSV). These ships are funded through the Shipbuilding and Conversion, Navy (SCN) account, except for the MLP, which is funded through the National Defense Sealift Fund (NDSF).

## FY2012 National Defense Authorization Bill (H.R. 1540/S. 1867/S. 1253)

### House (Committee Report)

#### *Funding for Shipbuilding*

The House Armed Services Committee, in its report (H.Rept. 112-78 of May 17, 2011) on H.R. 1540, recommends approving, with two exceptions, the Navy's requests for FY2012 procurement and advance procurement funding in the SCN and NDSF accounts for construction of new battle force ships. (See pages 345-346 and 460 of the report.)

One exception concerns LHA-7, an amphibious assault ship that was authorized in FY2011 but is being partially funded in FY2012. The committee's report recommends a net reduction of $50 million from the amount requested for LHA-7 for FY2012. The recommended net reduction of

[18] Materials from the hearing are posted at http://armedservices.house.gov/index.cfm/2011/6/the-efficacy-of-the-department-of-defense-s-thirty-year-aviation-and-shipbuilding-plans.

$50 million includes a $200 million reduction for "contract delay" and a $150 million increase for "program increase." Section 1604 of H.R. 1540 as reported by the committee provides for the recommended $150 million increase. Section 121 of H.R. 1540 as reported by the committee would permit the final increment of procurement funding for LHA-7 to be provided in FY2013. Regarding LHA-7, the committee's report states:

> The delivery of the first ship of the America-class, LHA-6, has been significantly delayed. According to the Department of Defense "Selected Acquisition Report" of December 31, 2010, the delays are "due to changing conditions in the shipyard portfolio which are driving labor demands in various trades". These delays have had a cascading effect on LHA-7, which was scheduled to go on contract for detail design and construction in November 2010, but now the Navy estimates the contract will be delayed until the end of fiscal year 2011. Elsewhere in this title, the committee includes a provision that would authorize the Navy to conclude funding for LHA-7 in fiscal year 2013. (page 33)

The second exception is that the committee's report recommends an undistributed increase of $150 million in the SCN account for advance procurement and economic order quantity (EOQ) funding, and an offsetting undistributed reduction of $150 million in the SCN account for "program decrease."

The committee's report also states:

> The committee is pleased that the Navy has turned around the downward spiral in battle force ship quantities, and the plan to achieve the floor of 313 ships appears to be achievable. To obtain the required capability and to provide the required stability to the fragile shipbuilding industrial base, the committee believes the following programs are crucial. (page 33)

The report at this points goes on to discuss the CVN-78 aircraft carrier program, the Virginia class attack submarine program, the Ohio replacement (SSBN[X]) ballistic missile submarine program, the DDG-51 destroyer program, and amphibious ships.

### *30-Year Shipbuilding Plan*

Section 1021 of H.R. 1540 as reported by the committee would amend the provision in the code (10 U.S.C. 231) pertaining to the 30-year shipbuilding plan. The text of Section 1021 is as follows:

> SEC. 1021. BUDGETING FOR CONSTRUCTION OF NAVAL VESSELS.
>
> (a) Annual Plan- Section 231 of title 10, United States Code, is amended to read as follows:
>
> `Sec. 231. Budgeting for construction of naval vessels: annual plan and certification
>
> `(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 submitted to Congress in relation to such budget under section 221 of

this title 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 under paragraph (1) on the schedule provided in that plan.

`(b) Annual Naval Vessel Construction Plan- (1) The annual naval vessel construction plan developed for a fiscal year for purposes of subsection (a)(1) should be designed so that the naval vessel force provided for under that plan is capable of supporting the national security strategy of the United States as set forth in the most recent national security strategy report of the President under section 108 of the National Security Act of 1947 (50 U.S.C. 404a), except that, if at the time such plan is submitted with the defense budget materials for that fiscal year, a national security strategy report required under such section 108 has not been submitted to Congress as required by paragraph (2) or paragraph (3), if applicable, of subsection (a) of such section, then such annual plan should be designed so that the naval vessel force provided for under that plan is capable of supporting the ship force structure recommended in the report of the most recent quadrennial defense review.

`(2) Each such naval vessel construction plan shall include the following:

`(A) A detailed program for the construction of combatant and support vessels for the Navy over the next 30 fiscal years.

`(B) 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, whichever is applicable under paragraph (1).

`(C) 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 with the defense budget materials for that fiscal year 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 level. Such assessment shall be coordinated in advance with the commanders of the combatant commands.

`(d) CBO Evaluation- Not later than 60 days after the date on which the congressional defense committees receive the plan under subsection (a)(1), the Director of the Congressional Budget Office shall submit to such committees a report assessing the sufficiency of the estimated levels of annual funding included in such plan with respect to the budget submitted during the year in which the plan is submitted and the future-years defense program submitted under section 221 of this title.

`(e) Definitions- In this section:

`(1) The term `budget', with respect to a fiscal year, means the budget for that fiscal year that is submitted to Congress by the President under section 1105(a) of title 31.

`(2) The term `defense budget materials', with respect to a fiscal year, means the materials submitted to Congress by the Secretary of Defense in support of the budget for that fiscal year.

> `(3) The term `quadrennial defense review' means the review of the defense programs and policies of the United States that is carried out every four years under section 118 of this title.'.
>
> (b) Clerical Amendment- The table of sections at the beginning of chapter 9 of such title is amended by striking the item relating to section 231 and inserting the following new item:
>
> `231. Budgeting for construction of naval vessels: annual plan and certification'.

Regarding Section 1021, the committee's report states:

> This section would repeal an amendment made by section 1023 of the Ike Skelton National Defense Authorization Act for Fiscal Year 2011 (Public Law 111–383). This section would require that a 30-year shipbuilding plan be delivered to Congress periodically. The section that would be repealed changed the periodicity from an annual requirement to once every 4 years to be delivered with the Quadrennial Defense Review.
>
> The committee believes that returning to an annual submittal of the plan would promote stability and continuity in the planning process, both in the plan itself, and in the shipbuilding industrial base. One aspect of the section that would be retained is the requirement that the Director of the Congressional Budget Office, within 60 days of submittal of the plan, provide an assessment of the sufficiency of funds to execute the plan in the budget year and Future Years Defense Program to the congressional defense committees. (page 208)

### *Number of Carrier Air Wings (CVWs) and CVW Headquarters*

Section 1094 of H.R. 1540 as reported states:

> SEC. 1094. NUMBER OF NAVY CARRIER AIR WINGS AND CARRIER AIR WING HEADQUARTERS.
>
> The Secretary of the Navy shall ensure that the Navy maintains—
>
> (1) a minimum of 10 carrier air wings; and
>
> (2) for each such carrier air wing, a dedicated and fully staffed headquarters.

## House (Floor Consideration)

On May 26, 2011, as part of its consideration of H.R. 1540, the House rejected, 176-241, H.Amdt. 335, which would have deleted Section 1604, which provides for $150 million in procurement funding for LHA-7 (see "Funding for Shipbuilding" in "House (Committee Report)" above).

## Senate (S. 1867)

S. 1867, an original measure reported by Senator Levin on November 15, 2011, without written report, in effect supersedes S. 1253 (see below). S. 1867 recommends approving the Navy's requests for FY2012 procurement and advance procurement funding in the SCN and NDSF accounts for construction of new battle force ships. (See Sections 4101 and 4401 of the bill as

reported by Senator Levin. In the printed version of the bill, the relevant tables within these two sections appear on pages 611 and 662.)

**Section 1021** of S. 1867 states:

> SEC. 1021. LIMITATION ON AVAILABILITY OF FUNDS FOR PLACING MARITIME PREPOSITIONING SHIP SQUADRONS ON REDUCED OPERATING STATUS.
>
> No amounts authorized to be appropriated by this Act may be obligated or expended to place a Maritime Prepositioning Ship squadron, or any component thereof, on reduced operating status until the later of the following:
>
> (1) The date on which the Commandant of the Marine Corps submits to the congressional defense committees a report setting forth an assessment of the impact on military readiness of the plans of the Navy for placing such Maritime Prepositioning Ship squadron, or component thereof, on reduced operating status.
>
> (2) The date on which the Chief of Naval Operations submits to the congressional defense committees a report that—
>
> (A) describes the plans of the Navy for placing such Maritime Prepositioning Ship squadron, or component thereof, on reduced operating status; and
>
> (B) sets forth comments of the Chief of Naval Operations on the assessment described in paragraph (1).
>
> (3) The date on which the Secretary of Defense certifies to the congressional defense committees that the risks to readiness of placing such Maritime Prepositioning squadron, or component thereof, on reduced operating status are acceptable.

**Section 1022** of S. 1867 states:

> SEC. 1022. MODIFICATION OF CONDITIONS ON STATUS OF RETIRED AIRCRAFT CARRIER EX-JOHN F. KENNEDY.
>
> Section 1011(c)(2) of the John Warner National Defense Authorization Act for Fiscal Year 2007 (P.L. 109-364; 120 Stat. 2374) is amended by striking `shall require' and all that follows and inserting `may, notwithstanding paragraph (1), demilitarize the vessel in preparation for the transfer.'.

## Senate (S. 1253)

S. 1253 has been, in effect, superseded by S. 1867 (see above). S. 1253 as reported by the Senate Armed Services Committee (S.Rept. 112-26 of June 22, 2011) recommends approving the Navy's requests for FY2012 procurement and advance procurement funding in the SCN and NDSF accounts for construction of new battle force ships. (See Sections 4101 and 4401 of the bill as reported by the committee. In the printed version of the bill as reported by the committee, the relevant tables within these two sections appear on pages 606 and 647.)

**Section 1021** of S. 1253 as reported by the committee states:

> SEC. 1021. LIMITATION ON AVAILABILITY OF FUNDS FOR PLACING MARITIME PREPOSITIONING SHIP SQUADRONS ON REDUCED OPERATING STATUS.

> No amounts authorized to be appropriated by this Act may be obligated or expended to place a Maritime Prepositioning Ship squadron, or any component thereof, on reduced operating status until the later of the following:
>
> (1) The date on which the Commandant of the Marine Corps submits to the congressional defense committees a report setting forth an assessment of the impact on military readiness of the plans of the Navy for placing such Maritime Prepositioning Ship squadron, or component thereof, on reduced operating status.
>
> (2) The date on which the Chief of Naval Operations submits to the congressional defense committees a report that—
>
> (A) describes the plans of the Navy for placing such Maritime Prepositioning Ship squadron, or component thereof, on reduced operating status; and
>
> (B) sets forth comments of the Chief of Naval Operations on the assessment described in paragraph (1).
>
> (3) The date on which the Secretary of Defense certifies to the congressional defense committees that the risks to readiness of placing such Maritime Prepositioning squadron, or component thereof, on reduced operating status are acceptable.

Regarding this section, the committee's report states:

> **Limitation on availability of funds for placing Maritime Prepositioning Ships squadrons on reduced operating status (sec. 1021)**
>
> The committee recommends a provision that would prohibit funding to place a maritime prepositioning ship squadron (MPSRON), or any component thereof, on reduced operating status until: the Commandant of the Marine Corps (CMC) submits a report to Congress assessing the impact on military readiness for placing such MPSRON on reduced operating status; the Chief of Naval Operations describes the Navy's plan and comments on the CMC's report for placing such MPSRON on reduced operating status; and the Secretary of Defense certifies to Congress that the risks to readiness of placing such MPSRON on reduced operating status are acceptable. (Page 175)

**Section 1022** of S. 1253 as reported by the committee states:

> SEC. 1022. MODIFICATION OF CONDITIONS ON STATUS OF RETIRED AIRCRAFT CARRIER EX-JOHN F. KENNEDY.
>
> Section 1011(c)(2) of the John Warner National Defense Authorization Act for Fiscal Year 2007 (P.L. 109-364; 120 Stat. 2374) is amended by striking `shall require' and all that follows and inserting `may, notwithstanding paragraph (1), demilitarize the vessel in preparation for the transfer.'.

Regarding this section, the committee's report states:

> **Modification of conditions on status of retired aircraft carrier ex-John F. Kennedy (sec. 1022)**
>
> The committee recommends a provision that would amend section 1011 of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109–364) to allow the Navy to dispose of the ex-John F. Kennedy. The provision would amend section 1011 to

> remove the requirement that the Navy ensure the ship is maintained in a status that would permit the Navy to return the ship to active service in event of a national emergency. (Page 176)

# FY2012 DOD Appropriations Bill (H.R. 2219)

## House

The House Appropriations Committee, in its report (H.Rept. 112-110 of June 16, 2011) on H.R. 2219, supports the procurement of the new-construction ships requested by the Navy for FY2012, but recommends reductions to the Navy's requested funding amounts for some of the ships. (Pages 153-154 and, for the MLP program, page 255). As detailed on page 276 of the report, Section 8040 of the bill as reported would rescind, among other funds, $110.351 million in FY2011 advance procurement funding for the LCS program. Section 8072 of the bill as reported details the use of $73.992 million in funding provided on page 153 of the committee's report for the completion of prior-year shipbuilding programs. The report also states:

> SHIPBUILDING OVERSIGHT
>
> The Committee understands that a number of issues related to quality have recently been identified on Navy ships. Most recently, a failed weld joint caused structural damage to a mast mounted antenna on an Arleigh Burke-class destroyer. Incorrect installation of key subsystems on several Virginia-class submarines required corrections to avoid jeopardizing the mission performance of the submarines. Faulty welds were identified on a number of ship classes, including at least four aircraft carriers. Additionally, several issues have arisen regarding the LPD–17 class of amphibious transport dock ships. These issues were severe enough to cause the USS San Antonio to miss a scheduled deployment.
>
> The Committee directs the Comptroller General to review the Navy's process for quality assurance in shipbuilding. This review should identify the extent to which quality assurance processes identified known quality problems, including an examination of what analyses the Navy has performed and what actions have been taken to address identified problems. The review should also examine the extent to which the American Bureau of Shipbuilding plays a role in quality assurance in Navy shipbuilding and how this role complements or duplicates reviews conducted by Navy Supervisor of Shipbuilding and Conversion personnel. As part of this analysis, a comparison should be made between the Navy, commercial shipbuilders, and commercial ship buyers' approaches to quality assurance. The results of this review should be provided to the congressional defense committees not later than 180 days after enactment of this Act. (Page 155)

## Senate

The Senate Appropriations Committee, in its report (S.Rept. 112-77 of September 15, 2011) on H.R. 2219, recommends fully funding all of the Navy ships requested for procurement in the Shipbuilding and Conversion, Navy (SCN) account (page 120), but recommends denying the request for $425.9 million in the National Defense Sealift Fund (NDSF) for the procurement of a Mobile Landing Platform (MLP) ship (page 221). Regarding the MLP, the committee's report states:

> *Mobile Landing Platform [MLP].*—The fiscal year 2012 budget request includes $425,865,000 to procure one Mobile Landing Platform [MLP]. The Navy has a requirement

> for three MLPs, and the Committee notes that in its previous budget submission, the Navy proposed procuring the three MLPs over the course of 5 years, beginning in fiscal year 2011. The fiscal year 2012 budget submission proposes to condense this acquisition to 3 years, concluding in fiscal year 2013. However, the Committee notes that the fiscal year 2012 budget submission does not take into account that Congress adjusted the MLP acquisition profile in the Fiscal Year 2011 Department of Defense Appropriations Act by accelerating the planned schedule by 2 years and procuring two MLPs in fiscal year 2011 instead of one. The Committee notes that this acceleration, coupled with procuring an additional MLP in fiscal year 2013, as the Navy has planned for the last two budget cycles, concludes the program's acquisition in 3 years, as the Navy proposes in its fiscal year 2012 budget submission. The Committee believes that a further acceleration of the MLP acquisition schedule is unwarranted and high-risk and does not allow for sufficient learning to occur, nor cost efficiencies to be absorbed prior to initiating construction of the third and final ship of the class. The Committee notes that Navy has already procured long lead materials for the third ship to avoid shipyard production breaks prior to award of the fiscal year 2013 MLP. Therefore, the Committee recommends denying the proposed additional acceleration of the program and recommends that the Navy retain its original plan of procuring a MLP in fiscal year 2013. (Pages 221-222)

The committee's report also states:

> *Ballistic Missile Defense [BMD] Capable Ships*.—The Committee notes that the Navy has established a requirement for fiscal year 2024 of having a force of 94 multi-mission large surface combatants (including ballistic missile defense [BMD] capability), but the Navy's fiscal year 2012 30-year shipbuilding plan projects that the Navy will achieve the 94-ship goal for BMD-capable ships in 2020 and 2021, with force levels declining thereafter. Specifically, the Navy projects that it will have, at most, 92 BMD-capable ships in 2024 before declining to 65 in 2034. The Committee is concerned about this projected shortfall and believes that the Navy should begin to review and consider options to close this gap. The Navy has indicated that it intends to pursue a multiyear procurement contract for DDG–51 vessels in fiscal year 2013 that could result in significant cost savings. Historic production rates of three DDG–51s per fiscal year reflected substantial unit cost savings in the past and would likely be realized by procuring DDG–51 ships at a more economical procurement rate than currently planned. The Committee directs the Secretary of the Navy to provide a report, at the same time as the President submits the budget request for fiscal year 2013, which provides options for closing this gap. (Page 121)

## CRS Reports Tracking Legislation on Specific Navy Shipbuilding Programs

For funding levels and legislative activity on individual Navy shipbuilding, conversion, and modernization programs, see the following CRS reports:

- CRS Report RS20643, *Navy Ford (CVN-78) Class Aircraft Carrier Program: Background and Issues for Congress*, by Ronald O'Rourke.
- CRS Report R41129, *Navy Ohio Replacement (SSBN[X]) Ballistic Missile Submarine Program: Background and Issues for Congress*, by Ronald O'Rourke.
- CRS Report RL32418, *Navy Virginia (SSN-774) Class Attack Submarine Procurement: Background and Issues for Congress*, by Ronald O'Rourke.
- CRS Report RL32109, *Navy DDG-51 and DDG-1000 Destroyer Programs: Background and Issues for Congress*, by Ronald O'Rourke.

- CRS Report RL33741, *Navy Littoral Combat Ship (LCS) Program: Background, Issues, and Options for Congress*, by Ronald O'Rourke.
- CRS Report RL34476, *Navy LPD-17 Amphibious Ship Procurement: Background, Issues, and Options for Congress*, by Ronald O'Rourke.

# Appendix A. Using Past Ship Force Levels to Assess Proposed Force Levels

One possible method for assessing proposals for the future size and structure of the Navy is to compare them to historical figures for total Navy fleet size. Historical figures for total fleet size, however, might not be a reliable yardstick for assessing the appropriateness of proposals for the future size and structure of the Navy, particularly if the historical figures are more than a few years old, because the missions to be performed by the Navy, the mix of ships that make up the Navy, and the technologies that are available to Navy ships for performing missions all change over time.

The Navy, for example, reached a late-Cold War peak of 568 battle force ships at the end of FY1987,[19] and as of October 13, 2011, had declined to a total of 284 battle force ships. The FY1987 fleet, however, was intended to meet a set of mission requirements that focused on countering Soviet naval forces at sea during a potential multi-theater NATO-Warsaw Pact conflict, while the October 2011 fleet is intended to meet a considerably different set of mission requirements centered on influencing events ashore by countering both land- and sea-based military forces of potential regional threats other than Russia, including improved Chinese military forces and non-state terrorist organizations. In addition, the Navy of FY1987 differed substantially from the October 2011 fleet in areas such as profusion of precision-guided air-delivered weapons, numbers of Tomahawk-capable ships, and sophistication of C4ISR systems.[20]

In coming years, Navy missions may shift again, and the capabilities of Navy ships will likely have changed further by that time due to developments such as more comprehensive implementation of networking technology and increased use of ship-based unmanned vehicles.

The 568-ship fleet of FY1987 may or may not have been capable of performing its stated missions; the 284-ship fleet of October 2011 may or may not be capable of performing its stated missions; and a fleet years from now with a certain number of ships may or may not be capable of performing its stated missions. Given changes over time in mission requirements, ship mixes, and technologies, however, these three issues are to a substantial degree independent of one another.

For similar reasons, trends over time in the total number of ships in the Navy are not necessarily a reliable indicator of the direction of change in the fleet's ability to perform its stated missions. An increasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform its stated missions is increasing, because the fleet's mission requirements might be increasing more rapidly than ship numbers and average ship capability. Similarly, a decreasing

[19] Some publications, such as those of the American Shipbuilding Association, have stated that the Navy reached a peak of 594 ships at the end of FY1987. This figure, however, is the total number of active ships in the fleet, which is not the same as the total number of battle force ships. The battle force ships figure is the number used in government discussions of the size of the Navy. In recent years, the total number of active ships has been larger than the total number of battle force ships. For example, the Naval Historical Center states that as of November 16, 2001, the Navy included a total of 337 active ships, while the Navy states that as of November 19, 2001, the Navy included a total of 317 battle force ships. Comparing the total number of active ships in one year to the total number of battle force ships in another year is thus an apples-to-oranges comparison that in this case overstates the decline since FY1987 in the number of ships in the Navy. As a general rule to avoid potential statistical distortions, comparisons of the number of ships in the Navy over time should use, whenever possible, a single counting method.

[20] C4ISR stands for command and control, communications, computers, intelligence, surveillance, and reconnaissance.

number of ships in the fleet might not necessarily mean that the fleet's ability to perform stated missions is decreasing, because the fleet's mission requirements might be declining more rapidly than numbers of ships, or because average ship capability and the percentage of time that ships are in deployed locations might be increasing quickly enough to more than offset reductions in total ship numbers.

Previous Navy force structure plans, such as those shown in **Table 1**, might provide some insight into the potential adequacy of a proposed new force-structure plan, but changes over time in mission requirements, technologies available to ships for performing missions, and other force-planning factors suggest that some caution should be applied in using past force structure plans for this purpose, particularly if those past force structure plans are more than a few years old. The Reagan-era plan for a 600-ship Navy, for example, was designed for a Cold War set of missions focusing on countering Soviet naval forces at sea, which is not an appropriate basis for planning the Navy today.[21]

[21] Navy force structure plans that predate those shown in **Table 1** include the Reagan-era 600-ship plan of the 1980s, the Base Force fleet of more than 400 ships planned during the final two years of the George H. W. Bush Administration, the 346-ship fleet from the Clinton Administration's 1993 Bottom-Up Review (or BUR, sometimes also called Base Force II), and the 310-ship fleet of the Clinton Administration's 1997 QDR. The table below summarizes some key features of these plans.

**Features of Recent Navy Force Structure Plans**

| Plan | 600-ship | Base Force | 1993 BUR | 1997 QDR |
|---|---|---|---|---|
| **Total ships** | ~600 | ~450/416[a] | 346 | ~305/310[b] |
| **Attack submarines** | 100 | 80/~55[c] | 45-55 | 50/55[d] |
| **Aircraft carriers** | 15[e] | 12 | 11+1[f] | 11+1[f] |
| **Surface combatants** | 242/228[g] | ~150 | ~124 | 116 |
| **Amphibious ships** | ~75[h] | 51[i] | 41[i] | 36[i] |

**Source:** Prepared by CRS based on DOD and U.S. Navy data.
a. Commonly referred to as 450-ship plan, but called for decreasing to 416 ships by end of FY1999.
b. Original total of about 305 ships was increased to about 310 due to increase in number of attack submarines to 55 from 50.
c. Plan originally included 80 attack submarines, but this was later reduced to about 55.
d. Plan originally included 50 attack submarines but this was later increased to 55.
e. Plus one additional aircraft carrier in the service life extension program (SLEP).
f. Eleven active carriers plus one operational reserve carrier.
g. Plan originally included 242 surface combatants but this was later reduced to 228.
h. Number needed to lift assault echelons of one Marine Expeditionary Force (MEF) plus one Marine Expeditionary Brigade (MEB).
i. Number needed to lift assault echelons of 2.5 MEBs. Changing numbers needed to meet this goal reflect in part changes in the design and capabilities of amphibious ships.

# Appendix B. Independent Panel Assessment of 2010 QDR

The law that requires DOD to perform QDRs once every four years (10 U.S.C. 118) states that the results of each QDR shall be assessed by an independent panel. The report of the independent panel that assessed the 2010 QDR was released on July 29, 2010. The independent panel's report recommended a Navy of 346 ships, including 11 aircraft carriers and 55 attack submarines.[22] The report stated the following, among other things:

- "The QDR should reflect current commitments, but it must also plan effectively for potential threats that could arise over the next 20 years.… we believe the 2010 QDR did not accord sufficient priority to the need to counter anti-access challenges, strengthen homeland defense (including our defense against cyber threats), and conduct post-conflict stabilization missions." (Page 54)
- "In this remarkable period of change, global security will still depend upon an American presence capable of unimpeded access to all international areas of the Pacific region. In an environment of 'anti-access strategies,' and assertions to create unique 'economic and security zones of influence,' America's rightful and historic presence will be critical. To preserve our interests, the United States will need to retain the ability to transit freely the areas of the Western Pacific for security and economic reasons. Our allies also depend on us to be fully present in the Asia-Pacific as a promoter of stability and to ensure the free flow of commerce. A robust U.S. force structure, largely rooted in maritime strategy but including other necessary capabilities, will be essential." (Page 51)
- "The United States will need agile forces capable of operating against the full range of potential contingencies. However, the need to deal with irregular and hybrid threats will tend to drive the size and shape of ground forces for years to come, whereas the need to continue to be fully present in Asia and the Pacific and other areas of interest will do the same for naval and air forces." (Page 55)
- "The force structure in the Asia-Pacific needs to be increased. In order to preserve U.S. interests, the United States will need to retain the ability to transit freely the areas of the Western Pacific for security and economic reasons. The United States must be fully present in the Asia-Pacific region to protect American lives and territory, ensure the free flow of commerce, maintain stability, and defend our allies in the region. A robust U.S. force structure, one that is largely rooted in maritime strategy and includes other necessary capabilities, will be essential." (Page 66)
- "Force structure must be strengthened in a number of areas to address the need to counter anti-access challenges, strengthen homeland defense (including defense against cyber threats), and conduct post-conflict stabilization missions: First, as a Pacific power, the U.S. presence in Asia has underwritten the regional stability that has enabled India and China to emerge as rising economic powers. The

[22] Stephen J. Hadley and William J. Perry, co-chairmen, et al*, The QDR in Perspective: Meeting America's National Security Needs In the 21st Century, The Final Report of the Quadrennial Defense Review Independent Panel*, Washington, 2010, Figure 3-2 on page 58.

United States should plan on continuing that role for the indefinite future. The Panel remains concerned that the QDR force structure may not be sufficient to assure others that the United States can meet its treaty commitments in the face of China's increased military capabilities. Therefore, we recommend an increased priority on defeating anti-access and area-denial threats. This will involve acquiring new capabilities, and, as Secretary Gates has urged, developing innovative concepts for their use. Specifically, we believe the United States must fully fund the modernization of its surface fleet. We also believe the United States must be able to deny an adversary sanctuary by providing persistent surveillance, tracking, and rapid engagement with high-volume precision strike. That is why the Panel supports an increase in investment in long-range strike systems and their associated sensors. In addition, U.S. forces must develop and demonstrate the ability to operate in an information-denied environment." (Pages 59-60)

- "To compete effectively, the U.S. military must continue to develop new conceptual approaches to dealing with operational challenges, like the Capstone Concept for Joint Operations (CCJO). The Navy and Air Force's effort to develop an Air-Sea Battle concept is one example of an approach to deal with the growing anti-access challenge. It will be necessary to invest in modernized capabilities to make this happen. The Chief of Naval Operations and Chief of Staff of the Air Force deserve support in this effort, and the Panel recommends the other military services be brought into the concept when appropriate." (Page 51; a similar passage appears on page 67)

In recommending a Navy of 346 ships, the independent panel's report cited the 1993 Bottom-Up Review (BUR) of U.S. defense plans and policies. **Table B-1** compares the Navy's 313-ship goal of September 2011 to the 346-ship Navy recommended in the 1993 BUR (as detailed partly in subsequent Navy testimony and publications) and the ship force levels recommended in the independent panel report.

**Table B-1. Comparison of Navy's 313-ship goal, Navy Plan from 1993 BUR, and Navy Plan from 2010 QDR Review Panel**

| Ship Type | Navy's 313-ship goal of September 2011 | Bottom-Up Review (BUR) (1993) | 2010 QDR Independent Review Panel (July 2010) |
|---|---|---|---|
| SSBNs | 12 | 18 | 14 |
| | | (SSBN force was later reduced to 14 as a result of the 1994 Nuclear Posture Review) | |
| SSGNs | 4 | 0 | 4 |
| | | (SSGN program did not yet exist) | |
| SSNs | 48 | 45 to 55 | 55 |
| | | (55 in FY99, with a long-term goal of about 45) | |
| Aircraft carriers | 11 active | 11 active + 1 operational/reserve | 11 active |
| Surface combatants | 149 | 124 | n/a |
| | | (114 active + 10 frigates in Naval Reserve Force; a total of 110-116 active ships was also cited) | |
| *Cruisers and destroyers* | *94* | *n/a* | *n/a* |
| *Frigates* | *0* | *n/a* | *n/a* |
| | *(to be replaced by LCSs)* | | |
| *LCSs* | *55* | *0* | *n/a* |
| | | *(LCS program did not exist)* | |
| Amphibious ships | 33 | 41 | n/a |
| | (33 needed to lift 2.0 MEBs) | (Enough to lift 2.5 MEBs) | |
| Dedicated mine warfare ships | 0 | 26 | n/a |
| | (to be replaced by LCSs) | (LCS program did not exist) | |
| CLF ships | 30 | 43 | n/a |
| Support ships | 26 | 22 | n/a |
| **TOTAL ships** | **313** | **346** | **346** |
| | | **(numbers above add to 331-341)**[a] | |

**Source:** Table prepared by CRS. ***Sources for 1993 Bottom-Up Review:*** Department of Defense, *Report on the Bottom-Up Review*, October 1993, Figure 7 on page 28; Department of the Navy, *Highlights of the FY 1995 Department of the Navy Budget*, February 1994, p. 1; Department of the Navy, *Force 2001, A Program Guide to the U.S. Navy*, 1994 edition, p. 15; Statement of VADM T. Joseph Lopez, U.S. Navy, Deputy Chief of Naval Operations (Resources, Warfare Requirements & Assessments), Testimony to the Military Forces and Personnel Subcommittee of the House Armed Services Committee, March 22, 1994, pp. 2-5. ***Source for independent panel report:*** Stephen J. Hadley and William J. Perry, co-chairmen, et al., *The QDR in Perspective: Meeting*

*America's National Security Needs In the 21st Century, The Final Report of the Quadrennial Defense Review Independent Panel*, Washington, 2010, Figure 3-2 on pages 58-59.

**Notes: n/a** is not addressed in the report. **SSBN** is nuclear-powered ballistic missile submarine; **SSGN** is nuclear-powered cruise missile and special operations forces submarine; **SSN** is nuclear-powered attack submarine; **LCS** is Littoral Combat Ship; **MPF(F)** is Maritime Prepositioning Force (Future) ship; **CLF** is combat logistics force (i.e., resupply) ship; **MEB** is Marine Expeditionary Brigade.

a. The Navy testified in 1994 that the planned number was adjusted from 346 to 330 to reflect reductions in numbers of tenders and early retirements of some older amphibious ships.

In a letter dated August 11, 2010, Secretary of Defense Robert Gates provided his comments on the independent panel's report. The letter stated in part:

> I completely agree with the Panel that a strong navy is essential; however, I disagree with the Panel's recommendation that DoD should establish the 1993 Bottom Up Review's (BUR's) fleet of 346 ships as the objective target. That number was a simple projection of the then-planned size of [the] Navy in FY 1999, not a reflection of 21st century, steady-state requirements. The fleet described in the 2010 QDR report, with its overall target of 313 to 321 ships, has roughly the same number of aircraft carriers, nuclear-powered attack submarines, surface combatants, mine warfare vessels, and amphibious ships as the larger BUR fleet. The main difference between the two fleets is in the numbers of combat logistics, mobile logistics, and support ships. Although it is true that the 2010 fleet includes fewer of these ships, they are all now more efficiently manned and operated by the Military Sealift Command and meet all of DoD's requirements….
>
> I agree with the Panel's general conclusion that DoD ought to enhance its overall posture and capabilities in the Asia-Pacific region. As I outlined in my speech at the Naval War College in April 2009, "to carry out the missions we may face in the future… we will need numbers, speed, and the ability to operate in shallow waters." So as the Air-Sea battle concept development reaches maturation, and as DoD's review of global defense posture continues, I will be looking for ways to meet plausible security threats while emphasizing sustained forward presence – particularly in the Pacific.[23]

[23] Letter dated August 11, 2010, from Secretary of Defense Robert Gates to the chairmen of the House and Senate Armed Services and Appropriations Committees, pp. 3 and 4. The ellipsis in the second paragraph appears in the letter.

# Appendix C. Size of the Navy and Navy Shipbuilding Rate

## Size of the Navy

**Table C-1** shows the size of the Navy in terms of total number of ships since FY1948; the numbers shown in the table reflect changes over time in the rules specifying which ships count toward the total. Differing counting rules result in differing totals, and for certain years, figures reflecting more than one set of counting rules are available. Figures in the table for FY1978 and subsequent years reflect the battle force ships counting method, which is the set of counting rules established in the early 1980s for public policy discussions of the size of the Navy.

As shown in the table, the total number of battle force ships in the Navy reached a late-Cold War peak of 568 at the end of FY1987 and began declining thereafter.[24] The Navy fell below 300 battle force ships in August 2003 and included 284 battle force ships as of October 13, 2011.

As discussed in **Appendix A**, historical figures for total fleet size might not be a reliable yardstick for assessing the appropriateness of proposals for the future size and structure of the Navy, particularly if the historical figures are more than a few years old, because the missions to be performed by the Navy, the mix of ships that make up the Navy, and the technologies that are available to Navy ships for performing missions all change over time. For similar reasons, trends over time in the total number of ships in the Navy are not necessarily a reliable indicator of the direction of change in the fleet's ability to perform its stated missions. An increasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform its stated missions is increasing, because the fleet's mission requirements might be increasing more rapidly than ship numbers and average ship capability. Similarly, a decreasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform stated missions is decreasing, because the fleet's mission requirements might be declining more rapidly than numbers of ships, or because average ship capability and the percentage of time that ships are in deployed locations might be increasing quickly enough to more than offset reductions in total ship numbers.

[24] Some publications, such as those of the American Shipbuilding Association, have stated that the Navy reached a peak of 594 ships at the end of FY1987. This figure, however, is the total number of active ships in the fleet, which is not the same as the total number of battle force ships. The battle force ships figure is the number used in government discussions of the size of the Navy. In recent years, the total number of active ships has been larger than the total number of battle force ships. For example, the Naval Historical Center states that as of November 16, 2001, the Navy included a total of 337 active ships, while the Navy states that as of November 19, 2001, the Navy included a total of 317 battle force ships. Comparing the total number of active ships in one year to the total number of battle force ships in another year is thus an apples-to-oranges comparison that in this case overstates the decline since FY1987 in the number of ships in the Navy. As a general rule to avoid potential statistical distortions, comparisons of the number of ships in the Navy over time should use, whenever possible, a single counting method.

**Table C-1. Total Number of Ships in the Navy Since FY1948**

| FY[a] | Number | FY[a] | Number | FY[a] | Number |
|---|---|---|---|---|---|
| 1948 | 737 | 1970 | 769 | 1992 | 466 |
| 1949 | 690 | 1971 | 702 | 1993 | 435 |
| 1950 | 634 | 1972 | 654 | 1994 | 391 |
| 1951 | 980 | 1973 | 584 | 1995 | 373 |
| 1952 | 1,097 | 1974 | 512 | 1996 | 356 |
| 1953 | 1,122 | 1975 | 496 | 1997 | 354 |
| 1954 | 1,113 | 1976 | 476 | 1998 | 333 |
| 1955 | 1,030 | 1977 | 464 | 1999 | 317 |
| 1956 | 973 | 1978 | 468 | 2000 | 318 |
| 1957 | 967 | 1979 | 471 | 2001 | 316 |
| 1958 | 890 | 1980 | 477 | 2002 | 313 |
| 1959 | 860 | 1981 | 490 | 2003 | 297 |
| 1960 | 812 | 1982 | 513 | 2004 | 291 |
| 1961 | 897 | 1983 | 514 | 2005 | 282 |
| 1962 | 959 | 1984 | 524 | 2006 | 281 |
| 1963 | 916 | 1985 | 541 | 2007 | 279 |
| 1964 | 917 | 1986 | 556 | 2008 | 282 |
| 1965 | 936 | 1987 | 568 | 2009 | 285 |
| 1966 | 947 | 1988 | 565 | 2010 | 288 |
| 1967 | 973 | 1989 | 566 | 2011 | 284 |
| 1968 | 976 | 1990 | 547 | 2012 | |
| 1969 | 926 | 1991 | 526 | 2013 | |

**Source:** Compiled by CRS using U.S. Navy data. Numbers shown reflect changes over time in the rules specifying which ships count toward the total. Figures for FY1978 and subsequent years reflect the battle force ships counting method, which is the set of counting rules established in the early 1980s for public policy discussions of the size of the Navy.

a. Data for earlier years in the table may be for the end of the calendar year (or for some other point during the year), rather than for the end of the fiscal year.

## Shipbuilding Rate

**Table C-2** shows past (FY1982-FY2011) and requested (FY2012-FY2016) rates of Navy ship procurement.

**Table C-2. Battle Force Ships Procured or Requested, FY1982-FY2016**

(Procured FY1982-FY2011; *requested FY2012-FY2015)*

| **82** | **83** | **84** | **85** | **86** | **87** | **88** | **89** | **90** | **91** | **92** | **93** | **94** | **95** | **96** | **97** | **98** | **99** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 14 | 16 | 19 | 20 | 17 | 15 | 19 | 15 | 11 | 11 | 7 | 4 | 4 | 5 | 4 | 5 | 5 |
| **00** | **01** | **02** | **03** | **04** | **05** | **06** | **07** | **08** | **09** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | |
| 6 | 6 | 6 | 5 | 7 | 8 | 4[a] | 5[a] | 3[a] | 8 | 7 | 10 | *10* | *13* | *11* | *12* | *9* | |

**Source:** CRS compilation based on examination of defense authorization and appropriation committee and conference reports for each fiscal year. The table excludes non-battle force ships that do not count toward the 313-ship goal, such as certain sealift and prepositioning ships operated by the Military Sealift Command and oceanographic ships operated by agencies such as the National Oceanic and Atmospheric Administration (NOAA).

a. The totals shown for FY2006, FY2007, and FY2008, reflect the cancellation two LCSs funded in FY2006, another two LCSs funded in FY2007, and an LCS funded in FY2008.

## Author Contact Information

Ronald O'Rourke
Specialist in Naval Affairs
rorourke@crs.loc.gov, 7-7610