US Ship Building Industry: Shipbuilding and Ship Repair

US Ship Building Industry

Two segments:

- Shipbuilding
- Ship Repair

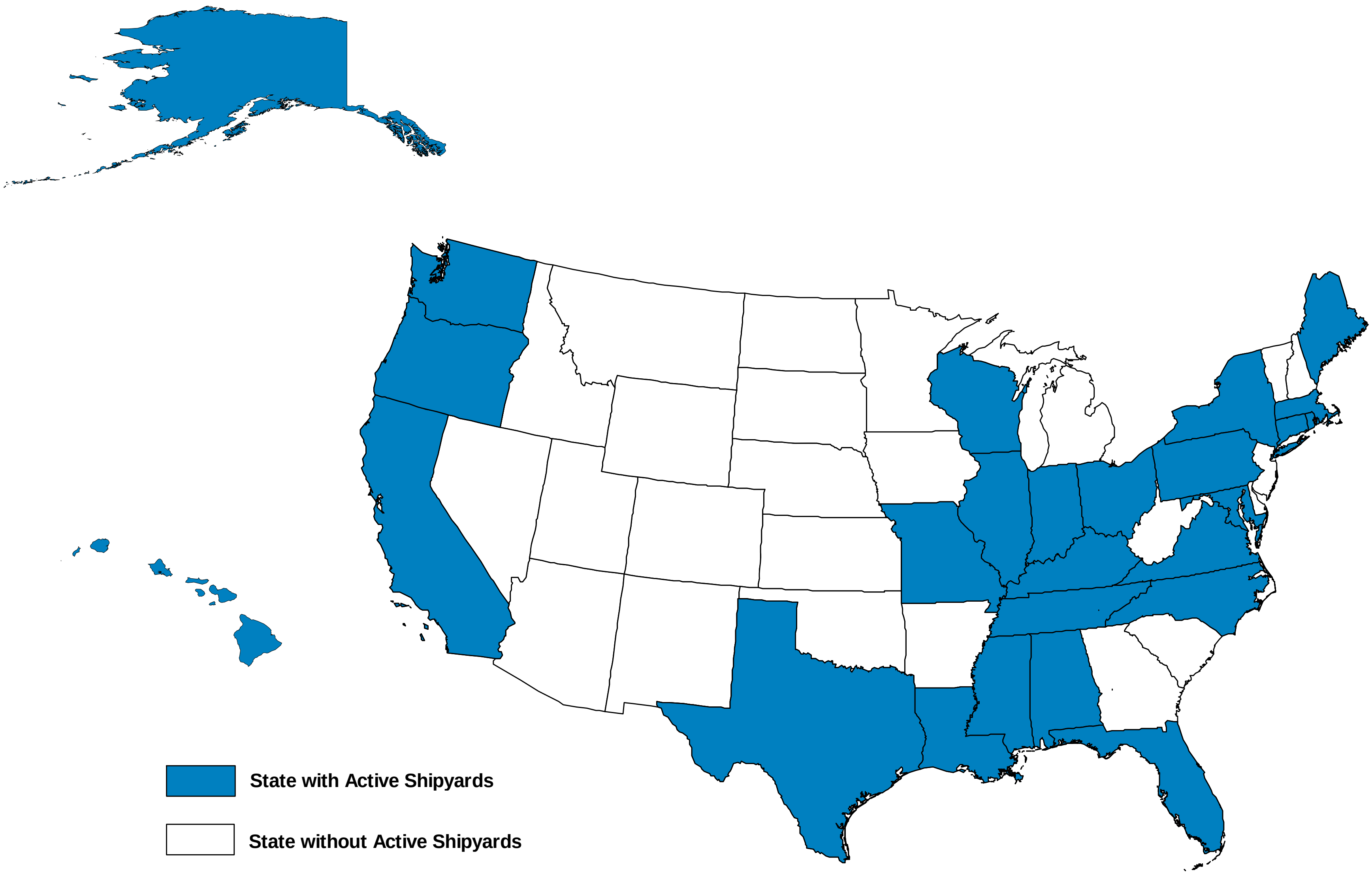
Shipbuilding

- Largest industry segment
- 69.4% of industry revenue

Two main categories of ships:

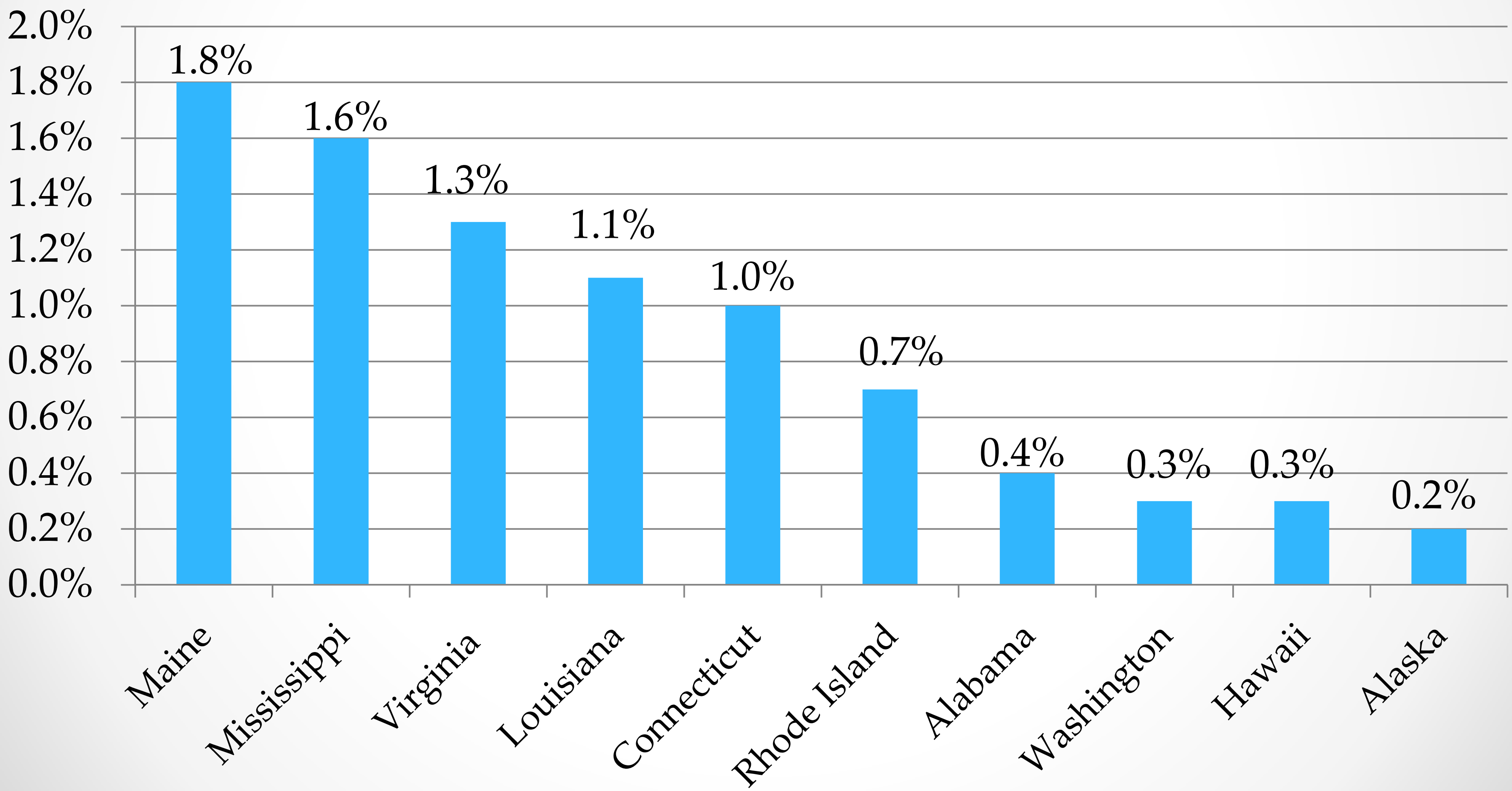
- Military ships
- Non-Military, self propelled commercial vessels

26 STATES with ACTIVE SHIPBUILDERS



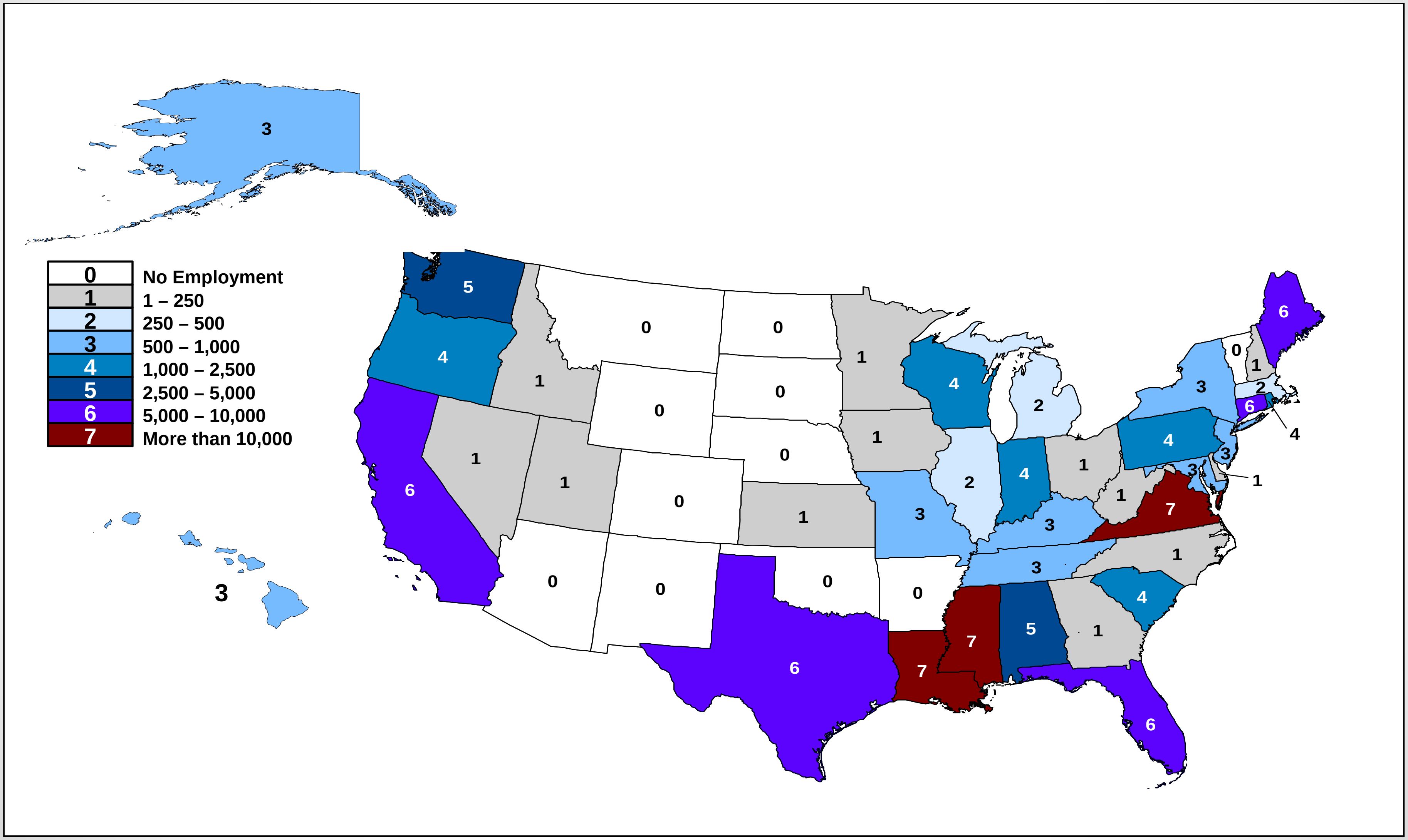
Source: Directory of shipyards at http://shipbuildinghistory.com

SHIPBUILDING and REPAIRING INDUSTRY EMPLOYMENT / TOTAL STATE EMPLOYMENT
10 States with Largest Shares, 2011



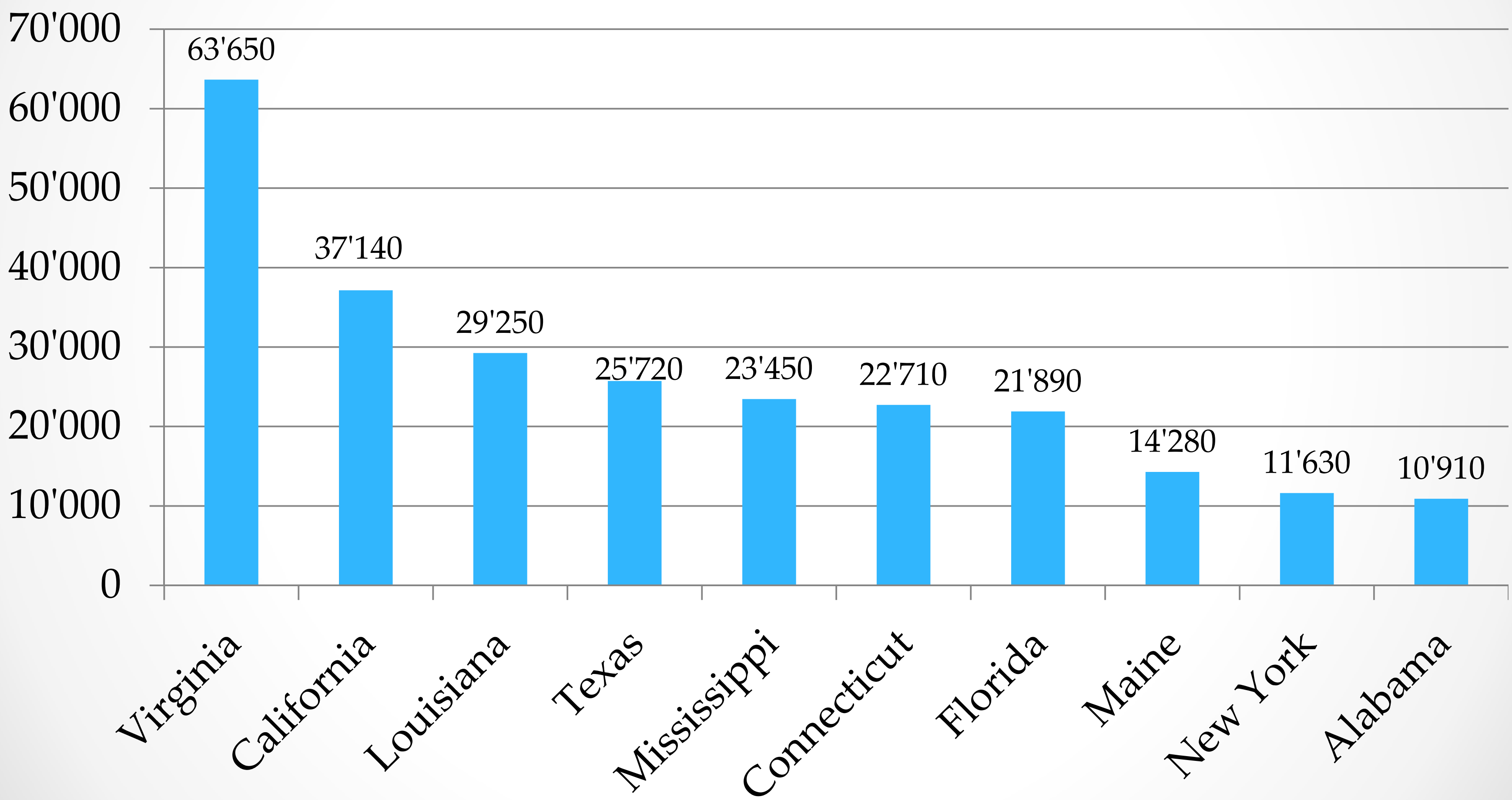
Source: Calculations using the MIG modeling system (2011 database).

PRIVATE SECTOR DIRECT EMPLOYMENT in the U.S. SHIPBUILDING AND REPAIRING INDUSTRY BY STATE 2011



Source: Estimates based on data from the MIG Modeling system (2011 database)

TOTAL DIRECT, INDIRECT, and INDUCED EMPLOYMENT ASSOCIATED with U.S. SHIPBUILDING and REPAIRING INDUSTRY OPERATIONS, by STATE
10 States with Highest Levels, 2011



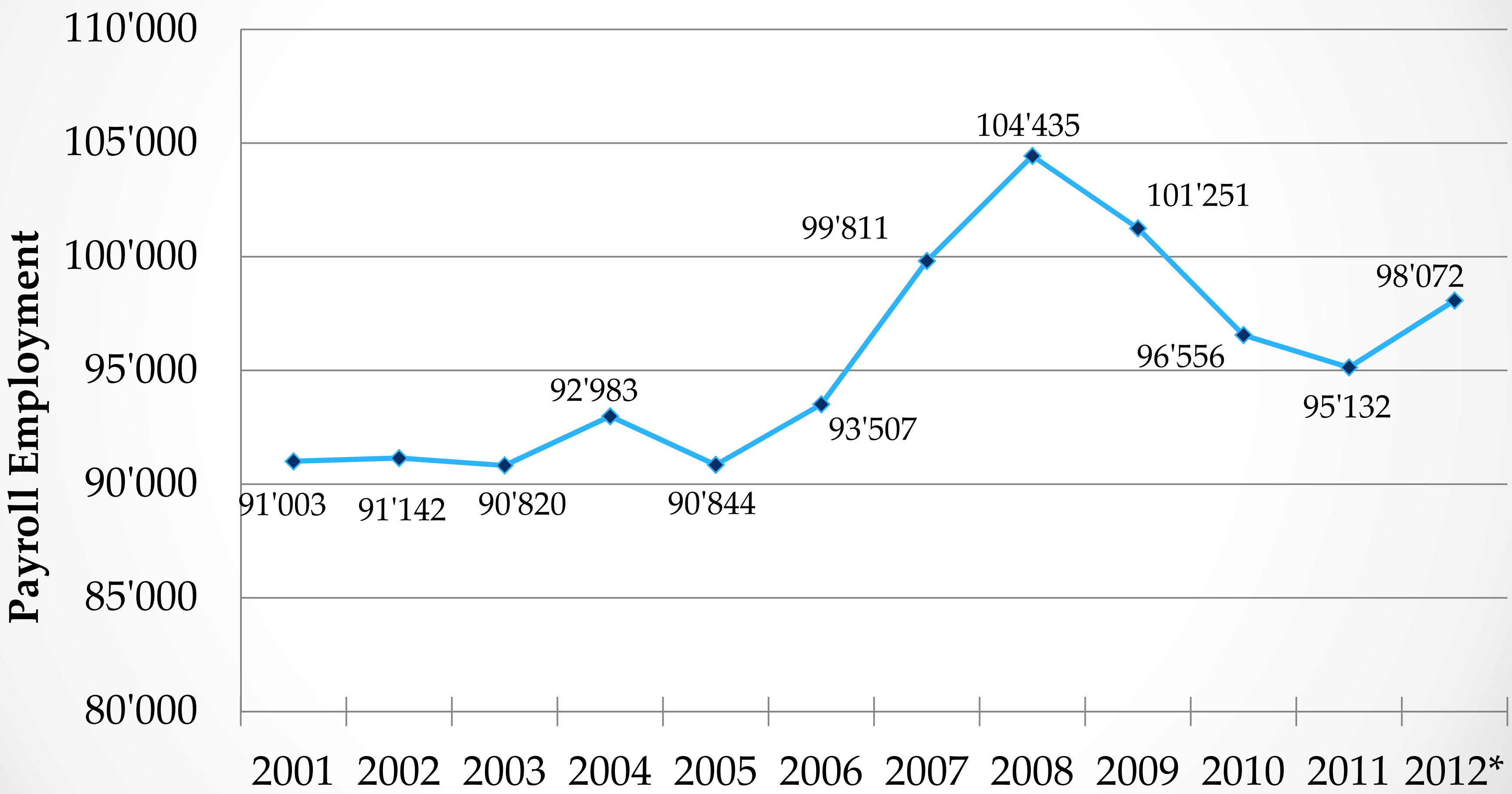
Source: Calculations using the MIF modeling system (2011 database).

TOTAL PRIVATE SECTOR DIRECT EMPLOYMENT in the U.S. SHIPBUILDING and REPAIRING INDUSTRY, Top 10 States in 2011

State	Private Employment*	Percent of U.S. Total
Virginia	***26,730***	***24.9%***
Louisiana	***12,970***	***12.1%***
Mississippi	***10,100***	***9.4%***
Connecticut	***8,870***	***8.3%***
California	***8,100***	***7.6%***
Maine	5,980	5.6%
Florida	5,790	5.4%
Texas	5,480	5.1%
Alabama	3,810	3.6%
Washington	3,520	3.3%
All other states combined	15,880	14.8%
U.S. Total	**107,240**	**100%**

Source: Estimates based on data from the MIG Modeling system (2011 database).
Note: Details may not add to totals due to rounding.
*Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

PRIVATE SECTOR DIRECT PAYROLL EMPLOYMENT in the U.S. SHIPBUILDING and REPAIRING INDUSTRY, 2001 to 2012*

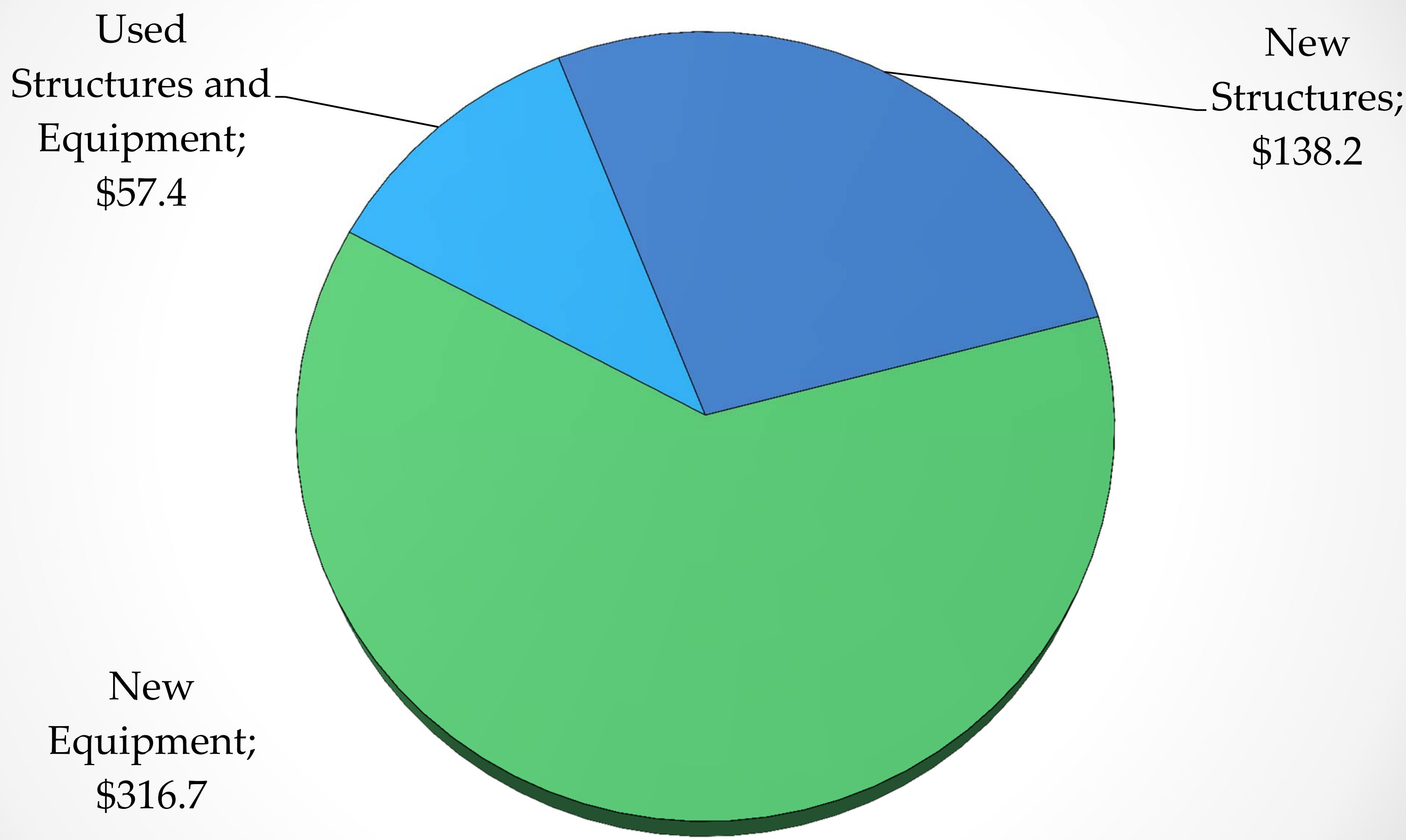


Source: Total private sector payroll employment for NAICS sector 336611 from U.S. Bureau of Labor Statistics, *Quarterly Census of Employment and Wages* (Downloaded February 25, 2013). Excludes the portion of the industry classified in NAICS sector 488390.
*Data for 2012 is average for January through June.

TOTAL PRIVATE SECTOR DIRECT LOBOR INCOME in the U.S. SHIPBUILDING and REPAIRING INDUSTRY, Top 10 States in 2011

State	Private Labor Income* ($ millions)	Percent of U.S. Total
Virginia	$1,924.8	24.0%
Mississippi	1,087.8	13.8%
Louisiana	839.0	10.6%
Connecticut	827.4	10.5%
California	573.1	7.3%
Maine	443.7	5.6%
Texas	346.9	4.4%
Florida	325.9	4.1%
Washington	239.5	3.0%
Alabama	232.7	2.9%
All other states combined	1,055.3	13.4%
U.S. Total	**$7,896.1**	**100%**

CAPITAL EXPENDITURES by U.S. SHIPBUILDERS, by TYPE, 2011 in $ MILLIONS



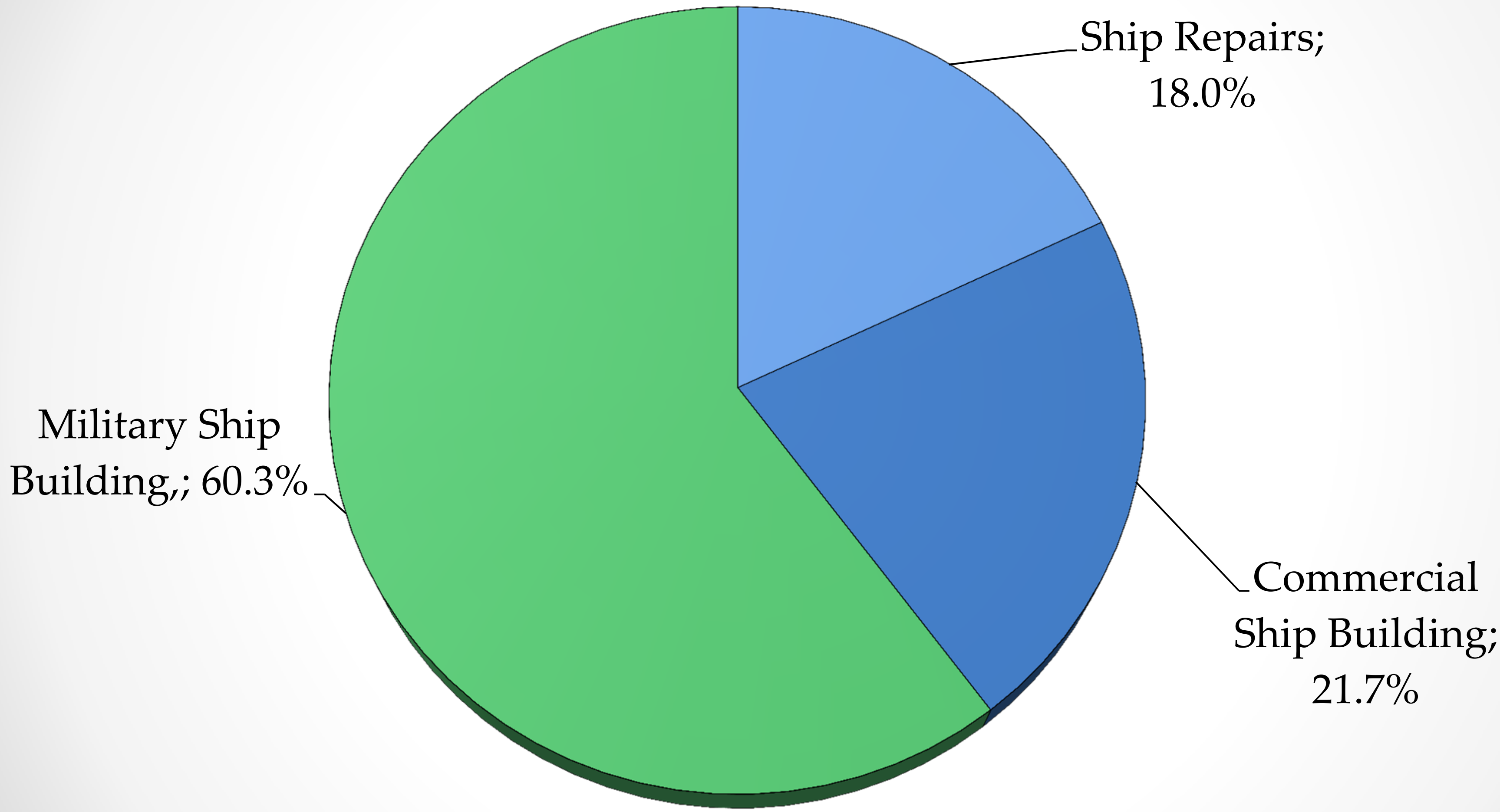
Source: U.S. Census Bureau, Annual Survey of Manufactures, 2011

DELIVERIES by U.S. SHIPYARDS by TYPE of VESSEL, 2010 - 2012

Type of Vessel	2010	2011	2012
Large Deep-Draft Vessels	16	11	11
Offshore Service Vessels and Crew Boats	38	21	28
Tugs and Towboats	81	109	118
Passenger Vessels (>50 feet)	22	30	33
Commercial Fishing Vessels (>50 Feet)	8	20	15
Other Self-Propelled Vessels (>50 Feet)	19	23	25
Large Oceangoing Barges	14	6	2
Inland Tank Barges	142	184	279
Inland Freight and Deck Barges	861	1,053	749
Total Delivered	**1,201**	**1,457**	**1,260**

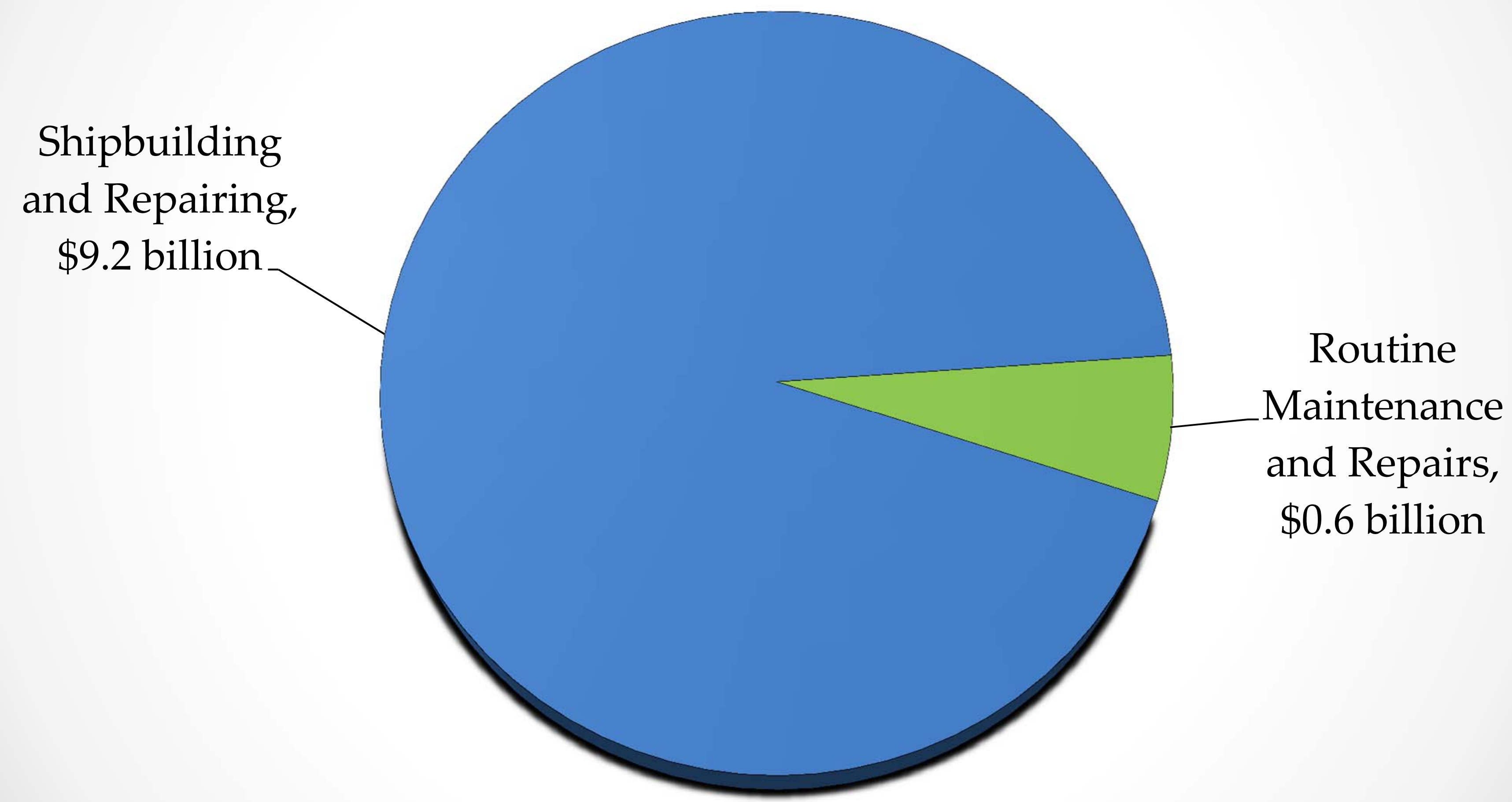
Source: www.shipbuildinghistory.com
Note: The delivery date for a vessel was determined by the data on which its Certificate of Documentation was issued, which should be, but may not be, the date on which the shipyard made delivery.

INDUSTRY REVENUES by PRODUCT TYPE, 2012



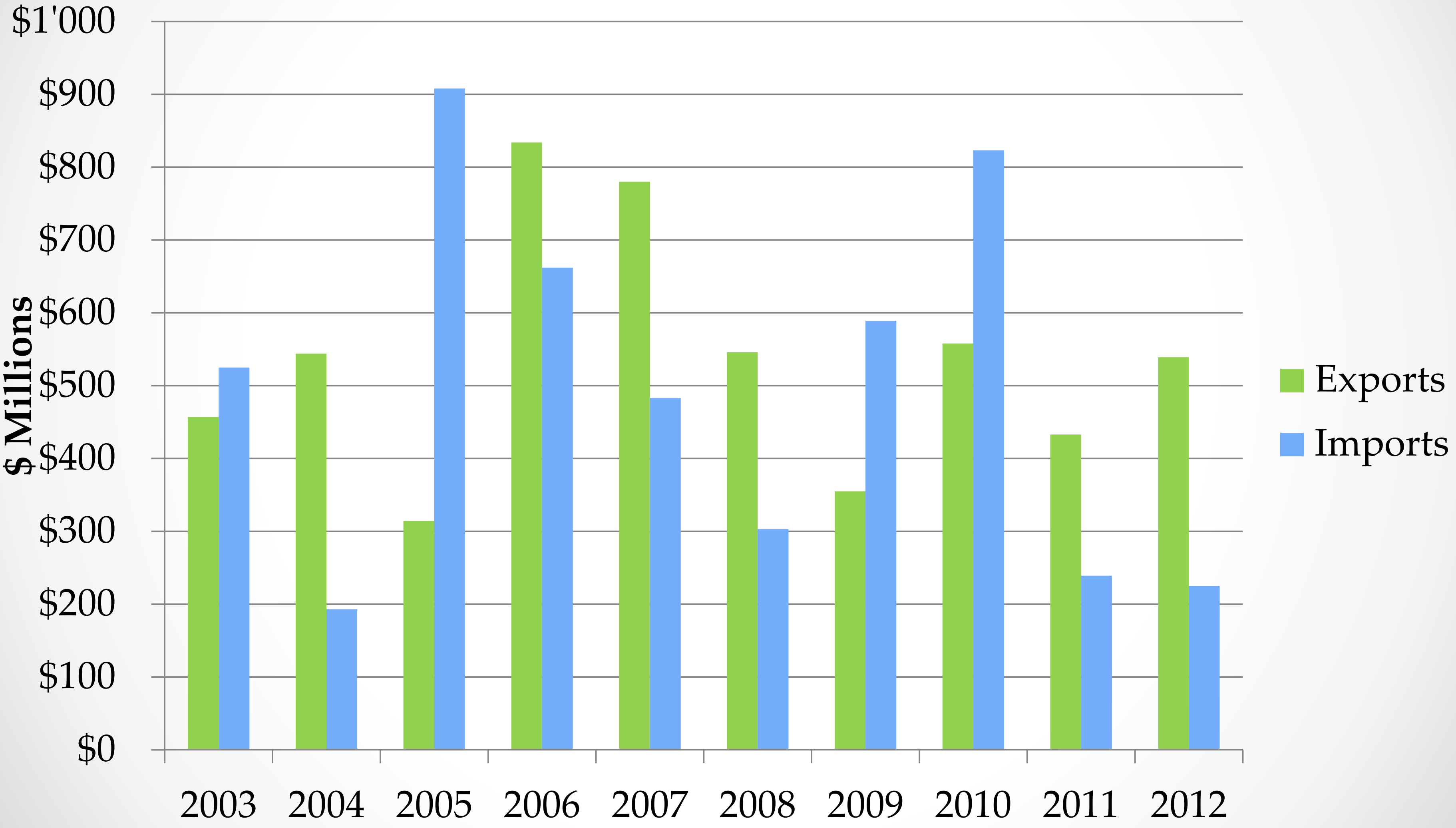
Source: IBIS *World*, "Staying Afloat: Despite a Decline in Commercial Orders, Military Shipbuilding Will Thrive." Industry Report 33661a July 2012.

TOTAL GDP in U.S. SHIPBUILDING and REPAIRING INDUSTRY, 2011



Source: Estimates based on data from the MIG Modeling system (2011 database). See Appendix for details.

IMPORTS and EXPORTS for the U.S. SHIPBUILDING and REPAIRING INDUSTRY, 2003 - 2012



- Source: IBIS*World*, "Staying Afloat: Despite a Decline in Commercial Orders, Military Shipbuilding will Thrive." Industry Report 33661a, July 2012.

ECONOMIC IMPORTANCE of the U.S. SHIPBUILDING and REPAIRING INDUSTRY, 2011

	Direct Impacts	Indirect & Induced Impacts		Total Impacts
		Operational Impacts	Capital Investment Impacts	
Employment*	107,240	289,860	4,910	402,010
Labor Income ($ millions)**	$7,896	$15,710	$306	$23,912
GDP ($ millions)	$9,837	$25,700	$464	$36,001

Source: Calculations using the MIG Modeling system (2011 database).
Note: Details may not add to totals due to rounding.
*Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.
**Labor income is defined as wages and salaries and benefits as well as proprietors' income.

NAVY'S FISCAL YEAR 2013 SHIPBUILDING PLAN OVERVIEW

LONG-TERM GOALS

- Reduce the Goal for the Inventory of Ships
- Reduce the Number of Ships to be Purchased/Shipbuilding Rate
- Alter the composition of ships to be purchased, buying fewer less-expensive support ships and more high-end combat ships

INVENTORY GOALS

- Current goal is “about 300 warships”
- Goal is down from 328 ship under the 2012 plan
- Battle force fleet currently 286 ships

PURCHASING PLAN

- Buy 268 ships between 2013 & 2042
  - 222 combat ships
  - 45 logistics and support ships
- Insufficient to achieve a fleet of 310 – 216 ships
- Produce a fleet of about 300 ships for the next 30 years

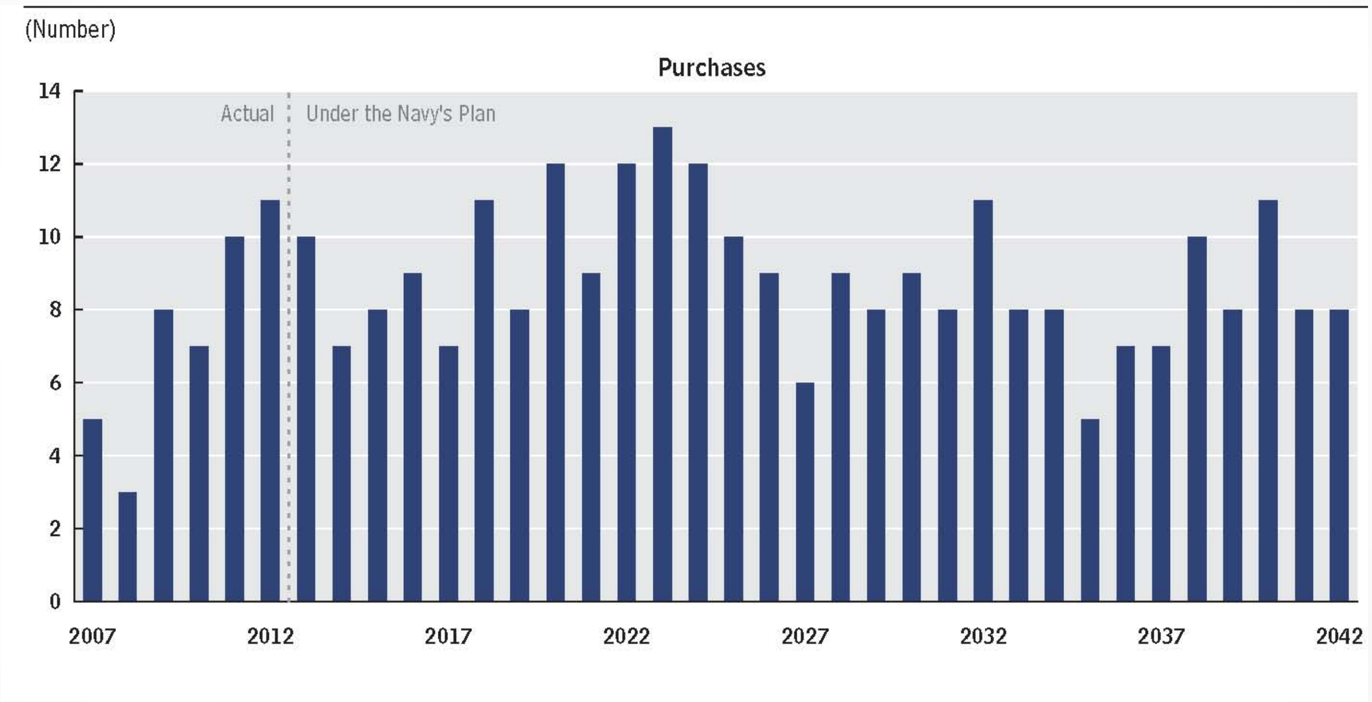
REDUCTIONS

- New orders to decommission seven Aegis cruises more than a decade before previously scheduled
- Shifts in aircraft carrier and littoral combat ship construction rates
- Ballistic missile submarine pushed back 2 years

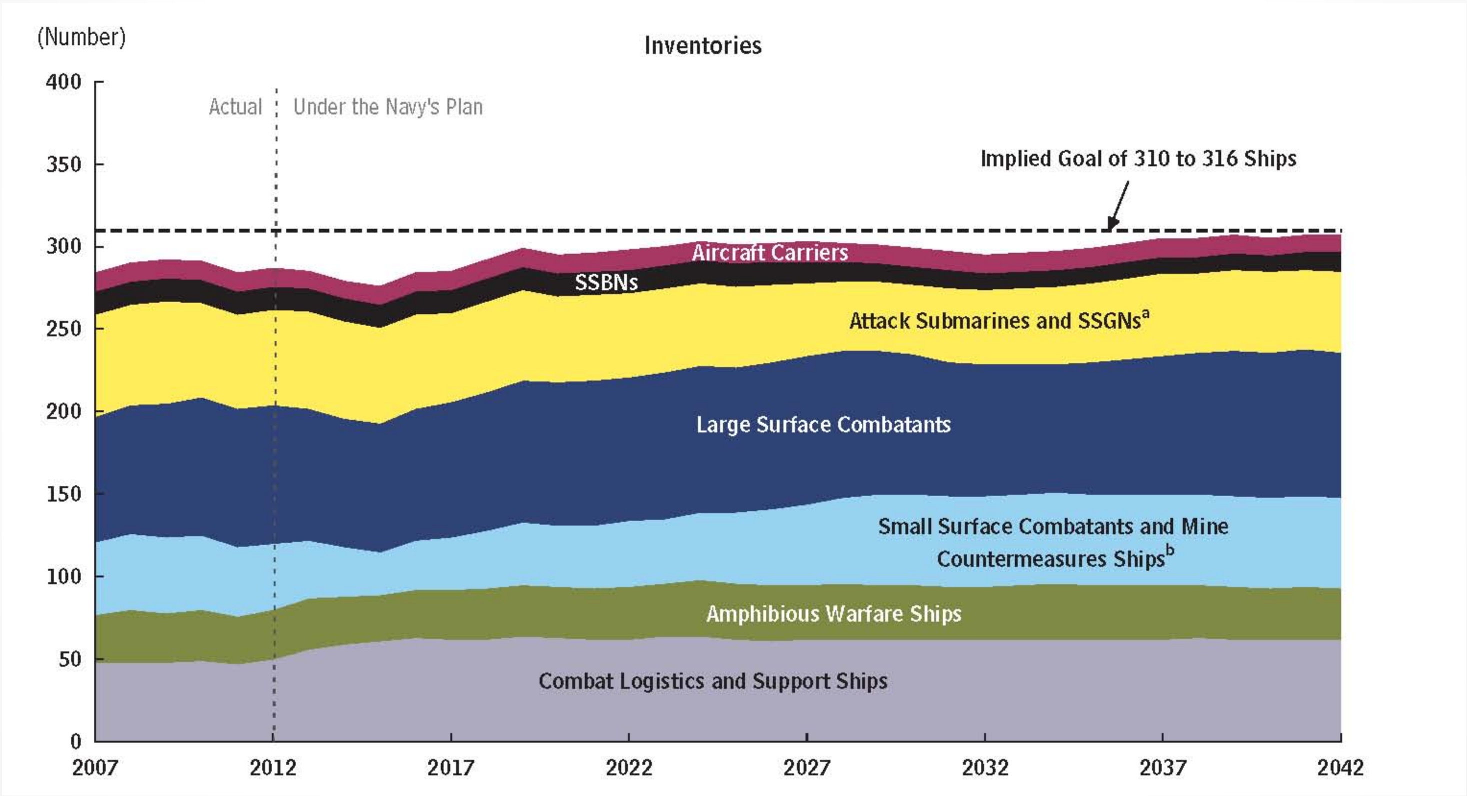
NAVY FY2013 SHIPBUILDING PLAN

Ship type	2013 Construction Plan	2013 Naval Battle Force Inventory
Aircraft Carrier	1	10
Large Surface Combatant	2	80
Small Surface Combatant	4	35
Attack Submarines	2	55
Cruise Missile Submarines	0	4
Ballistic Missile Submarines	0	14
Amphibious Warfare Ships	0	31
Combat Logistics Force	0	32
Support Vessels	1	24
TOTAL - 2013	**10**	**285**

ANNUAL SHIP PURCHASES UNDER NAVY'S 2013 PLAN



ANNUAL SHIP INVENTORIES UNDER NAVY'S 2013 PLAN



COSTS

- In 2013 plan: $505 billion over 30 years
  - $16.8 billion per year
  - 5% increase more than 2012 plan
  - Does not account for refueling nuclear-powered aircraft carriers or outfitting various details on new ships
- CBO estimates total $599 billion through 2042, average of $20 bill a year

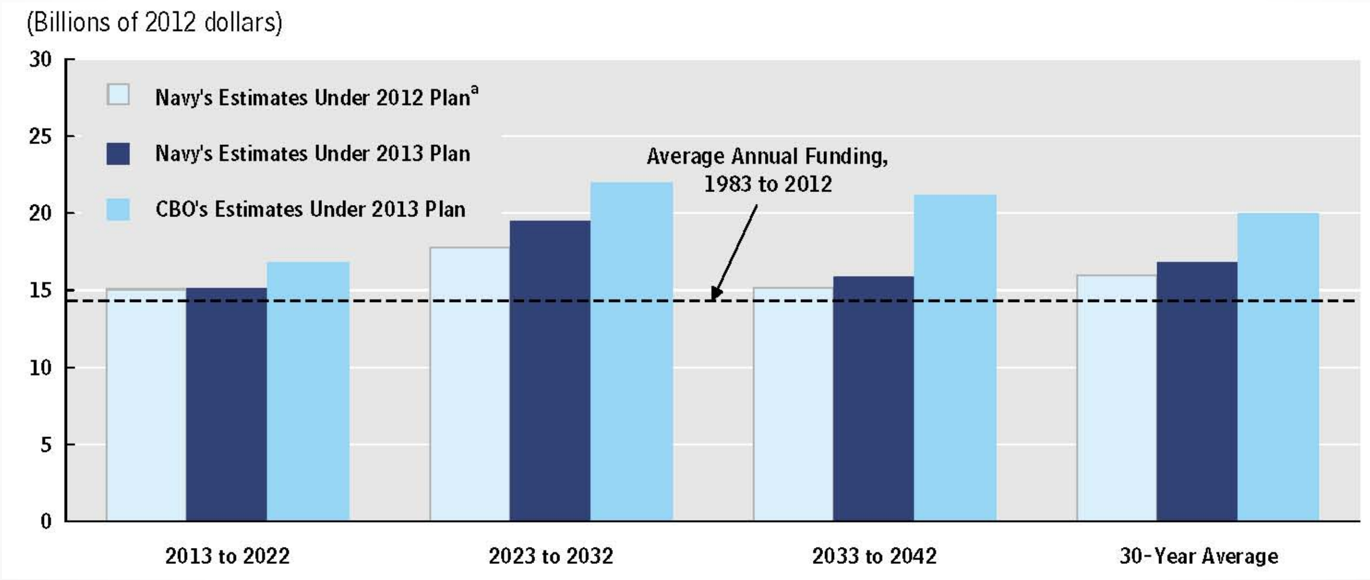
NAVY FY2013 SHIPBUILDING PLAN

	2013 Construction Plan	Funding Plan ($M)
FORD (CVN-78) Aircraft Carrier	1	608
ARLEIGH BURKE (DDG-51) Large Surface Combatant	2	3,515
LITTORAL COMBAT SHIP Small Surface Combatant	4	1,785
USS VIRGINIA (SSN-774) Attack Submarines	2	4,092
Cruise Missile Submarines	0	0
Ballistic Missile Submarines	0	0
Amphibious Warfare Ships	0	0
Combat Logistics Force	0	32
Joint High Speed Support Vessels	1	189
TOTAL - 2013	**10**	**285**

COSTS OF THE PLAN COMPARED WITH HISTORICAL FUNDING

- Est. $20.0 billion per year new-ship construction
- 40% above historical average funding
- Est. $21.9 billion per year for the full cost of program
    - 37% increase over past 30 years

AVG. ANNUAL COSTS NEW-SHIP CONSTRUCTION: NAVY'S 2012 & 2013 PLANS



AVG. ANNUAL SHIPBUILDING COSTS
NAVY'S 2013 PLAN – BY DECADE

	Near Term (2013–2022)	Midterm (2023–2032)	Far Term (2033–2042)	Total (2013–2042)
	Navy's Estimates (Billions of 2012 dollars)			
New-Ship Construction	15.1	19.5	15.9	16.8
New-Ship Construction and Refueling of Nuclear-Powered Aircraft Carriers[a]	16.5	20.6	16.7	17.9
New-Ship Construction, Refueling of Nuclear-Powered Aircraft Carriers, and Other Items[b]	17.5	21.6	17.4	18.8
	CBO's Estimates (Billions of 2012 dollars)			
New-Ship Construction	16.8	22.0	21.2	20.0
New-Ship Construction and Refueling of Nuclear-Powered Aircraft Carriers	18.2	23.1	21.9	21.1
New-Ship Construction, Refueling of Nuclear-Powered Aircraft Carriers, and Other Items	19.1	24.0	22.6	21.9
	Percentage Difference Between Navy's and CBO's and Estimates			
New-Ship Construction	11	13	33	19
New-Ship Construction and Refueling of Nuclear-Powered Aircraft Carriers	10	12	31	18
New-Ship Construction, Refueling of Nuclear-Powered Aircraft Carriers, and Other Items	9	11	30	17
Memorandum (Billions of 2012 dollars):				
CBO's Estimates of the Cost to Fully Fund the Navy's Goal of a Fleet of 310 to 316 Ships[c]	18.4	21.8	19.6	19.9
Costs of Mission Packages for Littoral Combat Ships	0.4	0.1	0.3	0.3

COMPARISON OF THE NAVY'S 2012 & 2013 SHIPBUILDING PLANS

	2012 Plan (2012–2041)	2013 Plan (2013–2042)	Change from 2012 to 2013
		Number of Ships Purchased Over 30 Years	
Combat Ships			
Aircraft carriers	6	6	0
Ballistic missile submarines	12	12	0
Attack submarines	44	46	2
Destroyers	52	70	18
Littoral combat ships	71	70 [a]	-1
Amphibious warfare ships	20	18	-2
Subtotal	205	222	17
Combat Logistics and Support Ships	70 [b]	46	-24
Total	**275**	**268**	**-7**
		Costs of New-Ship Construction[c] (Billions of 2012 dollars)	
Total Cost Over 30 Years			
Navy's estimate	481 [d]	505	24
CBO's estimate	557	599	42
Average Annual Cost			
Navy's estimate	16.0 [d]	16.8	0.8
CBO's estimate	18.6	20.0	1.4
Average Cost per Ship			
Navy's estimate	1.8 [d]	1.9	0.1
CBO's estimate	2.1	2.2	0.1