



U.S. Department of Transportation
Maritime Administration

U.S. Domestic Ocean Trades

2002



**U.S. Domestic Ocean Trades
2002**

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Preface

The following report contains data on U.S. domestic ocean traffic. The traffic is presented in metric tons and metric ton-miles for the following vessel types: tankers, ro-ro and container vessels, dry cargo barges, tank barges, bulk carriers, and other vessels.

The report is divided into two sections, Highlights and Summary Tables. The Highlights section includes selected time series (1998-2002) detailing traffic by vessel type. The Summary Tables section presents traffic by major commodity groups, contiguous and non-contiguous trades, and shipping and receiving coasts. The report is also available at www.marad.dot.gov/marad_statistics.

Comments and recommendations as to content and format of the report can be made at www.data.marad@marad.dot.gov. In addition, to learn more about the Maritime Administration or the Maritime industry, visit the agency's website at www.marad.dot.gov.

Notes and Sources

Geography

North Atlantic:

Connecticut
Delaware
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island

South Atlantic:

Florida (Atlantic Ports)
Georgia
North Carolina
Puerto Rico
South Carolina
Virginia
U.S. Virgin Islands

United States Gulf:

Alabama
Florida (Gulf Ports)
Louisiana
Mississippi
Texas

Pacific Northwest:

Alaska
Oregon
Washington

Pacific Southwest:

California
Hawaii
U.S. Pacific Island Territories

Contiguous Trades: Shipments between the lower 48 states (mainland).

Non-Contiguous Trades: Includes Shipments between the Lower 48 States and Alaska, Puerto Rico and Virgin Islands, Hawaii, and U.S. Pacific Territories. Shipments between Hawaii and Alaska are included in Hawaii non-contiguous trades, and shipments between Hawaii and U.S. Pacific Territories are included in Pacific Territories non-contiguous trades.

Vessel Types

The vessel categories used for this report include the following types:

Tankers: Petroleum/Chemical Carrier, Chemical Carrier, Petroleum Tanker, Liquid Gas Carrier.

RO-RO/Container: RO-RO Vessel, Container Ship, Container/Vehicle/Trailer (RO-RO) Carrier.

Dry Cargo Barge: Open Dry Cargo Barge, Covered Dry Cargo Barge, RO-RO Barge, Open Hopper Barge, Covered Hopper Barge, Carfloat (Railroad Car Barge), Container Barge, Lash/Seebee Barge, Flat/Deck Barge, Convertible Barge.

Tank Barge: Tank Barge.

Bulk Carrier: Bulk Carrier.

Other Cargo: General Cargo Freighter, Crewboat/Supply/Utility Vessel, Combination Passenger & Cargo, Break Bulk/RO-RO Carrier, Ferry, Tugboat/Towboat.

Domestic Ocean Trades

Domestic ocean traffic is defined as domestic traffic receiving a carriage over the ocean, or the Gulf of Mexico, (e.g. New Orleans to Baltimore, New York to Puerto Rico, San Francisco to Hawaii, Alaska to Hawaii); and traffic between Great Lakes ports and seacoast ports, when having carriage over the ocean.

Sources

The domestic trade data in this report is from U.S. Army Corps of Engineers Waterborne Commerce detail files (see below). The other sources provided information on related trends, e.g., U.S. oil imports.

Energy Information Agency, Quarterly Coal Report, 1st Quarter 2004, Wash., DC: U.S. Department of Energy, www.eia.doe.gov, June 2004. This source contains data on U.S. coal production and exports.

Notes and Sources

Energy Information Agency, Petroleum Supply Annual, 2003, Wash., DC: U.S. Department of Energy, www.eia.doe.gov, June 2004. This source contains data on U.S. petroleum production, imports and exports.

Energy Information Agency, Annual Energy Review, 2002, Wash., DC: U.S. Department of Energy, www.eia.doe.gov, June 2004. This source contains data on U.S. petroleum production by region and type.

Energy Information Agency, Quarterly Coal Report, 1st Quarter 2004, Wash., DC: U.S. Department of Energy, www.eia.doe.gov June 2004. This source contains data on U.S. coal production and exports.

Lloyd's Maritime Intelligence Unit, Vessel Movements Data Files, 1998 - 2002, London: Lloyd's Maritime Intelligence Unit, www.seasearcher.com, 1998-2002. This source contains data for vessel port calls, ports and active fleets.

U.S. Army Corps of Engineers, Waterborne Commerce of the United States, 1998-2002, detail files, New Orleans: Waterborne Commerce Statistics Center, www.iwr.usace.army.mil/ndc, 1999-2003. This source contains detailed data for U.S. domestic waterborne trade.

U.S. Army Corps of Engineers, Waterborne Commerce of the United States, 1998-2002, Part 5, National Summaries, New Orleans: Waterborne Commerce Statistics Center, www.iwr.usace.army.mil/ndc, 1999-2003. This source contains summaries of data for U.S. domestic waterborne trade by commodity group and type of traffic..

U.S. Geological Survey, Mineral Commodities Survey, 2003, Reston, VA: U.S. Geological Survey, U.S. Department of Interior, www.usgs.gov, 2003. This source contains data on U.S. phosphate rock production, imports, and exports.

U.S. Maritime Administration, Industry Survey Series: Coastal Tank Barge, 2002, Wash., DC: U.S. Maritime Administration, www.marad.dot.gov/marad_statistics, 2002. This source contains a summary of views of major coastwise tank barge operators regarding coastal tank barge markets.

Photo Credits

Photographs shown on the cover viewed clockwise beginning from the top left and ending in the bottom left, are courtesy of Bouchard Transportation Co., Matson Navigation Company, Crowley Marine Services, and Cashman Equipment Corp.

Highlights

Domestic Ocean Trades

In 2002, U.S. domestic ocean trades amounted to 196 million metric tons (Figure H-1 and Table S-1). Of this, 47 percent was moved by tankers, 30 percent was moved by tank barges, 18 percent was moved by dry cargo barges and 4 percent was moved by ro-ro's and containerships.

Overall, the trades have fallen by 30 million metric tons over the last four years. The largest declines were in the tanker and dry cargo barge segments, down 18 and 7 million metric tons, respectively. The declines were due largely to 4-year declines in U.S. production of coal (26 percent), phosphate rock (19 percent) and Alaska crude oil (14 percent) (See Energy Information Agency, Quarterly Coal Report, 1st Quarter 2004; and U.S. Geological Survey, Mineral Commodities Survey, 2003.)

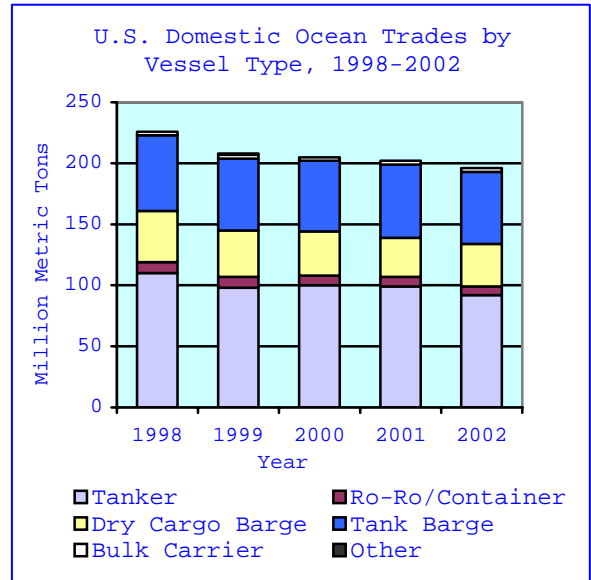


Figure H-1

In terms of metric ton-miles, the trades fell by 16 percent, a 14 percent decline in metric tons and a 3 percent decline in average shipment miles (Tables H-1 and S-2). The decline in shipment miles was due largely to a decline in long-haul tanker trades.

Ro-Ro/Container Trades

The domestic ro-ro/container trades consist of four non-contiguous trades; Mainland (lower 48 states)/Alaska, Mainland/Hawaii, Mainland/Puerto Rico, and U.S. Pacific Territories; and contiguous trades which are an adjunct to non-contiguous services. In 2002, the non-contiguous trades amounted to 7 million metric tons. Of this, 44 percent was in the Hawaii trades, 33 percent was in the Puerto Rico trades and 20 percent was in the Alaska trades (Figure H-2 and Table S-3).

	1998		2002	
	MT	MTM	MT	MTM
Tanker	110	195	92	159
Ro-Ro/Container	9	20	7	17
Dry Cargo Barge	42	29	35	21
Tank Barge	62	39	59	38
Bulk Carrier	3	3	3	2
Other	-	-	-	2
Total	227	286	196	239

Table H-1

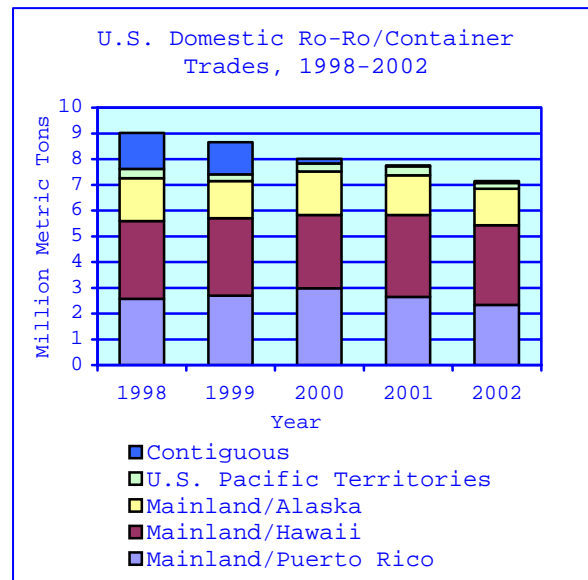


Figure H-2

Highlights

Ro-ro/container traffic in 2002 was 21 percent less (1.9 million metric tons) than four years earlier. The decline was largely in the contiguous segment (down 95 percent) as carriers in the non-contiguous trades reduced their mainland itineraries.

Tanker Trades

In 2002, domestic tanker trades amounted to 92 million metric tons. Of this, 50 percent was crude oil, 44 percent was petroleum products and 6 percent was chemicals (Figure H-3). Virtually all of the crude oil was shipped in Alaska and West Coast trades, while nearly all of the chemicals were shipped in U.S. Gulf and Atlantic trades.

Overall, the trades were down by 18 million metric tons over the last four years. The decline was primarily in long-haul trades: Alaska/Pacific Southwest, Pacific Northwest/Pacific Southwest, and U.S. Gulf/South Atlantic (Table S-3).

The Alaska/Pacific Southwest trade accounted for about half of the decline in tanker trades. From 1998 to 2002, Alaska crude oil output, which is currently moved by tanker from Valdez to West Coast ports, fell by 16 percent. Over the same period U.S. offshore production, which is moved by pipeline, increased by 20 percent.

The decline in domestic tanker trades has also been offset by imports. From 1998 to 2002, U.S. waterborne petroleum imports, increased by 10 percent; 11 percent for crude and 9 percent for petroleum products (U.S. Army Corps of Engineers, Waterborne Commerce of the United States, Part 5). Domestic tanker shipments of crude and products were down 20 percent and 10 percent, respectively, over the same period (Table S-1).

Barge Trades

Notwithstanding the growth in oil imports, tank barge shipments have been relatively stable over the last four years (Figure H-4). Tank barges compete with domestic tankers in medium-haul trades, but complement tankers (foreign and domestic) and pipelines in short-haul trades. Seventy percent of the major coastwise tank barge operators expect the tank barge share of coastal tank vessel (tanker and tank barge) shipments to increase over the next three years. (U.S. Maritime Administration, Industry Survey Series: Coastal Tank Barge, 2002, p. 7.). Coastwise tank barge operators took delivery of 25 new/reconstructed barges in 2002 and 2003, and another 19 barges are scheduled for delivery in 2004 and 2005.

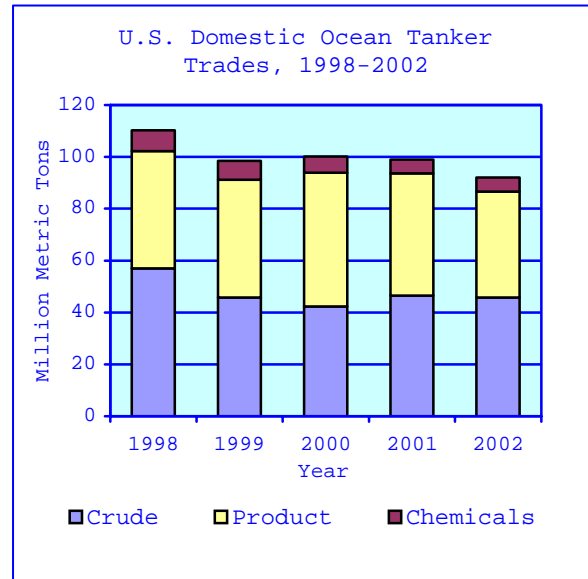


Figure H-3

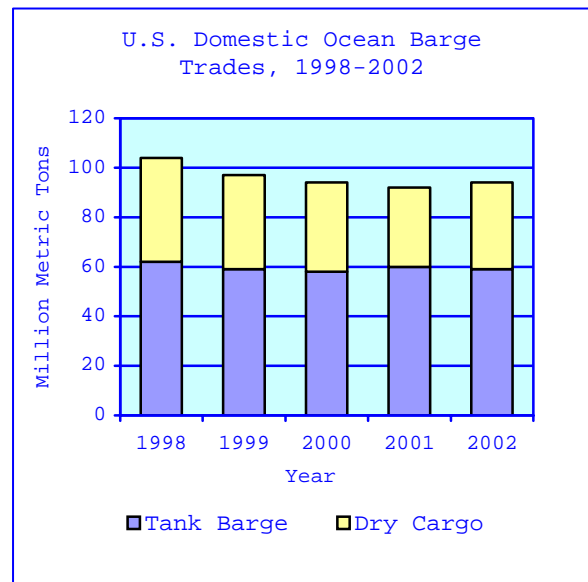


Figure H-4

Highlights

In contrast, dry cargo barge traffic fell by 20 percent (7 million metric tons) from 1998 to 2002. Barge shipments of coal and phosphate rock fell by 1.6 and 2.9 million metric tons, respectively (Table S-1).

Summary Tables

U.S. Domestic Ocean Trades By Vessel Type and Commodity Group, 1998 and 2002							
(Thousand Metric Tons)							
Year/Commodity Group	Tanker	Ro-Ro Container	Dry Cargo Barge	Tank Barge	Bulk Carrier	Other	Total
1998							
Coal	0	0	10,984	41	2,878	0	13,903
Petroleum	102,313	56	1,036	57,426	107	3	160,942
Crude	57,022	0	0	785	0	0	57,807
Chemicals	7,879	624	1,402	3,863	0	0	13,769
Crude Materials	0	272	16,374	336	30	55	17,067
Phosphate Rock	0	0	6,109	0	0	0	6,109
Farm products	0	3,099	3,045	155	0	41	6,340
Prim. Mfgs.	0	780	5,879	1	0	12	6,672
Manufactures	1	4,137	3,572	1	0	43	7,754
Other	0	54	1	2	0	0	57
Total	110,194	9,021	42,293	61,825	3,016	154	226,504
2002							
Coal	0	0	9,388	29	2,498	0	11,916
Petroleum	86,643	34	548	52,472	280	6	139,984
Crude	45,745	0	0	727	0	0	46,473
Chemicals	5,362	182	1,295	5,024	146	2	12,012
Crude Materials	0	206	11,401	243	0	8	11,859
Phosphate Rock	0	0	3,171	0	0	0	3,171
Farm products	3	1,624	2,721	737	0	285	5,370
Prim. Mfgs.	0	396	7,228	0	0	17	7,642
Manufactures	13	4,540	2,667	2	0	72	7,294
Other	0	149	77	0	0	15	241
Total	92,021	7,132	35,327	58,508	2,924	404	196,317

Table S-1

Summary Tables

U.S. Domestic Ocean Trades By Vessel Type and Commodity Group, 1998 and 2002							
(Million Metric Ton-Miles)							
Year/Commodity Group	Tanker	Ro-Ro Container	Dry Cargo Barge	Tank Barge	Bulk Carrier	Other	Total
1998							
Coal	0	0	7,605	47	1,515	0	9,168
Petroleum	174,932	125	1,363	32,625	137	1	209,183
Crude	102,430	0	0	276	0	0	57,807
Chemicals	19,985	1,210	1,420	5,800	0	0	28,416
Crude Materials	0	696	9,511	212	65	56	10,541
Phosphate Rock	0	0	5,568	0	0	0	5,568
Farm products	0	6,950	3,472	245	0	86	10,752
Prim. Mfgs.	0	1,835	2,680	3	0	22	4,539
Manufactures	4	9,537	3,250	1	0	35	12,827
Other	0	116	1	1	0	0	118
Total	194,941	20,470	29,301	38,934	1,717	200	285,543
2002							
Coal	0	0	6,258	28	1,424	0	7,710
Petroleum	144,350	90	527	30,032	663	2	175,665
Crude	82,816	0	0	348	0	0	83,164
Chemicals	14,402	450	1,235	7,336	113	4	23,540
Crude Materials	0	666	5,579	196	0	19	6,460
Phosphate Rock	0	0	2,775	0	0	0	2,775
Farm products	16	4,403	3,039	542	0	1,429	9,430
Prim. Mfgs.	0	1,110	2,651	0	0	40	3,801
Manufactures	22	10,480	1,662	2	0	108	12,274
Other	0	233	18	0	0	87	339
Total	158,790	17,433	20,970	38,136	2,200	1,688	239,218

Table S-2

Summary Tables

U.S. Domestic Ocean Trades, Contiguous/Non-Contiguous by Vessel Type, 1998-2002					
(Thousand Metric Tons)					
Vessel Type/Trade	1998	1999	2000	2001	2002
Tanker	110,194	98,405	100,269	98,962	92,021
Contiguous	40,599	37,057	40,960	38,180	33,633
Non-Contiguous	69,595	61,348	59,309	60,782	58,387
Alaska	50,874	43,393	40,576	44,020	43,583
Hawaii	2,718	2,142	2,189	2,489	2,296
Puerto Rico and Virgin Islands	15,965	15,657	16,497	14,273	12,458
U.S. Pacific Territories	38	156	47	0	50
Ro-Ro/Container	9,021	8,650	8,004	7,744	7,132
Contiguous	1,399	1,262	177	36	69
Non-Contiguous	7,623	7,388	7,828	7,708	7,062
Alaska	1,656	1,435	1,693	1,545	1,406
Hawaii	3,024	3,012	2,850	3,186	3,097
Puerto Rico and Virgin Islands	2,571	2,686	2,980	2,642	2,331
U.S. Pacific Territories	372	255	305	335	228
Dry Cargo Barge	42,293	37,900	36,344	32,476	35,327
Contiguous	38,275	34,578	33,726	30,340	33,079
Non-Contiguous	4,018	3,322	2,617	2,137	2,248
Alaska	755	624	509	332	367
Hawaii	213	150	216	185	118
Puerto Rico and Virgin Islands	3,033	2,526	1,871	1,596	1738
U.S. Pacific Territories	17	22	21	24	25
Tank Barge	61,825	59,293	58,103	60,088	58,508
Contiguous	61,471	58,729	57,676	59,772	58,244
Non-Contiguous	354	564	428	316	264
Alaska	157	288	198	116	84
Hawaii	8	34	10	0	0
Puerto Rico and Virgin Islands	189	242	216	200	180
U.S. Pacific Territories	0	0	4	0	0
Dry Bulk Carrier	3,016	2,659	2,780	3,434	2,924
Contiguous	3,016	2,342	2,469	3,261	2,924
Non-Contiguous	0	317	311	173	0
Alaska	0	0	0	0	0
Hawaii	0	317	311	173	0
Puerto Rico and Virgin Islands	0	0	0	0	0
U.S. Pacific Territories	0	0	0	0	0
Other	154	666	381	152	404
Contiguous	45	292	57	77	73
Non-contiguous	110	374	324	76	331
Alaska	110	119	98	76	66
Hawaii	0	0	1	0	0
Puerto Rico and Virgin Islands	0	0	1	0	2
U.S. Pacific Territories	0	255	224	0	263
Total	226,504	207,575	205,881	202,857	196,317
Contiguous	144,804	134,261	135,066	131,666	128,024
Non-contiguous	81,699	73,314	70,814	71,191	68,292
Alaska	53,551	45,860	43,074	46,088	45,505
Hawaii	5,963	5,654	5,576	6,033	5,511
Puerto Rico and Virgin Islands	21,758	21,111	21,564	18,711	16,709
U.S. Pacific Territories	427	689	600	359	567

Table S-3

Summary Tables

U.S. Domestic Ocean Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	38,840	2,561	1,095	0	3	42,499
South Atlantic	15,803	9,449	1,293	24	160	26,730
U.S. Gulf	4,885	22,843	43,532	152	1,401	72,813
Pacific Northwest	0	31	314	28,037	36,028	64,409
Pacific Southwest	20	50	497	2,723	16,761	20,052
Total	59,548	34,935	46,730	30,937	54,354	226,504
1999						
North Atlantic	36,766	2,375	912	0	77	40,131
South Atlantic	14,321	8,699	1,487	63	567	25,137
U.S. Gulf	4,395	21,427	40,325	172	2,255	68,574
Pacific Northwest	25	19	175	27,144	28,295	55,658
Pacific Southwest	2	6	226	2,691	15,150	18,075
Total	55,508	32,526	43,125	30,070	46,345	207,575
2000						
North Atlantic	34,882	1,687	1,345	0	0	37,914
South Atlantic	15,222	8,936	1,232	24	488	25,901
U.S. Gulf	5,903	21,723	39,718	127	1,444	68,915
Pacific Northwest	0	24	173	29,475	25,958	55,629
Pacific Southwest	4	35	313	2,532	14,637	17,521
Total	56,010	32,405	42,781	32,157	42,527	205,881
2001						
North Atlantic	34,793	1,899	950	0	0	37,642
South Atlantic	14,638	7,798	1,412	34	424	24,307
U.S. Gulf	5,063	20,000	37,574	70	1,322	64,029
Pacific Northwest	1	14	129	30,848	27,582	58,573
Pacific Southwest	0	23	246	2,571	15,465	18,306
Total	54,495	29,735	40,311	33,523	44,793	202,857
2002						
North Atlantic	33,844	1,879	1,258	0	0	36,981
South Atlantic	11,671	7,699	1,591	0	150	21,111
U.S. Gulf	4,628	19,118	38,872	36	1,139	63,793
Pacific Northwest	0	84	161	29,124	26,516	55,885
Pacific Southwest	6	0	146	2,482	15,913	18,547
Total	50,149	28,781	42,027	31,642	43,718	196,317

Table S-4

Summary Tables

U.S. Domestic Ocean Tanker Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	765	158	627	0	0	1,550
South Atlantic	9,654	5,483	711	24	160	16,033
U.S. Gulf	4,079	13,274	10,064	132	1,394	28,943
Pacific Northwest	0	31	314	23,110	33,739	57,193
Alaska	0	0	0	22,600	31,485	54,085
Pacific Southwest	20	50	497	1,632	4,277	6,476
Total	14,518	18,995	12,213	24,898	39,570	110,194
1999						
North Atlantic	1,002	79	632	0	74	1,788
South Atlantic	8,985	4,921	945	63	567	15,481
U.S. Gulf	3,737	12,701	9,933	153	2,147	28,671
Pacific Northwest	25	19	175	21,998	26,209	48,427
Alaska	0	0	0	20,266	24,910	45,177
Pacific Southwest	2	5	226	1,704	2,101	4,039
Total	13,750	17,726	11,911	23,918	31,099	98,405
2000						
North Atlantic	1,002	122	865	0	0	1,988
South Atlantic	9,712	5,188	941	24	487	16,353
U.S. Gulf	4,853	13,617	9,937	127	1,444	29,978
Pacific Northwest	0	24	171	24,239	24,094	48,528
Alaska	0	0	0	20,490	21,878	42,367
Pacific Southwest	0	35	313	1,738	1,336	3,422
Total	15,568	18,986	12,227	26,128	27,361	100,269
2001						
North Atlantic	783	250	715	0	0	1,748
South Atlantic	8,863	4,268	1,047	34	424	14,636
U.S. Gulf	4,449	11,210	10,474	70	1,302	27,506
Pacific Northwest	0	14	129	25,206	25,475	50,825
Alaska	0	0	37	23,609	22,841	46,486
Pacific Southwest	0	23	246	1,881	2,098	4,248
Total	14,095	15,765	12,611	27,191	29,300	98,962
2002						
North Atlantic	911	162	981	0	0	2,054
South Atlantic	6,530	4,095	1,347	0	150	12,122
U.S. Gulf	3,806	11,048	9,181	36	1,124	25,195
Pacific Northwest	0	84	128	24,287	24,569	49,068
Alaska	0	0	0	23,741	22,507	46,249
Pacific Southwest	0	0	130	1,756	1,696	3,582
Total	11,248	15,389	11,766	26,079	27,539	92,021

Table S-5

Summary Tables

U.S. Domestic Ocean Ro-Ro/Container Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	242	970	38	0	3	1,253
South Atlantic	255	1,389	259	0	0	1,904
U.S. Gulf		402	0	0	0	402
Pacific Northwest	0	0	0	1,667	723	2,390
Pacific Southwest	0	0	0	232	2,840	3,072
Total	498	2,761	297	1,898	3,567	9,021
1999						
North Atlantic	245	850	28	0	3	1,126
South Atlantic	245	1,586	212	0	0	2,043
U.S. Gulf	0	363	0	0	0	364
Pacific Northwest	0	0	0	1,487	685	2,172
Pacific Southwest	0	0	0	242	2,703	2,946
Total	491	2,799	240	1,729	3,391	8,650
2000						
North Atlantic	0	582	0	0	0	582
South Atlantic	203	1,735	89	0	0	2,027
U.S. Gulf	0	371	0	0	0	371
Pacific Northwest	0	0	0	1,693	588	2,281
Pacific Southwest	0	0	0	166	2,577	2,743
Total	203	2,688	89	1,859	3,165	8,004
2001						
North Atlantic	0	506	0	0	0	506
South Atlantic	152	1,695	66	0	0	1,913
U.S. Gulf	0	223	0	0	0	223
Pacific Northwest	0	0	0	1,559	610	2,169
Pacific Southwest	0	0	0	89	2,843	2,932
Total	152	2,424	66	1,648	3,454	7,744
2002						
North Atlantic	0	297	0	0	0	297
South Atlantic	86	1,686	37	0	0	1,809
U.S. Gulf	0	226	0	0	0	226
Pacific Northwest	0	0	0	1,438	586	2,024
Pacific Southwest	0	0	0	90	2,687	2,777
Total	86	2,208	37	1,528	3,273	7,132

Table S-6

Summary Tables

U.S. Domestic Ocean Dry Cargo Barge Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	6,612	1,004	232	0	0	7,848
South Atlantic	1,996	2,032	199	0	0	4,227
U.S. Gulf	0	1,556	19,479	0	0	21,035
Pacific Northwest	0	0	0	1,632	435	2,066
Pacific Southwest	0	0	0	272	6,845	7,116
Total	8,608	4,592	19,910	1,904	7,279	42,293
1999						
North Atlantic	6,304	883	151	0	0	7,339
South Atlantic	1,630	1,608	166	0	0	3,404
U.S. Gulf	8	1,047	16,804	0	1	17,860
Pacific Northwest	0	0	0	1,822	622	2,444
Pacific Southwest	0	0	0	155	6,698	6,854
Total	7,942	3,538	17,121	1,977	7,321	37,900
2000						
North Atlantic	6,308	678	89	0	0	7,075
South Atlantic	2,240	1,386	81	0	0	3,707
U.S. Gulf	95	802	15,252	0	1	16,150
Pacific Northwest	0	0	1	1,741	663	2,405
Pacific Southwest	0	0	0	50	6,956	7,006
Total	8,643	2,866	15,424	1,791	7,620	36,344
2001						
North Atlantic	6,958	561	0	0	0	7,519
South Atlantic	2,332	1,308	69	0	0	3,709
U.S. Gulf	116	883	11,312	0	0	12,312
Pacific Northwest	0	0	0	1,506	664	2,170
Pacific Southwest	0	0	0	50	6,718	6,768
Total	9,406	2,752	11,381	1,555	7,382	32,476
2002						
North Atlantic	6,684	809	0	0	0	7,492
South Atlantic	2,245	1,267	15	0	0	3,527
U.S. Gulf	28	637	13,911	0	0	14,576
Pacific Northwest	0	0	0	1,167	680	1,848
Pacific Southwest	0	0	2	78	7,805	7,884
Total	8,956	2,713	13,928	1,245	8,485	35,327

Table S-7

Summary Tables

U.S. Domestic Ocean Tank Barge Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	31,216	430	171	0	0	31,817
South Atlantic	1,217	545	124	0	0	1,886
U.S. Gulf	806	7,532	13,754	19	8	22,120
Pacific Northwest	0	0	0	1,507	1,132	2,639
Pacific Southwest	0	0	0	589	2,775	3,364
Total	33,239	8,507	14,050	2,115	3,915	61,825
1999						
North Atlantic	29,210	564	100	0	0	29,874
South Atlantic	1,119	583	164	0	0	1,866
U.S. Gulf	649	7,316	13,577	19	107	21,668
Pacific Northwest	0	0	0	1,452	779	2,231
Pacific Southwest	0	0	0	575	3,079	3,654
Total	30,978	8,463	13,841	2,047	3,965	59,293
2000						
North Atlantic	27,562	305	391	0	0	28,258
South Atlantic	701	626	121	0	0	1,449
U.S. Gulf	955	6,933	14,417	0	0	22,304
Pacific Northwest	0	0	0	1,695	613	2,308
Pacific Southwest	0	0	0	577	3,208	3,784
Total	29,217	7,864	14,930	2,272	3,820	58,103
2001						
North Atlantic	27,038	582	235	0	0	27,855
South Atlantic	900	527	230	0	0	1,657
U.S. Gulf	496	7,476	15,117	0	19	23,108
Pacific Northwest	0	0	0	2,490	812	3,303
Pacific Southwest	0	0	0	552	3,612	4,164
Total	28,434	8,585	15,582	3,043	4,444	60,088
2002						
North Atlantic	26,239	612	277	0	0	27,128
South Atlantic	915	652	159	0	0	1,726
U.S. Gulf	794	7,016	14,983	0	15	22,809
Pacific Northwest	0	0	0	2,163	680	2,843
Pacific Southwest	0	0	0	558	3,444	4,002
Total	27,948	8,280	15,420	2,721	4,139	58,508

Table S-8

Summary Tables

U.S. Domestic Ocean Bulk Carrier Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	0	0	26	0	0	26
South Atlantic	2,680	0	0	0	0	2,680
U.S. Gulf	0	80	230	0	0	310
Pacific Northwest	0	0	0	0	0	0
Pacific Southwest	0	0	0	0	0	0
Total	2,680	80	256	0	0	3,016
1999						
North Atlantic	0	0	0	0	0	0
South Atlantic	2,342	0	0	0	0	2,342
U.S. Gulf	0	0	0	0	0	0
Pacific Northwest	0	0	0	0	0	0
Pacific Southwest	0	0	0	0	317	317
Total	2,342	0	0	0	317	2,659
2000						
North Atlantic	0	0	0	0	0	0
South Atlantic	2,366	0	0	0	0	2,366
U.S. Gulf	0	0	103	0	0	103
Pacific Northwest	0	0	0	0	0	0
Pacific Southwest	0	0	0	0	311	311
Total	2,366	0	103	0	311	2,780
2001						
North Atlantic	0	0	0	0	0	0
South Atlantic	2,391	0	0	0	0	2,391
U.S. Gulf	0	209	661	0	0	870
Pacific Northwest	0	0	0	0	20	20
Pacific Southwest	0	0	0	0	153	153
Total	2,391	209	661	0	173	3,434
2002						
North Atlantic	0	0	0	0	0	0
South Atlantic	1,894	0	32	0	0	1,926
U.S. Gulf	0	188	777	0	0	965
Pacific Northwest	0	0	33	0	0	33
Pacific Southwest	0	0	0	0	0	0
Total	1,894	188	842	0	0	2,924

Table S-9

Summary Tables

Other U.S. Domestic Ocean Trades, 1998-2002						
(Thousand Metric Tons)						
Year/ Shipping Coast	Receiving Coast					Total
	North Atlantic	South Atlantic	U.S. Gulf	Pacific Northwest	Pacific Southwest	
1998						
North Atlantic	5	0	0	0	0	5
South Atlantic	0	0	0	0	0	0
U.S. Gulf	0	0	3	0	0	3
Pacific Northwest	0	0	0	122	0	122
Pacific Southwest	0	0	0	0	24	24
Total	5	0	3	122	24	154
1999						
North Atlantic	5	0	0	0	0	5
South Atlantic	0	0	0	0	0	0
U.S. Gulf	0	0	11	0	0	11
Pacific Northwest	0	0	0	385	0	385
Pacific Southwest	0	0	0	14	251	265
Total	5	0	11	399	251	666
2000						
North Atlantic	10	0	0	0	0	10
South Atlantic	0	0	0	0	0	0
U.S. Gulf	0	1	8	0	0	9
Pacific Northwest	0	0	0	107	0	107
Pacific Southwest	4	0	0	1	250	255
Total	14	1	8	108	250	381
2001						
North Atlantic	14	0	0	0	0	14
South Atlantic	0	0	0	0	0	0
U.S. Gulf	0	0	11	0	0	11
Pacific Northwest	1	0	0	86	0	87
Pacific Southwest	0	0	0	0	41	41
Total	15	0	11	86	41	153
2002						
North Atlantic	10	0	0	0	0	10
South Atlantic	0	0	0	0	0	0
U.S. Gulf	0	2	20	0	0	22
Pacific Northwest	0	0	0	69	1	70
Pacific Southwest	6	0	14	1	281	302
Total	16	2	34	70	282	404

Table S-10