U.S. Department of Transportation Maritime Administration





# Vessel Calls Snapshot, 2011









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Office of Policy and Plans

Maritime Administration

U.S. Department of Transportation





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# Preface

The snapshot contains data on calls by oceangoing vessels of 10,000 deadweight (DWT) or greater at U.S. ports. Vessel capacities are expressed in terms of deadweight tons for all vessel types, twenty-foot equivalent units (TEU's) for containerships and cubic meters (CM) for gas carriers.

# Notes and Sources

#### Notes

Average capacity calculation: A weighted average; sum of vessel calls weighted by vessel capacity divided by calls. For example, if 3 vessels made a total of 25 calls at U.S. ports. The total capacity calling was 750,000 DWT, the average capacity per call is 750,000/25 or 30,000 DWT; and similarly for TEU and CM capacities.

	Calls	DWT	Calls x DWT
Vessel A	10	25,000	250,000
Vessel B	5	20,000	100,000
Vessel C	10	40,000	400,000
Total	25		750,000

<u>Average age calculation</u>: The calculation for average age is the same as above substituting age of vessel in years for capacities.

#### Capacity (Size)

Throughout the report, average vessel size is the sum of vessel calls weighted by vessel deadweight (DWT) divided by calls (See example below.). DWT is the total weight (metric tons) of cargo, fuel, fresh water, stores and crew which a ship can carry when immersed to its load line. For containerships and gas carriers, capacities are also expressed in twenty-foot equivalent units, (TEU) and cubic meters (CM), respectively. A TEU is a nominal unit of measure equivalent to a 20' x 8' x 8' shipping container.

#### **Coastal Regions**

**North Atlantic (N. Atl.)** – All ports from Eastport, ME to Baltimore MD.

**South Atlantic (S. Atl.)** – All ports from Alexandria, VA to Miami, FL.

# Notes and Sources

#### Puerto Rico (PR)

**U.S. Gulf (USG)** – All ports from Key West, FL to Brownsville, TX.

**Pacific Northwest (PNW)** – All U.S. ports from Barrow, AK to Coos Bay, OR.

**Pacific Southwest (PSW)** – All ports from Crockett, CA to San Diego, CA and all Hawaiian ports.

#### Jones Act Fleet

Vessels built in the U.S. and registered under U.S.-flag; or vessels reconstructed in the U.S. and registered under U.S.flag; or foreign-built vessels forfeited for violation of U.S. law and registered under U.S.-flag. These vessels have unrestricted coastwise trading privileges.

**Percent change calculation**: (value<sub>2011</sub> – value<sub>2006</sub>)/ value<sub>2006</sub> x 100.

#### Vessel Types

The vessel categories included in this report are:

Tanker – Petroleum tankers and chemical tankers.

**Product**: 10,000–69,999 DWT. **Crude**: >=70,000 DWT.

**Container** – Fully-cellular containerships, and refrigerated container carriers.

**Dry Bulk Carrier** – Bulk vessels, bulk containerships, cement carriers, ore carriers, and wood-chip carriers.

**Ro-Ro** – Roll-on/roll-off vessels, ro-ro containerships, and vehicle carriers.

# Notes and Sources

Gas Carrier – LNG carriers, LNG/LPG carriers, and LPG carriers.

**Combination Carrier (Combo)** – Ore/bulk/oil carriers and bulk/oil carriers.

**General Cargo** – General cargo carriers, partial containerships, refrigerated ships, barge carriers, and livestock carriers.

#### Sources

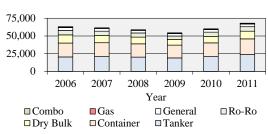
Lloyd's Marine Intelligence Unit, <u>Vessel Movements Data</u> <u>Files</u>, 2006-2011, London: Lloyd's Marine Intelligence Unit, 2007-2012. This source contains data for vessel port calls, ports and active fleets.

Lloyd's Marine Intelligence Unit, <u>Seasearcher</u>, London: Lloyd's Marine Intelligence Unit, 2012. This source contains data for vessel port calls, ports and active fleets.

Clarkson Research Studies, <u>Clarkson's Vessel Registers</u>, London: Clarkson Research Studies, January 2012. This source contains data on the characteristics of the world merchant fleets.

IHS Global Limited, <u>IHS Sea-web</u>, Bracknell, United Kingdom: IHS Global Limited, November 2013. This source contains data on ships, owners, shipbuilders, fixtures, casualties, port state control, ISM and real-time ship movement data and ports information.

In 2011, 7,836 oceangoing vessels made 68,036 calls at U.S. ports. Vessel calls were up 7.9 percent from five years earlier, but 13.6 percent from the year before. The recovery was spread over all of the major vessel types. Of the 2011 calls, 35.0 percent were by tankers, 32.5 percent were by containerships, 16.1 percent were by dry bulk vessels, 9.1 percent were by Roll-On/Roll-Off (Ro-Ro) vessels, and 5.9 percent were by general cargo ships. In 2011, 98.0 percent of the tanker calls were by double-hull tankers, up from 83.7 percent five years earlier.



Vessel	Calls	at U.S.	Ports,	2006-2011
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Vessel	Calls a	at U.S.	Ports.	2006-2011
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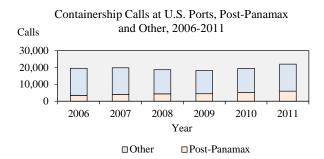
							% Ch
Туре	2006	2007	2008	2009	2010	2011	06-11
Tanker	20,391	20,699	20,096	18,991	20,832	23,812	16.8
D/Hull	17,070	18,158	18,315	18,035	20,199	23,347	36.8
Product	12,746	12,671	12,182	11,413	12,537	14,827	16.3
D/Hull	9,869	10,350	10,561	10,534	11,947	14,365	45.6
Crude	7,645	8,028	7,914	7,578	8,295	8,985	17.5
D/Hull	7,201	7,808	7,754	7,501	8,252	8,982	24.7
Container	19,587	19,859	18,729	18,199	19,521	22,089	12.8
Dry Bulk	11,579	10,081	9,513	7,884	9,227	10,947	-5.5
Ro-Ro	6,315	6,074	5,962	4,947	5,842	6,182	-2.1
Vehicle	4,181	4,084	4,101	3,336	4,100	4,343	3.9
Gas	879	824	698	659	738	857	-2.5
LNG	213	202	171	201	202	157	-26.3
Combo	319	222	169	127	158	120	-62.4
General	3,983	3,844	3,584	3,274	3,553	4,029	1.2
All Types	63,053	61,603	58,751	54,081	59,871	68,036	7.9

In 2011, the average vessel size per call at U.S. ports was 53,832 DWT, up 6.3 percent from five years before. The average size of containerships increased by 13.3 percent in terms of TEU capacity (9.9 percent in terms of DWT) as carriers expanded the deployment of post-panamax (5,000+TEU) containerships in U.S. trades. The average size of dry bulk carriers increased by 20.4 percent reflecting a sharp increase in U.S. coal exports which tend to move in larger vessels than grains, the other major U.S. dry bulk export.

Average Vessel Size per Call at U.S. Ports, 2006-20 (DWT unless otherwise specified)	011	
	0/ 01	

							% Ch.
Туре	2006	2007	2008	2009	2010	2011	2006-11
Tanker	72,340	72,741	72,660	72,483	71,748	70,381	-2.7
D/Hull	76,306	76,898	75,358	74,012	72,689	70,996	-7.0
Product	37,765	36,766	36,672	37,363	37,373	37,505	-0.7
D/Hull	37,972	37,048	36,909	37,305	37,291	37,448	-1.4
Crude	129,984	129,521	128,056	125,377	123,703	124,634	-4.1
D/Hull	128,844	129,723	127,725	125,561	123,937	124,650	-3.3
Container	46,602	47,726	49,214	50,207	51,266	51,204	9.9
(TEU)	3,503	3,598	3,744	3,849	3,932	3,969	13.3
Dry Bulk	44,578	45,145	47,276	48,126	50,439	53,652	20.4
Ro-Ro	19,750	19,634	20,146	20,631	20,574	20,819	5.4
Vehicle	18,801	18,585	18,886	19,203	19,261	19,741	5.0
Gas	41,287	41,262	41,388	45,078	44,154	40,523	-1.8
(CM)	61,739	61,486	61,921	68,722	66,980	59,247	-4.0
LNG	70,962	73,703	70,097	74,465	74,445	81,363	14.7
(CM)	130,006	134,832	128,834	135,895	137,028	151,719	16.7
Combo	86,338	94,837	98,709	102,115	106,559	109,331	26.6
General	25,408	25,540	24,596	23,641	23,595	22,756	-10.4
All Types	50,653	51,638	52,518	53,472	53,687	53,832	6.3

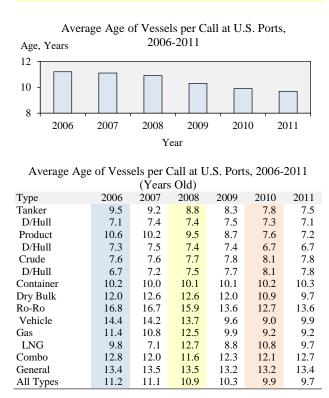
Over the last five years, calls by containerships of 5,000 TEU or greater, which are largely post-panamax class, increased by 78.2 percent while the number of 5,000+ TEU containerships deployed in U.S. trades increased by 60.4 percent. In 2011, 5,000+ TEU containerships accounted for 27.0 percent of containership calls at U.S. ports, up from 17.1 percent five years before.



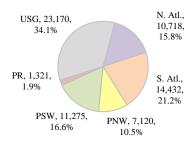
Containership	Calls at	U.S.	Ports by	Size.	2006-2011

Vessel Size,				2		ç	% Ch.
TEUs	2006	2007	2008	2009	2010	2011 2	2006-11
Calls							
< 2,000	4,143	3,900	3,492	3,287	3,707	4,547	9.8
2,000-2,999	3,985	4,099	3,344	2,676	2,760	2,856	-28.3
3,000-3,999	3,333	2,866	2,460	2,499	2,052	2,327	-30.2
4,000-4,999	4,782	5,033	5,120	5,303	5,876	6,400	33.8
> 4,999	3,344	3,961	4,313	4,434	5,126	5,959	78.2
Total	19,587	19,859	18,729	18,199	19,521	22,089	12.8
Vessels							
< 2,000	212	195	196	179	178	180	-15.1
2,000-2,999	257	230	219	220	206	183	-28.8
3,000-3,999	177	166	141	147	130	131	-26.0
4,000-4,999	258	271	284	306	315	306	18.6
>4,999	260	277	326	366	396	417	60.4
Total	1,164	1,139	1,166	1,218	1,225	1,217	4.6

In 2011, the average age of vessels calling at U.S. ports was 9.7 years, down from 11.2 years in 2006. The largest 5-year declines in average age were reflected in Ro-Ro vessels. Specifically, the average age of vehicle carriers calling at U.S. ports declined from 14.4 years to 9.9 years.



In 2011, Gulf ports accounted for 34.1 percent of U.S.vessel calls, up from 28.7 percent five years earlier, due to the large volumes of liquid and dry bulk cargoes handled by these ports. The Gulf share of U.S. vessel calls increased for 6 of the 7 major vessel types.



Vessel Calls at U.S. Ports by Coast, 2011

Vessel Calls at U.S. Ports by Coast, 2006 and 2011
(Percent of Calls)

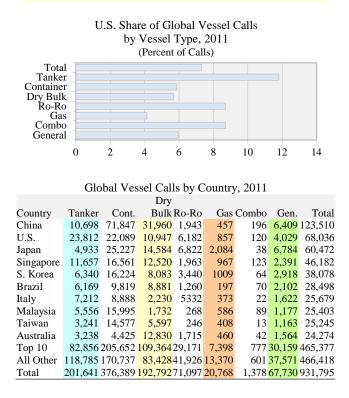
(Percent of Calls)									
Туре	N. Atl.	PNW	PR	PSW	S. Atl	USG	Total		
2006									
Tanker	20.7	8.0	1.6	11.9	8.2	49.5	100.0		
Container	18.2	9.5	2.3	28.1	34.9	6.9	100.0		
Dry Bulk	14.6	19.8	0.8	14.6	12.5	37.7	100.0		
Ro-Ro	26.0	11.1	4.0	23.2	29.1	6.7	100.0		
Gas	18.4	5.7	3.2	4.2	7.1	61.4	100.0		
Combo	31.0	2.8	2.5	4.4	15.4	43.9	100.0		
General	21.8	8.4	5.9	16.9	17.4	29.5	100.0		
All Types	19.4	10.9	2.2	18.8	20.0	28.7	100.0		
2011									
Tanker	14.0	6.3	1.3	12.0	6.6	59.8	100.0		
Container	15.5	7.9	2.3	25.6	38.6	10.0	100.0		
Dry Bulk	11.7	25.6	0.7	12.0	13.5	36.4	100.0		
Ro-Ro	28.0	12.0	3.6	16.1	31.9	9.3	100.0		
Gas	14.1	2.1	3.4	4.6	4.1	71.8	100.0		
Combo	15.8	0.8	0.0	0.0	28.3	55.0	100.0		
General	20.4	8.7	4.6	10.5	19.1	36.7	100.0		
All Types	15.8	10.5	1.9	16.6	21.2	34.1	100.0		

Note: Percentages may not total 100% due to rounding.

In 2011, the top 10 U.S. ports accounted for 55.5 percent of calls by oceangoing vessels 10,000 DWT or greater (of 132 U.S. ports). Houston was largest for tanker calls; LA/LB was largest for containership calls, and Columbia River Ports were largest for dry bulk calls.

Vessel Calls at U.S. Ports, Top Ten Ports, 2011							
Tanker		Container		Dry Bulk			
Houston	4,652	LA/LB	2,927	Columbia Rvr.	2,193		
New York	1.517	New York	2,389	New Orleans	1,195		
LA/LB	1,311	San Francisco	2,187	Virginia Ports	1,017		
Texas City	1,118	Virginia Ports	2,160	Houston	766		
Galv. Light.	969	Savannah	2,015	San Francisco	663		
New Orleans	933	Charleston	1,302	Baltimore	610		
Galveston	806	Port Ever.	1,075	LA/LB	581		
Philadelphia	798	Miami	1,064	Mobile	374		
Corpus Christi	747	Houston	827	Tampa	251		
San Francisco	681	Seattle	796	Philadelphia	229		
Top 10	13,532	Top 10	16,742	Top 10	7,879		
All Ports	23,812	All Ports	22,089	All Ports	10,947		
Ro-Ro		Gas		General			
Baltimore	856	Houston	239	Philadelphia	530		
Jacksonville	675	Tampa	72	Houston	519		
New York	468	Boston	53	New Orleans	248		
LA/LB	321	Freeport	50	LA/LB	222		
Brunswick	319	Point Comfort	49	Columbia Rvr.	203		
Tacoma	315	Philadelphia	48	San Juan, PR	178		
Charleston	267	Pascagoula	41	Mobile	167		
Philadelphia	243	New Orleans	40	Baltimore	151		
Virginia Ports	243	San Francisco	26	Port Ever.	131		
Columbia Rvr.	240	Port Arthur	24	Jacksonville	124		
Top 10	3,947	Top 10	642	Top 10	2,473		
All Ports	6,182	All Ports	857	All Ports	4,029		
Combo		All Types					
Virginia Ports	34	Houston	7,218				
Houston	27	LA/LB	5,364				
Mobile	17	New York	4,661				
Baltimore	14	San Francisco	3,752				
New Orleans	7	Virginia Ports	3,671				
Corpus Christi	5	New Orleans	2,942				
Philadelphia	3	Columbia R.	2,920				
Lake Charles	2	Savannah	2,731				
Annapolis, MD	) 1	Philadelphia	2,310				
Freeport	1	Baltimore	2,158				
Top 10	111	Top 10	37,727				
All Ports	120	All Ports	68,036				

In 2011, U.S. ports accounted for nearly 7.3 percent of global vessel calls. The U.S. ranked second in terms of overall calls. Tanker calls at U.S. ports accounted for nearly 12 percent of global tanker calls.



In 2011, U.S.-flag vessels accounted for 10.8 percent of calls (all flags) at U.S. ports, down from 11.7 percent 5 years earlier. Jones Act eligible vessels accounted for 69.5 percent of U.S-flag calls, down from 78.6 percent in 2006. Of the U.S.-flag calls, 80.7 percent were by tankers and containerships (roughly 40 percent each), and 16.6 percent were by Ro-Ro vessels.

#### Vessel Calls at U.S. Ports, U.S.-flag and Jones Act Fleets, 2006-2011

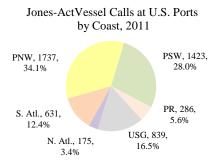
							% Ch.
Vessel Type	2006	2007	2008	2009	2010	2011	2006-11
U.SFlag							
Tanker	3,401	3,543	3,335	3,171	2,996	2,957	-13.1
D/Hull	2,187	2,660	2,667	2,715	2,683	2,734	25.0
Product	2,435	2,489	2,397	2,337	2,237	2,257	-7.3
D/Hull	1,471	1,656	1,780	1,889	1,924	2,034	38.3
Crude	966	1,054	938	834	759	700	-27.5
D/Hull	716	1,004	887	826	759	700	-2.2
Container	2,465	2,557	2,474	2,668	2,820	2,954	19.8
Dry Bulk	76	91	89	101	118	134	76.3
Ro-Ro	1,364	1,243	1,152	908	1,175	1,219	-10.6
Vehicle	565	484	496	391	572	537	-5.0
Combo	0	0	0	1	0	0	0.0
General	50	37	41	20	45	62	24.0
All Types	7,356	7,471	7,091	6,869	7,154	7,326	-0.4
Jones Act							
Tanker	3,368	3,507	3,309	3,140	2,967	2,880	-14.5
D/Hull	2,154	2,624	2,641	2,684	2,659	2,700	25.3
Product	2,402	2,453	2,371	2,306	2,208	2,180	-9.2
D/Hull	1,438	1,620	1,754	1,858	1,900	2,000	39.1
Crude	966	1,054	938	834	759	700	-27.5
D/Hull	716	1,004	887	826	759	700	-2.2
Container	1,490	1,417	1,275	1,272	1,254	1,303	-12.6
Dry Bulk	37	57	51	59	78	87	135.1
Ro-Ro	868	842	735	579	683	796	-8.3
Vehicle	113	120	109	102	131	156	38.1
Combo	0	0	0	1	0	0	0.0
General	22	14	17	4	16	25	13.6
All Types	5,785	5,837	5,387	5,055	4,998	5,091	-12.0

Over the last five years the average age of U.S.-flag vessels per call fell from 19.4 years to 16.8 years as many of vessels built during the shipbuilding boom of the late 1970's were replaced. Despite the upgrades, the average age of U.S.-flag vessels per call was much greater than that for foreign-flag vessels (8.8 years).

Jones Act Fleets, 2006-2011								
(Years Old)								
Туре	2006	2007	2008	2009	2010	2011		
U.SFlag								
Tanker	17.8	17.1	16.2	15.1	13.1	11.8		
D/Hull	14.5	14.9	14.0	13.3	11.5	10.7		
Product	19.8	19.8	18.5	17.0	14.1	12.2		
D/Hull	17.5	17.8	16.2	14.9	11.8	10.8		
Crude	12.8	10.7	10.2	9.9	10.5	10.4		
D/Hull	8.4	10.0	9.6	9.8	10.5	10.4		
Container	21.3	20.2	19.2	18.5	19.0	20.2		
Dry Bulk	21.8	23.6	24.3	25.1	26.4	25.6		
Ro-Ro	19.1	19.7	18.4	18.3	17.6	19.6		
Vehicle	10.6	11.8	10.8	11.2	10.7	10.7		
Combo	0.0	0.0	0.0	22.0	0.0	0.0		
General	29.6	30.3	32.0	27.2	25.0	25.2		
All Types	19.4	18.7	17.8	17.1	16.5	16.8		
Jones Act								
Tanker	18.0	17.2	16.2	15.2	13.1	11.7		
D/Hull	14.6	15.0	14.0	13.4	11.4	10.7		
Product	20.0	20.0	18.6	17.1	14.1	12.1		
D/Hull	17.7	18.1	16.3	14.9	11.8	10.8		
Crude	12.8	10.7	10.2	9.9	10.5	10.4		
D/Hull	8.4	10.0	9.6	9.8	10.5	10.4		
Container	25.9	27.0	26.5	27.6	28.6	29.6		
Dry Bulk	25.5	26.5	28.1	28.7	28.7	29.7		
Ro-Ro	21.9	22.0	20.8	19.7	19.8	22.1		
Vehicle	1.1	6.1	3.3	3.7	4.1	4.9		
Combo	0.0	0.0	0.0	22.0	0.0	0.0		
General	35.0	38.8	41.4	30.3	17.4	31.3		
All Types	20.7	20.4	19.5	19.0	18.2	18.3		

Average Age of Vessels per Call at U.S. Ports, U.S.-Flag and

In 2011, South Atlantic ports accounted for 12.4 percent of the calls by Jones Act vessels, up from 9.5 percent 5 years before. South Atlantic shares increased for every vessel type.



Jones-Act Vessel Calls by Coast, 2006 and 2011
(Percent of Calls)

Туре	N. Atl.	S. Atl.	PNW	PSW	PR	USG	Total		
2006									
Tanker	9.4	8.0	35.6	19.4	0.7	27.0	100.0		
Container	3.6	6.9	32.1	41.7	13.3	2.4	100.0		
Dry Bulk	40.5	16.2	10.8	0.0	5.4	27.0	100.0		
Ro-Ro	0.5	19.8	21.4	43.9	13.2	1.2	100.0		
General	9.1	9.1	13.6	4.5	0.0	63.6	100.0		
All Types	6.7	9.5	32.3	28.7	5.8	16.9	100.0		
2011									
Tanker	1.8	9.9	36.8	24.5	0.2	26.7	100.0		
Container	4.0	8.1	34.7	39.9	11.7	1.6	100.0		
Dry Bulk	4.6	57.5	0.0	6.9	0.0	31.0	100.0		
Ro-Ro	7.9	23.2	26.9	23.4	16.2	2.4	100.0		
General	16.0	16.0	40.0	20.0	0.0	8.0	100.0		
All Types	3.4	12.4	34.1	28.0	5.6	16.5	100.0		

#### **Photo Credits** Front cover Alaska Tanker Company Wallenius

Maersk Line

### **Back cover**

Southern Union Company Alaska Tanker Company Fidelio Limited Partnership

