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

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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's FY2011 budget submission retains, for the time being at least, the goal of achieving and maintaining a 313-ship fleet that the Navy first presented to Congress in February 2006. Although the 313-ship goal remains in place, some elements of Navy ship force planning that have emerged since 2006 appear to diverge from elements of the 313-ship plan. The Navy's report on its FY2011 30-year (FY2011-FY2040) shipbuilding plan refers to a forthcoming force structure assessment (FSA). Such an assessment could produce a replacement for the 313-ship plan. It is not clear when the FSA might be conducted, or when a replacement for the 313-ship plan might be issued.

The Navy's proposed FY2011 budget requests funding for the procurement of nine new battle force ships (i.e., ships that count against the 313-ship goal). The nine ships include two attack submarines, two destroyers, two Littoral Combat Ships (LCSs), one amphibious assault 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 (FY2011-FY2015) shipbuilding plan includes a total of 50 new battle force ships, or an average of 10 per year. Of the 50 ships in the plan, half are relatively inexpensive LCSs or JHSVs.

The Navy's FY2011 30-year (FY2011-FY2040) shipbuilding plan includes 276 ships. The Navy estimates that executing the plan would require an average of $15.9 billion per year in constant FY2010 dollars. In past years, the Congressional Budget Office's (CBO's) estimate of the cost of implementing the 30-year shipbuilding plan has been higher than the Navy's estimate, reinforcing concerns among some observers about the prospective affordability of the plan. CBO is now assessing the potential cost of the Navy's FY2011 30-year shipbuilding plan.

The Navy projects that implementing the 30-year plan would result in a fleet that grows from 284 ships in FY2011 to 315 ships in FY2020, reaches a peak of 320 ships in FY2024, drops below 313 ships in FY2027, declines to 288 ships in FY2032-FY2033, and then increases to 301 ships in FY2039-FY2040. 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.

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The Navy's five-year (FY2011-FY2015) shipbuilding plan includes a total of 50 new battle force ships, or an average of 10 per year.[2] Of the 50 ships in the plan, half are relatively inexpensive LCSs or JHSVs.

The Navy's FY2011 30-year (FY2011-FY2040) shipbuilding plan includes 276 ships. The Navy estimates that executing the plan would require an average of $15.9 billion per year in constant FY2010 dollars. In past years, the Congressional Budget Office's (CBO's) estimate of the cost of implementing the 30-year shipbuilding plan has been higher than the Navy's estimate, reinforcing concerns among some observers about the prospective affordability of the plan. CBO is now assessing the potential cost of the Navy's FY2011 30-year shipbuilding plan.

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[1] The proposed FY2011 budget also requests funding for the procurement of an oceanographic ship that does not count against the 313-ship goal.

[2] The five-year plan also includes two oceanographic ships (one in FY2011 and one in FY2012) that do not count against the 313-ship goal.

Background

313-Ship Force-Level Objective of 2006

The Navy's FY2011 budget submission retains, for the time being at least, the goal of achieving and maintaining a 313-ship fleet that the Navy first presented to Congress in February 2006. **Table 1** shows the composition of the Navy's planned 313-ship fleet and compares it to previous Navy ship force structure proposals.

Table 1. Navy Ship Force Structure Proposals Since 2001

Ship type	February 2006 Navy proposal for 313-ship fleet	Early-2005 Navy proposal for fleet of 260-325 ships		2002-2004 Navy proposal for 375-ship Navy[a]	2001 QDR plan for 310-ship Navy
		260-ships	325-ships		
Ballistic missile submarines (SSBNs)	14	14	14	14	14
Cruise missile submarines (SSGNs)	4	4	4	4	2 or 4[b]
Attack submarines (SSNs)	48	37	41	55	55
Aircraft carriers	11[c]	10	11	12	12
Cruisers, destroyers, frigates	88	67	92	104	116
Littoral Combat Ships (LCSs)	55	63	82	56	0
Amphibious ships	31	17	24	37	36
MPF(F) ships[d]	12[d]	14[d]	20[d]	0[d]	0[d]
Combat logistics (resupply) ships	30	24	26	42	34
Dedicated mine warfare ships	0	0	0	26[e]	16
Other[f]	20	10	11	25	25
Total battle force ships	**313**	**260**	**325**	**375**	**310 or 312**

Sources: U.S. Navy data.

a. Initial composition. Composition was subsequently modified.

b. 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.

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

d. 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 contribute to Navy combat capabilities (for example, by supporting Navy aircraft operations). For this reason, MPF(F) ships are counted by the Navy as battle force ships.

e. 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.

f. Includes, among other things, command ships and support ships.

Although the 313-ship goal remains in place, some elements of Navy ship force planning that have emerged since 2006 appear to diverge from elements of the 313-aship plan. For example:

- The 20 support ships in the 313-ship plan include three JHSVs, but the Navy now plans to procure considerably more than three JHSVs.
- The planned composition of the Navy's cruiser-destroyer force has changed considerably since 2006.
- 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 31.
- Navy shipbuilding plans no longer call for building a 12-ship squadron of next-generation Maritime Prepositioning Force (Future), or MPF(F), ships.

The Navy's report on its FY2011 30-year (FY2011-FY2040) shipbuilding plan refers to a forthcoming force structure assessment (FSA).[3] Such an assessment could produce a replacement for the 313-ship plan. It is not clear when the FSA might be conducted, or when a replacement for the 313-ship plan might be issued.

Five-Year (FY2011-FY2015) Shipbuilding Plan

Table 2 shows the Navy's proposed five-year (FY2011-FY2015) shipbuilding plan.

Table 2. Navy Five-Year (FY2011-FY2015) Shipbuilding Plan

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

Ship type	FY11	FY12	FY13	FY14	FY15	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	2	1	2	1	2	8
Littoral Combat Ship (LCS)	2	3	4	4	4	17
San Antonio (LPD-17) class amphibious ship		1				1
Large-deck amphibious assault ship (LHA[R])	1					1

[3] U.S. Navy, *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2011*, February 2010, pp. 14, 19, 25.

Ship type	FY11	FY12	FY13	FY14	FY15	Total
Fleet tug (TATF)					1	1
Mobile Landing Platform (MLP) ship	1		1		1	3
Joint High Speed Vessel (JHSV)	1	1	2	2	2	8
TOTAL	9	8	12	9	12	50

Source: FY2011 Navy budget submission.

Note: The FY2011-FY2015 shipbuilding plan also includes two oceanographic ships (one in FY2011 and one in FY2012) that do not count against the 313-ship goal.

Observations that can be made about the Navy's proposed five-year (FY2011-FY2015) shipbuilding plan include the following:

- The plan includes a total of 50 new battle force ships, or an average of 10 per year.[4] This is an increase from the single-digit numbers of battle force ships that have been funded each year since FY1993. Shipbuilding supporters for some time have wanted to increase the shipbuilding rate to 10 or more ships per year. A rate of 10 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.
- Although LCSs and JHSVs account for less than 25% of the 313-ship requirement, they account for 50% of the ships in the five-year plan. In this sense, these relatively inexpensive ships are overrepresented in the five-year shipbuilding plan relative to their portion of the 313-ship requirement, making it easier to procure an average of 10 ships per year within available resources. At some point in the future, when the LCS and JHSV programs run their course and are no longer over-represented in the shipbuilding plan, procuring an average of 10 ships per year could become a considerably more expensive proposition. On this basis, the FY2011-FY2015 shipbuilding program's average of 10 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 FY2011-FY2015 plan contains no amphibious ships in FY2013-FY2015. This could result in a dip in workload starting in FY2013 at the yards that build amphibious ships—Northrop Grumman Shipbuilding's (NGSB's) Gulf Coast yards (the Avondale yard upriver from New Orleans, LA, and the Ingalls yard at Pascagoula, MS). This dip could be deep enough to prompt speculation about a possible consolidation of some kind at these yards.

30-Year (FY2011-FY2040) Shipbuilding Plan

Table 3 shows the Navy's FY2011 30-year (FY2011-FY2040) shipbuilding plan. The plan includes 276 ships. The Navy estimates that executing the plan would require an average of $15.9 billion per year in constant FY2010 dollars. In past years, the Congressional Budget Office's (CBO's) estimate of the cost of implementing the 30-year shipbuilding plan has been higher than

[4] The five-year plan also includes two oceanographic ships (one in FY2011 and one in FY2012) that do not count against the 313-ship goal.

the Navy's estimate, reinforcing concerns among some observers about the prospective affordability of the plan. CBO is now assessing the potential cost of the Navy's FY2011 30-year shipbuilding plan.

Table 3. Navy 30-Year (FY2011-FY2040) Shipbuilding Plan

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

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

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; **MPF(F)** = Maritime Prepositioning Force (Future) ships; **Supt** = support ships.

Resulting Projected Force Levels for FY2011-FY2040

Table 4 shows the Navy's projection of force levels for FY2011-FY2040 that would result from implementing the 30-year shipbuilding plan shown in **Table 3**.

Table 4. Projected Force Levels Resulting from 30-Year Plan

FY	CVN	LSC	SSC	SSN	SSGN	SSBN	AWS	CLF	Supt	Total
Goal in 313-ship plan	**11**	**88**	**55**	**48**	**4**	**14**	**31**	**30**	**20**	**313**[a]
11	11	84	42	53	4	14	29	29	18	**284**
12	11	84	41	54	4	14	30	29	20	**287**
13	10	85	37	55	4	14	30	29	23	**287**
14	10	86	32	55	4	14	30	30	24	**285**
15	11	88	28	54	4	14	31	30	25	**285**
16	11	90	32	51	4	14	33	30	27	**292**
17	11	91	33	51	4	14	33	30	31	**298**
18	11	93	37	50	4	14	33	30	33	**305**
19	11	94	37	51	4	14	33	30	37	**311**
20	12	96	39	49	4	14	33	30	38	**315**
21	12	96	39	49	4	14	34	31	39	**318**
22	12	95	41	48	4	14	34	29	41	**318**
23	11	94	39	48	4	14	35	29	45	**319**
24	11	94	40	46	4	14	36	28	47	**320**
25	12	92	41	45	4	14	35	28	46	**317**
26	12	89	43	44	4	14	36	28	45	**313**
27	12	87	45	43	2	13	35	26	46	**308**
28	11	85	46	41	1	13	36	26	46	**304**
29	11	81	48	40	0	13	34	25	44	**296**
30	12	77	49	39	0	12	33	25	44	**291**
31	12	73	51	41	0	12	33	24	44	**290**
32	11	71	52	41	0	12	32	25	44	**288**
33	11	69	53	42	0	12	31	26	44	**288**
34	11	67	54	43	0	12	33	26	44	**290**
35	12	68	55	44	0	12	30	25	44	**290**
36	11	70	56	45	0	12	30	26	44	**294**
37	11	72	56	46	0	12	29	27	44	**297**
38	11	74	56	45	0	12	29	27	44	**298**
39	11	76	56	45	0	12	29	28	44	**301**
40	11	76	55	45	0	12	30	28	44	**301**

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

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; **MPF(F)** = Maritime Prepositioning Force (Future) ships; **Supt** = support ships.

a. The 313-ship plan also includes a 12-ship Maritime Prepositioning Force (Future), or MPF(F), squadron. The Navy's FY2011 30-year shipbuilding plan does not contemplate building a 12-ship MPF(F) squadron.

Observations that can be made about the above force-level projections include the following:

- The Navy projects that implementing its 30-year shipbuilding plan would result in a fleet that grows from 284 ships in FY2011 to 315 ships in FY2020, reaches a peak of 320 ships in FY2024, drops below 313 ships in FY2027, declines to 288 ships in FY2032-FY2033, and then increases to 301 ships in FY2039-FY2040.
- 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 attack submarines drops below the required level of 48 boats in FY2022, reaches a minimum of 39 boats in FY2030, and remains below 48 boats through 2040. The projected number of cruisers and destroyers drops below the required level of 88 ships in 2027, reaches a minimum of 67 ships in FY2034, and remains below 88 ships through FY2040.
- The Navy projects a force of more than 40 support ships in FY2022 and beyond, compared to a goal of 20 support ships in the 313-ship plan. The 20 support ships in the 313-ship plan include three JHSVs, but the Navy now plans to procure many more than three JHSVs. The Navy's projection of more than 40 support ships in FY2022 and beyond suggests that the Navy may be planning to procure 20 or more JHSVs.

Oversight Issues for Congress

Potential oversight issues for Congress concerning the Navy's planned 313-ship fleet, the five-year (FY2011-FY2015) shipbuilding plan, and the 30-year (FY2011-FY2040) shipbuilding plan include the following:

- What is the Navy's schedule for performing the new force structure assessment (FSA) mentioned in the Navy's report on its 30-year shipbuilding plan? Will this FSA result in a new force-level goal to replace the 313-ship plan? If so, when does the Navy intend to issue the replacement plan? Why has the Navy decided to retain, the for time being at least, the 313-ship plan, when certain elements of Navy ship force planning that have emerged since 2006 appear to diverge from that plan?
- Given the Administration's September 2009 announcement of its new plan for ballistic missile defense (BMD) in Europe, which includes a significant use of BMD-capable cruisers and destroyers, would the 88-ship force of cruisers and destroyers called for in the 313-ship plan be adequate?
- Given that the Navy and Marine Corps agree that a force of 33 amphibious ships is the minimum needed to lift the assault echelons of 2.0 Marine Expeditionary

Brigades (MEBs), and that this lift goal would be more robustly met by a 38-ship amphibious force, would the 31-ship amphibious force called for in the 313-ship plan be adequate?

- Given past goals for a force of 55 attack submarines, would the 48-boat attack submarine force called for in the 313-ship plan be adequate?
- Has the Navy accurately estimated the cost of implementing the 30-year shipbuilding plan? In past years, the Congressional Budget Office's (CBO's) estimate of the cost of implementing the 30-year shipbuilding plan has been higher than the Navy's estimate, reinforcing concerns among some observers about the prospective affordability of the plan. CBO is now assessing the potential cost of the Navy's FY2011 30-year shipbuilding plan.
- What would be the operational implications of the shortfalls in attack submarines and cruisers-destroyers that the Navy projects for the latter years of the 30-year shipbuilding plan?

Legislative Activity for FY2011

The Navy's FY2011 budget submission, including the five-year (FY2011-FY2015) and 30-year (FY2011-FY2040) shipbuilding plans, were submitted to Congress in early February 2010.

For 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 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. Adequacy of Planned 313-Ship Fleet

Some observers have questioned whether the overall planned total of 313 ships would be adequate, particularly in light of Navy plans in recent decades for larger total numbers of ships.

One possible method for assessing the appropriateness of the total number of ships being proposed by the Navy is to compare that number to historical figures for total fleet size. Historical figures for total fleet size, however, might not be a reliable yardstick for assessing the appropriateness of the Navy's proposed 313-ship fleet, 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,[5] and as of September 30, 2009, had declined to a total of 285 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 September 2009 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 non-state terrorist organizations. In addition, the Navy of FY1987 differed substantially from the September 2009 fleet in areas such as profusion of precision-guided air-delivered weapons, numbers of Tomahawk-capable ships, and sophistication of C4ISR systems.[6]

In coming years, Navy missions may shift again, to include, as a possible example, a greater emphasis on being able to counter improved Chinese maritime military capabilities.[7] In addition, 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 285-ship fleet of September 2009 may or nor may not have been 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.

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[5] 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 apple-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.

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

[7] For a discussion, see CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, by Ronald O'Rourke.

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.

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.[8]

[8] 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]	36[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. Note how number needed to meet this goal changed from Base Force plan to the BUR plan—a result of new, larger amphibious ship designs.

Appendix B. Size of the Navy and Navy Shipbuilding Rate

Size of the Navy

Table B-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.[9] The Navy fell below 300 battle force ships in August 2003 and included 285 battle force ships as of September 30, 2009.

As discussed in **Appendix A**, historical figures for total fleet size might not be a reliable yardstick for assessing the appropriateness of the Navy's proposed 313-ship fleet, 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.

[9] Some publications 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 apple-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 B-1. Total Number of Ships in the Navy Since FY1948

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

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 B-2 shows past (FY1982-FY2010) and requested (FY2011-FY2015) rates of Navy ship procurement.

Table B-2. Battle Force Ships Procured or Requested, FY1982-FY2015

(Procured FY1982-FY2010; *requested FY2011-FY2015)*

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

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, have been adjusted downward to reflect the cancellation two LCSs funded in FY2006, another two LCSs funded in FY2007, and an LCS funded in FY2008.

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