APPENDICES

Appendix A: Comparison of ICF Kaiser and 1995 Mercer Trade Forecasts

COMPARISON OF ICF KAISER COMMODITY FORECASTS WITH MERCER FORECASTS
(Commodity Forecast Aggregated Over All Applicable Routes)

NOTES

1. ICF KAISER commodity forecast covers the major routes while the MERCER forecast covers all routes, hence the commodity estimates are not directly comparable. However, the growth rates over time provide a more suitable basis for comparison.

2. In the ICF Kaiser forecast, 1995 data were reported data; whereas in the Mercer forecast, 1995 data were forecasts.

COMMODITY	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	Compound Average Annual Growth Rates 1990 - 1995	1995 - 2000	2000 - 2010	2010 - 2015
BANANAS														
ICF KAISER	1,686,000	2,093,000	2,189,000	2,313,000	2,466,000	2,632,000	2,808,000	3,838,000	5,100,000	6,592,000	12.7	6.1	6.1	5.3
MERCER	2,064,053	2,166,696	2,270,225	2,378,960	2,485,475	2,595,490	2,700,483	2,954,142	3,207,639	3,487,328	5.9	4.6	1.7	1.7
REEFER, OTHER														
ICF KAISER	2,822,000	3,059,000	3,089,000	3,183,000	3,291,000	3,426,000	3,565,000	4,313,000	5,048,000	5,801,000	0.6	3.1	3.5	2.8
MERCER	3,765,126	3,915,822	4,081,422	4,275,056	4,467,039	4,663,642	4,768,878	5,353,848	6,001,131	6,745,885	1.1	4.0	2.3	2.4
CHEMICALS														
ICF KAISER	5,591,000	5,960,000	6,081,000	6,216,000	6,352,000	6,511,000	6,669,000	7,485,000	8,223,000	8,928,000	8.5	2.3	2.1	1.7
MERCER	6,990,016	7,145,973	7,511,420	7,986,325	8,404,034	8,827,768	9,067,081	10,287,100	11,563,870	13,013,300	7.2	4.4	2.5	2.4
PETROLEUM CHEMICALS														
ICF KAISER	2,301,000	1,967,000	2,051,000	2,148,000	2,250,000	2,361,000	2,474,000	3,032,000	3,564,000	4,067,000	6.2	4.7	3.7	2.7
MERCER	2,718,523	2,837,253	2,893,327	3,030,845	3,107,031	3,168,322	3,209,703	3,405,023	3,526,081	3,654,849	10.9	2.8	0.9	0.7
COAL & COKE														
ICF KAISER	8,961,000	10,926,000	10,872,000	10,872,000	10,852,000	10,828,000	10,807,000	10,772,000	10,728,000	10,690,000	6.7	-0.2	-0.1	-0.1
MERCER	9,338,457	10,316,190	9,817,431	9,346,586	9,311,937	9,309,537	9,275,797	9,153,527	9,088,198	9,094,498	4.9	-0.1	-0.2	0.0
GRAINS, OTHER														
ICF KAISER (Corn added for comparison)	18,493,000	27,329,000	27,410,000	27,831,000	28,203,000	28,608,000	29,025,000	31,358,000	33,870,000	36,633,000	8.2	1.2	1.6	1.6
MERCER	19,250,440	24,802,960	20,599,310	20,038,950	20,319,610	20,548,050	20,696,400	21,474,420	22,317,990	23,235,180	7.5	1.2	0.8	0.8

COMPARISON OF ICF KAISER COMMODITY FORECASTS WITH MERCER FORECASTS
(Commodity Forecast Aggregated Over All Applicable Routes)

NOTES

1. ICF KAISER commodity forecast covers the major routes while the MERCER forecast covers all routes, hence the commodity estimates are not directly comparable. However, the growth rates over time provide a more suitable basis for comparison.

2. In the ICF Kaiser forecast, 1995 data were reported data; whereas in the Mercer forecast, 1995 data were forecasts.

COMMODITY	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	Compound Average Annual Growth Rates 1990 - 1995	1995 - 2000	2000 - 2010	2010 - 2015
SOYBEANS														
ICF KAISER	7,103,000	8,407,000	8,562,000	8,754,000	8,967,000	9,203,000	9,451,000	10,870,000	12,409,000	14,363,000	6.7	2.4	2.8	3.0
MERCER	7,143,043	7,241,258	7,447,102	7,613,099	7,731,025	7,844,080	7,920,474	8,373,142	8,857,703	9,377,310	3.3	1.7	1.1	1.2
WHEAT														
ICF KAISER	4,220,000	5,541,000	5,621,000	5,707,000	5,801,000	5,903,000	6,006,000	6,544,000	7,076,000	7,613,000	0.1	1.6	1.7	1.5
MERCER	7,673,671	7,172,269	7,564,737	7,731,365	7,741,714	7,780,553	7,845,699	8,008,793	8,236,086	8,504,558	1.1	0.4	0.5	0.6
LUMBER PRODUCTS														
ICF KAISER	5,150,000	5,678,000	5,830,000	5,992,000	6,153,000	6,364,000	6,576,000	7,677,000	8,744,000	9,809,000	1.9	3.0	2.9	2.3
MERCER	5,841,886	6,133,980	6,225,990	6,319,379	6,414,171	6,510,383	6,575,487	6,628,091	6,667,859	6,694,530	-0.9	2.0	0.1	0.1
PULPWOOD														
ICF KAISER	3,362,000	3,903,000	4,030,000	4,138,000	4,247,000	4,359,000	4,474,000	5,084,000	5,750,000	6,453,000	6.7	2.8	2.5	2.3
MERCER	3,620,685	3,749,056	3,898,112	4,054,535	4,238,222	4,434,053	4,537,704	5,091,926	5,713,885	6,416,519	4.3	3.8	2.3	2.4
AUTOMOBILES														
ICF KAISER	1,561,000	1,629,000	1,650,000	1,672,000	1,697,000	1,726,000	1,755,000	1,923,000	2,129,000	2,370,000	0.6	1.5	2.0	2.2
MERCER	1,649,906	1,719,596	1,689,176	1,657,582	1,623,082	1,606,103	1,578,607	1,596,682	1,630,662	1,686,947	0.7	-0.7	0.3	0.7
IRON & STEEL														
ICF KAISER	6,997,000	8,209,000	8,318,000	8,420,000	8,520,000	8,629,000	8,741,000	9,366,000	9,982,000	10,620,000	6	1.3	1.3	1.2
MERCER	7,847,307	8,389,608	8,258,733	8,296,489	8,447,556	8,563,148	8,635,051	9,068,333	9,423,787	9,811,578	3.1	1.6	0.9	0.8

COMPARISON OF ICF KAISER COMMODITY FORECASTS WITH MERCER FORECASTS
(Commodity Forecast Aggregated Over All Applicable Routes)

NOTES

1. ICF KAISER commodity forecast covers the major routes while the MERCER forecast covers all routes, hence the commodity estimates are not directly comparable. However, the growth rates over time provide a more suitable basis for comparison.

2. In the ICF Kaiser forecast, 1995 data were reported data; whereas in the Mercer forecast, 1995 data were forecasts.

COMMODITY	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	Compound Average Annual Growth Rates 1990 - 1995	1995 - 2000	2000 - 2010	2010 - 2015
MINERALS, MISC.														
ICF KAISER	5,206,000	4,743,000	4,708,000	4,671,000	4,641,000	4,618,000	4,600,000	4,585,000	4,597,000	4,656,000	1.9	-0.6	0.0	0.3
MERCER	7,097,039	7,782,205	6,281,040	7,277,030	7,297,381	7,338,116	7,363,312	7,546,502	779,399	8,119,478	4.6	0.6	0.6	0.8
PHOSPHATES														
ICF KAISER	7,591,000	7,326,000	7,256,000	7,288,000	7,277,000	7,248,000	7,229,000	7,245,000	7,325,000	7,375,000	1.1	-0.3	0.1	0.1
MERCER	8,993,145	9,892,459	10,189,230	10,494,910	10,810,200	11,133,590	11,356,730	11,526,720	11,699,990	11,816,990	3.8	4.0	0.3	0.2
FERTILIZERS, OTHER														
ICF KAISER	5,240,000	5,497,000	5,545,000	5,606,000	5,669,000	5,734,000	5,800,000	6,190,000	6,624,000	7,057,000	2.4	1.1	1.3	1.3
MERCER	6,443,764	6,621,425	6,820,589	7,053,700	7,292,694	7,500,756	7,631,365	8,224,737	8,942,917	9,802,635	3.5	2.9	1.6	1.9
ALUMINE/BAUXITE														
ICF KAISER	585,000	434,000	425,000	427,000	430,000	432,000	435,000	460,000	484,000	523,000	-28.1	0.1	1.1	1.6
MERCER	909,621	863,860	892,873	915,992	930,136	945,078	958,883	1,014,205	1,023,169	1,035,278	-23.4	0.9	0.7	0.2
ORES, OTHER														
ICF KAISER	4,956,000	5,667,000	5,728,000	5,814,000	5,921,000	6,042,000	6,170,000	6,970,000	7,914,000	9,163,000	7.1	1.7	2.5	3.0
MERCER	5,570,386	5,688,700	5,765,324	5,831,428	5,921,546	6,045,887	6,107,684	6,437,120	6,805,644	7,223,864	2.9	1.6	1.1	1.2
SCRAP METAL														
ICF KAISER	1,614,000	1,646,000	1,742,000	1,828,000	1,934,000	2,065,000	2,200,000	2,966,000	3,805,000	4,715,000	-4.3	6.0	5.6	4.4
MERCER	1,668,350	1,592,626	1,622,075	1,658,319	1,692,925	1,738,032	1,758,686	1,865,988	1,980,381	2,102,388	-6.4	0.9	1.2	1.2
METALS, OTHER														
ICF KAISER	1,746,000	1,582,000	1,639,000	1,697,000	1,761,000	1,843,000	1,928,000	2,447,000	3,025,000	3,691,000	-3.9	4.0	4.6	4.1
MERCER	1,947,400	2,040,004	2,115,574	2214510	2,302,051	2,404,606	2,463,689	2,787,706	3,165,689	3,607,507	0.04	4.0	2.5	2.7
SUGAR														

COMPARISON OF ICF KAISER COMMODITY FORECASTS WITH MERCER FORECASTS
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2. In the ICF Kaiser forecast, 1995 data were reported data; whereas in the Mercer forecast, 1995 data were forecasts.

COMMODITY	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	Compound Average Annual Growth Rates 1990 - 1995	1995 - 2000	2000 - 2010	2010 - 2015
ICF KAISER	1,819,000	2,148,000	2,148,000	2,172,000	2,201,000	2,233,000	2,266,000	2,489,000	2,766,000	3,130,000	-4.7	1.1	2.0	2.5
MERCER	2,660,823	2,726,459	2,774,894	2,809,794	2,839,083	2,898,939	2,945,490	2,999,623	3,057,793	3,124,985	-5.7	1.2	0.4	0.4
PETROLEUM														
ICF KAISER	9,360,000	10,664,000	10,555,000	10,484,000	10,434,000	10,370,000	10,318,000	10,246,000	10,373,000	10,757,000	3.6	-0.7	0.1	0.7
MERCER	9,761,962	9,912,510	10,088,150	10,241,730	10,355,870	10,429,480	10,494,490	10,904,260	11,339,600	11,800,880	1.4	1.2	0.8	0.8
PETROLEUM RESID.														
ICF KAISER	2,848,000	2,528,000	2,593,000	2,670,000	2,756,000	2,850,000	2,951,000	3,584,000	4,314,000	5,190,000	-9.6	3.1	3.9	3.8
MERCER	3,065,997	2,606,097	2,527,930	2,452,077	2,378,515	2,307,159	2,237,945	2,215,565	2,193,409	2,171,476	-13.9	-5.1	-0.2	-0.2
PETROLEUM COKE														
ICF KAISER	2,848,000	2,209,000	2,119,000	2,056,000	1,993,000	1,937,000	1,885,000	1,684,000	1,578,000	1,558,000	-6	-3.1	-1.8	-0.3
MERCER	3,116,840	3,196,130	3,258,951	3,384,111	3,404,912	3,440,594	3,475,620	3,657,483	3,851,258	4,057,958	-0.2	1.8	1.0	1.1
PETROLEUM PRODUCTS														
ICF KAISER	8,646,000	9,346,000	9,788,000	10,279,000	10,824,000	11,419,000	12,064,000	16,254,000	22,039,000	30,217,000	10.1	5.2	6.2	6.5
MERCER	11,017,430	11,896,630	12,013,150	12,279,880	12,519,440	12,729,550	12,867,340	13,625,360	14,476,970	15,474,290	10.5	2.6	1.2	1.3
PAPER														
ICF KAISER	1,481,000	1,154,000	1,192,000	1,230,000	1,270,000	1,315,000	1,360,000	1,619,000	1,877,000	2,163,000	1.7	3.3	3.3	2.9
MERCER	1,792,815	1,538,176	1,612,172	1,706,239	1,802,916	1,904,083	1,854,252	2,255,981	2,605,750	3,011,545	2	1.5	2.9	2.9

COMPARISON OF ICF KAISER COMMODITY FORECASTS WITH MERCER FORECASTS
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2. In the ICF Kaiser forecast, 1995 data were reported data; whereas in the Mercer forecast, 1995 data were forecasts.

COMMODITY	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	Compound Average Annual Growth Rates 1990 - 1995	1995 - 2000	2000 - 2010	2010 - 2015
FOOD & AGRICULTURE														
ICF KAISER	2,807,000	3,118,000	3,181,000	3,250,000	3,319,000	3,389,000	3,463,000	3,944,000	4,530,000	5,303,000	7.7	2.1	2.7	3.2
MERCER	3,690,717	3,819,295	3,989,077	4,205,300	4,418,071	4,613,759	4,724,046	5,323,560	6,013,282	6,809,152	5.4	4.2	2.4	2.5
ALL OTHER														
ICF KAISER	1,958,000	1,956,000	2,018,000	2,083,000	2,153,000	2,227,000	2,307,000	2,805,000	3,402,000	4,117,000	5.9	3.4	4.0	3.9
MERCER	2,463,234	2,541,653	2,635,418	2,739,349	2,842,789	2,941,376	3,047,932	3,643,624	4,360,155	5,223,136	5.9	3.6	3.7	3.7
CONTAINERIZED CARGO														
ICF KAISER	19,922,000	21,603,000	22,285,000	23,000,000	23,770,000	24,648,000	25,557,000	30,477,000	36,264,000	42,851,000	3.7	3.4	3.6	3.4
MERCER	22,435,800	23,041,590	23,611,360	24,232,950	24,827,010	25,397,680	25,883,080	28,466,220	31,331,990	34,514,010	2.1	2.4	1.9	2.0
TOTAL FOR ALL COMMODITIES														
ICF KAISER (All Major Routes)	146,871,000	166,322,000	168,625,000	171,801,000	175,154,000	178,919,000	182,885,000	206,227,000	233,541,000	266,407,000	4.2	1.9	2.5	2.7
*ICF KAISER (All Routes) **	170,538,000	190,303,000	192,939,000	196,573,000	200,409,000	204,717,000	209,254,000	235,962,000	267,215,000	304,819,000	3.9	1.9	2.5	2.7
MERCER	170,538,000	181,350,500	178,454,800	182,226,500	185,926,400	189,619,800	192,081,900	203,889,700	216,876,000	231,618,000	2.9	1.2	1.2	1.3

** Assuming overall growth rates for all minor routes follow the same pattern of those of the major routes*

Appendix B: Detailed Forecast Information

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Baseline Scenario : No Change in Tolls

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	81,728	85,597	82,497	78,602	85,625	100,817	104,146	105,606	107,016	108,577	110,196	119,497	128,959	139,319	4.3	1.8	1.6	1.5	1.6
Coal and Coke	7,893	8,041	8,504	7,482	8,961	10,926	11,107	11,132	11,132	11,119	11,110	11,137	11,159	11,204	6.7	0.3	0.0	0.0	0.1
Soybeans	6,090	6,267	7,220	7,863	7,103	8,407	8,770	8,966	9,183	9,424	9,678	11,124	12,691	14,678	6.7	2.9	2.8	2.7	3.0
Wheat	5,504	5,731	5,397	3,981	4,220	5,541	5,762	5,849	5,946	6,051	6,156	6,708	7,252	7,803	0.1	2.1	1.7	1.6	1.5
Corn	13,980	15,013	14,344	16,007	15,847	23,623	24,212	24,589	24,901	25,235	25,580	27,536	29,702	32,142	11.1	1.6	1.5	1.5	1.6
Other Grains	2,880	3,086	3,136	3,008	2,646	3,706	3,891	3,953	4,032	4,125	4,218	4,688	5,128	5,538	5.2	2.6	2.1	1.8	1.6
Lumber Products	5,165	5,594	5,416	5,142	5,150	5,678	5,955	6,098	6,241	6,438	6,637	7,656	8,603	9,511	1.9	3.2	2.9	2.4	2.0
Pulpwood	2,818	2,812	3,505	3,496	3,362	3,903	4,103	4,181	4,261	4,343	4,428	4,892	5,326	5,764	6.7	2.6	2.0	1.7	1.6
Iron and Steel	6,127	6,920	5,656	4,607	6,997	8,209	8,514	8,607	8,696	8,798	8,902	9,499	10,047	10,610	6.0	1.6	1.3	1.1	1.1
Misc. Minerals	4,318	4,209	3,269	3,154	5,206	4,743	4,860	4,893	4,925	4,960	4,996	5,218	5,380	5,536	1.9	1.0	0.9	0.6	0.6
Phosphates	6,951	8,090	7,412	6,045	7,591	7,326	7,432	7,464	7,452	7,421	7,401	7,414	7,492	7,539	1.1	0.2	0.0	0.2	0.1
Other Fertilizers	4,872	4,243	4,245	4,540	5,240	5,497	5,710	5,784	5,857	5,933	6,011	6,446	6,822	7,183	2.4	1.8	1.4	1.1	1.0
Alumina/Bauxite	2,259	1,673	737	546	585	434	452	467	483	500	518	629	723	840	-28.1	3.6	4.0	2.8	3.0
Other Ores	4,019	4,701	4,974	4,713	4,956	5,667	5,925	6,032	6,151	6,273	6,400	7,164	7,908	8,765	7.1	2.5	2.3	2.0	2.1
Scrap Metals	2,051	2,029	1,376	2,482	1,614	1,646	1,784	1,871	1,979	2,111	2,248	3,023	3,874	4,795	-4.3	6.4	6.1	5.1	4.4
Sugar	2,737	2,838	2,711	1,928	1,819	2,148	2,197	2,198	2,202	2,205	2,209	2,258	2,286	2,327	-4.7	0.6	0.4	0.2	0.4
Petroleum Coke	3,004	2,970	3,250	2,357	2,848	2,209	2,251	2,265	2,280	2,301	2,325	2,484	2,697	2,943	-6.0	1.0	1.3	1.7	1.8
Paper	1,061	1,379	1,346	1,252	1,481	1,154	1,221	1,257	1,295	1,337	1,380	1,620	1,867	2,141	1.7	3.6	3.3	2.9	2.8
Tanker	26,482	25,982	26,414	29,483	31,551	33,582	35,064	35,843	36,677	37,587	38,547	44,388	51,346	60,291	4.9	2.8	2.9	3.0	3.3
Chemicals	3,964	4,686	4,922	5,257	5,591	5,960	6,204	6,341	6,480	6,640	6,798	7,629	8,340	9,007	8.5	2.7	2.3	1.8	1.6
Petroleum Chemicals	1,457	1,841	1,211	1,694	2,301	1,967	2,084	2,179	2,277	2,385	2,494	3,028	3,528	3,993	6.2	4.9	4.0	3.1	2.5
Crude Petroleum	8,933	7,646	7,590	7,995	9,360	10,664	11,006	11,097	11,203	11,322	11,455	12,402	13,771	15,768	3.6	1.4	1.6	2.1	2.7
Petroleum Residual	4,194	3,566	4,434	4,102	2,848	2,528	2,657	2,723	2,796	2,873	2,956	3,462	4,021	4,695	-9.6	3.2	3.2	3.0	3.1
Petroleum Products	5,778	6,260	6,271	8,264	8,646	9,346	9,860	10,179	10,522	10,892	11,288	13,805	17,023	21,389	10.1	3.8	4.1	4.3	4.7
Other Food & Agriculture	2,155	1,983	1,986	2,171	2,807	3,118	3,253	3,324	3,399	3,475	3,556	4,062	4,663	5,440	7.7	2.7	2.7	2.8	3.1
General Cargo/Reefer	7,513	8,129	7,851	7,904	8,212	8,690	9,060	9,264	9,494	9,757	10,028	11,579	13,192	14,945	3.0	2.9	2.9	2.6	2.5
Bananas	1,149	1,563	1,647	1,446	1,686	2,093	2,182	2,223	2,269	2,315	2,362	2,616	2,870	3,145	12.7	2.4	2.1	1.9	1.8
Other Reefer	2,964	2,975	2,744	2,569	2,822	3,059	3,172	3,257	3,350	3,462	3,575	4,167	4,781	5,410	0.6	3.2	3.1	2.8	2.5
Other Metals	1,935	1,912	1,696	1,823	1,746	1,582	1,660	1,696	1,737	1,793	1,851	2,215	2,566	2,946	-3.9	3.2	3.7	3.0	2.8
All Others	1,466	1,679	1,764	2,066	1,958	1,956	2,046	2,089	2,137	2,187	2,241	2,582	2,975	3,444	5.9	2.8	2.9	2.9	3.0
RoRo/Vehicles																			
Automotives	1,580	1,500	1,490	1,488	1,561	1,629	1,680	1,688	1,694	1,709	1,723	1,796	1,885	1,990	0.6	1.1	0.8	1.0	1.1
Containerized Cargo																			
Containerized Cargo	18,021	18,573	19,197	18,918	19,922	21,603	23,023	23,957	24,932	26,044	27,190	33,340	40,406	48,375	3.7	4.7	4.2	3.9	3.7
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	176,359	179,813	183,674	187,685	210,601	235,787	264,921	4.2	2.4	2.3	2.3	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Major Routes (in Thousands of Long Tons)
Baseline Scenario : No Change in Tolls

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	48,402	53,643	51,080	50,664	50,695	60,920	63,049	64,360	65,541	66,894	68,283	75,730	83,811	92,475	4.7	2.3	2.1	2.0	2.0
East Asia to US East	9,692	9,683	9,933	10,213	12,221	12,519	12,973	13,110	13,237	13,378	13,521	14,275	15,023	15,834	5.3	1.6	1.1	1.0	1.1
South Am. West to US East	8,705	6,243	5,178	5,381	9,378	9,006	9,226	9,221	9,220	9,216	9,215	9,266	9,323	9,418	0.7	0.5	0.1	0.1	0.2
Canada to Europe	7,537	7,466	6,592	5,530	6,360	8,074	8,350	8,426	8,499	8,571	8,643	9,035	9,375	9,690	1.4	1.4	0.9	0.7	0.7
South Am. West to Europe	6,280	6,350	6,156	6,327	7,008	7,642	7,857	7,889	7,928	7,968	8,009	8,237	8,395	8,544	4.0	0.9	0.6	0.4	0.4
US West to Europe	5,647	5,918	6,933	5,584	5,387	5,096	5,299	5,390	5,489	5,598	5,710	6,322	6,978	7,663	-2.0	2.3	2.1	2.0	1.9
US East to South & SE Asia	3,621	5,351	5,101	5,745	6,084	7,111	7,561	7,956	8,352	8,804	9,271	11,795	14,729	18,109	14.5	5.4	4.9	4.5	4.2
US East to South Am. West	4,360	4,709	4,786	5,229	5,537	7,440	8,102	8,501	8,966	9,482	10,028	13,292	17,201	21,977	11.3	6.2	5.8	5.3	5.0
US East to Central Am./Carib.	4,396	4,171	4,360	3,639	3,312	3,949	4,307	4,591	4,889	5,218	5,568	7,703	10,259	13,619	-2.1	7.1	6.7	5.9	5.8
South Am. West to Central Am./Carib.	5,001	3,818	2,928	4,324	2,953	2,589	2,658	2,660	2,665	2,668	2,673	2,709	2,727	2,747	-12.3	0.6	0.3	0.1	0.1
South Am. East to South Am. West	1,845	3,104	3,300	2,990	3,287	5,272	5,494	5,563	5,642	5,728	5,818	6,350	6,882	7,444	23.4	2.0	1.8	1.6	1.6
US East to Oceania	2,692	3,003	3,040	3,099	3,442	3,986	4,123	4,174	4,260	4,340	4,423	4,885	5,412	6,007	8.2	2.1	2.0	2.1	2.1
Europe to US West	3,698	3,196	2,695	2,415	3,246	2,965	3,064	3,082	3,093	3,113	3,131	3,210	3,236	3,232	-4.3	1.1	0.5	0.2	0.0
South Am. East to US West	1,926	3,149	3,036	2,476	3,305	3,869	4,126	4,287	4,455	4,644	4,847	6,143	7,752	9,942	15.0	4.6	4.9	4.8	5.1
South & SE Asia to US East	2,799	2,855	2,925	2,982	3,135	2,984	3,104	3,144	3,178	3,221	3,263	3,469	3,634	3,777	1.3	1.8	1.2	0.9	0.8
Centl Am./Carib. to Centl Am./Carib.	2,446	2,074	3,012	2,939	2,784	3,304	3,396	3,408	3,425	3,442	3,460	3,609	3,716	3,846	6.2	0.9	0.8	0.6	0.7
Oceania to US East	3,844	3,315	2,307	2,091	2,096	1,925	1,979	1,984	1,989	1,994	1,999	2,023	2,042	2,058	-12.9	0.8	0.2	0.2	0.2
South Am. East to Central Am./Carib.	1,845	1,878	2,161	2,420	3,213	3,222	3,385	3,473	3,574	3,677	3,785	4,458	5,107	5,842	11.8	3.3	3.3	2.8	2.7
Central Am./Carib. to US East	1,580	1,847	2,330	2,454	3,107	3,003	3,093	3,106	3,117	3,130	3,143	3,229	3,284	3,345	13.7	0.9	0.5	0.3	0.4
Europe to South Am. West	2,093	1,715	1,764	2,217	2,751	3,062	3,193	3,222	3,259	3,301	3,343	3,557	3,742	3,918	7.9	1.8	1.3	1.0	0.9
South Am. East to East Asia	1,923	1,457	1,871	1,981	1,263	2,035	2,102	2,159	2,222	2,299	2,378	2,884	3,330	3,806	1.1	3.2	3.9	2.9	2.7
Central Am./Carib. to East Asia	1,968	1,912	1,945	1,305	1,641	1,463	1,497	1,496	1,498	1,498	1,500	1,535	1,567	1,611	-5.8	0.5	0.5	0.4	0.6
Central Am./Carib. to South Am. West	1,021	755	1,017	890	1,470	1,651	1,723	1,745	1,773	1,805	1,839	2,048	2,263	2,520	10.1	2.2	2.2	2.0	2.2
East Asia to Central Am./Carib.	1,127	1,048	1,164	1,283	864	869	927	969	1,018	1,070	1,125	1,463	1,880	2,401	-5.1	5.3	5.4	5.2	5.0
South Am. West to South Am. East	224	328	860	1,075	1,189	1,067	1,088	1,113	1,144	1,178	1,214	1,453	1,762	2,180	36.6	2.6	3.7	3.9	4.3
US West to South Am. East	344	378	376	444	274	522	527	553	588	628	672	970	1,310	1,757	8.7	5.2	7.6	6.2	6.0
East Asia to South Am. East	162	268	302	374	333	399	389	400	413	429	445	551	650	765	19.8	2.2	4.4	3.4	3.3
Central Am./Carib. to South Am. East	144	145	296	323	536	378	382	380	379	379	380	400	397	396	21.2	0.1	1.1	-0.2	0.0
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	176,359	179,813	183,674	187,685	210,601	235,787	264,921	4.2	2.4	2.3	2.3	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Baseline Scenario : No Change in Tolls

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	104.3	109.8	106.6	111.7	121.1	138.7	143.3	145.4	147.4	149.6	152.0	165.3	178.6	193.1	5.9	1.8	1.7	1.6	1.6
Coal and Coke	9.2	9.7	10.3	9.9	12.2	14.8	15.1	15.1	15.1	15.1	15.1	15.1	15.2	15.3	10.0	0.4	0.1	0.1	0.1
Soybeans	7.0	7.2	8.3	9.9	9.1	10.5	11.0	11.2	11.5	11.8	12.1	14.0	16.0	18.6	8.6	2.9	2.9	2.7	3.0
Wheat	6.4	6.7	6.1	5.3	5.4	6.9	7.2	7.3	7.4	7.5	7.7	8.4	9.1	9.8	1.4	2.2	1.8	1.6	1.5
Corn	15.7	16.8	16.1	19.8	19.6	29.3	30.0	30.5	30.9	31.3	31.7	34.2	37.0	40.1	13.2	1.6	1.5	1.6	1.6
Other Grains	3.4	3.6	3.8	4.0	3.5	4.8	5.1	5.1	5.3	5.4	5.5	6.1	6.7	7.3	7.5	2.7	2.2	1.8	1.6
Lumber Products	9.2	10.1	10.5	11.1	11.1	11.5	12.1	12.3	12.6	13.0	13.4	15.5	17.4	19.2	4.4	3.2	2.9	2.3	2.0
Pulpwood	3.6	3.5	4.6	5.0	4.9	5.5	5.8	5.9	6.0	6.2	6.3	6.9	7.6	8.2	9.0	2.6	2.0	1.7	1.6
Iron and Steel	9.6	10.8	9.1	8.4	11.7	13.5	14.0	14.1	14.2	14.4	14.5	15.3	16.1	16.8	7.1	1.4	1.1	0.9	0.9
Misc. Minerals	5.1	4.9	3.9	4.2	6.6	6.1	6.2	6.3	6.3	6.4	6.4	6.7	7.0	7.2	3.6	1.1	1.0	0.7	0.6
Phosphates	7.8	9.2	8.6	7.6	9.6	9.1	9.2	9.2	9.2	9.1	9.1	9.1	9.2	9.3	2.9	0.2	0.0	0.2	0.1
Other Fertilizers	6.6	5.6	5.5	6.5	7.6	7.5	7.8	7.8	7.9	8.0	8.1	8.7	9.1	9.6	2.5	1.7	1.3	1.0	0.9
Alumina/Bauxite	2.5	1.9	0.9	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.8	1.0	1.1	-25.4	3.5	3.9	2.7	3.0
Other Ores	5.0	5.9	6.4	6.5	6.7	7.5	7.9	8.0	8.2	8.4	8.5	9.6	10.6	11.7	8.4	2.5	2.3	2.0	2.1
Scrap Metals	2.5	2.5	1.7	3.5	2.3	2.2	2.3	2.5	2.6	2.8	2.9	4.0	5.1	6.3	-3.2	6.4	6.1	5.1	4.4
Sugar	3.4	3.5	3.3	2.6	2.5	2.8	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	-3.6	0.6	0.4	0.2	0.3
Petroleum Coke	3.4	3.4	3.8	3.2	3.7	2.9	2.9	2.9	3.0	3.0	3.0	3.2	3.5	3.8	-3.3	1.1	1.4	1.7	1.8
Paper	3.9	4.2	3.6	3.5	3.7	3.3	3.5	3.6	3.7	3.8	3.9	4.5	5.2	5.9	-3.1	3.5	3.1	2.7	2.6
Tanker	35.6	35.5	35.8	41.7	44.7	47.0	49.1	50.2	51.3	52.6	54.0	62.2	71.9	84.5	5.7	2.8	2.9	3.0	3.3
Chemicals	4.9	6.0	6.4	7.4	7.8	8.1	8.5	8.6	8.8	9.0	9.2	10.3	11.3	12.1	10.5	2.6	2.3	1.7	1.5
Petroleum Chemicals	1.7	2.2	1.5	2.4	3.1	2.7	2.8	2.9	3.1	3.2	3.4	4.1	4.7	5.3	8.9	4.7	3.9	3.0	2.5
Crude Petroleum	10.2	9.0	9.1	10.0	12.0	13.5	13.9	14.0	14.1	14.3	14.5	15.7	17.4	19.8	5.7	1.5	1.6	2.1	2.7
Petroleum Residual	4.9	4.4	5.4	5.2	3.7	3.2	3.4	3.5	3.6	3.7	3.8	4.5	5.2	6.1	-8.1	3.3	3.3	3.1	3.2
Petroleum Products	8.7	9.5	9.4	12.5	13.4	14.4	15.2	15.7	16.2	16.8	17.4	21.2	26.1	32.7	10.7	3.8	4.1	4.2	4.6
Other Food & Agriculture	5.1	4.4	4.0	4.3	4.7	5.1	5.3	5.4	5.5	5.6	5.7	6.5	7.3	8.4	0.0	2.4	2.4	2.5	2.9
General Cargo/Reefer	24.6	27.6	26.8	27.3	28.8	30.7	31.9	32.5	33.3	34.1	35.0	39.7	44.7	50.0	4.5	2.7	2.6	2.4	2.3
Bananas	5.4	7.4	7.8	6.5	7.5	9.0	9.4	9.6	9.8	10.0	10.2	11.3	12.4	13.6	11.0	2.4	2.1	1.9	1.8
Other Reefer	10.2	10.8	10.1	10.3	10.7	11.5	11.9	12.2	12.6	13.1	13.5	15.8	18.3	20.7	2.5	3.3	3.2	2.9	2.6
Other Metals	3.0	3.0	2.9	3.2	3.1	2.7	2.8	2.9	2.9	3.0	3.1	3.6	4.1	4.7	-2.2	2.9	3.3	2.7	2.6
All Others	6.0	6.4	6.0	7.3	7.5	7.5	7.7	7.8	7.9	8.1	8.2	9.0	9.9	10.9	4.4	1.9	1.8	1.9	2.1
RoRo/Vehicles																			
Automotives	32.9	31.5	31.0	35.4	37.8	37.0	38.1	38.3	38.5	38.9	39.3	41.3	43.6	46.1	2.4	1.3	1.0	1.1	1.2
Containerized Cargo																			
Containerized Cargo	63.0	63.0	64.5	71.2	72.3	77.1	82.2	85.6	89.1	93.1	97.3	119.7	145.8	175.5	4.1	4.8	4.2	4.0	3.8
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	352.0	359.7	368.4	377.5	428.2	484.5	549.2	4.9	2.7	2.6	2.5	2.5
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	53.1	54.3	55.6	57.0	64.6	73.1	82.9	3.7	2.7	2.6	2.5	2.5
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	85.2	87.1	89.2	91.4	103.6	117.3	132.9	9.0	2.7	2.6	2.5	2.5
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	490.4	501.0	513.2	525.8	596.5	674.9	765.0	5.4	2.7	2.6	2.5	2.5
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	2.1%	2.2%	2.4%	2.5%								

Estimates of PCC Tolls by Major Routes (in Millions of US Dollars)
Baseline Scenario : No Change in Tolls

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	65.6	73.3	70.8	77.6	78.4	90.4	93.9	96.3	98.6	101.2	103.9	118.0	133.1	149.0	6.6	2.8	2.6	2.4	2.3
East Asia to US East	42.8	40.4	38.6	41.3	44.9	42.8	44.2	44.3	44.4	44.6	44.8	45.7	46.2	46.7	0.0	0.9	0.4	0.2	0.2
South Am. West to US East	18.2	14.8	13.8	14.5	18.8	18.1	18.7	18.9	19.1	19.2	19.4	20.4	21.3	22.4	-0.1	1.4	1.0	1.0	1.0
Canada to Europe	9.3	9.4	8.4	7.7	8.4	10.5	10.9	11.0	11.1	11.2	11.3	11.8	12.2	12.6	2.4	1.4	0.9	0.7	0.7
South Am. West to Europe	13.0	15.0	14.8	15.3	17.1	19.3	19.9	20.0	20.2	20.4	20.5	21.4	22.1	22.8	8.2	1.3	0.8	0.7	0.6
US West to Europe	8.9	9.5	11.1	9.9	10.2	10.0	10.5	10.8	11.1	11.5	11.8	13.7	15.6	17.7	2.3	3.5	3.0	2.7	2.5
US East to South & SE Asia	6.3	8.5	8.2	10.6	11.6	13.4	14.3	15.1	16.0	16.9	17.9	23.3	29.6	36.7	16.5	5.9	5.4	4.9	4.4
US East to South Am. West	12.3	12.2	13.3	14.8	15.6	18.9	20.9	22.1	23.5	25.1	26.8	36.7	49.1	64.3	9.0	7.2	6.5	6.0	5.5
US East to Central Am./Carib.	5.7	5.4	5.8	5.5	4.9	5.6	6.1	6.6	7.0	7.5	8.0	11.3	15.2	20.5	-0.3	7.5	7.0	6.2	6.1
South Am. West to Central Am./Carib.	6.2	4.9	3.9	6.1	4.9	4.4	4.5	4.5	4.6	4.6	4.6	4.8	4.9	5.0	-6.6	1.0	0.7	0.5	0.5
South Am. East to South Am. West	3.0	4.7	4.8	5.3	5.9	8.9	9.4	9.5	9.7	9.9	10.2	11.4	12.8	14.3	24.5	2.7	2.4	2.3	2.2
US East to Oceania	5.0	5.2	5.4	6.0	6.5	7.5	7.9	8.0	8.3	8.5	8.7	10.0	11.5	13.2	8.6	3.0	2.8	2.8	2.7
Europe to US West	14.4	12.3	11.9	12.7	14.6	13.4	13.7	13.7	13.6	13.5	13.5	13.1	12.6	12.0	-1.4	0.1	-0.5	-0.8	-0.9
South Am. East to US West	2.7	4.3	4.0	3.5	4.6	5.3	5.6	5.8	6.0	6.2	6.5	8.2	10.2	13.0	14.2	4.4	4.7	4.5	4.9
South & SE Asia to US East	9.4	10.7	10.1	11.5	10.6	11.0	11.4	11.5	11.7	11.8	12.0	12.6	13.2	13.6	3.1	1.7	1.1	0.8	0.7
Centl Am./Carib. to Centl Am./Carib.	4.2	3.7	4.4	4.6	4.6	5.8	6.0	6.0	6.1	6.1	6.2	6.5	6.8	7.1	6.9	1.2	1.1	0.8	0.9
Oceania to US East	5.8	5.4	4.2	4.2	4.6	4.2	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.5	-6.1	0.7	0.2	0.1	0.1
South Am. East to Central Am./Carib.	2.5	2.8	3.1	3.3	4.7	4.8	5.0	5.1	5.3	5.5	5.6	6.6	7.6	8.8	14.0	3.3	3.4	2.8	2.8
Central Am./Carib. to US East	2.0	2.6	3.1	3.4	4.2	3.9	4.0	4.0	4.0	4.0	4.1	4.2	4.2	4.3	13.8	0.9	0.5	0.3	0.3
Europe to South Am. West	7.9	7.5	7.4	8.4	9.3	10.3	10.8	11.0	11.2	11.4	11.6	12.7	13.6	14.5	5.4	2.5	1.7	1.4	1.3
South Am. East to East Asia	2.6	2.0	2.4	2.8	2.0	3.0	3.1	3.1	3.2	3.3	3.4	4.1	4.7	5.3	2.5	3.0	3.7	2.7	2.5
Central Am./Carib. to East Asia	2.9	2.7	2.6	2.5	2.5	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.6	-5.3	0.9	0.9	0.8	0.9
Central Am./Carib. to South Am. West	2.4	2.1	2.4	2.3	3.7	3.9	4.2	4.3	4.4	4.5	4.7	5.6	6.6	7.8	10.1	3.6	3.6	3.4	3.4
East Asia to Central Am./Carib.	5.1	5.1	5.3	6.8	5.8	6.0	6.3	6.4	6.7	6.9	7.1	8.6	10.5	12.8	3.2	3.6	3.9	4.0	4.1
South Am. West to South Am. East	0.7	0.9	2.0	2.5	2.6	2.8	2.8	2.9	3.1	3.3	3.4	4.6	6.3	8.6	33.1	4.4	6.1	6.3	6.4
US West to South Am. East	0.4	0.6	0.8	0.8	0.5	1.1	1.1	1.1	1.2	1.3	1.4	2.0	2.8	3.8	18.9	5.7	7.9	6.6	6.3
East Asia to South Am. East	0.7	1.0	1.5	2.6	2.4	2.3	2.3	2.4	2.5	2.6	2.7	3.3	3.9	4.7	28.0	2.8	4.0	3.7	3.5
Central Am./Carib. to South Am. East	0.4	0.4	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	9.9	0.3	0.9	0.0	0.1
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	352.0	359.7	368.4	377.5	428.2	484.5	549.2	4.9	2.7	2.6	2.5	2.5
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	53.1	54.3	55.6	57.0	64.6	73.1	82.9	3.7	2.7	2.6	2.5	2.5
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	85.2	87.1	89.2	91.4	103.6	117.3	132.9	9.0	2.7	2.6	2.5	2.5
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	490.4	501.0	513.2	525.8	596.5	674.9	765.0	5.4	2.7	2.6	2.5	2.5
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	2.1%	2.2%	2.4%	2.5%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 1: Tolls are raised 15% in 1997 and 1998 and remain the same thereafter

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	81,728	85,597	82,497	78,602	85,625	100,817	104,146	94,794	86,599	87,816	89,076	96,242	103,567	111,543	4.3	-2.4	1.6	1.5	1.5
Coal and Coke	7,893	8,041	8,504	7,482	8,961	10,926	11,107	9,497	8,121	8,105	8,093	8,083	8,072	8,081	6.7	-5.8	0.0	0.0	0.0
Soybeans	6,090	6,267	7,220	7,863	7,103	8,407	8,770	8,404	8,085	8,278	8,480	9,614	10,832	12,340	6.7	0.2	2.5	2.4	2.6
Wheat	5,504	5,731	5,397	3,981	4,220	5,541	5,762	5,365	5,024	5,104	5,185	5,601	6,008	6,408	0.1	-1.3	1.6	1.4	1.3
Corn	13,980	15,013	14,344	16,007	15,847	23,623	24,212	23,158	22,115	22,362	22,616	24,039	25,620	27,403	11.1	-0.9	1.2	1.3	1.4
Other Grains	2,880	3,086	3,136	3,008	2,646	3,706	3,891	3,656	3,464	3,541	3,617	3,999	4,362	4,705	5.2	-0.5	2.0	1.8	1.5
Lumber Products	5,165	5,594	5,416	5,142	5,150	5,678	5,955	5,283	4,697	4,851	5,005	5,796	6,537	7,249	1.9	-2.5	3.0	2.4	2.1
Pulpwood	2,818	2,812	3,505	3,496	3,362	3,903	4,103	3,534	3,063	3,128	3,194	3,558	3,904	4,251	6.7	-3.9	2.2	1.9	1.7
Iron and Steel	6,127	6,920	5,656	4,607	6,997	8,209	8,514	7,544	6,704	6,787	6,872	7,356	7,809	8,278	6.0	-3.5	1.4	1.2	1.2
Misc. Minerals	4,318	4,209	3,269	3,154	5,206	4,743	4,860	4,335	3,878	3,907	3,936	4,113	4,246	4,373	1.9	-3.7	0.9	0.6	0.6
Phosphates	6,951	8,090	7,412	6,045	7,591	7,326	7,432	6,655	5,926	5,902	5,885	5,896	5,957	5,993	1.1	-4.3	0.0	0.2	0.1
Other Fertilizers	4,872	4,243	4,245	4,540	5,240	5,497	5,710	5,048	4,477	4,539	4,602	4,952	5,260	5,557	2.4	-3.5	1.5	1.2	1.1
Alumina/Bauxite	2,259	1,673	737	546	585	434	452	405	364	377	391	477	552	646	-28.1	-2.0	4.0	3.0	3.2
Other Ores	4,019	4,701	4,974	4,713	4,956	5,667	5,925	5,157	4,517	4,610	4,707	5,281	5,846	6,494	7.1	-3.6	2.3	2.1	2.1
Scrap Metals	2,051	2,029	1,376	2,482	1,614	1,646	1,784	1,669	1,576	1,681	1,791	2,410	3,091	3,828	-4.3	1.7	6.1	5.1	4.4
Sugar	2,737	2,838	2,711	1,928	1,819	2,148	2,197	1,876	1,612	1,615	1,619	1,657	1,679	1,710	-4.7	-5.5	0.5	0.3	0.4
Petroleum Coke	3,004	2,970	3,250	2,357	2,848	2,209	2,251	2,106	1,974	1,991	2,010	2,141	2,320	2,526	-6.0	-1.9	1.3	1.6	1.7
Paper	1,061	1,379	1,346	1,252	1,481	1,154	1,221	1,102	1,003	1,037	1,073	1,269	1,473	1,700	1.7	-1.5	3.4	3.0	2.9
Tanker	26,482	25,982	26,414	29,483	31,551	33,582	35,064	31,662	28,949	29,751	30,594	35,643	41,671	49,388	4.9	-1.8	3.1	3.2	3.5
Chemicals	3,964	4,686	4,922	5,257	5,591	5,960	6,204	6,122	6,070	6,227	6,383	7,180	7,880	8,534	8.5	1.4	2.4	1.9	1.6
Petroleum Chemicals	1,457	1,841	1,211	1,694	2,301	1,967	2,084	2,156	2,234	2,342	2,450	2,980	3,478	3,940	6.2	4.5	4.0	3.1	2.5
Crude Petroleum	8,933	7,646	7,590	7,995	9,360	10,664	11,006	9,150	7,625	7,705	7,794	8,423	9,327	10,640	3.6	-6.1	1.6	2.1	2.7
Petroleum Residual	4,194	3,566	4,434	4,102	2,848	2,528	2,657	2,354	2,105	2,166	2,230	2,628	3,078	3,626	-9.6	-2.5	3.3	3.2	3.3
Petroleum Products	5,778	6,260	6,271	8,264	8,646	9,346	9,860	8,830	8,019	8,338	8,680	10,867	13,731	17,681	10.1	-1.5	4.6	4.8	5.2
Other Food & Agriculture	2,155	1,983	1,986	2,171	2,807	3,118	3,253	3,050	2,895	2,973	3,056	3,564	4,178	4,966	7.7	-0.4	3.1	3.2	3.5
General Cargo/Reefer	7,513	8,129	7,851	7,904	8,212	8,690	9,060	8,818	8,626	8,863	9,108	10,492	11,940	13,510	3.0	0.9	2.9	2.6	2.5
Bananas	1,149	1,563	1,647	1,446	1,686	2,093	2,182	2,182	2,187	2,232	2,277	2,521	2,767	3,032	12.7	1.7	2.1	1.9	1.8
Other Reefer	2,964	2,975	2,744	2,569	2,822	3,059	3,172	3,190	3,215	3,321	3,429	3,995	4,581	5,183	0.6	2.3	3.1	2.8	2.5
Other Metals	1,935	1,912	1,696	1,823	1,746	1,582	1,660	1,514	1,389	1,432	1,476	1,756	2,025	2,317	-3.9	-1.4	3.5	2.9	2.7
All Others	1,466	1,679	1,764	2,066	1,958	1,956	2,046	1,932	1,835	1,878	1,925	2,220	2,566	2,978	5.9	-0.3	2.9	2.9	3.0
RoRo/Vehicles																			
Automotives	1,580	1,500	1,490	1,488	1,561	1,629	1,680	1,688	1,694	1,709	1,723	1,796	1,885	1,990	0.6	1.1	0.8	1.0	1.1
Containerized Cargo																			
Containerized Cargo	18,021	18,573	19,197	18,918	19,922	21,603	23,023	23,957	24,932	26,044	27,190	33,340	40,406	48,375	3.7	4.7	4.2	3.9	3.7
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	160,919	150,800	154,183	157,691	177,514	199,468	224,806	4.2	-1.1	2.4	2.4	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	23,203	21,744	22,231	22,737	25,595	28,761	32,414	2.0	-1.1	2.4	2.4	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	184,122	172,544	176,415	180,428	203,109	228,229	257,220	3.9	-1.1	2.4	2.4	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	-7.0%	-6.3%	2.2%	2.3%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 1: Tolls are raised 15% in 1997 and 1998 and remain the same thereafter

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	48,402	53,643	51,080	50,664	50,695	60,920	63,049	60,898	58,801	60,029	61,287	68,013	75,330	83,210	4.7	0.1	2.1	2.1	2.0
East Asia to US East	9,692	9,683	9,933	10,213	12,221	12,519	12,973	12,074	11,283	11,410	11,539	12,205	12,852	13,537	5.3	-1.6	1.1	1.0	1.0
South Am. West to US East	8,705	6,243	5,178	5,381	9,378	9,006	9,226	7,966	6,956	6,972	6,991	7,121	7,260	7,427	0.7	-4.9	0.4	0.4	0.5
Canada to Europe	7,537	7,466	6,592	5,530	6,360	8,074	8,350	6,806	5,549	5,595	5,641	5,894	6,113	6,316	1.4	-6.9	0.9	0.7	0.7
South Am. West to Europe	6,280	6,350	6,156	6,327	7,008	7,642	7,857	7,090	6,468	6,509	6,549	6,764	6,925	7,075	4.0	-3.0	0.6	0.5	0.4
US West to Europe	5,647	5,918	6,933	5,584	5,387	5,096	5,299	5,152	5,028	5,134	5,241	5,830	6,461	7,120	-2.0	0.6	2.2	2.1	2.0
US East to South & SE Asia	3,621	5,351	5,101	5,745	6,084	7,111	7,561	7,754	7,971	8,405	8,853	11,258	14,052	17,244	14.5	4.5	4.9	4.5	4.2
US East to South Am. West	4,360	4,709	4,786	5,229	5,537	7,440	8,102	7,695	7,422	7,867	8,337	11,151	14,591	18,843	11.3	2.3	6.0	5.5	5.2
US East to Central Am./Carib.	4,396	4,171	4,360	3,639	3,312	3,949	4,307	3,939	3,632	3,882	4,150	5,808	7,830	10,529	-2.1	1.0	7.0	6.2	6.1
South Am. West to Central Am./Carib.	5,001	3,818	2,928	4,324	2,953	2,589	2,658	2,375	2,128	2,132	2,137	2,174	2,195	2,217	-12.3	-3.8	0.3	0.2	0.2
South Am. East to South Am. West	1,845	3,104	3,300	2,990	3,287	5,272	5,494	4,720	4,087	4,153	4,222	4,626	5,037	5,478	23.4	-4.3	1.8	1.7	1.7
US East to Oceania	2,692	3,003	3,040	3,099	3,442	3,986	4,123	3,957	3,846	3,924	4,007	4,456	4,966	5,537	8.2	0.1	2.1	2.2	2.2
Europe to US West	3,698	3,196	2,695	2,415	3,246	2,965	3,064	2,946	2,840	2,861	2,880	2,960	2,991	2,992	-4.3	-0.6	0.6	0.2	0.0
South Am. East to US West	1,926	3,149	3,036	2,476	3,305	3,869	4,126	3,475	2,929	3,052	3,183	4,029	5,074	6,498	15.0	-3.8	4.8	4.7	5.1
South & SE Asia to US East	2,799	2,855	2,925	2,982	3,135	2,984	3,104	2,962	2,839	2,880	2,919	3,110	3,266	3,400	1.3	-0.4	1.3	1.0	0.8
Centl Am./Carib. to Centl Am./Carib.	2,446	2,074	3,012	2,939	2,784	3,304	3,396	2,777	2,281	2,293	2,306	2,413	2,491	2,586	6.2	-6.9	0.9	0.6	0.7
Oceania to US East	3,844	3,315	2,307	2,091	2,096	1,925	1,979	1,925	1,879	1,884	1,889	1,915	1,937	1,956	-12.9	-0.4	0.3	0.2	0.2
South Am. East to Central Am./Carib.	1,845	1,878	2,161	2,420	3,213	3,222	3,385	2,917	2,524	2,597	2,674	3,153	3,618	4,146	11.8	-3.7	3.4	2.8	2.8
Central Am./Carib. to US East	1,580	1,847	2,330	2,454	3,107	3,003	3,093	2,843	2,618	2,629	2,641	2,716	2,767	2,821	13.7	-2.5	0.6	0.4	0.4
Europe to South Am. West	2,093	1,715	1,764	2,217	2,751	3,062	3,193	2,987	2,822	2,865	2,907	3,123	3,314	3,495	7.9	-1.0	1.4	1.2	1.1
South Am. East to East Asia	1,923	1,457	1,871	1,981	1,263	2,035	2,102	1,779	1,511	1,565	1,621	1,975	2,289	2,624	1.1	-4.4	4.0	3.0	2.8
Central Am./Carib. to East Asia	1,968	1,912	1,945	1,305	1,641	1,463	1,497	1,282	1,109	1,111	1,113	1,143	1,170	1,205	-5.8	-5.3	0.5	0.5	0.6
Central Am./Carib. to South Am. West	1,021	755	1,017	890	1,470	1,651	1,723	1,527	1,371	1,402	1,434	1,632	1,846	2,100	10.1	-2.8	2.6	2.5	2.6
East Asia to Central Am./Carib.	1,127	1,048	1,164	1,283	864	869	927	937	959	1,011	1,067	1,406	1,826	2,349	-5.1	4.2	5.7	5.4	5.2
South Am. West to South Am. East	224	328	860	1,075	1,189	1,067	1,088	1,008	946	978	1,013	1,243	1,546	1,959	36.6	-1.0	4.2	4.5	4.8
US West to South Am. East	344	378	376	444	274	522	527	462	413	442	474	690	942	1,274	8.7	-1.9	7.8	6.4	6.2
East Asia to South Am. East	162	268	302	374	333	399	389	339	301	313	325	403	479	567	19.8	-4.0	4.4	3.5	3.4
Central Am./Carib. to South Am. East	144	145	296	323	536	378	382	330	288	288	288	303	301	301	21.2	-5.3	1.0	-0.1	0.0
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	160,919	150,800	154,183	157,691	177,514	199,468	224,806	4.2	-1.1	2.4	2.4	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	23,203	21,744	22,231	22,737	25,595	28,761	32,414	2.0	-1.1	2.4	2.4	2.4
Total PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	184,122	172,544	176,415	180,428	203,109	228,229	257,220	3.9	-1.1	2.4	2.4	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	-7.0%	-6.3%	2.2%	2.3%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Alternative Scenario 1: Tolls are raised 15% in 1997 and 1998 and remain the same thereafter

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	104.3	109.8	106.6	111.7	121.1	138.7	143.3	149.6	156.7	159.0	161.4	175.0	188.7	203.5	5.9	3.1	1.6	1.5	1.5
Coal and Coke	9.2	9.7	10.3	9.9	12.2	14.8	15.1	14.8	14.6	14.6	14.6	14.6	14.6	14.6	10.0	-0.3	0.0	0.0	0.1
Soybeans	7.0	7.2	8.3	9.9	9.1	10.5	11.0	12.1	13.4	13.7	14.0	16.0	18.0	20.6	8.6	5.9	2.6	2.5	2.7
Wheat	6.4	6.7	6.1	5.3	5.4	6.9	7.2	7.7	8.2	8.4	8.5	9.2	9.9	10.5	1.4	4.3	1.6	1.4	1.3
Corn	15.7	16.8	16.1	19.8	19.6	29.3	30.0	33.0	36.2	36.6	37.0	39.4	42.1	45.1	13.2	4.8	1.3	1.3	1.4
Other Grains	3.4	3.6	3.8	4.0	3.5	4.8	5.1	5.4	5.9	6.0	6.2	6.8	7.5	8.1	7.5	5.0	2.1	1.8	1.5
Lumber Products	9.2	10.1	10.5	11.1	11.1	11.5	12.1	12.3	12.6	13.0	13.4	15.6	17.5	19.4	4.4	3.2	3.0	2.4	2.1
Pulpwood	3.6	3.5	4.6	5.0	4.9	5.5	5.8	5.8	5.8	5.9	6.0	6.7	7.4	8.0	9.0	1.7	2.2	1.9	1.7
Iron and Steel	9.6	10.8	9.1	8.4	11.7	13.5	14.0	14.2	14.4	14.6	14.7	15.6	16.4	17.3	7.1	1.7	1.2	1.0	1.0
Misc. Minerals	5.1	4.9	3.9	4.2	6.6	6.1	6.2	6.4	6.6	6.6	6.7	7.0	7.3	7.5	3.6	2.0	1.0	0.7	0.7
Phosphates	7.8	9.2	8.6	7.6	9.6	9.1	9.2	9.4	9.7	9.6	9.6	9.6	9.7	9.8	2.9	1.2	0.0	0.2	0.1
Other Fertilizers	6.6	5.6	5.5	6.5	7.6	7.5	7.8	7.9	8.0	8.1	8.2	8.8	9.3	9.7	2.5	1.8	1.4	1.1	1.0
Alumina/Bauxite	2.5	1.9	0.9	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.8	1.0	1.1	-25.4	3.3	4.0	2.9	3.1
Other Ores	5.0	5.9	6.4	6.5	6.7	7.5	7.9	7.9	8.0	8.1	8.3	9.3	10.3	11.5	8.4	1.9	2.3	2.1	2.1
Scrap Metals	2.5	2.5	1.7	3.5	2.3	2.2	2.3	2.5	2.7	2.9	3.1	4.2	5.4	6.6	-3.2	7.5	6.1	5.1	4.4
Sugar	3.4	3.5	3.3	2.6	2.5	2.8	2.9	2.8	2.8	2.8	2.8	2.9	2.9	3.0	-3.6	0.0	0.5	0.2	0.3
Petroleum Coke	3.4	3.4	3.8	3.2	3.7	2.9	2.9	3.1	3.4	3.4	3.4	3.6	4.0	4.3	-3.3	3.7	1.3	1.6	1.7
Paper	3.9	4.2	3.6	3.5	3.7	3.3	3.5	3.7	3.9	4.0	4.1	4.8	5.6	6.3	-3.1	4.7	3.2	2.8	2.7
Tanker	35.6	35.5	35.8	41.7	44.7	47.0	49.1	50.9	53.4	54.9	56.5	65.9	77.1	91.6	5.7	3.7	3.1	3.2	3.5
Chemicals	4.9	6.0	6.4	7.4	7.8	8.1	8.5	9.5	10.8	11.0	11.3	12.7	13.9	15.0	10.5	6.8	2.3	1.8	1.6
Petroleum Chemicals	1.7	2.2	1.5	2.4	3.1	2.7	2.8	3.3	3.9	4.1	4.3	5.2	6.0	6.8	8.9	9.9	3.9	3.1	2.5
Crude Petroleum	10.2	9.0	9.1	10.0	12.0	13.5	13.9	13.3	12.8	12.9	13.0	14.1	15.6	17.7	5.7	-0.6	1.6	2.0	2.6
Petroleum Residual	4.9	4.4	5.4	5.2	3.7	3.2	3.4	3.5	3.6	3.7	3.8	4.5	5.3	6.3	-8.1	3.3	3.4	3.3	3.4
Petroleum Products	8.7	9.5	9.4	12.5	13.4	14.4	15.2	15.6	16.3	16.9	17.6	22.0	27.8	35.8	10.7	4.1	4.6	4.8	5.2
Other Food & Agriculture	5.1	4.4	4.0	4.3	4.7	5.1	5.3	5.7	6.1	6.3	6.4	7.4	8.6	10.1	0.0	4.8	2.9	3.0	3.3
General Cargo/Reefer	24.6	27.6	26.8	27.3	28.8	30.7	31.9	35.9	40.7	41.7	42.8	48.6	54.6	61.1	4.5	6.9	2.6	2.4	2.3
Bananas	5.4	7.4	7.8	6.5	7.5	9.0	9.4	10.8	12.5	12.7	13.0	14.4	15.8	17.3	11.0	7.5	2.1	1.9	1.8
Other Reefer	10.2	10.8	10.1	10.3	10.7	11.5	11.9	13.8	16.0	16.5	17.1	20.0	23.1	26.3	2.5	8.3	3.2	2.9	2.6
Other Metals	3.0	3.0	2.9	3.2	3.1	2.7	2.8	3.0	3.1	3.2	3.3	3.9	4.4	4.9	-2.2	4.3	3.1	2.6	2.5
All Others	6.0	6.4	6.0	7.3	7.5	7.5	7.7	8.4	9.1	9.2	9.4	10.3	11.3	12.6	4.4	4.6	1.8	2.0	2.1
RoRo/Vehicles																			
Automotives	32.9	31.5	31.0	35.4	37.8	37.0	38.1	44.1	51.0	51.5	52.0	54.6	57.6	61.0	2.4	7.1	1.0	1.1	1.2
Containerized Cargo																			
Containerized Cargo	63.0	63.0	64.5	71.2	72.3	77.1	82.2	98.4	117.8	123.2	128.6	158.4	192.8	232.1	4.1	10.8	4.2	4.0	3.8
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	378.9	419.7	430.3	441.3	502.4	570.8	649.3	4.9	6.0	2.6	2.6	2.6
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	57.2	63.4	65.0	66.6	75.8	86.2	98.0	3.7	6.0	2.6	2.6	2.6
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	91.7	101.6	104.2	106.8	121.6	138.2	157.1	9.0	6.0	2.6	2.6	2.6
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	527.9	584.6	599.4	614.8	699.9	795.1	904.4	5.4	6.0	2.6	2.6	2.6
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	10.0%	10.8%	2.5%	2.6%								

Estimates of PCC Tolls by Product (In Millions of US Dollars)
Alternative Scenario 1: Tolls are raised 15% in 1997 and 1998 and remain the same thereafter

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	65.6	73.3	70.8	77.6	78.4	90.4	93.9	105.3	118.2	121.4	124.6	141.8	160.2	179.6	6.6	6.6	2.6	2.5	2.3
East Asia to US East	42.8	40.4	38.6	41.3	44.9	42.8	44.2	49.1	54.6	54.8	55.1	56.0	56.6	56.9	0.0	5.2	0.3	0.2	0.1
South Am. West to US East	18.2	14.8	13.8	14.5	18.8	18.1	18.7	19.8	21.2	21.5	21.7	23.1	24.5	26.1	-0.1	3.7	1.2	1.2	1.2
Canada to Europe	9.3	9.4	8.4	7.7	8.4	10.5	10.9	10.2	9.6	9.7	9.7	10.2	10.5	10.9	2.4	-1.5	0.9	0.7	0.7
South Am. West to Europe	13.0	15.0	14.8	15.3	17.1	19.3	19.9	21.6	23.6	23.8	24.0	25.1	26.1	26.9	8.2	4.5	0.9	0.7	0.6
US West to Europe	8.9	9.5	11.1	9.9	10.2	10.0	10.5	12.0	13.8	14.2	14.7	17.1	19.7	22.3	2.3	8.1	3.1	2.8	2.5
US East to South & SE Asia	6.3	8.5	8.2	10.6	11.6	13.4	14.3	17.1	20.4	21.7	22.9	29.8	37.9	47.0	16.5	11.3	5.4	4.9	4.4
US East to South Am. West	12.3	12.2	13.3	14.8	15.6	18.9	20.9	24.0	28.0	30.0	32.1	44.4	60.0	79.1	9.0	11.1	6.7	6.2	5.7
US East to Central Am./Carib.	5.7	5.4	5.8	5.5	4.9	5.6	6.1	6.5	7.0	7.6	8.1	11.5	15.8	21.5	-0.3	7.7	7.3	6.5	6.4
South Am. West to Central Am./Carib.	6.2	4.9	3.9	6.1	4.9	4.4	4.5	4.8	5.1	5.1	5.1	5.4	5.5	5.7	-6.6	3.2	0.9	0.6	0.6
South Am. East to South Am. West	3.0	4.7	4.8	5.3	5.9	8.9	9.4	9.5	9.8	10.1	10.3	11.8	13.3	15.0	24.5	3.0	2.6	2.5	2.5
US East to Oceania	5.0	5.2	5.4	6.0	6.5	7.5	7.9	8.9	10.2	10.5	10.8	12.5	14.4	16.5	8.6	7.5	3.0	2.9	2.7
Europe to US West	14.4	12.3	11.9	12.7	14.6	13.4	13.7	15.4	17.3	17.2	17.2	16.7	16.0	15.3	-1.4	5.1	-0.5	-0.8	-1.0
South Am. East to US West	2.7	4.3	4.0	3.5	4.6	5.3	5.6	5.4	5.3	5.5	5.7	7.2	9.0	11.4	14.2	1.8	4.7	4.4	4.9
South & SE Asia to US East	9.4	10.7	10.1	11.5	10.6	11.0	11.4	12.8	14.3	14.5	14.7	15.5	16.2	16.8	3.1	6.0	1.1	0.9	0.7
Centl Am./Carib. to Centl Am./Carib.	4.2	3.7	4.4	4.6	4.6	5.8	6.0	5.8	5.6	5.7	5.7	6.1	6.4	6.7	6.9	-0.4	1.2	1.0	1.1
Oceania to US East	5.8	5.4	4.2	4.2	4.6	4.2	4.3	4.9	5.5	5.5	5.5	5.6	5.6	5.7	-6.1	5.6	0.2	0.2	0.1
South Am. East to Central Am./Carib.	2.5	2.8	3.1	3.3	4.7	4.8	5.0	5.0	5.0	5.2	5.3	6.3	7.3	8.4	14.0	2.2	3.4	2.9	2.8
Central Am./Carib. to US East	2.0	2.6	3.1	3.4	4.2	3.9	4.0	4.2	4.5	4.5	4.5	4.6	4.7	4.8	13.8	2.9	0.5	0.3	0.4
Europe to South Am. West	7.9	7.5	7.4	8.4	9.3	10.3	10.8	12.1	13.6	13.9	14.2	15.5	16.8	18.0	5.4	6.6	1.9	1.6	1.4
South Am. East to East Asia	2.6	2.0	2.4	2.8	2.0	3.0	3.1	3.0	2.9	3.0	3.1	3.7	4.3	4.8	2.5	0.8	3.8	2.8	2.6
Central Am./Carib. to East Asia	2.9	2.7	2.6	2.5	2.5	2.2	2.3	2.3	2.4	2.4	2.4	2.5	2.7	2.8	-5.3	1.7	1.0	0.9	1.0
Central Am./Carib. to South Am. West	2.4	2.1	2.4	2.3	3.7	3.9	4.2	4.5	4.9	5.1	5.3	6.4	7.8	9.3	10.1	6.0	4.1	3.8	3.8
East Asia to Central Am./Carib.	5.1	5.1	5.3	6.8	5.8	6.0	6.3	7.3	8.6	8.9	9.3	11.2	13.7	16.8	3.2	9.1	4.0	4.0	4.1
South Am. West to South Am. East	0.7	0.9	2.0	2.5	2.6	2.8	2.8	3.2	3.6	3.8	4.1	5.6	7.8	10.8	33.1	8.0	6.6	6.8	6.7
US West to South Am. East	0.4	0.6	0.8	0.8	0.5	1.1	1.1	1.1	1.2	1.3	1.4	2.1	2.9	4.1	18.9	6.1	8.2	7.0	6.6
East Asia to South Am. East	0.7	1.0	1.5	2.6	2.4	2.3	2.3	2.5	2.8	2.9	3.0	3.7	4.5	5.5	28.0	5.2	4.3	4.0	3.7
Central Am./Carib. to South Am. East	0.4	0.4	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	9.9	1.9	0.9	0.1	0.2
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	378.9	419.7	430.3	441.3	502.4	570.8	649.3	4.9	6.0	2.6	2.6	2.6
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	57.2	63.4	65.0	66.6	75.8	86.2	98.0	3.7	6.0	2.6	2.6	2.6
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	91.7	101.6	104.2	106.8	121.6	138.2	157.1	9.0	6.0	2.6	2.6	2.6
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	527.9	584.6	599.4	614.8	699.9	795.1	904.4	5.4	6.0	2.6	2.6	2.6
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	10.0%	10.8%	2.5%	2.6%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 2: Tolls are raised 10% in 1997 and 1998 and remain the same thereafter

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	81,728	85,597	82,497	78,602	85,625	100,817	104,146	98,398	93,061	94,386	95,759	103,595	111,592	120,316	4.3	-1.0	1.6	1.5	1.5
Coal and Coke	7,893	8,041	8,504	7,482	8,961	10,926	11,107	10,042	9,066	9,051	9,039	9,040	9,039	9,059	6.7	-3.7	0.0	0.0	0.0
Soybeans	6,090	6,267	7,220	7,863	7,103	8,407	8,770	8,591	8,435	8,643	8,861	10,092	11,419	13,076	6.7	1.1	2.6	2.5	2.7
Wheat	5,504	5,731	5,397	3,981	4,220	5,541	5,762	5,526	5,316	5,403	5,491	5,950	6,399	6,846	0.1	-0.2	1.6	1.5	1.4
Corn	13,980	15,013	14,344	16,007	15,847	23,623	24,212	23,635	23,007	23,281	23,564	25,152	26,915	28,902	11.1	-0.1	1.3	1.4	1.4
Other Grains	2,880	3,086	3,136	3,008	2,646	3,706	3,891	3,755	3,644	3,726	3,807	4,217	4,604	4,968	5.2	0.5	2.1	1.8	1.5
Lumber Products	5,165	5,594	5,416	5,142	5,150	5,678	5,955	5,555	5,185	5,353	5,521	6,385	7,192	7,966	1.9	-0.6	2.9	2.4	2.1
Pulpwood	2,818	2,812	3,505	3,496	3,362	3,903	4,103	3,750	3,436	3,507	3,579	3,974	4,348	4,724	6.7	-1.7	2.1	1.8	1.7
Iron and Steel	6,127	6,920	5,656	4,607	6,997	8,209	8,514	7,898	7,334	7,423	7,514	8,034	8,517	9,016	6.0	-1.8	1.3	1.2	1.1
Misc. Minerals	4,318	4,209	3,269	3,154	5,206	4,743	4,860	4,521	4,211	4,241	4,273	4,464	4,606	4,742	1.9	-2.1	0.9	0.6	0.6
Phosphates	6,951	8,090	7,412	6,045	7,591	7,326	7,432	6,925	6,415	6,388	6,370	6,382	6,448	6,488	1.1	-2.8	0.0	0.2	0.1
Other Fertilizers	4,872	4,243	4,245	4,540	5,240	5,497	5,710	5,293	4,914	4,980	5,048	5,425	5,755	6,072	2.4	-1.7	1.5	1.2	1.1
Alumina/Bauxite	2,259	1,673	737	546	585	434	452	425	401	416	432	525	606	707	-28.1	-0.1	4.0	2.9	3.1
Other Ores	4,019	4,701	4,974	4,713	4,956	5,667	5,925	5,449	5,029	5,132	5,238	5,871	6,493	7,207	7.1	-1.6	2.3	2.0	2.1
Scrap Metals	2,051	2,029	1,376	2,482	1,614	1,646	1,784	1,736	1,705	1,819	1,937	2,606	3,341	4,138	-4.3	3.3	6.1	5.1	4.4
Sugar	2,737	2,838	2,711	1,928	1,819	2,148	2,197	1,984	1,797	1,800	1,804	1,846	1,869	1,904	-4.7	-3.4	0.5	0.3	0.4
Petroleum Coke	3,004	2,970	3,250	2,357	2,848	2,209	2,251	2,159	2,073	2,091	2,111	2,252	2,441	2,660	-6.0	-0.9	1.3	1.6	1.7
Paper	1,061	1,379	1,346	1,252	1,481	1,154	1,221	1,154	1,095	1,132	1,170	1,380	1,598	1,840	1.7	0.3	3.4	3.0	2.9
Tanker	26,482	25,982	26,414	29,483	31,551	33,582	35,064	33,056	31,359	32,195	33,075	38,371	44,689	52,789	4.9	-0.3	3.0	3.1	3.4
Chemicals	3,964	4,686	4,922	5,257	5,591	5,960	6,204	6,195	6,200	6,358	6,514	7,322	8,025	8,684	8.5	1.8	2.4	1.9	1.6
Petroleum Chemicals	1,457	1,841	1,211	1,694	2,301	1,967	2,084	2,164	2,248	2,356	2,464	2,995	3,494	3,957	6.2	4.6	4.0	3.1	2.5
Crude Petroleum	8,933	7,646	7,590	7,995	9,360	10,664	11,006	9,799	8,739	8,831	8,934	9,661	10,710	12,235	3.6	-3.5	1.6	2.1	2.7
Petroleum Residual	4,194	3,566	4,434	4,102	2,848	2,528	2,657	2,477	2,320	2,387	2,457	2,889	3,373	3,960	-9.6	-0.6	3.3	3.1	3.3
Petroleum Products	5,778	6,260	6,271	8,264	8,646	9,346	9,860	9,280	8,799	9,133	9,492	11,783	14,757	18,838	10.1	0.3	4.4	4.6	5.0
Other Food & Agriculture	2,155	1,983	1,986	2,171	2,807	3,118	3,253	3,141	3,053	3,131	3,213	3,721	4,330	5,115	7.7	0.6	3.0	3.1	3.4
General Cargo/Reefer	7,513	8,129	7,851	7,904	8,212	8,690	9,060	8,967	8,905	9,151	9,404	10,842	12,342	13,972	3.0	1.6	2.9	2.6	2.5
Bananas	1,149	1,563	1,647	1,446	1,686	2,093	2,182	2,196	2,214	2,259	2,305	2,552	2,801	3,069	12.7	2.0	2.1	1.9	1.8
Other Reefer	2,964	2,975	2,744	2,569	2,822	3,059	3,172	3,212	3,259	3,367	3,477	4,051	4,647	5,257	0.6	2.6	3.1	2.8	2.5
Other Metals	1,935	1,912	1,696	1,823	1,746	1,582	1,660	1,575	1,500	1,547	1,595	1,902	2,197	2,517	-3.9	0.2	3.6	2.9	2.8
All Others	1,466	1,679	1,764	2,066	1,958	1,956	2,046	1,984	1,932	1,977	2,026	2,336	2,697	3,128	5.9	0.7	2.9	2.9	3.0
RoRo/Vehicles																			
Automotives	1,580	1,500	1,490	1,488	1,561	1,629	1,680	1,688	1,694	1,709	1,723	1,796	1,885	1,990	0.6	1.1	0.8	1.0	1.1
Containerized Cargo																			
Containerized Cargo	18,021	18,573	19,197	18,918	19,922	21,603	23,023	23,957	24,932	26,044	27,190	33,340	40,406	48,375	3.7	4.7	4.2	3.9	3.7
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	166,066	159,951	163,485	167,151	187,944	210,913	237,442	4.2	0.1	2.4	2.3	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	23,945	23,063	23,573	24,101	27,099	30,411	34,236	2.0	0.1	2.4	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	190,011	183,014	187,057	191,252	215,044	241,324	271,678	3.9	0.1	2.4	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	-4.0%	-3.7%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 2: Tolls are raised 10% in 1997 and 1998 and remain the same thereafter

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	48,402	53,643	51,080	50,664	50,695	60,920	63,049	62,052	60,982	62,250	63,550	70,508	78,071	86,203	4.7	0.8	2.1	2.1	2.0
East Asia to US East	9,692	9,683	9,933	10,213	12,221	12,519	12,973	12,419	11,905	12,037	12,169	12,864	13,543	14,268	5.3	-0.6	1.1	1.0	1.0
South Am. West to US East	8,705	6,243	5,178	5,381	9,378	9,006	9,226	8,384	7,660	7,670	7,683	7,788	7,902	8,047	0.7	-3.1	0.3	0.3	0.4
Canada to Europe	7,537	7,466	6,592	5,530	6,360	8,074	8,350	7,346	6,461	6,515	6,570	6,866	7,122	7,360	1.4	-4.0	0.9	0.7	0.7
South Am. West to Europe	6,280	6,350	6,156	6,327	7,008	7,642	7,857	7,356	6,924	6,965	7,005	7,224	7,385	7,534	4.0	-1.7	0.6	0.4	0.4
US West to Europe	5,647	5,918	6,933	5,584	5,387	5,096	5,299	5,231	5,178	5,285	5,393	5,990	6,629	7,297	-2.0	1.1	2.1	2.0	1.9
US East to South & SE Asia	3,621	5,351	5,101	5,745	6,084	7,111	7,561	7,821	8,089	8,529	8,983	11,424	14,262	17,512	14.5	4.8	4.9	4.5	4.2
US East to South Am. West	4,360	4,709	4,786	5,229	5,537	7,440	8,102	7,963	7,905	8,372	8,866	11,820	15,407	19,824	11.3	3.6	5.9	5.4	5.2
US East to Central Am./Carib.	4,396	4,171	4,360	3,639	3,312	3,949	4,307	4,156	4,023	4,297	4,591	6,397	8,584	11,488	-2.1	3.1	6.9	6.1	6.0
South Am. West to Central Am./Carib.	5,001	3,818	2,928	4,324	2,953	2,589	2,658	2,470	2,299	2,303	2,308	2,345	2,365	2,386	-12.3	-2.3	0.3	0.2	0.2
South Am. East to South Am. West	1,845	3,104	3,300	2,990	3,287	5,272	5,494	5,001	4,571	4,644	4,719	5,163	5,611	6,090	23.4	-2.2	1.8	1.7	1.7
US East to Oceania	2,692	3,003	3,040	3,099	3,442	3,986	4,123	4,029	3,979	4,058	4,140	4,594	5,109	5,688	8.2	0.8	2.1	2.1	2.2
Europe to US West	3,698	3,196	2,695	2,415	3,246	2,965	3,064	2,992	2,921	2,941	2,960	3,040	3,069	3,068	-4.3	0.0	0.5	0.2	0.0
South Am. East to US West	1,926	3,149	3,036	2,476	3,305	3,869	4,126	3,746	3,401	3,545	3,698	4,683	5,902	7,564	15.0	-0.9	4.8	4.7	5.1
South & SE Asia to US East	2,799	2,855	2,925	2,982	3,135	2,984	3,104	3,022	2,946	2,988	3,028	3,223	3,382	3,519	1.3	0.3	1.3	1.0	0.8
Centl Am./Carib. to Centl Am./Carib.	2,446	2,074	3,012	2,939	2,784	3,304	3,396	2,987	2,635	2,648	2,663	2,783	2,870	2,976	6.2	-4.2	0.9	0.6	0.7
Oceania to US East	3,844	3,315	2,307	2,091	2,096	1,925	1,979	1,945	1,914	1,919	1,924	1,950	1,971	1,989	-12.9	0.0	0.3	0.2	0.2
South Am. East to Central Am./Carib.	1,845	1,878	2,161	2,420	3,213	3,222	3,385	3,102	2,853	2,936	3,022	3,562	4,085	4,678	11.8	-1.3	3.3	2.8	2.7
Central Am./Carib. to US East	1,580	1,847	2,330	2,454	3,107	3,003	3,093	2,931	2,779	2,791	2,803	2,881	2,933	2,990	13.7	-1.4	0.6	0.4	0.4
Europe to South Am. West	2,093	1,715	1,764	2,217	2,751	3,062	3,193	3,065	2,960	3,003	3,045	3,260	3,450	3,629	7.9	-0.1	1.4	1.1	1.0
South Am. East to East Asia	1,923	1,457	1,871	1,981	1,263	2,035	2,102	1,905	1,733	1,794	1,857	2,258	2,614	2,993	1.1	-1.8	4.0	3.0	2.7
Central Am./Carib. to East Asia	1,968	1,912	1,945	1,305	1,641	1,463	1,497	1,353	1,230	1,231	1,233	1,264	1,293	1,331	-5.8	-3.4	0.5	0.4	0.6
Central Am./Carib. to South Am. West	1,021	755	1,017	890	1,470	1,651	1,723	1,600	1,497	1,528	1,561	1,763	1,977	2,232	10.1	-1.1	2.5	2.3	2.5
East Asia to Central Am./Carib.	1,127	1,048	1,164	1,283	864	869	927	948	977	1,030	1,085	1,424	1,843	2,365	-5.1	4.6	5.6	5.3	5.1
South Am. West to South Am. East	224	328	860	1,075	1,189	1,067	1,088	1,043	1,009	1,042	1,077	1,310	1,615	2,029	36.6	0.2	4.0	4.3	4.7
US West to South Am. East	344	378	376	444	274	522	527	492	467	500	535	777	1,056	1,423	8.7	0.5	7.7	6.3	6.2
East Asia to South Am. East	162	268	302	374	333	399	389	359	336	349	362	449	532	628	19.8	-1.9	4.4	3.5	3.4
Central Am./Carib. to South Am. East	144	145	296	323	536	378	382	346	317	317	317	333	331	331	21.2	-3.4	1.0	-0.1	0.0
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	166,066	159,951	163,485	167,151	187,944	210,913	237,442	4.2	0.1	2.4	2.3	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	23,945	23,063	23,573	24,101	27,099	30,411	34,236	2.0	0.1	2.4	2.3	2.4
Total PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	190,011	183,014	187,057	191,252	215,044	241,324	271,678	3.9	0.1	2.4	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	-4.0%	-3.7%	2.2%	2.2%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Alternative Scenario 2: Tolls are raised 10% in 1997 and 1998 and remain the same thereafter

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	104.3	109.8	106.6	111.7	121.1	138.7	143.3	148.7	154.4	156.8	159.1	172.7	186.4	201.2	5.9	2.8	1.6	1.5	1.5
Coal and Coke	9.2	9.7	10.3	9.9	12.2	14.8	15.1	15.0	14.9	14.9	14.9	14.9	14.9	15.0	10.0	0.1	0.0	0.0	0.1
Soybeans	7.0	7.2	8.3	9.9	9.1	10.5	11.0	11.8	12.8	13.1	13.4	15.3	17.4	20.0	8.6	5.0	2.7	2.6	2.8
Wheat	6.4	6.7	6.1	5.3	5.4	6.9	7.2	7.5	8.0	8.1	8.2	8.9	9.6	10.3	1.4	3.7	1.7	1.5	1.4
Corn	15.7	16.8	16.1	19.8	19.6	29.3	30.0	32.2	34.5	34.9	35.3	37.8	40.5	43.6	13.2	3.8	1.3	1.4	1.5
Other Grains	3.4	3.6	3.8	4.0	3.5	4.8	5.1	5.4	5.7	5.8	6.0	6.6	7.2	7.8	7.5	4.3	2.1	1.8	1.5
Lumber Products	9.2	10.1	10.5	11.1	11.1	11.5	12.1	12.4	12.7	13.1	13.6	15.7	17.6	19.5	4.4	3.4	2.9	2.4	2.0
Pulpwood	3.6	3.5	4.6	5.0	4.9	5.5	5.8	5.8	5.9	6.0	6.2	6.8	7.5	8.1	9.0	2.2	2.1	1.8	1.7
Iron and Steel	9.6	10.8	9.1	8.4	11.7	13.5	14.0	14.2	14.5	14.6	14.8	15.6	16.4	17.2	7.1	1.8	1.2	1.0	0.9
Misc. Minerals	5.1	4.9	3.9	4.2	6.6	6.1	6.2	6.4	6.5	6.6	6.7	7.0	7.2	7.5	3.6	1.8	1.0	0.7	0.7
Phosphates	7.8	9.2	8.6	7.6	9.6	9.1	9.2	9.4	9.6	9.5	9.5	9.5	9.6	9.7	2.9	1.0	0.0	0.2	0.1
Other Fertilizers	6.6	5.6	5.5	6.5	7.6	7.5	7.8	7.9	8.0	8.1	8.2	8.8	9.3	9.7	2.5	1.9	1.3	1.1	1.0
Alumina/Bauxite	2.5	1.9	0.9	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.8	1.0	1.1	-25.4	3.6	4.0	2.8	3.1
Other Ores	5.0	5.9	6.4	6.5	6.7	7.5	7.9	8.0	8.1	8.3	8.5	9.5	10.5	11.7	8.4	2.3	2.3	2.0	2.1
Scrap Metals	2.5	2.5	1.7	3.5	2.3	2.2	2.3	2.5	2.7	2.9	3.1	4.1	5.3	6.6	-3.2	7.3	6.1	5.1	4.4
Sugar	3.4	3.5	3.3	2.6	2.5	2.8	2.9	2.8	2.8	2.8	2.9	2.9	3.0	3.0	-3.6	0.4	0.5	0.2	0.3
Petroleum Coke	3.4	3.4	3.8	3.2	3.7	2.9	2.9	3.1	3.2	3.3	3.3	3.5	3.8	4.2	-3.3	2.9	1.4	1.7	1.8
Paper	3.9	4.2	3.6	3.5	3.7	3.3	3.5	3.6	3.8	4.0	4.1	4.8	5.5	6.2	-3.1	4.4	3.1	2.8	2.6
Tanker	35.6	35.5	35.8	41.7	44.7	47.0	49.1	50.9	53.0	54.4	55.9	65.0	75.7	89.6	5.7	3.5	3.0	3.1	3.4
Chemicals	4.9	6.0	6.4	7.4	7.8	8.1	8.5	9.2	10.1	10.4	10.6	11.9	13.0	14.0	10.5	5.4	2.3	1.8	1.5
Petroleum Chemicals	1.7	2.2	1.5	2.4	3.1	2.7	2.8	3.2	3.6	3.8	4.0	4.8	5.6	6.3	8.9	8.2	3.9	3.0	2.5
Crude Petroleum	10.2	9.0	9.1	10.0	12.0	13.5	13.9	13.6	13.4	13.5	13.7	14.8	16.4	18.6	5.7	0.3	1.6	2.0	2.6
Petroleum Residual	4.9	4.4	5.4	5.2	3.7	3.2	3.4	3.5	3.6	3.7	3.8	4.5	5.3	6.2	-8.1	3.4	3.4	3.2	3.3
Petroleum Products	8.7	9.5	9.4	12.5	13.4	14.4	15.2	15.7	16.4	17.0	17.6	21.9	27.3	34.9	10.7	4.1	4.4	4.6	5.0
Other Food & Agriculture	5.1	4.4	4.0	4.3	4.7	5.1	5.3	5.6	5.9	6.1	6.2	7.1	8.2	9.5	0.0	4.1	2.7	2.8	3.1
General Cargo/Reefer	24.6	27.6	26.8	27.3	28.8	30.7	31.9	34.9	38.2	39.2	40.2	45.6	51.3	57.4	4.5	5.5	2.6	2.4	2.3
Bananas	5.4	7.4	7.8	6.5	7.5	9.0	9.4	10.4	11.6	11.8	12.0	13.3	14.6	16.0	11.0	5.9	2.1	1.9	1.8
Other Reefer	10.2	10.8	10.1	10.3	10.7	11.5	11.9	13.3	14.8	15.4	15.9	18.6	21.5	24.4	2.5	6.7	3.2	2.9	2.6
Other Metals	3.0	3.0	2.9	3.2	3.1	2.7	2.8	2.9	3.1	3.2	3.3	3.8	4.3	4.9	-2.2	4.0	3.2	2.6	2.5
All Others	6.0	6.4	6.0	7.3	7.5	7.5	7.7	8.2	8.7	8.9	9.0	9.9	10.9	12.1	4.4	3.8	1.8	2.0	2.1
RoRo/Vehicles																			
Automotives	32.9	31.5	31.0	35.4	37.8	37.0	38.1	42.2	46.6	47.1	47.6	50.0	52.7	55.8	2.4	5.2	1.0	1.1	1.2
Containerized Cargo																			
Containerized Cargo	63.0	63.0	64.5	71.2	72.3	77.1	82.2	94.1	107.8	112.7	117.7	144.9	176.4	212.3	4.1	8.8	4.2	4.0	3.8
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	370.7	400.1	410.2	420.5	478.1	542.5	616.3	4.9	4.9	2.6	2.6	2.6
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	56.0	60.4	61.9	63.5	72.2	81.9	93.0	3.7	4.9	2.6	2.6	2.6
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	89.7	96.8	99.3	101.8	115.7	131.3	149.2	9.0	4.9	2.6	2.6	2.6
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	516.4	557.4	571.3	585.8	666.0	755.6	858.4	5.4	4.9	2.6	2.6	2.6
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	7.6%	7.9%	2.5%	2.5%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Alternative Scenario 2: Tolls are raised 10% in 1997 and 1998 and remain the same thereafter

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	65.6	73.3	70.8	77.6	78.4	90.4	93.9	102.5	111.7	114.7	117.8	133.9	151.2	169.5	6.6	5.4	2.6	2.5	2.3
East Asia to US East	42.8	40.4	38.6	41.3	44.9	42.8	44.2	47.5	51.2	51.4	51.6	52.6	53.1	53.5	0.0	3.8	0.4	0.2	0.1
South Am. West to US East	18.2	14.8	13.8	14.5	18.8	18.1	18.7	19.6	20.5	20.8	21.0	22.2	23.5	24.9	-0.1	3.0	1.1	1.1	1.1
Canada to Europe	9.3	9.4	8.4	7.7	8.4	10.5	10.9	10.5	10.2	10.3	10.4	10.8	11.2	11.6	2.4	-0.3	0.9	0.7	0.7
South Am. West to Europe	13.0	15.0	14.8	15.3	17.1	19.3	19.9	21.1	22.5	22.7	22.9	23.9	24.8	25.6	8.2	3.5	0.9	0.7	0.6
US West to Europe	8.9	9.5	11.1	9.9	10.2	10.0	10.5	11.6	12.9	13.3	13.7	15.9	18.3	20.7	2.3	6.6	3.1	2.8	2.5
US East to South & SE Asia	6.3	8.5	8.2	10.6	11.6	13.4	14.3	16.5	18.9	20.0	21.2	27.5	35.0	43.5	16.5	9.6	5.4	4.9	4.4
US East to South Am. West	12.3	12.2	13.3	14.8	15.6	18.9	20.9	23.4	26.5	28.4	30.3	41.8	56.3	74.1	9.0	9.9	6.7	6.1	5.6
US East to Central Am./Carib.	5.7	5.4	5.8	5.5	4.9	5.6	6.1	6.6	7.1	7.6	8.1	11.5	15.7	21.3	-0.3	7.7	7.2	6.4	6.2
South Am. West to Central Am./Carib.	6.2	4.9	3.9	6.1	4.9	4.4	4.5	4.7	4.9	4.9	5.0	5.2	5.3	5.5	-6.6	2.6	0.8	0.6	0.6
South Am. East to South Am. West	3.0	4.7	4.8	5.3	5.9	8.9	9.4	9.6	9.9	10.1	10.3	11.7	13.2	14.9	24.5	3.0	2.5	2.4	2.4
US East to Oceania	5.0	5.2	5.4	6.0	6.5	7.5	7.9	8.6	9.5	9.8	10.1	11.6	13.4	15.3	8.6	6.0	2.9	2.8	2.7
Europe to US West	14.4	12.3	11.9	12.7	14.6	13.4	13.7	14.8	16.0	15.9	15.9	15.5	14.9	14.2	-1.4	3.5	-0.5	-0.8	-0.9
South Am. East to US West	2.7	4.3	4.0	3.5	4.6	5.3	5.6	5.6	5.6	5.8	6.1	7.6	9.5	12.1	14.2	2.9	4.7	4.5	4.9
South & SE Asia to US East	9.4	10.7	10.1	11.5	10.6	11.0	11.4	12.4	13.4	13.6	13.8	14.5	15.2	15.7	3.1	4.7	1.1	0.8	0.7
Centl Am./Carib. to Centl Am./Carib.	4.2	3.7	4.4	4.6	4.6	5.8	6.0	5.9	5.8	5.9	5.9	6.3	6.6	6.9	6.9	0.3	1.2	0.9	1.0
Oceania to US East	5.8	5.4	4.2	4.2	4.6	4.2	4.3	4.7	5.1	5.1	5.1	5.2	5.2	5.3	-6.1	4.0	0.2	0.1	0.1
South Am. East to Central Am./Carib.	2.5	2.8	3.1	3.3	4.7	4.8	5.0	5.1	5.2	5.3	5.5	6.5	7.5	8.6	14.0	2.8	3.4	2.9	2.8
Central Am./Carib. to US East	2.0	2.6	3.1	3.4	4.2	3.9	4.0	4.2	4.3	4.3	4.4	4.5	4.6	4.6	13.8	2.4	0.5	0.3	0.3
Europe to South Am. West	7.9	7.5	7.4	8.4	9.3	10.3	10.8	11.7	12.8	13.1	13.3	14.6	15.7	16.8	5.4	5.3	1.8	1.5	1.3
South Am. East to East Asia	2.6	2.0	2.4	2.8	2.0	3.0	3.1	3.0	3.0	3.1	3.2	3.9	4.4	5.0	2.5	1.8	3.8	2.8	2.6
Central Am./Carib. to East Asia	2.9	2.7	2.6	2.5	2.5	2.2	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.7	-5.3	1.6	1.0	0.9	1.0
Central Am./Carib. to South Am. West	2.4	2.1	2.4	2.3	3.7	3.9	4.2	4.4	4.7	4.9	5.1	6.2	7.4	8.8	10.1	5.3	4.0	3.7	3.6
East Asia to Central Am./Carib.	5.1	5.1	5.3	6.8	5.8	6.0	6.3	7.0	7.9	8.2	8.5	10.3	12.6	15.4	3.2	7.4	3.9	4.0	4.1
South Am. West to South Am. East	0.7	0.9	2.0	2.5	2.6	2.8	2.8	3.1	3.5	3.6	3.9	5.3	7.3	10.0	33.1	6.9	6.5	6.6	6.6
US West to South Am. East	0.4	0.6	0.8	0.8	0.5	1.1	1.1	1.1	1.2	1.3	1.4	2.1	2.9	4.0	18.9	6.1	8.1	6.9	6.5
East Asia to South Am. East	0.7	1.0	1.5	2.6	2.4	2.3	2.3	2.5	2.7	2.8	2.9	3.6	4.4	5.2	28.0	4.5	4.2	3.9	3.6
Central Am./Carib. to South Am. East	0.4	0.4	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	9.9	1.4	0.9	0.0	0.1
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	370.7	400.1	410.2	420.5	478.1	542.5	616.3	4.9	4.9	2.6	2.6	2.6
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	56.0	60.4	61.9	63.5	72.2	81.9	93.0	3.7	4.9	2.6	2.6	2.6
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	89.7	96.8	99.3	101.8	115.7	131.3	149.2	9.0	4.9	2.6	2.6	2.6
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	516.4	557.4	571.3	585.8	666.0	755.6	858.4	5.4	4.9	2.6	2.6	2.6
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	7.6%	7.9%	2.5%	2.5%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 4: Tolls are raised by 2.5% every year

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	81,728	85,597	82,497	78,602	85,625	100,817	104,146	103,894	103,585	103,413	103,286	103,502	103,481	103,838	4.3	0.5	0.0	0.0	0.1
Coal and Coke	7,893	8,041	8,504	7,482	8,961	10,926	11,107	10,857	10,588	10,314	10,049	8,877	7,831	6,921	6.7	-1.7	-2.5	-2.5	-2.4
Soybeans	6,090	6,267	7,220	7,863	7,103	8,407	8,770	8,873	8,992	9,129	9,272	10,072	10,842	11,809	6.7	2.0	1.7	1.5	1.7
Wheat	5,504	5,731	5,397	3,981	4,220	5,541	5,762	5,790	5,826	5,867	5,908	6,104	6,249	6,354	0.1	1.3	0.7	0.5	0.3
Corn	13,980	15,013	14,344	16,007	15,847	23,623	24,212	24,383	24,483	24,597	24,714	25,397	26,101	26,891	11.1	0.9	0.5	0.5	0.6
Other Grains	2,880	3,086	3,136	3,008	2,646	3,706	3,891	3,906	3,937	3,981	4,023	4,223	4,368	4,465	5.2	1.7	1.0	0.7	0.4
Lumber Products	5,165	5,594	5,416	5,142	5,150	5,678	5,955	5,979	6,000	6,071	6,138	6,434	6,579	6,624	1.9	1.6	0.9	0.4	0.1
Pulpwood	2,818	2,812	3,505	3,496	3,362	3,903	4,103	4,077	4,052	4,030	4,010	3,949	3,866	3,791	6.7	0.5	-0.3	-0.4	-0.4
Iron and Steel	6,127	6,920	5,656	4,607	6,997	8,209	8,514	8,451	8,385	8,333	8,284	8,121	7,933	7,774	6.0	0.2	-0.4	-0.5	-0.4
Misc. Minerals	4,318	4,209	3,269	3,154	5,206	4,743	4,860	4,797	4,734	4,675	4,617	4,376	4,104	3,848	1.9	-0.5	-1.1	-1.3	-1.3
Phosphates	6,951	8,090	7,412	6,045	7,591	7,326	7,432	7,318	7,162	6,993	6,837	6,205	5,678	5,168	1.1	-1.4	-1.9	-1.8	-1.9
Other Fertilizers	4,872	4,243	4,245	4,540	5,240	5,497	5,710	5,651	5,593	5,538	5,486	5,277	5,038	4,809	2.4	0.0	-0.8	-0.9	-0.9
Alumina/Bauxite	2,259	1,673	737	546	585	434	452	457	463	470	477	525	550	588	-28.1	1.9	1.9	0.9	1.3
Other Ores	4,019	4,701	4,974	4,713	4,956	5,667	5,925	5,899	5,884	5,871	5,862	5,907	5,890	5,917	7.1	0.7	0.2	-0.1	0.1
Scrap Metals	2,051	2,029	1,376	2,482	1,614	1,646	1,784	1,837	1,908	1,999	2,090	2,569	3,011	3,414	-4.3	4.9	4.2	3.2	2.5
Sugar	2,737	2,838	2,711	1,928	1,819	2,148	2,197	2,151	2,110	2,069	2,031	1,879	1,730	1,609	-4.7	-1.1	-1.5	-1.6	-1.4
Petroleum Coke	3,004	2,970	3,250	2,357	2,848	2,209	2,251	2,237	2,225	2,219	2,213	2,222	2,268	2,325	-6.0	0.0	0.1	0.4	0.5
Paper	1,061	1,379	1,346	1,252	1,481	1,154	1,221	1,231	1,244	1,259	1,275	1,365	1,445	1,531	1.7	2.0	1.4	1.1	1.2
Tanker	26,482	25,982	26,414	29,483	31,551	33,582	35,064	35,262	35,515	35,845	36,222	39,006	42,636	47,713	4.9	1.5	1.5	1.8	2.3
Chemicals	3,964	4,686	4,922	5,257	5,591	5,960	6,204	6,283	6,364	6,468	6,572	7,135	7,611	8,066	8.5	2.0	1.7	1.3	1.2
Petroleum Chemicals	1,457	1,841	1,211	1,694	2,301	1,967	2,084	2,174	2,267	2,371	2,475	2,986	3,467	3,913	6.2	4.7	3.8	3.0	2.5
Crude Petroleum	8,933	7,646	7,590	7,995	9,360	10,664	11,006	10,818	10,648	10,494	10,355	9,901	9,712	9,806	3.6	-0.6	-0.9	-0.4	0.2
Petroleum Residual	4,194	3,566	4,434	4,102	2,848	2,528	2,657	2,685	2,717	2,753	2,792	3,047	3,307	3,623	-9.6	2.0	1.8	1.7	1.8
Petroleum Products	5,778	6,260	6,271	8,264	8,646	9,346	9,860	10,013	10,187	10,385	10,605	12,160	14,290	17,394	10.1	2.6	2.8	3.3	4.0
Other Food & Agriculture	2,155	1,983	1,986	2,171	2,807	3,118	3,253	3,290	3,331	3,374	3,423	3,778	4,249	4,910	7.7	1.9	2.0	2.4	2.9
General Cargo/Reefer	7,513	8,129	7,851	7,904	8,212	8,690	9,060	9,195	9,353	9,544	9,739	10,864	11,984	13,162	3.0	2.3	2.2	2.0	1.9
Bananas	1,149	1,563	1,647	1,446	1,686	2,093	2,182	2,216	2,255	2,294	2,334	2,545	2,752	2,971	12.7	2.2	1.7	1.6	1.5
Other Reefer	2,964	2,975	2,744	2,569	2,822	3,059	3,172	3,246	3,329	3,429	3,529	4,048	4,568	5,082	0.6	2.9	2.8	2.4	2.2
Other Metals	1,935	1,912	1,696	1,823	1,746	1,582	1,660	1,673	1,691	1,721	1,754	1,969	2,147	2,330	-3.9	2.1	2.3	1.7	1.6
All Others	1,466	1,679	1,764	2,066	1,958	1,956	2,046	2,060	2,079	2,099	2,123	2,302	2,516	2,779	5.9	1.7	1.6	1.8	2.0
RoRo/Vehicles																			
Automotives	1,580	1,500	1,490	1,488	1,561	1,629	1,680	1,688	1,694	1,709	1,723	1,796	1,885	1,990	0.6	1.1	0.8	1.0	1.1
Containerized Cargo																			
Containerized Cargo	18,021	18,573	19,197	18,918	19,922	21,603	23,023	23,957	24,932	26,044	27,190	33,340	40,406	48,375	3.7	4.7	4.2	3.9	3.7
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	173,996	175,080	176,555	178,161	188,508	200,391	215,079	4.2	1.4	1.1	1.2	1.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,088	25,244	25,457	25,689	27,181	28,894	31,012	2.0	1.4	1.1	1.2	1.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	199,084	200,324	202,012	203,849	215,689	229,285	246,091	3.9	1.4	1.1	1.2	1.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	0.6%	0.6%	0.8%	0.9%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Alternative Scenario 4: Tolls are raised by 2.5% every year

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	48,402	53,643	51,080	50,664	50,695	60,920	63,049	63,783	64,376	65,127	65,898	70,016	74,381	78,978	4.7	1.6	1.2	1.2	1.2
East Asia to US East	9,692	9,683	9,933	10,213	12,221	12,519	12,973	12,937	12,893	12,864	12,837	12,751	12,660	12,606	5.3	0.5	-0.1	-0.1	-0.1
South Am. West to US East	8,705	6,243	5,178	5,381	9,378	9,006	9,226	9,011	8,811	8,617	8,436	7,696	7,137	6,749	0.7	-1.3	-1.8	-1.5	-1.1
Canada to Europe	7,537	7,466	6,592	5,530	6,360	8,074	8,350	8,156	7,963	7,773	7,587	6,739	5,941	5,218	1.4	-1.2	-2.3	-2.5	-2.6
South Am. West to Europe	6,280	6,350	6,156	6,327	7,008	7,642	7,857	7,755	7,666	7,580	7,499	7,157	6,826	6,546	4.0	-0.4	-0.9	-0.9	-0.8
US West to Europe	5,647	5,918	6,933	5,584	5,387	5,096	5,299	5,350	5,410	5,479	5,551	5,957	6,397	6,856	-2.0	1.7	1.4	1.4	1.4
US East to South & SE Asia	3,621	5,351	5,101	5,745	6,084	7,111	7,561	7,922	8,283	8,697	9,124	11,402	14,016	16,961	14.5	5.1	4.6	4.2	3.9
US East to South Am. West	4,360	4,709	4,786	5,229	5,537	7,440	8,102	8,366	8,689	9,053	9,438	11,722	14,416	17,715	11.3	4.9	4.4	4.2	4.2
US East to Central Am./Carib.	4,396	4,171	4,360	3,639	3,312	3,949	4,307	4,557	4,819	5,109	5,418	7,291	9,498	12,384	-2.1	6.5	6.1	5.4	5.5
South Am. West to Central Am./Carib.	5,001	3,818	2,928	4,324	2,953	2,589	2,658	2,643	2,629	2,616	2,603	2,553	2,490	2,432	-12.3	0.1	-0.4	-0.5	-0.5
South Am. East to South Am. West	1,845	3,104	3,300	2,990	3,287	5,272	5,494	5,409	5,334	5,268	5,207	4,978	4,768	4,611	23.4	-0.2	-0.9	-0.9	-0.7
US East to Oceania	2,692	3,003	3,040	3,099	3,442	3,986	4,123	4,068	4,049	4,025	4,005	3,957	3,977	4,052	8.2	0.1	-0.2	0.1	0.4
Europe to US West	3,698	3,196	2,695	2,415	3,246	2,965	3,064	3,050	3,031	3,021	3,011	2,960	2,882	2,793	-4.3	0.3	-0.3	-0.5	-0.6
South Am. East to US West	1,926	3,149	3,036	2,476	3,305	3,869	4,126	4,189	4,252	4,329	4,412	4,951	5,496	6,165	15.0	2.7	2.3	2.1	2.3
South & SE Asia to US East	2,799	2,855	2,925	2,982	3,135	2,984	3,104	3,143	3,177	3,220	3,261	3,465	3,628	3,769	1.3	1.8	1.2	0.9	0.8
Centl Am./Carib. to Centl Am./Carib.	2,446	2,074	3,012	2,939	2,784	3,304	3,396	3,384	3,377	3,370	3,364	3,391	3,378	3,383	6.2	0.4	0.2	-0.1	0.0
Oceania to US East	3,844	3,315	2,307	2,091	2,096	1,925	1,979	1,969	1,960	1,950	1,941	1,892	1,839	1,785	-12.9	0.2	-0.5	-0.6	-0.6
South Am. East to Central Am./Carib.	1,845	1,878	2,161	2,420	3,213	3,222	3,385	3,413	3,451	3,489	3,529	3,821	4,029	4,251	11.8	1.8	1.6	1.1	1.1
Central Am./Carib. to US East	1,580	1,847	2,330	2,454	3,107	3,003	3,093	3,045	2,997	2,951	2,906	2,710	2,507	2,326	13.7	-0.7	-1.4	-1.5	-1.5
Europe to South Am. West	2,093	1,715	1,764	2,217	2,751	3,062	3,193	3,194	3,204	3,219	3,235	3,325	3,400	3,478	7.9	1.1	0.6	0.4	0.5
South Am. East to East Asia	1,923	1,457	1,871	1,981	1,263	2,035	2,102	2,118	2,139	2,172	2,205	2,440	2,576	2,696	1.1	1.6	2.0	1.1	0.9
Central Am./Carib. to East Asia	1,968	1,912	1,945	1,305	1,641	1,463	1,497	1,452	1,410	1,370	1,332	1,183	1,056	958	-5.8	-1.9	-2.4	-2.2	-1.9
Central Am./Carib. to South Am. West	1,021	755	1,017	890	1,470	1,651	1,723	1,711	1,706	1,706	1,707	1,763	1,844	1,981	10.1	0.7	0.6	0.9	1.4
East Asia to Central Am./Carib.	1,127	1,048	1,164	1,283	864	869	927	959	997	1,039	1,084	1,372	1,744	2,220	-5.1	4.5	4.8	4.9	4.9
South Am. West to South Am. East	224	328	860	1,075	1,189	1,067	1,088	1,106	1,129	1,156	1,185	1,392	1,675	2,071	36.6	2.1	3.3	3.8	4.3
US West to South Am. East	344	378	376	444	274	522	527	539	558	581	606	778	948	1,159	8.7	3.0	5.1	4.0	4.1
East Asia to South Am. East	162	268	302	374	333	399	389	396	405	416	428	506	572	647	19.8	1.4	3.4	2.5	2.5
Central Am./Carib. to South Am. East	144	145	296	323	536	378	382	373	366	359	353	340	310	286	21.2	-1.3	-0.7	-1.8	-1.6
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	173,996	175,080	176,555	178,161	188,508	200,391	215,079	4.2	1.4	1.1	1.2	1.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,088	25,244	25,457	25,689	27,181	28,894	31,012	2.0	1.4	1.1	1.2	1.4
Total PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	199,084	200,324	202,012	203,849	215,689	229,285	246,091	3.9	1.4	1.1	1.2	1.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	0.6%	0.6%	0.8%	0.9%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Alternative Scenario 4: Tolls are raised by 2.5% every year

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	104.3	109.8	106.6	111.7	121.1	138.7	143.3	146.6	149.8	153.4	157.1	178.4	201.9	229.2	5.9	2.5	2.6	2.5	2.6
Coal and Coke	9.2	9.7	10.3	9.9	12.2	14.8	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.2	10.0	0.4	0.0	0.0	0.1
Soybeans	7.0	7.2	8.3	9.9	9.1	10.5	11.0	11.4	11.8	12.3	12.8	15.8	19.3	23.8	8.6	4.1	4.3	4.1	4.3
Wheat	6.4	6.7	6.1	5.3	5.4	6.9	7.2	7.4	7.6	7.9	8.1	9.5	11.0	12.6	1.4	3.3	3.2	3.0	2.8
Corn	15.7	16.8	16.1	19.8	19.6	29.3	30.0	31.0	31.9	32.8	33.8	39.4	45.9	53.6	13.2	2.9	3.1	3.1	3.1
Other Grains	3.4	3.6	3.8	4.0	3.5	4.8	5.1	5.2	5.4	5.6	5.8	6.9	8.1	9.3	7.5	3.7	3.6	3.2	3.0
Lumber Products	9.2	10.1	10.5	11.1	11.1	11.5	12.1	12.4	12.8	13.3	13.8	16.4	19.0	21.7	4.4	3.7	3.6	3.0	2.7
Pulpwood	3.6	3.5	4.6	5.0	4.9	5.5	5.8	5.9	6.0	6.2	6.3	7.0	7.8	8.7	9.0	2.6	2.3	2.1	2.2
Iron and Steel	9.6	10.8	9.1	8.4	11.7	13.5	14.0	14.2	14.4	14.6	14.9	16.4	17.9	19.7	7.1	1.9	1.9	1.8	1.9
Misc. Minerals	5.1	4.9	3.9	4.2	6.6	6.1	6.2	6.3	6.4	6.5	6.5	7.1	7.5	8.0	3.6	1.5	1.5	1.3	1.3
Phosphates	7.8	9.2	8.6	7.6	9.6	9.1	9.2	9.2	9.3	9.3	9.3	9.6	9.9	10.2	2.9	0.6	0.5	0.7	0.6
Other Fertilizers	6.6	5.6	5.5	6.5	7.6	7.5	7.8	7.9	8.0	8.1	8.2	8.8	9.5	10.2	2.5	1.8	1.6	1.4	1.4
Alumina/Bauxite	2.5	1.9	0.9	0.8	0.8	0.6	0.6	0.6	0.7	0.7	0.7	0.9	1.0	1.2	-25.4	3.8	4.4	3.4	3.8
Other Ores	5.0	5.9	6.4	6.5	6.7	7.5	7.9	8.1	8.2	8.4	8.6	9.9	11.1	12.7	8.4	2.7	2.7	2.5	2.6
Scrap Metals	2.5	2.5	1.7	3.5	2.3	2.2	2.3	2.5	2.6	2.8	3.0	4.2	5.6	7.2	-3.2	7.0	6.8	5.8	5.1
Sugar	3.4	3.5	3.3	2.6	2.5	2.8	2.9	2.9	2.9	2.9	2.9	3.1	3.2	3.4	-3.6	0.9	0.9	0.8	1.0
Petroleum Coke	3.4	3.4	3.8	3.2	3.7	2.9	2.9	3.0	3.0	3.1	3.2	3.6	4.1	4.8	-3.3	2.0	2.6	2.9	3.0
Paper	3.9	4.2	3.6	3.5	3.7	3.3	3.5	3.6	3.7	3.9	4.0	4.9	5.8	7.0	-3.1	4.1	3.9	3.6	3.6
Tanker	35.6	35.5	35.8	41.7	44.7	47.0	49.1	50.6	52.3	54.1	56.0	68.3	84.7	107.5	5.7	3.6	4.1	4.4	4.9
Chemicals	4.9	6.0	6.4	7.4	7.8	8.1	8.5	8.8	9.1	9.4	9.8	12.0	14.4	17.1	10.5	3.8	4.0	3.7	3.6
Petroleum Chemicals	1.7	2.2	1.5	2.4	3.1	2.7	2.8	3.0	3.2	3.4	3.7	5.0	6.5	8.2	8.9	6.5	6.2	5.5	4.9
Crude Petroleum	10.2	9.0	9.1	10.0	12.0	13.5	13.9	14.0	14.1	14.3	14.5	15.7	17.4	19.9	5.7	1.4	1.6	2.1	2.7
Petroleum Residual	4.9	4.4	5.4	5.2	3.7	3.2	3.4	3.5	3.7	3.8	4.0	4.9	6.1	7.6	-8.1	4.2	4.4	4.3	4.5
Petroleum Products	8.7	9.5	9.4	12.5	13.4	14.4	15.2	15.8	16.5	17.2	18.0	23.4	31.0	42.7	10.7	4.6	5.3	5.8	6.6
Other Food & Agriculture	5.1	4.4	4.0	4.3	4.7	5.1	5.3	5.5	5.7	5.9	6.1	7.5	9.3	12.0	0.0	3.6	4.2	4.6	5.2
General Cargo/Reefer	24.6	27.6	26.8	27.3	28.8	30.7	31.9	33.1	34.5	36.1	37.7	47.0	58.1	71.7	4.5	4.2	4.5	4.4	4.3
Bananas	5.4	7.4	7.8	6.5	7.5	9.0	9.4	9.8	10.2	10.7	11.1	13.7	16.8	20.5	11.0	4.2	4.3	4.1	4.1
Other Reefer	10.2	10.8	10.1	10.3	10.7	11.5	11.9	12.5	13.2	13.9	14.7	19.2	24.6	31.1	2.5	5.1	5.5	5.1	4.8
Other Metals	3.0	3.0	2.9	3.2	3.1	2.7	2.8	2.9	3.0	3.1	3.2	4.0	4.9	6.0	-2.2	3.8	4.5	4.0	4.0
All Others	6.0	6.4	6.0	7.3	7.5	7.5	7.7	7.9	8.1	8.4	8.6	10.0	11.8	14.1	4.4	2.9	3.1	3.4	3.6
RoRo/Vehicles																			
Automotives	32.9	31.5	31.0	35.4	37.8	37.0	38.1	39.3	40.5	41.9	43.4	51.6	61.6	73.8	2.4	3.3	3.5	3.6	3.7
Containerized Cargo																			
Containerized Cargo	63.0	63.0	64.5	71.2	72.3	77.1	82.2	87.7	93.6	100.3	107.4	149.5	206.0	280.5	4.1	6.9	6.8	6.6	6.4
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	357.3	370.7	385.7	401.5	494.9	612.3	762.7	4.9	4.0	4.3	4.3	4.5
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	53.9	56.0	58.2	60.6	74.7	92.4	115.1	3.7	4.0	4.3	4.3	4.5
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	86.5	89.7	93.4	97.2	119.8	148.2	184.6	9.0	4.0	4.3	4.3	4.5
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	497.8	516.4	537.3	559.3	689.3	852.9	1,062.4	5.4	4.0	4.3	4.3	4.5
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	3.7%	3.7%	4.0%	4.1%								

Estimates of PCC Tolls by Product (In Millions of US Dollars)
Alternative Scenario 4: Tolls are raised by 2.5% every year

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	65.6	73.3	70.8	77.6	78.4	90.4	93.9	97.9	101.9	106.4	111.0	137.4	169.2	207.5	6.6	4.2	4.3	4.3	4.2
East Asia to US East	42.8	40.4	38.6	41.3	44.9	42.8	44.2	45.2	46.1	47.2	48.3	54.0	60.0	66.5	0.0	2.4	2.3	2.1	2.1
South Am. West to US East	18.2	14.8	13.8	14.5	18.8	18.1	18.7	19.1	19.4	19.8	20.3	22.8	26.0	30.0	-0.1	2.3	2.4	2.7	2.9
Canada to Europe	9.3	9.4	8.4	7.7	8.4	10.5	10.9	10.9	10.9	10.9	10.9	11.0	10.9	10.9	2.4	0.7	0.1	0.0	-0.1
South Am. West to Europe	13.0	15.0	14.8	15.3	17.1	19.3	19.9	20.3	20.8	21.3	21.8	24.5	27.6	31.0	8.2	2.5	2.4	2.4	2.4
US West to Europe	8.9	9.5	11.1	9.9	10.2	10.0	10.5	11.0	11.6	12.1	12.8	16.4	20.9	26.3	2.3	5.1	5.1	4.9	4.7
US East to South & SE Asia	6.3	8.5	8.2	10.6	11.6	13.4	14.3	15.5	16.7	18.1	19.6	28.4	40.4	56.2	16.5	7.8	7.7	7.3	6.8
US East to South Am. West	12.3	12.2	13.3	14.8	15.6	18.9	20.9	22.5	24.3	26.3	28.6	43.0	63.7	93.0	9.0	8.6	8.5	8.2	7.9
US East to Central Am./Carib.	5.7	5.4	5.8	5.5	4.9	5.6	6.1	6.7	7.3	7.9	8.6	13.4	20.0	29.9	-0.3	9.0	9.1	8.4	8.4
South Am. West to Central Am./Carib.	6.2	4.9	3.9	6.1	4.9	4.4	4.5	4.6	4.7	4.8	5.0	5.7	6.4	7.3	-6.6	2.5	2.7	2.5	2.5
South Am. East to South Am. West	3.0	4.7	4.8	5.3	5.9	8.9	9.4	9.5	9.7	10.0	10.2	11.7	13.6	16.1	24.5	2.8	2.8	3.0	3.3
US East to Oceania	5.0	5.2	5.4	6.0	6.5	7.5	7.9	8.1	8.4	8.7	9.0	10.9	13.4	16.5	8.6	3.7	3.9	4.2	4.3
Europe to US West	14.4	12.3	11.9	12.7	14.6	13.4	13.7	13.9	14.1	14.4	14.6	15.8	16.9	17.9	-1.4	1.8	1.6	1.3	1.2
South Am. East to US West	2.7	4.3	4.0	3.5	4.6	5.3	5.6	5.8	6.0	6.3	6.6	8.4	10.4	13.2	14.2	4.6	4.9	4.5	4.8
South & SE Asia to US East	9.4	10.7	10.1	11.5	10.6	11.0	11.4	11.8	12.2	12.7	13.2	15.7	18.5	21.6	3.1	3.7	3.6	3.3	3.2
Centl Am./Carib. to Centl Am./Carib.	4.2	3.7	4.4	4.6	4.6	5.8	6.0	6.1	6.3	6.5	6.6	7.7	8.8	10.1	6.9	2.6	3.0	2.7	2.9
Oceania to US East	5.8	5.4	4.2	4.2	4.6	4.2	4.3	4.4	4.5	4.6	4.7	5.2	5.8	6.4	-6.1	2.3	2.1	2.1	2.1
South Am. East to Central Am./Carib.	2.5	2.8	3.1	3.3	4.7	4.8	5.0	5.2	5.4	5.6	5.8	7.1	8.6	10.3	14.0	4.0	4.3	3.8	3.8
Central Am./Carib. to US East	2.0	2.6	3.1	3.4	4.2	3.9	4.0	4.0	4.1	4.1	4.1	4.4	4.6	4.8	13.8	1.3	1.1	0.9	0.9
Europe to South Am. West	7.9	7.5	7.4	8.4	9.3	10.3	10.8	11.2	11.6	12.1	12.6	15.2	18.2	21.6	5.4	4.1	3.9	3.7	3.5
South Am. East to East Asia	2.6	2.0	2.4	2.8	2.0	3.0	3.1	3.1	3.2	3.4	3.5	4.3	5.1	6.0	2.5	3.4	4.4	3.4	3.2
Central Am./Carib. to East Asia	2.9	2.7	2.6	2.5	2.5	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.6	2.9	-5.3	1.0	1.2	1.4	1.7
Central Am./Carib. to South Am. West	2.4	2.1	2.4	2.3	3.7	3.9	4.2	4.3	4.5	4.7	4.9	6.4	8.3	11.0	10.1	4.7	5.3	5.5	5.7
East Asia to Central Am./Carib.	5.1	5.1	5.3	6.8	5.8	6.0	6.3	6.6	6.9	7.3	7.8	10.5	14.4	19.8	3.2	5.4	6.2	6.4	6.6
South Am. West to South Am. East	0.7	0.9	2.0	2.5	2.6	2.8	2.8	3.0	3.2	3.5	3.7	5.6	8.7	13.4	33.1	6.2	8.6	9.0	9.1
US West to South Am. East	0.4	0.6	0.8	0.8	0.5	1.1	1.1	1.1	1.2	1.3	1.4	2.1	3.1	4.6	18.9	6.1	8.7	7.8	7.8
East Asia to South Am. East	0.7	1.0	1.5	2.6	2.4	2.3	2.3	2.4	2.6	2.7	2.9	3.9	5.2	6.9	28.0	4.3	6.1	5.9	5.8
Central Am./Carib. to South Am. East	0.4	0.4	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	9.9	1.2	2.1	1.3	1.5
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	357.3	370.7	385.7	401.5	494.9	612.3	762.7	4.9	4.0	4.3	4.3	4.5
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	53.9	56.0	58.2	60.6	74.7	92.4	115.1	3.7	4.0	4.3	4.3	4.5
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	86.5	89.7	93.4	97.2	119.8	148.2	184.6	9.0	4.0	4.3	4.3	4.5
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	497.8	516.4	537.3	559.3	689.3	852.9	1,062.4	5.4	4.0	4.3	4.3	4.5
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	3.7%	3.7%	4.0%	4.1%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 3: Tolls are raised 5% for four years from 1997 and remain the same thereafter

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	81,728	85,597	82,497	78,602	85,625	100,817	104,146	102,002	99,867	97,924	96,078	103,951	111,983	120,749	4.3	-1.0	1.6	1.5	1.5
Coal and Coke	7,893	8,041	8,504	7,482	8,961	10,926	11,107	10,587	10,069	9,566	9,092	9,094	9,094	9,115	6.7	-3.6	0.0	0.0	0.0
Soybeans	6,090	6,267	7,220	7,863	7,103	8,407	8,770	8,779	8,801	8,838	8,877	10,114	11,448	13,114	6.7	1.1	2.6	2.5	2.8
Wheat	5,504	5,731	5,397	3,981	4,220	5,541	5,762	5,688	5,623	5,565	5,506	5,968	6,420	6,870	0.1	-0.1	1.6	1.5	1.4
Corn	13,980	15,013	14,344	16,007	15,847	23,623	24,212	24,112	23,936	23,769	23,600	25,199	26,973	28,973	11.1	0.0	1.3	1.4	1.4
Other Grains	2,880	3,086	3,136	3,008	2,646	3,706	3,891	3,854	3,833	3,825	3,816	4,227	4,616	4,981	5.2	0.6	2.1	1.8	1.5
Lumber Products	5,165	5,594	5,416	5,142	5,150	5,678	5,955	5,826	5,700	5,623	5,546	6,413	7,223	8,000	1.9	-0.5	2.9	2.4	2.1
Pulpwood	2,818	2,812	3,505	3,496	3,362	3,903	4,103	3,965	3,836	3,715	3,602	3,999	4,374	4,752	6.7	-1.6	2.1	1.8	1.7
Iron and Steel	6,127	6,920	5,656	4,607	6,997	8,209	8,514	8,253	7,998	7,766	7,545	8,066	8,551	9,051	6.0	-1.7	1.3	1.2	1.1
Misc. Minerals	4,318	4,209	3,269	3,154	5,206	4,743	4,860	4,707	4,560	4,421	4,288	4,480	4,622	4,759	1.9	-2.0	0.9	0.6	0.6
Phosphates	6,951	8,090	7,412	6,045	7,591	7,326	7,432	7,194	6,923	6,646	6,389	6,400	6,467	6,507	1.1	-2.7	0.0	0.2	0.1
Other Fertilizers	4,872	4,243	4,245	4,540	5,240	5,497	5,710	5,539	5,374	5,218	5,069	5,448	5,779	6,096	2.4	-1.6	1.5	1.2	1.1
Alumina/Bauxite	2,259	1,673	737	546	585	434	452	446	441	437	433	527	609	710	-28.1	0.0	4.0	2.9	3.1
Other Ores	4,019	4,701	4,974	4,713	4,956	5,667	5,925	5,740	5,574	5,416	5,267	5,904	6,529	7,246	7.1	-1.5	2.3	2.0	2.1
Scrap Metals	2,051	2,029	1,376	2,482	1,614	1,646	1,784	1,804	1,839	1,892	1,943	2,614	3,351	4,150	-4.3	3.4	6.1	5.1	4.4
Sugar	2,737	2,838	2,711	1,928	1,819	2,148	2,197	2,091	1,993	1,901	1,814	1,856	1,880	1,914	-4.7	-3.3	0.5	0.3	0.4
Petroleum Coke	3,004	2,970	3,250	2,357	2,848	2,209	2,251	2,212	2,175	2,144	2,115	2,255	2,445	2,665	-6.0	-0.9	1.3	1.6	1.7
Paper	1,061	1,379	1,346	1,252	1,481	1,154	1,221	1,205	1,193	1,183	1,175	1,385	1,604	1,846	1.7	0.4	3.4	3.0	2.9
Tanker	26,482	25,982	26,414	29,483	31,551	33,582	35,064	34,450	33,935	33,538	33,224	38,536	44,871	52,994	4.9	-0.2	3.0	3.1	3.4
Chemicals	3,964	4,686	4,922	5,257	5,591	5,960	6,204	6,268	6,336	6,428	6,520	7,329	8,032	8,691	8.5	1.8	2.4	1.8	1.6
Petroleum Chemicals	1,457	1,841	1,211	1,694	2,301	1,967	2,084	2,171	2,262	2,363	2,465	2,996	3,495	3,957	6.2	4.6	4.0	3.1	2.5
Crude Petroleum	8,933	7,646	7,590	7,995	9,360	10,664	11,006	10,448	9,932	9,451	9,005	9,739	10,796	12,336	3.6	-3.3	1.6	2.1	2.7
Petroleum Residual	4,194	3,566	4,434	4,102	2,848	2,528	2,657	2,600	2,551	2,508	2,470	2,904	3,390	3,980	-9.6	-0.5	3.3	3.1	3.3
Petroleum Products	5,778	6,260	6,271	8,264	8,646	9,346	9,860	9,729	9,633	9,571	9,542	11,839	14,820	18,907	10.1	0.4	4.4	4.6	5.0
Other Food & Agriculture	2,155	1,983	1,986	2,171	2,807	3,118	3,253	3,233	3,221	3,217	3,222	3,729	4,338	5,123	7.7	0.7	3.0	3.1	3.4
General Cargo/Reefer	7,513	8,129	7,851	7,904	8,212	8,690	9,060	9,115	9,194	9,302	9,414	10,853	12,356	13,987	3.0	1.6	2.9	2.6	2.5
Bananas	1,149	1,563	1,647	1,446	1,686	2,093	2,182	2,209	2,241	2,273	2,306	2,552	2,802	3,070	12.7	2.0	2.1	1.9	1.8
Other Reefer	2,964	2,975	2,744	2,569	2,822	3,059	3,172	3,234	3,304	3,391	3,478	4,052	4,648	5,258	0.6	2.6	3.1	2.8	2.5
Other Metals	1,935	1,912	1,696	1,823	1,746	1,582	1,660	1,635	1,616	1,608	1,601	1,908	2,204	2,526	-3.9	0.2	3.6	2.9	2.8
All Others	1,466	1,679	1,764	2,066	1,958	1,956	2,046	2,037	2,033	2,030	2,030	2,340	2,702	3,133	5.9	0.7	2.9	2.9	3.0
RoRo/Vehicles																			
Automotives	1,580	1,500	1,490	1,488	1,561	1,629	1,680	1,688	1,694	1,709	1,723	1,796	1,885	1,990	0.6	1.1	0.8	1.0	1.1
Containerized Cargo																			
Containerized Cargo	18,021	18,573	19,197	18,918	19,922	21,603	23,023	23,957	24,932	26,044	27,190	33,340	40,406	48,375	3.7	4.7	4.2	3.9	3.7
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	171,212	169,622	168,517	167,629	188,476	211,500	238,095	4.2	0.2	2.4	2.3	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	24,687	24,457	24,298	24,170	27,176	30,496	34,330	2.0	0.2	2.4	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	195,899	194,080	192,815	191,799	215,652	241,996	272,425	3.9	0.2	2.4	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	-1.0%	-0.9%	-0.7%	-0.5%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Alternative Scenario 3: Tolls are raised 5% for four years from 1997 and remain the same thereafter

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	48,402	53,643	51,080	50,664	50,695	60,920	63,049	63,206	63,228	63,409	63,614	70,580	78,151	86,292	4.7	0.9	2.1	2.1	2.0
East Asia to US East	9,692	9,683	9,933	10,213	12,221	12,519	12,973	12,764	12,556	12,371	12,197	12,893	13,573	14,300	5.3	-0.5	1.1	1.0	1.0
South Am. West to US East	8,705	6,243	5,178	5,381	9,378	9,006	9,226	8,802	8,415	8,055	7,726	7,830	7,942	8,085	0.7	-3.0	0.3	0.3	0.4
Canada to Europe	7,537	7,466	6,592	5,530	6,360	8,074	8,350	7,886	7,445	7,027	6,633	6,931	7,190	7,430	1.4	-3.9	0.9	0.7	0.7
South Am. West to Europe	6,280	6,350	6,156	6,327	7,008	7,642	7,857	7,622	7,411	7,215	7,032	7,251	7,411	7,561	4.0	-1.6	0.6	0.4	0.4
US West to Europe	5,647	5,918	6,933	5,584	5,387	5,096	5,299	5,311	5,332	5,363	5,397	5,994	6,633	7,301	-2.0	1.2	2.1	2.0	1.9
US East to South & SE Asia	3,621	5,351	5,101	5,745	6,084	7,111	7,561	7,888	8,216	8,597	8,991	11,435	14,276	17,530	14.5	4.8	4.9	4.5	4.2
US East to South Am. West	4,360	4,709	4,786	5,229	5,537	7,440	8,102	8,232	8,419	8,648	8,897	11,859	15,454	19,880	11.3	3.6	5.9	5.4	5.2
US East to Central Am./Carib.	4,396	4,171	4,360	3,639	3,312	3,949	4,307	4,373	4,442	4,527	4,619	6,435	8,633	11,550	-2.1	3.2	6.9	6.1	6.0
South Am. West to Central Am./Carib.	5,001	3,818	2,928	4,324	2,953	2,589	2,658	2,565	2,478	2,395	2,315	2,352	2,372	2,393	-12.3	-2.2	0.3	0.2	0.2
South Am. East to South Am. West	1,845	3,104	3,300	2,990	3,287	5,272	5,494	5,282	5,090	4,914	4,750	5,196	5,647	6,128	23.4	-2.1	1.8	1.7	1.6
US East to Oceania	2,692	3,003	3,040	3,099	3,442	3,986	4,123	4,102	4,117	4,128	4,145	4,599	5,114	5,693	8.2	0.8	2.1	2.1	2.2
Europe to US West	3,698	3,196	2,695	2,415	3,246	2,965	3,064	3,037	3,005	2,984	2,963	3,043	3,072	3,072	-4.3	0.0	0.5	0.2	0.0
South Am. East to US West	1,926	3,149	3,036	2,476	3,305	3,869	4,126	4,016	3,910	3,818	3,733	4,727	5,958	7,636	15.0	-0.7	4.8	4.7	5.1
South & SE Asia to US East	2,799	2,855	2,925	2,982	3,135	2,984	3,104	3,083	3,059	3,046	3,033	3,229	3,388	3,525	1.3	0.3	1.3	1.0	0.8
Centl Am./Carib. to Centl Am./Carib.	2,446	2,074	3,012	2,939	2,784	3,304	3,396	3,197	3,016	2,846	2,687	2,808	2,896	3,002	6.2	-4.0	0.9	0.6	0.7
Oceania to US East	3,844	3,315	2,307	2,091	2,096	1,925	1,979	1,964	1,951	1,938	1,926	1,951	1,972	1,990	-12.9	0.0	0.3	0.2	0.2
South Am. East to Central Am./Carib.	1,845	1,878	2,161	2,420	3,213	3,222	3,385	3,288	3,203	3,120	3,042	3,585	4,111	4,708	11.8	-1.1	3.3	2.8	2.7
Central Am./Carib. to US East	1,580	1,847	2,330	2,454	3,107	3,003	3,093	3,018	2,945	2,875	2,808	2,886	2,939	2,995	13.7	-1.3	0.6	0.4	0.4
Europe to South Am. West	2,093	1,715	1,764	2,217	2,751	3,062	3,193	3,143	3,106	3,077	3,052	3,267	3,456	3,636	7.9	-0.1	1.4	1.1	1.0
South Am. East to East Asia	1,923	1,457	1,871	1,981	1,263	2,035	2,102	2,032	1,970	1,919	1,872	2,276	2,634	3,015	1.1	-1.7	4.0	3.0	2.7
Central Am./Carib. to East Asia	1,968	1,912	1,945	1,305	1,641	1,463	1,497	1,425	1,359	1,298	1,241	1,272	1,301	1,339	-5.8	-3.2	0.5	0.4	0.6
Central Am./Carib. to South Am. West	1,021	755	1,017	890	1,470	1,651	1,723	1,673	1,631	1,597	1,568	1,770	1,984	2,239	10.1	-1.0	2.5	2.3	2.4
East Asia to Central Am./Carib.	1,127	1,048	1,164	1,283	864	869	927	958	997	1,040	1,086	1,424	1,844	2,366	-5.1	4.6	5.6	5.3	5.1
South Am. West to South Am. East	224	328	860	1,075	1,189	1,067	1,088	1,078	1,075	1,076	1,080	1,313	1,618	2,032	36.6	0.2	4.0	4.3	4.7
US West to South Am. East	344	378	376	444	274	522	527	523	525	532	540	783	1,064	1,433	8.7	0.6	7.7	6.3	6.1
East Asia to South Am. East	162	268	302	374	333	399	389	379	373	369	365	452	536	632	19.8	-1.8	4.4	3.5	3.4
Central Am./Carib. to South Am. East	144	145	296	323	536	378	382	363	347	332	319	335	333	332	21.2	-3.3	1.0	-0.1	0.0
Total, Major Routes	135,324	139,780	137,448	136,395	146,871	166,322	172,972	171,212	169,622	168,517	167,629	188,476	211,500	238,095	4.2	0.2	2.4	2.3	2.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	24,687	24,457	24,298	24,170	27,176	30,496	34,330	2.0	0.2	2.4	2.3	2.4
Total PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	195,899	194,080	192,815	191,799	215,652	241,996	272,425	3.9	0.2	2.4	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	-1.0%	-0.9%	-0.7%	-0.5%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Alternative Scenario 3: Tolls are raised 5% for four years from 1997 and remain the same thereafter

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	104.3	109.8	106.6	111.7	121.1	138.7	143.3	147.3	151.3	155.8	160.4	174.1	187.9	202.8	5.9	3.0	1.7	1.5	1.5
Coal and Coke	9.2	9.7	10.3	9.9	12.2	14.8	15.1	15.1	15.1	15.0	15.0	15.1	15.1	15.1	10.0	0.3	0.0	0.0	0.1
Soybeans	7.0	7.2	8.3	9.9	9.1	10.5	11.0	11.5	12.2	12.8	13.5	15.5	17.5	20.2	8.6	5.1	2.7	2.6	2.8
Wheat	6.4	6.7	6.1	5.3	5.4	6.9	7.2	7.4	7.7	8.0	8.3	9.0	9.7	10.4	1.4	3.8	1.7	1.5	1.4
Corn	15.7	16.8	16.1	19.8	19.6	29.3	30.0	31.4	32.7	34.1	35.5	38.0	40.8	43.9	13.2	4.0	1.4	1.4	1.5
Other Grains	3.4	3.6	3.8	4.0	3.5	4.8	5.1	5.3	5.5	5.7	6.0	6.7	7.3	7.9	7.5	4.5	2.1	1.8	1.5
Lumber Products	9.2	10.1	10.5	11.1	11.1	11.5	12.1	12.4	12.7	13.2	13.7	15.8	17.8	19.7	4.4	3.5	2.9	2.4	2.0
Pulpwood	3.6	3.5	4.6	5.0	4.9	5.5	5.8	5.9	6.0	6.1	6.2	6.9	7.6	8.2	9.0	2.4	2.1	1.8	1.7
Iron and Steel	9.6	10.8	9.1	8.4	11.7	13.5	14.0	14.2	14.4	14.6	14.9	15.8	16.6	17.4	7.1	1.9	1.2	1.0	0.9
Misc. Minerals	5.1	4.9	3.9	4.2	6.6	6.1	6.2	6.3	6.5	6.6	6.7	7.0	7.3	7.5	3.6	2.0	1.0	0.7	0.7
Phosphates	7.8	9.2	8.6	7.6	9.6	9.1	9.2	9.3	9.4	9.5	9.6	9.6	9.7	9.7	2.9	1.1	0.0	0.2	0.1
Other Fertilizers	6.6	5.6	5.5	6.5	7.6	7.5	7.8	7.9	8.0	8.2	8.3	8.9	9.4	9.8	2.5	2.1	1.3	1.1	1.0
Alumina/Bauxite	2.5	1.9	0.9	0.8	0.8	0.6	0.6	0.6	0.7	0.7	0.7	0.9	1.0	1.1	-25.4	3.8	4.0	2.8	3.1
Other Ores	5.0	5.9	6.4	6.5	6.7	7.5	7.9	8.0	8.2	8.4	8.5	9.6	10.6	11.8	8.4	2.5	2.3	2.0	2.1
Scrap Metals	2.5	2.5	1.7	3.5	2.3	2.2	2.3	2.5	2.7	2.9	3.1	4.2	5.3	6.6	-3.2	7.5	6.1	5.1	4.4
Sugar	3.4	3.5	3.3	2.6	2.5	2.8	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	-3.6	0.6	0.5	0.2	0.3
Petroleum Coke	3.4	3.4	3.8	3.2	3.7	2.9	2.9	3.0	3.1	3.2	3.3	3.5	3.8	4.2	-3.3	3.0	1.4	1.7	1.8
Paper	3.9	4.2	3.6	3.5	3.7	3.3	3.5	3.6	3.8	3.9	4.1	4.8	5.5	6.3	-3.1	4.6	3.1	2.8	2.6
Tanker	35.6	35.5	35.8	41.7	44.7	47.0	49.1	50.6	52.3	54.3	56.4	65.5	76.4	90.3	5.7	3.7	3.0	3.1	3.4
Chemicals	4.9	6.0	6.4	7.4	7.8	8.1	8.5	8.9	9.5	10.0	10.7	12.0	13.1	14.1	10.5	5.6	2.3	1.8	1.5
Petroleum Chemicals	1.7	2.2	1.5	2.4	3.1	2.7	2.8	3.1	3.3	3.7	4.0	4.8	5.6	6.3	8.9	8.3	3.9	3.0	2.5
Crude Petroleum	10.2	9.0	9.1	10.0	12.0	13.5	13.9	13.9	13.8	13.8	13.8	15.0	16.6	18.9	5.7	0.6	1.6	2.1	2.6
Petroleum Residual	4.9	4.4	5.4	5.2	3.7	3.2	3.4	3.5	3.6	3.7	3.9	4.6	5.3	6.3	-8.1	3.6	3.4	3.2	3.3
Petroleum Products	8.7	9.5	9.4	12.5	13.4	14.4	15.2	15.7	16.3	17.0	17.8	22.1	27.6	35.2	10.7	4.3	4.4	4.6	5.0
Other Food & Agriculture	5.1	4.4	4.0	4.3	4.7	5.1	5.3	5.5	5.7	6.0	6.3	7.2	8.2	9.6	0.0	4.2	2.7	2.8	3.1
General Cargo/Reefer	24.6	27.6	26.8	27.3	28.8	30.7	31.9	33.7	35.7	38.0	40.4	45.8	51.5	57.7	4.5	5.7	2.6	2.4	2.3
Bananas	5.4	7.4	7.8	6.5	7.5	9.0	9.4	10.0	10.7	11.4	12.1	13.4	14.7	16.1	11.0	6.0	2.1	1.9	1.8
Other Reefer	10.2	10.8	10.1	10.3	10.7	11.5	11.9	12.8	13.7	14.8	15.9	18.7	21.6	24.5	2.5	6.8	3.2	2.9	2.6
Other Metals	3.0	3.0	2.9	3.2	3.1	2.7	2.8	2.9	3.0	3.1	3.3	3.8	4.4	4.9	-2.2	4.1	3.2	2.6	2.5
All Others	6.0	6.4	6.0	7.3	7.5	7.5	7.7	8.0	8.3	8.7	9.0	9.9	10.9	12.1	4.4	3.9	1.8	2.0	2.1
RoRo/Vehicles																			
Automotives	32.9	31.5	31.0	35.4	37.8	37.0	38.1	40.3	42.5	45.1	47.8	50.2	53.0	56.1	2.4	5.3	1.0	1.1	1.2
Containerized Cargo																			
Containerized Cargo	63.0	63.0	64.5	71.2	72.3	77.1	82.2	89.9	98.2	107.8	118.2	145.5	177.2	213.3	4.1	8.9	4.2	4.0	3.8
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	361.7	380.1	400.9	423.3	481.2	545.9	620.2	4.9	5.1	2.6	2.6	2.6
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	54.6	57.4	60.5	63.9	72.6	82.4	93.6	3.7	5.1	2.6	2.6	2.6
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	87.6	92.0	97.0	102.4	116.5	132.1	150.1	9.0	5.1	2.6	2.6	2.6
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	503.9	529.5	558.5	589.6	670.3	760.5	863.9	5.4	5.1	2.6	2.6	2.6
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	5.0%	5.1%	5.5%	5.6%								

Estimates of PCC Tolls by Product (in Millions of US Dollars)
Alternative Scenario 3: Tolls are raised 5% for four years from 1997 and remain the same thereafter

Routes	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
US East to East Asia	65.6	73.3	70.8	77.6	78.4	90.4	93.9	99.5	105.2	111.6	118.4	134.7	152.0	170.4	6.6	5.6	2.6	2.5	2.3
East Asia to US East	42.8	40.4	38.6	41.3	44.9	42.8	44.2	46.0	47.8	49.8	51.9	52.8	53.4	53.8	0.0	3.9	0.4	0.2	0.1
South Am. West to US East	18.2	14.8	13.8	14.5	18.8	18.1	18.7	19.3	19.8	20.5	21.2	22.4	23.7	25.0	-0.1	3.1	1.1	1.1	1.1
Canada to Europe	9.3	9.4	8.4	7.7	8.4	10.5	10.9	10.8	10.7	10.6	10.5	11.0	11.4	11.8	2.4	0.0	0.9	0.7	0.7
South Am. West to Europe	13.0	15.0	14.8	15.3	17.1	19.3	19.9	20.6	21.3	22.2	23.0	24.1	24.9	25.7	8.2	3.6	0.9	0.7	0.6
US West to Europe	8.9	9.5	11.1	9.9	10.2	10.0	10.5	11.2	12.0	12.9	13.8	16.0	18.4	20.8	2.3	6.7	3.1	2.8	2.5
US East to South & SE Asia	6.3	8.5	8.2	10.6	11.6	13.4	14.3	15.8	17.4	19.3	21.3	27.7	35.2	43.7	16.5	9.7	5.4	4.9	4.4
US East to South Am. West	12.3	12.2	13.3	14.8	15.6	18.9	20.9	22.8	25.0	27.6	30.5	42.1	56.7	74.5	9.0	10.0	6.7	6.1	5.6
US East to Central Am./Carib.	5.7	5.4	5.8	5.5	4.9	5.6	6.1	6.6	7.1	7.6	8.2	11.6	15.9	21.5	-0.3	8.0	7.2	6.4	6.2
South Am. West to Central Am./Carib.	6.2	4.9	3.9	6.1	4.9	4.4	4.5	4.6	4.7	4.9	5.0	5.2	5.4	5.5	-6.6	2.7	0.8	0.6	0.6
South Am. East to South Am. West	3.0	4.7	4.8	5.3	5.9	8.9	9.4	9.6	9.8	10.1	10.4	11.8	13.3	15.0	24.5	3.2	2.5	2.4	2.4
US East to Oceania	5.0	5.2	5.4	6.0	6.5	7.5	7.9	8.3	8.9	9.5	10.1	11.7	13.5	15.4	8.6	6.2	2.9	2.8	2.7
Europe to US West	14.4	12.3	11.9	12.7	14.6	13.4	13.7	14.2	14.8	15.4	16.0	15.5	14.9	14.2	-1.4	3.6	-0.5	-0.8	-0.9
South Am. East to US West	2.7	4.3	4.0	3.5	4.6	5.3	5.6	5.7	5.8	6.0	6.1	7.7	9.6	12.2	14.2	3.2	4.7	4.5	4.9
South & SE Asia to US East	9.4	10.7	10.1	11.5	10.6	11.0	11.4	12.0	12.5	13.2	13.9	14.6	15.3	15.8	3.1	4.8	1.1	0.8	0.7
Centl Am./Carib. to Centl Am./Carib.	4.2	3.7	4.4	4.6	4.6	5.8	6.0	6.0	6.0	6.0	6.0	6.4	6.6	7.0	6.9	0.6	1.2	0.9	1.0
Oceania to US East	5.8	5.4	4.2	4.2	4.6	4.2	4.3	4.5	4.7	4.9	5.2	5.2	5.2	5.3	-6.1	4.2	0.2	0.1	0.1
South Am. East to Central Am./Carib.	2.5	2.8	3.1	3.3	4.7	4.8	5.0	5.1	5.3	5.4	5.5	6.5	7.5	8.7	14.0	3.0	3.4	2.9	2.8
Central Am./Carib. to US East	2.0	2.6	3.1	3.4	4.2	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	13.8	2.5	0.5	0.3	0.3
Europe to South Am. West	7.9	7.5	7.4	8.4	9.3	10.3	10.8	11.4	12.0	12.7	13.4	14.7	15.8	16.9	5.4	5.4	1.8	1.5	1.3
South Am. East to East Asia	2.6	2.0	2.4	2.8	2.0	3.0	3.1	3.1	3.1	3.2	3.3	3.9	4.5	5.1	2.5	2.0	3.8	2.7	2.6
Central Am./Carib. to East Asia	2.9	2.7	2.6	2.5	2.5	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.6	2.8	-5.3	1.8	1.0	0.9	1.0
Central Am./Carib. to South Am. West	2.4	2.1	2.4	2.3	3.7	3.9	4.2	4.3	4.6	4.8	5.1	6.2	7.4	8.9	10.1	5.5	3.9	3.7	3.6
East Asia to Central Am./Carib.	5.1	5.1	5.3	6.8	5.8	6.0	6.3	6.7	7.3	7.9	8.6	10.4	12.7	15.5	3.2	7.5	3.9	4.0	4.1
South Am. West to South Am. East	0.7	0.9	2.0	2.5	2.6	2.8	2.8	3.0	3.3	3.6	3.9	5.3	7.3	10.1	33.1	7.0	6.4	6.6	6.6
US West to South Am. East	0.4	0.6	0.8	0.8	0.5	1.1	1.1	1.1	1.2	1.3	1.4	2.1	2.9	4.0	18.9	6.3	8.1	6.9	6.5
East Asia to South Am. East	0.7	1.0	1.5	2.6	2.4	2.3	2.3	2.4	2.6	2.8	2.9	3.6	4.4	5.2	28.0	4.7	4.2	3.9	3.6
Central Am./Carib. to South Am. East	0.4	0.4	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	9.9	1.6	0.9	0.0	0.1
Total, Major Routes	260.3	267.3	264.7	287.3	304.6	330.4	344.6	361.7	380.1	400.9	423.3	481.2	545.9	620.2	4.9	5.1	2.6	2.6	2.6
Total, Minor Routes	41.7	43.5	41.2	44.4	47.4	49.9	52.0	54.6	57.4	60.5	63.9	72.6	82.4	93.6	3.7	5.1	2.6	2.6	2.6
Other Tolls	51.9	61.6	59.9	66.7	64.9	80.0	83.4	87.6	92.0	97.0	102.4	116.5	132.1	150.1	9.0	5.1	2.6	2.6	2.6
Total Tolls	353.9	372.4	365.9	398.4	416.9	460.2	480.1	503.9	529.5	558.5	589.6	670.3	760.5	863.9	5.4	5.1	2.6	2.6	2.6
% Change		5.2%	-1.8%	8.9%	4.7%	10.4%	4.3%	5.0%	5.1%	5.5%	5.6%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: US East to East Asia

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	39,509	43,530	42,316	40,776	40,609	51,568	53,120	53,918	54,582	55,353	56,146	60,427	64,939	69,596	5.5	1.7	1.5	1.5	1.4
Coal and Coke	4,205	3,631	3,849	2,758	2,773	2,547	2,529	2,507	2,457	2,403	2,351	2,116	1,910	1,727	-9.5	-1.6	-2.1	-2.0	-2.0
Soybeans	5,440	5,578	6,213	6,806	5,868	6,687	6,918	7,006	7,103	7,209	7,319	7,889	8,483	9,140	4.2	1.8	1.5	1.5	1.5
Wheat	3,924	4,017	4,189	1,984	2,554	3,975	4,096	4,124	4,161	4,204	4,248	4,458	4,648	4,804	0.3	1.3	1.0	0.8	0.7
Corn	12,337	13,383	12,797	14,665	14,122	20,655	20,986	21,169	21,272	21,378	21,484	22,028	22,642	23,339	10.9	0.8	0.5	0.6	0.6
Other Grains	1,914	1,779	1,453	1,642	1,678	2,277	2,375	2,394	2,425	2,465	2,505	2,695	2,870	3,031	3.5	1.9	1.5	1.3	1.1
Lumber Products	1,545	2,577	3,068	3,065	3,339	3,646	3,846	3,965	4,086	4,259	4,434	5,312	6,178	7,024	18.7	4.0	3.7	3.1	2.6
Pulpwood	518	527	978	681	850	906	983	1,023	1,064	1,110	1,156	1,398	1,640	1,879	11.8	5.0	3.9	3.2	2.8
Iron and Steel	1,079	1,824	535	463	49	1,102	1,207	1,281	1,354	1,429	1,507	1,925	2,374	2,849	0.4	6.5	5.0	4.3	3.7
Misc. Minerals	557	545	589	606	638	643	676	710	742	776	811	995	1,182	1,370	2.9	4.8	4.2	3.5	3.0
Phosphates	4,871	6,091	5,572	4,630	5,909	5,920	6,040	6,087	6,063	6,032	6,010	5,985	5,993	5,937	4.0	0.3	-0.1	0.0	-0.2
Other Fertilizers	401	717	692	509	744	1,158	1,261	1,342	1,422	1,503	1,586	2,025	2,467	2,902	23.7	6.5	5.0	4.0	3.3
Alumina/Bauxite	9	12	12	7	0	6	7	8	8	9	9	15	20	28	-7.0	7.7	9.5	6.6	6.8
Other Ores	48	46	42	43	14	30	32	33	34	36	37	47	54	63	-8.8	4.3	4.6	3.1	3.0
Scrap Metals	1,790	1,848	1,200	2,267	1,509	1,510	1,638	1,717	1,816	1,937	2,063	2,771	3,552	4,395	-3.3	6.4	6.1	5.1	4.4
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	587	548	718	384	147	217	213	218	220	223	225	238	251	267	-18.1	0.8	1.1	1.1	1.2
Paper	284	407	410	266	415	288	314	334	354	377	401	530	676	841	0.3	6.8	5.8	5.0	4.5
Tanker	3,524	4,276	3,005	4,610	4,785	4,531	4,793	5,026	5,256	5,508	5,766	7,174	8,793	10,719	5.2	4.9	4.5	4.2	4.0
Chemicals	1,413	1,503	1,406	1,559	1,807	1,837	1,914	1,977	2,037	2,107	2,175	2,508	2,813	3,096	5.4	3.4	2.9	2.3	1.9
Petroleum Chemicals	786	914	525	733	946	1,057	1,119	1,176	1,235	1,301	1,366	1,685	1,985	2,260	6.1	5.3	4.3	3.3	2.6
Crude Petroleum	0	0	0	1	4	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Residual	93	207	37	5	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	1,002	1,463	753	2,142	1,577	610	657	704	749	799	851	1,184	1,656	2,324	-9.5	6.9	6.8	6.9	7.0
Other Food & Agriculture	229	189	283	170	451	1,027	1,103	1,169	1,235	1,302	1,374	1,797	2,339	3,039	35.0	6.0	5.5	5.4	5.4
General Cargo/Reefer	412	640	798	672	908	836	872	919	971	1,036	1,102	1,473	1,892	2,354	15.2	5.7	6.0	5.1	4.5
Bananas	0	1	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Reefer	226	367	405	384	556	534	539	564	594	633	674	895	1,140	1,399	18.7	4.8	5.9	5.0	4.2
Other Metals	44	51	137	28	24	38	43	46	50	54	59	90	122	159	-2.6	9.1	8.7	6.3	5.5
All Others	142	221	255	260	327	263	290	309	328	348	369	488	630	796	13.1	7.0	5.7	5.3	4.8
RoRo/Vehicles																			
Automotives	8	12	16	32	40	67	71	74	77	81	85	100	112	119	54.8	4.7	3.5	2.2	1.2
Containerized Cargo																			
Containerized Cargo	4,951	5,184	4,945	4,574	4,353	3,919	4,192	4,423	4,654	4,916	5,185	6,556	8,075	9,687	-4.6	5.8	4.8	4.3	3.7
Total, Major Routes	48,402	53,643	51,080	50,664	50,695	60,920	63,049	64,360	65,541	66,894	68,283	75,730	83,811	92,475	4.7	2.3	2.1	2.0	2.0
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: East Asia to US East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	4,644	4,842	4,635	4,241	6,309	7,029	7,246	7,293	7,342	7,387	7,436	7,739	8,092	8,544	8.6	1.1	0.8	0.9	1.1
Coal and Coke	580	805	1,292	1,147	1,833	2,476	2,540	2,551	2,563	2,567	2,572	2,613	2,667	2,738	33.7	0.8	0.3	0.4	0.5
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	8	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Lumber Products	39	22	27	6	25	4	5	5	5	5	5	5	5	5	-35.2	1.2	0.5	0.0	-0.3
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	2,473	2,322	2,237	1,659	2,544	2,465	2,488	2,448	2,404	2,363	2,323	2,117	1,909	1,708	-0.1	-1.2	-1.8	-2.0	-2.2
Misc. Minerals	0	2	1	0	5	5	5	5	5	5	4	4	4	3	99.5	-1.7	-1.0	-2.3	-2.1
Phosphates	0	0	25	0	2	1	1	1	1	1	1	1	1	1	NA	-0.6	0.8	-1.5	-1.5
Other Fertilizers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Alumina/Bauxite	312	251	268	302	349	300	319	331	343	355	369	439	497	561	-0.8	4.2	3.6	2.5	2.5
Other Ores	1,139	1,320	745	949	1,389	1,663	1,773	1,839	1,910	1,981	2,055	2,459	2,916	3,440	7.9	4.3	3.7	3.5	3.4
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	17	0	10	0	11	14	14	14	14	14	14	14	13	13	-4.1	-0.4	-0.4	-0.8	-0.7
Petroleum Coke	84	120	23	179	152	101	102	100	98	96	95	88	80	74	3.7	-1.4	-1.4	-1.8	-1.6
Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	170	296	744	1,713	1,678	1,445	1,508	1,534	1,561	1,587	1,614	1,761	1,911	2,077	53.3	2.2	1.8	1.7	1.7
Chemicals	101	139	137	398	412	254	266	270	275	279	284	307	328	349	20.3	2.2	1.6	1.3	1.2
Petroleum Chemicals	29	21	27	78	73	81	85	88	91	93	96	110	124	138	22.7	3.6	2.8	2.4	2.2
Crude Petroleum	0	0	0	0	56	3	3	3	3	3	3	4	4	4	NA	3.5	3.1	2.5	2.3
Petroleum Residual	0	53	478	861	704	530	546	549	551	553	554	563	565	564	NA	0.9	0.3	0.1	0.0
Petroleum Products	22	69	83	355	369	534	564	581	599	616	635	735	849	981	89.1	3.5	3.0	2.9	2.9
Other Food & Agriculture	19	13	18	21	64	42	43	43	43	43	43	42	41	40	18.0	0.1	-0.2	-0.5	-0.5
General Cargo/Reefer	285	246	250	207	333	283	292	293	295	297	298	310	316	322	-0.1	1.0	0.7	0.4	0.4
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	88	64	70	78	89	74	78	80	82	84	86	97	106	115	-3.3	2.9	2.5	1.8	1.6
Other Metals	27	28	24	8	103	113	114	114	114	114	114	114	111	108	33.3	0.2	0.0	-0.5	-0.6
All Others	170	155	156	121	142	97	99	99	99	99	99	99	99	99	-10.7	0.5	0.0	0.0	0.0
RoRo/Vehicles																			
Automotives	1,184	1,123	1,040	968	1,014	931	947	936	922	912	902	839	765	686	-4.7	-0.6	-1.4	-1.8	-2.2
Containerized Cargo																			
Containerized Cargo	3,409	3,176	3,264	3,084	2,887	2,830	2,981	3,053	3,117	3,194	3,270	3,627	3,938	4,206	-3.7	2.9	2.1	1.7	1.3
Total, Major Routes	9,692	9,683	9,933	10,213	12,221	12,519	12,973	13,110	13,237	13,378	13,521	14,275	15,023	15,834	5.3	1.6	1.1	1.0	1.1
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: South Am. West to US East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	1990-95	95-2000	2000-05	2005-10	2010-15
															-------Compound Annual Growth Rates-------				
Major Routes																			
Bulk	1,839	1,432	952	1,212	3,027	2,212	2,257	2,246	2,235	2,224	2,212	2,168	2,106	2,047	3.8	0.0	-0.4	-0.6	-0.6
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	-1.5	-0.1	-2.0	-1.8
Other Grains	1	0	0	0	0	2	2	2	2	2	2	2	2	2	22.9	-1.7	-0.4	-2.4	-2.1
Lumber Products	54	47	31	33	49	40	42	42	42	43	43	46	47	49	-5.6	1.4	1.2	0.6	0.6
Pulpwood	5	34	42	28	37	43	44	44	43	43	43	44	43	42	52.1	0.1	0.6	-0.7	-0.5
Iron and Steel	29	2	1	1	32	11	11	11	11	11	11	11	11	11	-17.6	0.4	0.2	-0.3	-0.3
Misc. Minerals	811	589	303	443	2,138	1,448	1,473	1,461	1,449	1,437	1,425	1,369	1,305	1,242	12.3	-0.3	-0.8	-1.0	-1.0
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	286	185	194	339	421	190	193	191	189	187	185	176	166	157	-7.9	-0.6	-0.9	-1.2	-1.1
Alumina/Bauxite	0	0	0	1	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Ores	248	343	273	176	197	294	305	308	311	314	317	335	350	365	3.5	1.6	1.1	0.9	0.9
Scrap Metals	0	0	0	1	1	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	401	220	107	164	142	184	188	187	187	186	186	185	183	180	-14.5	0.2	-0.1	-0.3	-0.3
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	4	12	1	24	8	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	4,945	2,977	2,398	2,386	4,280	4,629	4,692	4,644	4,602	4,552	4,504	4,300	4,106	3,937	-1.3	-0.5	-0.9	-0.9	-0.8
Chemicals	94	47	188	240	199	79	80	78	77	75	74	71	65	60	-3.4	-1.3	-0.8	-1.8	-1.6
Petroleum Chemicals	2	4	18	4	4	3	3	3	3	2	2	2	2	1	6.2	-4.2	-2.1	-4.6	-4.0
Crude Petroleum	2,213	1,667	929	1,493	3,247	4,209	4,265	4,222	4,183	4,137	4,093	3,899	3,723	3,568	13.7	-0.6	-1.0	-0.9	-0.8
Petroleum Residual	2,250	1,082	1,039	356	471	160	161	159	158	156	154	145	137	130	-41.1	-0.7	-1.1	-1.2	-1.1
Petroleum Products	131	1	35	72	186	63	64	63	63	63	62	62	60	58	-13.6	-0.2	-0.1	-0.8	-0.7
Other Food & Agriculture	255	176	189	222	173	116	119	119	119	119	119	120	120	120	-14.6	0.5	0.2	0.0	0.0
General Cargo/Reefer	1,323	1,225	1,057	922	982	918	984	1,023	1,063	1,106	1,149	1,378	1,621	1,878	-7.0	4.6	3.7	3.3	3.0
Bananas	580	579	392	242	233	271	291	305	319	333	348	430	526	641	-14.1	5.2	4.3	4.1	4.0
Other Reefer	498	464	468	493	527	553	593	616	638	664	690	820	952	1,081	2.1	4.5	3.5	3.0	2.6
Other Metals	181	126	152	138	169	66	70	72	74	77	79	92	104	114	-18.3	3.9	3.0	2.4	2.0
All Others	64	57	45	49	53	28	30	30	31	32	32	36	39	42	-14.9	2.7	2.1	1.7	1.5
RoRo/Vehicles																			
Automotives	0	1	0	0	1	1	1	1	1	1	1	1	1	1	107.6	1.3	0.4	0.9	0.8
Containerized Cargo																			
Containerized Cargo	598	608	771	861	1,088	1,246	1,293	1,307	1,319	1,334	1,349	1,418	1,488	1,555	15.8	1.6	1.0	1.0	0.9
Total, Major Routes	8,705	6,243	5,178	5,381	9,378	9,006	9,226	9,221	9,220	9,216	9,215	9,266	9,323	9,418	0.7	0.5	0.1	0.1	0.2
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: Canada to Europe

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	7,195	6,998	6,138	5,086	5,836	7,686	7,955	8,034	8,110	8,184	8,259	8,655	9,011	9,340	1.3	1.4	0.9	0.8	0.7
Coal and Coke	1,944	2,365	2,605	1,670	2,614	4,316	4,461	4,503	4,543	4,585	4,627	4,849	5,056	5,242	17.3	1.4	0.9	0.8	0.7
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	73	52	27	285	124	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	34	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	215	478	75	251	376	319	327	327	328	329	331	342	353	364	8.2	0.7	0.7	0.6	0.6
Lumber Products	1,962	1,567	1,198	765	718	713	741	753	764	773	782	827	864	896	-18.3	1.9	1.1	0.9	0.7
Pulpwood	1,440	1,475	1,498	1,552	1,438	1,889	1,966	1,989	2,010	2,029	2,048	2,146	2,239	2,330	5.6	1.6	0.9	0.9	0.8
Iron and Steel	0	1	0	0	5	0	0	0	0	0	0	0	0	0	-41.9	-2.7	-0.6	-3.1	-2.5
Misc. Minerals	985	377	179	37	0	39	39	39	39	39	39	39	38	36	-47.7	0.2	-0.2	-0.5	-0.7
Phosphates	0	0	0	0	6	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Fertilizers	37	34	0	0	0	69	69	68	67	66	65	63	59	55	13.0	-1.2	-0.4	-1.4	-1.3
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	70	89	88	68	36	29	29	29	29	29	29	30	29	29	-16.2	0.0	0.7	-0.4	-0.3
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	159	224	90	79	68	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	311	335	377	347	450	312	323	327	331	335	339	359	374	387	0.1	1.7	1.2	0.8	0.7
Tanker	16	54	58	68	330	211	214	212	210	208	206	202	188	176	68.2	-0.5	-0.4	-1.4	-1.3
Chemicals	4	13	0	0	0	0	0	0	0	0	0	0	0	0	-72.2	-0.9	-0.7	-2.1	-2.0
Petroleum Chemicals	0	10	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	0	0	0	0	15	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Food & Agriculture	11	31	58	68	315	211	214	212	210	208	206	202	188	176	79.8	-0.5	-0.4	-1.4	-1.3
General Cargo/Reefer	91	136	165	178	124	99	103	103	104	105	106	112	115	118	1.7	1.3	1.1	0.5	0.5
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	24	33	83	22	22	10	10	10	10	10	10	10	10	9	-16.2	0.2	-0.4	-0.4	-0.4
Other Metals	20	43	19	54	20	23	24	24	24	24	24	27	27	27	2.4	1.3	1.8	0.2	0.2
All Others	47	61	62	102	83	66	69	69	70	71	72	76	78	81	7.2	1.5	1.1	0.7	0.7
RoRo/Vehicles																			
Automotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	-1.9	-0.5	-0.6
Containerized Cargo																			
Containerized Cargo	235	278	231	199	70	78	78	77	75	74	72	66	61	57	-19.9	-1.5	-1.9	-1.5	-1.4
Total, Major Routes	7,537	7,466	6,592	5,530	6,360	8,074	8,350	8,426	8,499	8,571	8,643	9,035	9,375	9,690	1.4	1.4	0.9	0.7	0.7
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: South Am. West to Europe

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	1990-95	95-2000	2000-05	2005-10	2010-15
															-------Compound Annual Growth Rates-------				
Major Routes																			
Bulk	2,941	2,600	2,779	2,773	2,920	3,272	3,346	3,337	3,332	3,324	3,318	3,319	3,282	3,253	2.2	0.3	0.0	-0.2	-0.2
Coal and Coke	0	0	18	0	0	22	22	21	21	20	20	19	17	15	NA	-1.8	-0.6	-2.4	-2.1
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	1	1	1	1	1	1	1	1	0	0	0	0	0	0	-0.7	-3.7	-1.1	-4.1	-3.4
Other Grains	0	0	0	0	0	3	3	3	3	2	2	2	2	2	NA	-2.8	-0.8	-3.3	-2.8
Lumber Products	368	478	184	137	91	277	284	283	282	281	280	281	275	270	-5.5	0.2	0.0	-0.4	-0.4
Pulpwood	190	143	311	439	286	464	474	472	470	468	466	465	453	442	19.5	0.1	0.0	-0.5	-0.5
Iron and Steel	4	1	1	7	1	6	6	6	6	5	5	5	4	4	7.2	-3.1	-1.0	-3.6	-3.0
Misc. Minerals	0	9	29	1	1	23	23	22	21	20	19	18	15	13	165.8	-3.7	-1.0	-4.1	-3.4
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	1,304	870	789	825	1,100	843	862	861	860	859	857	855	851	848	-8.4	0.3	-0.1	-0.1	-0.1
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	1,013	1,008	1,416	1,253	1,281	1,527	1,565	1,565	1,566	1,566	1,567	1,575	1,575	1,577	8.6	0.5	0.1	0.0	0.0
Scrap Metals	27	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	39	28	45	45	44	43	42	41	40	36	33	377.3	-1.5	-0.5	-2.1	-1.8
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	33	91	30	73	131	62	63	62	61	60	59	58	53	49	13.1	-1.1	-0.3	-1.7	-1.5
Tanker	357	355	140	358	440	388	396	395	394	392	391	389	381	375	1.7	0.2	-0.1	-0.4	-0.3
Chemicals	7	14	6	11	42	64	65	64	63	62	61	59	55	51	54.0	-1.0	-0.5	-1.5	-1.3
Petroleum Chemicals	15	0	0	0	0	2	2	2	2	2	2	2	2	1	-33.6	-1.8	-0.8	-2.2	-1.8
Crude Petroleum	0	0	0	0	49	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Residual	0	2	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	4	30	0	20	4	0	0	0	0	0	0	0	0	0	-70.3	-1.9	-0.8	-2.3	-2.0
Other Food & Agriculture	330	310	133	327	345	322	329	329	329	328	328	327	325	322	-0.5	0.4	0.0	-0.2	-0.2
General Cargo/Reefer	2,383	2,864	2,595	2,478	2,825	3,093	3,204	3,247	3,295	3,345	3,394	3,630	3,837	4,026	5.4	1.9	1.4	1.1	1.0
Bananas	553	954	1,208	1,169	1,425	1,790	1,856	1,881	1,910	1,940	1,970	2,114	2,250	2,377	26.5	1.9	1.4	1.3	1.1
Other Reefer	967	970	744	542	620	790	817	829	842	856	870	929	969	1,002	-4.0	2.0	1.3	0.9	0.7
Other Metals	804	866	526	666	651	427	441	446	450	455	459	485	509	533	-11.9	1.5	1.1	1.0	0.9
All Others	59	74	117	101	129	86	90	91	93	94	95	103	109	113	7.7	2.1	1.5	1.1	0.8
RoRo/Vehicles																			
Automotives	0	0	0	0	0	3	3	3	3	3	3	3	3	3	263.5	0.8	0.0	0.3	0.2
Containerized Cargo																			
Containerized Cargo	599	531	642	718	823	886	907	906	905	903	902	896	891	886	8.1	0.4	-0.1	-0.1	-0.1
Total, Major Routes	6,280	6,350	6,156	6,327	7,008	7,642	7,857	7,889	7,928	7,968	8,009	8,237	8,395	8,544	4.0	0.9	0.6	0.4	0.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: US West to Europe

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	3,928	3,944	4,719	4,132	3,863	3,594	3,690	3,709	3,732	3,761	3,791	3,974	4,194	4,428	-1.8	1.1	0.9	1.1	1.1
Coal and Coke	213	176	263	781	426	628	646	649	651	654	656	669	678	687	24.1	0.9	0.4	0.3	0.2
Soybeans	0	0	0	0	12	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	81	30	131	80	50	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	160	117	167	195	58	243	250	250	251	253	254	259	262	262	8.7	0.9	0.4	0.2	0.1
Lumber Products	288	221	248	171	161	67	71	73	75	76	78	88	97	106	-25.3	3.1	2.3	2.0	1.8
Pulpwood	341	280	258	205	225	165	173	175	177	179	182	193	204	216	-13.5	1.9	1.2	1.2	1.1
Iron and Steel	0	9	0	1	0	16	17	17	17	17	18	19	19	20	1645.8	1.5	1.3	0.7	0.7
Misc. Minerals	484	738	894	841	495	486	499	505	510	516	520	543	559	570	0.1	1.4	0.8	0.6	0.4
Phosphates	0	4	0	0	19	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	21	26	11	0	0	35	35	34	34	34	33	32	29	27	10.8	-1.2	-1.0	-1.4	-1.4
Alumina/Bauxite	0	0	0	34	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	304	456	593	312	173	254	261	264	268	272	276	299	319	341	-3.6	1.7	1.6	1.3	1.3
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	2	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	2,027	1,874	2,120	1,507	2,233	1,688	1,727	1,729	1,736	1,748	1,761	1,859	2,011	2,184	-3.6	0.8	1.1	1.6	1.7
Paper	8	13	34	3	11	11	12	12	12	12	12	14	14	15	6.3	2.1	1.7	1.1	0.9
Tanker	130	250	597	68	212	69	71	70	70	70	69	70	69	67	-11.8	0.0	0.2	-0.4	-0.4
Chemicals	35	46	84	12	81	28	28	28	28	28	28	28	27	26	-4.6	-0.1	-0.1	-0.5	-0.4
Petroleum Chemicals	27	35	17	25	25	20	21	21	21	20	20	21	20	20	-5.7	0.1	0.4	-0.6	-0.5
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	138	309	0	55	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	18	17	164	12	12	19	19	19	19	19	19	19	19	19	0.7	0.2	0.4	-0.3	-0.2
Other Food & Agriculture	49	15	23	20	39	2	2	2	2	2	2	2	2	2	-45.4	0.2	0.2	-0.1	0.0
General Cargo/Reefer	343	391	327	253	164	206	215	219	225	230	235	261	282	303	-9.7	2.6	2.1	1.5	1.5
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	207	211	174	140	139	121	129	134	139	145	151	176	200	223	-10.1	4.4	3.2	2.5	2.3
Other Metals	86	105	110	69	11	52	53	52	52	52	52	54	52	51	-9.8	0.1	0.6	-0.5	-0.5
All Others	49	76	43	44	14	33	34	33	33	33	33	32	30	29	-7.5	-0.5	-0.6	-0.9	-0.8
RoRo/Vehicles																			
Automotives	0	3	0	0	3	0	0	0	0	0	0	0	0	1	24.6	6.4	5.7	5.3	4.3
Containerized Cargo																			
Containerized Cargo	1,246	1,330	1,291	1,131	1,146	1,226	1,322	1,391	1,462	1,537	1,614	2,016	2,433	2,864	-0.3	5.7	4.5	3.8	3.3
Total, Major Routes	5,647	5,918	6,933	5,584	5,387	5,096	5,299	5,390	5,489	5,598	5,710	6,322	6,978	7,663	-2.0	2.3	2.1	2.0	1.9
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: US East to South & SE Asia

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	826	1,257	1,471	1,811	1,341	1,966	2,074	2,172	2,270	2,380	2,495	3,167	3,949	4,906	18.9	4.9	4.9	4.5	4.4
Coal and Coke	0	21	0	0	0	8	8	8	8	8	8	7	7	6	NA	-1.2	-2.2	-1.6	-1.7
Soybeans	185	269	295	407	388	708	744	778	818	864	913	1,212	1,576	2,069	30.7	5.2	5.8	5.4	5.6
Wheat	11	8	17	53	1	1	1	1	1	1	1	2	2	2	-34.1	2.7	4.8	2.0	1.4
Corn	12	21	71	33	40	189	182	188	191	194	196	221	239	265	73.9	0.7	2.4	1.6	2.1
Other Grains	15	32	39	22	17	36	40	41	43	45	48	67	82	99	19.9	5.7	6.7	4.3	3.7
Lumber Products	28	28	16	157	41	28	29	30	32	33	35	43	51	59	0.0	4.6	4.1	3.6	3.1
Pulpwood	210	217	279	468	332	217	238	249	261	275	289	360	436	515	0.6	5.9	4.5	3.9	3.4
Iron and Steel	125	315	182	108	53	228	253	272	290	310	330	438	564	702	12.9	7.6	5.9	5.2	4.5
Misc. Minerals	67	46	61	81	49	64	68	72	76	80	84	106	131	158	-0.7	5.6	4.8	4.3	3.7
Phosphates	85	44	262	171	170	226	231	233	233	232	231	231	233	233	21.5	0.4	0.0	0.2	0.0
Other Fertilizers	4	74	106	104	171	98	107	116	124	133	141	187	238	291	89.8	7.6	5.8	5.0	4.1
Alumina/Bauxite	9	12	12	7	0	6	7	8	9	10	12	21	36	60	-7.0	12.7	11.9	11.5	11.0
Other Ores	0	10	7	0	4	5	5	6	6	6	7	9	11	15	NA	6.6	5.4	5.4	5.1
Scrap Metals	63	69	0	37	0	69	75	80	85	92	99	138	186	241	1.7	7.6	7.0	6.1	5.3
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	4	27	37	0	0	43	42	44	44	45	45	48	52	56	57.1	1.1	1.1	1.4	1.5
Paper	8	65	85	164	74	38	42	45	48	52	56	77	104	136	37.4	8.1	6.8	6.1	5.5
Tanker	1,581	2,662	2,364	2,658	2,848	2,763	2,939	3,066	3,190	3,330	3,470	4,192	4,997	5,904	11.8	4.7	3.9	3.6	3.4
Chemicals	987	1,223	1,349	1,363	1,434	1,658	1,747	1,803	1,856	1,918	1,978	2,268	2,540	2,793	10.9	3.6	2.8	2.3	1.9
Petroleum Chemicals	420	735	452	668	978	627	671	704	739	776	814	994	1,171	1,335	8.4	5.3	4.1	3.3	2.7
Crude Petroleum	41	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	176	40	40	0	52	59	64	70	77	84	121	170	231	NA	9.8	7.7	7.0	6.4
Petroleum Products	109	499	511	528	400	359	391	419	445	474	505	695	968	1,350	26.9	7.0	6.6	6.8	6.9
Other Food & Agriculture	23	28	11	58	36	66	71	76	80	84	89	113	149	194	22.9	6.3	4.9	5.6	5.5
General Cargo/Reefer	100	145	175	176	250	251	253	254	257	261	266	293	326	365	20.2	1.2	1.9	2.2	2.2
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	60	39	28	46	73	92	94	98	103	110	117	154	196	241	9.2	4.8	5.7	4.9	4.2
Other Metals	6	16	4	30	0	4	4	4	5	5	5	7	9	11	-7.7	7.1	5.6	5.3	4.6
All Others	35	90	144	100	177	155	155	152	149	146	144	132	121	112	34.7	-1.5	-1.8	-1.6	-1.5
RoRo/Vehicles																			
Automotives	1	1	2	4	7	5	5	5	6	6	6	8	9	10	41.9	5.8	4.4	3.0	1.7
Containerized Cargo																			
Containerized Cargo	1,114	1,286	1,088	1,096	1,639	2,127	2,290	2,458	2,629	2,827	3,034	4,136	5,447	6,924	13.8	7.4	6.4	5.7	4.9
Total, Major Routes	3,621	5,351	5,101	5,745	6,084	7,111	7,561	7,956	8,352	8,804	9,271	11,795	14,729	18,109	14.5	5.4	4.9	4.5	4.2
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: US East to South Am. West

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	2,832	2,891	2,585	2,930	2,734	4,049	4,334	4,478	4,651	4,836	5,029	6,180	7,317	8,528	7.4	4.4	4.2	3.4	3.1
Coal and Coke	525	173	24	11	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Soybeans	90	24	57	97	142	274	299	313	332	349	367	488	588	718	24.9	6.0	5.9	3.8	4.1
Wheat	865	949	467	956	514	822	876	908	942	977	1,013	1,215	1,435	1,683	-1.0	4.3	3.7	3.4	3.2
Corn	349	504	695	627	876	1,676	1,829	1,922	2,029	2,147	2,271	3,009	3,756	4,517	36.9	6.3	5.8	4.5	3.8
Other Grains	210	139	130	134	85	171	179	180	182	185	188	208	223	238	-4.0	1.9	2.0	1.4	1.3
Lumber Products	2	1	1	1	2	2	2	2	2	2	2	3	3	3	-3.0	3.2	3.7	2.1	1.9
Pulpwood	2	8	2	0	2	2	2	2	2	2	2	3	3	3	5.6	0.6	1.5	-0.3	-0.1
Iron and Steel	46	61	90	183	54	171	179	182	185	189	192	210	225	236	30.2	2.4	1.8	1.3	1.0
Misc. Minerals	27	23	18	61	17	20	20	20	21	21	21	22	22	23	-6.2	1.1	1.1	0.3	0.2
Phosphates	197	178	335	276	311	153	155	151	150	148	146	140	134	131	-4.9	-1.0	-0.9	-0.8	-0.5
Other Fertilizers	254	404	296	240	374	371	379	375	372	368	365	348	325	301	7.8	-0.3	-1.0	-1.4	-1.5
Alumina/Bauxite	1	0	7	0	2	1	1	1	1	1	1	1	1	2	-1.7	3.7	4.9	2.1	2.4
Other Ores	18	17	13	35	26	64	68	70	73	75	78	93	105	117	29.4	4.0	3.7	2.4	2.3
Scrap Metals	26	89	94	56	40	0	0	0	0	0	0	0	0	0	-75.9	6.4	5.8	4.8	4.0
Sugar	36	74	87	7	46	27	28	28	28	28	29	31	31	32	-5.2	1.1	1.7	0.1	0.1
Petroleum Coke	0	0	0	25	0	0	0	0	0	0	0	0	0	0	280.7	2.5	3.2	1.4	1.5
Paper	187	248	268	220	243	295	314	323	332	343	353	409	466	526	9.6	3.7	2.9	2.7	2.5
Tanker	757	804	842	764	1,029	1,282	1,410	1,506	1,613	1,732	1,858	2,624	3,657	5,055	11.1	7.7	7.2	6.9	6.7
Chemicals	261	249	260	262	313	333	360	377	395	416	437	544	650	752	5.0	5.6	4.5	3.6	2.9
Petroleum Chemicals	14	24	40	41	39	43	46	48	50	51	53	63	71	77	26.0	4.3	3.5	2.3	1.7
Crude Petroleum	0	0	28	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	37	77	65	42	86	97	107	118	131	145	238	377	568	202.3	11.1	10.5	9.6	8.6
Petroleum Products	352	351	324	254	502	719	799	865	937	1,016	1,101	1,635	2,391	3,465	15.3	8.9	8.2	7.9	7.7
Other Food & Agriculture	129	143	113	143	132	101	107	110	113	117	122	144	167	193	-4.8	3.7	3.4	3.1	2.9
General Cargo/Reefer	205	224	276	283	239	242	250	252	254	256	258	273	288	302	3.4	1.3	1.1	1.1	0.9
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Reefer	4	7	11	15	25	33	36	38	40	42	44	59	74	89	53.1	6.2	5.9	4.7	3.6
Other Metals	19	1	4	3	8	7	7	7	7	8	8	9	9	10	-18.8	2.7	2.7	1.5	1.3
All Others	182	215	261	265	206	202	207	207	207	206	206	205	204	203	2.1	0.4	-0.1	-0.1	-0.1
RoRo/Vehicles																			
Automotives	19	24	70	65	92	112	129	141	154	169	184	275	391	529	43.1	10.4	8.4	7.3	6.2
Containerized Cargo																			
Containerized Cargo	547	766	1,014	1,187	1,442	1,755	1,978	2,124	2,294	2,490	2,699	3,940	5,548	7,562	26.2	9.0	7.9	7.1	6.4
Total, Major Routes	4,360	4,709	4,786	5,229	5,537	7,440	8,102	8,501	8,966	9,482	10,028	13,292	17,201	21,977	11.3	6.2	5.8	5.3	5.0
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: US East to Central Am./Carib.

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	3,629	3,369	3,357	2,794	2,840	3,257	3,526	3,727	3,927	4,149	4,379	5,708	7,179	8,996	-2.1	6.1	5.4	4.7	4.6
Coal and Coke	0	36	0	155	187	206	215	216	216	217	217	218	209	200	NA	1.0	0.1	-0.8	-0.9
Soybeans	176	238	458	357	475	401	442	485	527	578	634	987	1,395	1,995	17.9	9.6	9.3	7.2	7.4
Wheat	416	612	544	561	597	694	738	765	792	818	843	979	1,116	1,262	10.8	4.0	3.0	2.6	2.5
Corn	1,261	1,060	759	620	799	1,068	1,179	1,273	1,369	1,475	1,586	2,225	2,998	3,936	-3.3	8.2	7.0	6.1	5.6
Other Grains	273	237	929	493	250	323	363	392	422	454	486	645	785	904	3.4	8.5	5.8	4.0	2.9
Lumber Products	1	1	3	1	2	0	0	0	0	0	0	0	0	0	-23.7	5.3	5.2	2.9	2.5
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Iron and Steel	9	8	0	0	8	3	4	4	4	4	4	5	6	6	-17.6	3.8	4.2	2.0	1.4
Misc. Minerals	2	2	12	1	0	18	19	19	19	20	20	23	24	24	56.1	1.9	2.9	0.3	0.1
Phosphates	989	799	191	95	81	105	113	114	114	115	116	125	134	146	-36.1	2.1	1.5	1.4	1.6
Other Fertilizers	340	296	353	407	356	371	382	382	382	382	382	377	363	345	1.8	0.6	-0.3	-0.8	-1.0
Alumina/Bauxite	0	0	1	0	2	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Ores	9	9	9	23	14	7	8	8	8	9	9	11	12	14	-4.6	4.0	4.2	2.5	2.5
Scrap Metals	113	21	72	49	52	48	52	55	59	63	68	93	115	139	-15.6	7.0	6.6	4.3	3.9
Sugar	12	0	0	0	3	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	28	49	26	31	14	11	12	13	13	14	15	18	22	25	-16.8	5.9	4.6	3.5	2.9
Tanker	688	710	915	687	352	571	641	707	784	870	965	1,616	2,498	3,793	-3.7	11.1	10.9	9.1	8.7
Chemicals	26	30	93	40	50	49	53	55	58	61	64	77	86	93	13.4	5.3	4.0	2.2	1.4
Petroleum Chemicals	1	1	2	2	2	3	3	3	3	4	4	4	4	4	28.8	2.2	2.4	-0.2	-0.6
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	143	160	201	158	0	68	76	83	91	99	108	162	227	307	-13.7	9.6	8.4	7.0	6.3
Petroleum Products	468	472	564	432	246	364	415	466	527	595	672	1,221	1,997	3,174	-4.9	13.1	12.7	10.3	9.7
Other Food & Agriculture	50	47	55	55	55	86	94	100	106	112	118	152	183	215	11.7	6.4	5.2	3.8	3.3
General Cargo/Reefer	52	73	69	119	95	94	108	122	139	158	178	313	488	701	12.5	13.7	12.0	9.3	7.5
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	5	2	1	2	3	3	3	3	4	5	5	11	18	29	-13.2	16.2	14.4	11.4	9.7
Other Metals	0	0	0	0	26	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
All Others	47	71	68	117	66	91	105	119	135	153	172	303	470	672	14.3	13.6	11.9	9.2	7.4
RoRo/Vehicles																			
Automotives	0	0	0	1	2	3	3	4	4	5	5	8	12	18	79.8	11.9	8.7	9.2	7.8
Containerized Cargo																			
Containerized Cargo	27	20	18	39	24	25	28	31	34	37	41	58	83	112	-1.2	9.9	7.4	7.3	6.2
Total, Major Routes	4,396	4,171	4,360	3,639	3,312	3,949	4,307	4,591	4,889	5,218	5,568	7,703	10,259	13,619	-2.1	7.1	6.7	5.9	5.8
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: South Am. West to Central Am./Carib.

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	149	84	228	243	236	127	131	132	133	135	136	143	146	150	-3.2	1.4	1.0	0.5	0.4
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Soybeans	0	0	0	5	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	0	0	0	0	8	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	73	38	29	30	43	34	36	37	38	39	40	45	49	53	-14.2	3.3	2.4	1.6	1.3
Pulpwood	3	0	0	11	13	1	1	1	1	1	1	2	2	2	-14.4	1.9	1.4	0.5	0.4
Iron and Steel	1	3	0	1	4	1	1	1	1	1	1	1	1	1	5.6	0.3	0.2	-0.2	-0.3
Misc. Minerals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	31	3	15	31	48	36	37	38	38	38	38	39	39	38	3.1	1.0	0.4	-0.1	-0.2
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	28	33	180	160	106	12	12	12	13	13	13	14	15	16	-15.8	2.4	1.8	1.4	1.3
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Sugar	10	4	3	0	3	40	41	40	40	40	39	39	38	37	31.6	-0.2	-0.2	-0.6	-0.4
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	3	2	1	5	12	2	2	2	2	2	2	2	2	2	-8.9	2.1	1.3	0.7	0.4
Tanker	4,756	3,649	2,589	3,963	2,548	2,206	2,259	2,255	2,252	2,249	2,247	2,242	2,226	2,213	-14.2	0.4	0.0	-0.1	-0.1
Chemicals	4	0	0	1	16	21	21	21	20	20	20	19	18	17	40.9	-1.1	-0.5	-1.6	-1.4
Petroleum Chemicals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Crude Petroleum	4,159	2,793	1,880	2,792	1,809	1,767	1,811	1,811	1,810	1,810	1,809	1,808	1,806	1,803	-15.7	0.5	0.0	0.0	0.0
Petroleum Residual	509	707	561	991	394	158	162	162	161	161	161	161	159	158	-20.8	0.4	-0.1	-0.1	-0.1
Petroleum Products	33	100	103	149	271	161	163	162	160	159	157	155	148	141	37.4	-0.5	-0.3	-1.0	-0.9
Other Food & Agriculture	52	49	45	31	58	99	101	101	100	100	99	98	96	94	13.8	0.0	-0.2	-0.5	-0.5
General Cargo/Reefer	55	43	64	49	52	66	68	68	69	69	70	73	75	77	3.7	1.2	1.0	0.5	0.5
Bananas	0	0	3	1	4	4	4	4	4	4	4	4	3	3	NA	-0.4	0.8	-1.3	-1.0
Other Reefer	44	21	27	13	20	36	38	38	39	39	39	42	44	46	-3.6	1.6	1.3	0.9	0.8
Other Metals	3	15	26	19	18	16	16	16	17	17	17	18	19	20	42.9	1.7	1.3	0.9	0.8
All Others	8	7	8	16	9	10	10	10	10	10	10	9	9	8	3.6	-0.7	-1.2	-1.3	-1.2
RoRo/Vehicles																			
Automotives	0	0	0	0	1	0	0	0	0	0	0	0	0	0	101.5	0.7	1.4	0.2	0.3
Containerized Cargo																			
Containerized Cargo	41	41	48	69	117	191	200	205	210	215	220	251	279	307	35.8	2.9	2.7	2.1	2.0
Total, Major Routes	5,001	3,818	2,928	4,324	2,953	2,589	2,658	2,660	2,665	2,668	2,673	2,709	2,727	2,747	-12.3	0.6	0.3	0.1	0.1
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: South Am. East to South Am. West

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	516	885	596	1,001	1,589	1,463	1,507	1,508	1,512	1,516	1,521	1,555	1,563	1,566	23.2	0.8	0.5	0.1	0.0
Coal and Coke	152	488	86	382	714	350	355	350	347	344	340	326	308	291	18.1	-0.6	-0.9	-1.1	-1.1
Soybeans	0	5	8	13	43	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	1	22	1	0	0	1	1	1	1	1	1	1	1	1	7.2	0.4	0.9	-0.5	-0.5
Lumber Products	0	1	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pulpwood	2	2	5	2	4	0	0	0	0	0	0	0	0	0	-23.3	-1.3	-0.7	-2.0	-1.8
Iron and Steel	135	134	184	196	352	404	420	424	428	433	438	463	481	495	24.6	1.6	1.1	0.8	0.6
Misc. Minerals	44	67	44	90	57	197	205	206	208	211	213	227	234	241	35.1	1.5	1.3	0.6	0.6
Phosphates	3	1	5	1	2	14	14	14	14	14	14	14	14	14	36.4	-0.3	0.6	-0.4	0.0
Other Fertilizers	124	92	241	284	298	430	443	443	443	443	442	444	439	433	28.3	0.6	0.1	-0.2	-0.3
Alumina/Bauxite	11	14	7	12	11	2	2	2	2	2	2	2	2	3	-29.2	2.0	2.0	0.8	0.8
Other Ores	1	1	1	6	73	47	49	49	50	51	52	58	62	67	143.9	2.1	2.3	1.4	1.4
Scrap Metals	0	0	3	8	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Sugar	37	34	0	0	14	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	9	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Paper	8	23	11	7	10	17	18	18	18	18	19	20	21	21	17.4	1.7	1.5	0.7	0.5
Tanker	1,232	2,103	2,507	1,729	1,346	3,328	3,464	3,510	3,559	3,615	3,672	4,014	4,353	4,695	22.0	2.0	1.8	1.6	1.5
Chemicals	29	15	14	41	80	65	67	66	66	65	65	67	64	61	17.4	0.0	0.5	-1.0	-0.9
Petroleum Chemicals	3	6	5	9	28	23	24	23	23	23	22	23	21	19	46.4	-0.9	0.3	-1.9	-1.7
Crude Petroleum	742	1,166	1,660	642	523	1,466	1,498	1,494	1,490	1,485	1,482	1,479	1,483	1,504	14.6	0.2	0.0	0.1	0.3
Petroleum Residual	0	24	68	86	0	2	2	2	2	2	2	2	2	2	NA	0.5	1.4	-0.3	-0.2
Petroleum Products	455	889	756	919	710	1,771	1,873	1,924	1,978	2,039	2,101	2,443	2,783	3,109	31.2	3.5	3.1	2.6	2.2
Other Food & Agriculture	3	3	3	33	5	1	1	1	1	1	1	1	1	1	-25.4	-0.5	0.7	-1.3	-1.1
General Cargo/Reefer	56	46	75	111	150	128	133	134	136	137	139	148	158	167	17.8	1.6	1.3	1.2	1.2
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	4	0	0	1	0	7	8	8	9	10	11	16	22	29	10.8	9.4	8.1	6.9	5.8
Other Metals	12	13	16	19	40	9	10	10	10	10	10	11	12	13	-4.5	2.2	2.2	1.2	1.0
All Others	41	32	59	91	110	112	116	116	117	118	118	121	124	126	22.4	1.0	0.6	0.4	0.4
RoRo/Vehicles																			
Automotives	1	2	1	4	6	9	10	10	10	11	12	15	19	23	63.3	5.2	5.0	4.6	4.2
Containerized Cargo																			
Containerized Cargo	39	68	121	144	195	344	380	401	424	449	475	618	790	994	54.5	6.6	5.4	5.0	4.7
Total, Major Routes	1,845	3,104	3,300	2,990	3,287	5,272	5,494	5,563	5,642	5,728	5,818	6,350	6,882	7,444	23.4	2.0	1.8	1.6	1.6
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: US East to Oceania

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	1,273	1,381	1,508	1,664	1,828	2,167	2,229	2,248	2,292	2,328	2,367	2,581	2,833	3,131	11.2	1.8	1.7	1.9	2.0
Coal and Coke	32	14	0	0	19	2	2	1	1	1	1	1	1	1	-45.6	-2.3	-2.2	-3.1	-3.0
Soybeans	60	115	167	147	149	337	366	384	403	424	445	549	650	755	41.0	5.7	4.3	3.4	3.1
Wheat	0	5	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Corn	18	11	2	5	3	33	35	37	39	41	43	52	67	85	12.8	5.3	4.0	5.1	4.9
Other Grains	16	0	0	4	0	245	263	276	288	301	314	379	461	550	72.8	5.2	3.8	4.0	3.6
Lumber Products	0	0	0	0	2	1	1	1	1	1	1	2	2	2	150.5	1.9	2.9	1.4	1.7
Pulpwood	22	14	18	17	24	17	17	17	17	18	18	19	19	20	-5.3	1.3	1.3	0.5	0.4
Iron and Steel	10	42	3	0	1	8	8	8	8	8	8	8	8	9	-6.5	1.0	1.2	0.2	0.2
Misc. Minerals	76	50	25	28	47	54	57	57	59	60	61	67	71	74	-6.7	2.3	1.9	1.1	0.9
Phosphates	483	623	814	781	1,034	848	839	826	841	843	847	885	952	1,050	11.9	0.0	0.9	1.5	2.0
Other Fertilizers	403	282	292	516	422	539	552	549	542	538	534	512	485	456	6.0	-0.2	-0.8	-1.1	-1.2
Alumina/Bauxite	3	2	0	0	4	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	5	37	29	15	21	11	11	12	12	12	13	15	17	19	17.9	3.6	3.3	2.3	2.3
Scrap Metals	0	0	0	29	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	133	173	140	120	97	68	71	72	74	75	76	84	92	101	-12.6	2.4	2.0	1.8	1.8
Paper	11	12	19	1	4	6	7	7	7	7	7	8	9	10	-11.6	3.5	3.0	1.9	1.5
Tanker	805	1,034	803	694	883	920	937	931	926	921	916	900	881	864	2.7	-0.1	-0.3	-0.4	-0.4
Chemicals	633	820	621	607	672	801	818	815	812	809	807	799	789	781	4.8	0.1	-0.2	-0.3	-0.2
Petroleum Chemicals	15	8	38	9	21	4	4	4	4	4	4	4	3	3	-21.9	-2.3	-1.2	-2.5	-2.1
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	3	46	3	0	5	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	138	158	137	75	175	97	98	96	94	92	90	83	76	70	-6.8	-1.4	-1.6	-1.8	-1.7
Other Food & Agriculture	15	2	4	3	9	17	17	17	16	16	15	14	12	10	2.6	-2.8	-1.5	-3.2	-2.8
General Cargo/Reefer	48	51	87	111	105	140	148	156	167	177	187	245	307	372	24.0	6.0	5.5	4.6	3.9
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	16	10	22	30	30	29	31	34	36	39	42	59	77	96	12.5	8.2	6.9	5.5	4.5
Other Metals	8	0	2	7	8	5	5	5	6	6	6	7	8	9	-7.5	2.9	4.3	1.8	2.0
All Others	24	41	63	73	67	106	112	117	124	132	139	179	221	267	34.5	5.6	5.2	4.4	3.8
RoRo/Vehicles																			
Automotives	11	2	1	3	4	5	5	5	6	6	6	8	11	14	-15.9	5.8	5.2	5.4	5.0
Containerized Cargo																			
Containerized Cargo	555	535	641	626	623	755	803	833	870	908	946	1,151	1,380	1,626	6.3	4.6	4.0	3.7	3.3
Total, Major Routes	2,692	3,003	3,040	3,099	3,442	3,986	4,123	4,174	4,260	4,340	4,423	4,885	5,412	6,007	8.2	2.1	2.0	2.1	2.1
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: Europe to US West

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	1,294	1,413	904	684	1,177	851	870	866	863	860	857	846	828	812	-8.0	0.1	-0.3	-0.4	-0.4
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	160	0	0	35	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Lumber Products	8	2	0	0	3	4	4	4	3	3	3	3	3	3	-15.3	-0.7	-0.1	-1.3	-1.1
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	592	536	541	341	809	358	367	367	367	367	367	366	364	361	-9.6	0.5	0.0	-0.1	-0.1
Misc. Minerals	230	426	70	0	3	40	41	41	41	41	41	40	39	38	-29.4	0.1	-0.2	-0.5	-0.4
Phosphates	15	0	0	0	5	28	28	28	27	27	26	25	23	21	13.6	-1.7	-0.8	-2.0	-1.7
Other Fertilizers	383	251	271	325	309	407	415	413	411	409	406	397	385	375	1.2	0.0	-0.5	-0.6	-0.6
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Ores	0	5	13	1	0	5	5	5	5	5	5	5	5	5	110.1	0.3	0.5	-0.3	-0.2
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	1	1	1	1	1	1	1	1	1	NA	-0.2	-0.4	-0.8	-0.7
Paper	64	33	8	17	12	8	8	8	8	8	8	8	8	8	-33.9	0.3	0.1	-0.3	-0.3
Tanker	480	160	158	87	134	118	120	120	120	120	120	120	119	118	-24.5	0.4	0.0	-0.2	-0.2
Chemicals	30	42	48	2	24	13	13	13	12	12	12	11	9	8	-15.7	-1.7	-1.8	-2.7	-2.8
Petroleum Chemicals	0	0	6	0	0	0	0	0	0	0	0	0	0	0	NA	1.0	2.0	-0.4	-0.3
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	39	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Products	427	57	87	73	110	105	108	108	108	108	108	109	109	109	-24.5	0.7	0.2	0.0	0.0
Other Food & Agriculture	24	22	17	12	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
General Cargo/Reefer	145	124	75	138	146	137	140	140	140	140	140	145	140	134	-1.2	0.5	0.6	-0.7	-0.8
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	59	70	46	56	80	61	63	62	62	62	62	62	59	56	0.7	0.5	-0.2	-0.8	-1.2
Other Metals	9	1	2	21	23	55	56	56	56	56	56	60	58	56	44.8	0.4	1.6	-0.8	-0.7
All Others	78	52	27	61	43	21	22	22	22	22	22	22	23	23	-23.0	1.0	0.3	0.1	-0.1
RoRo/Vehicles																			
Automotives	171	114	97	97	129	126	127	124	121	119	116	102	88	74	-5.9	-1.7	-2.5	-3.0	-3.3
Containerized Cargo																			
Containerized Cargo	1,608	1,385	1,461	1,409	1,661	1,733	1,807	1,830	1,848	1,874	1,898	1,998	2,061	2,094	1.5	1.8	1.0	0.6	0.3
Total, Major Routes	3,698	3,196	2,695	2,415	3,246	2,965	3,064	3,082	3,093	3,113	3,131	3,210	3,236	3,232	-4.3	1.1	0.5	0.2	0.0
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: South Am. East to US West

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	886	1,264	1,044	747	1,367	1,027	1,076	1,099	1,120	1,144	1,169	1,302	1,399	1,485	3.0	2.6	2.2	1.4	1.2
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	14	7	4	37	49	10	10	11	11	12	12	15	16	17	-6.3	4.0	4.7	1.7	1.3
Pulpwood	42	42	42	43	50	57	62	66	69	73	77	104	127	154	6.4	6.1	6.1	4.2	3.9
Iron and Steel	584	665	743	512	901	780	820	840	857	877	896	994	1,065	1,120	6.0	2.8	2.1	1.4	1.0
Misc. Minerals	172	484	206	45	128	157	158	158	157	156	156	153	148	142	-1.7	-0.2	-0.3	-0.8	-0.8
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Alumina/Bauxite	42	11	11	72	133	11	12	13	14	15	16	25	33	43	-24.1	9.1	8.6	5.7	5.5
Other Ores	24	53	35	36	102	0	0	0	0	0	0	0	0	0	-74.9	7.6	8.4	6.1	6.2
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	9	3	3	1	4	12	12	12	12	12	12	12	10	9	6.6	-0.9	0.3	-2.7	-2.8
Tanker	856	1,609	1,803	1,539	1,874	2,607	2,809	2,948	3,094	3,259	3,436	4,573	6,074	8,156	25.0	5.7	5.9	5.8	6.1
Chemicals	0	27	72	107	132	219	227	230	232	235	237	259	266	273	NA	1.6	1.8	0.5	0.5
Petroleum Chemicals	0	21	0	0	20	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Crude Petroleum	286	439	864	779	925	1,055	1,184	1,288	1,398	1,528	1,669	2,576	3,855	5,677	29.8	9.6	9.1	8.4	8.0
Petroleum Residual	49	658	548	392	305	432	465	487	510	534	559	714	882	1,085	54.2	5.3	5.0	4.3	4.2
Petroleum Products	511	429	316	255	491	899	931	941	951	960	969	1,022	1,069	1,119	11.9	1.5	1.1	0.9	0.9
Other Food & Agriculture	9	35	3	5	1	2	2	2	2	2	2	2	2	1	-23.0	-2.7	-2.0	-3.3	-3.1
General Cargo/Reefer	92	148	45	137	10	135	139	140	142	143	145	173	189	217	7.9	1.4	3.6	1.8	2.7
Bananas	0	0	0	15	8	27	30	32	34	37	39	67	89	121	NA	7.7	11.2	5.8	6.5
Other Reefer	2	2	2	0	0	2	2	2	2	2	2	2	2	2	7.5	-1.3	-0.5	-2.0	-2.2
Other Metals	2	19	37	64	0	67	67	67	67	67	67	66	65	64	113.4	-0.2	0.0	-0.4	-0.4
All Others	89	127	6	57	2	39	39	39	38	38	37	38	33	30	-15.4	-0.7	0.3	-2.4	-2.4
RoRo/Vehicles																			
Automotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Containerized Cargo																			
Containerized Cargo	92	127	144	54	53	100	102	100	99	98	97	95	89	85	1.7	-0.7	-0.4	-1.2	-1.0
Total, Major Routes	1,926	3,149	3,036	2,476	3,305	3,869	4,126	4,287	4,455	4,644	4,847	6,143	7,752	9,942	15.0	4.6	4.9	4.8	5.1
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: South & SE Asia to US East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	937	841	899	809	895	850	874	876	877	879	881	894	889	880	-1.9	0.7	0.3	-0.1	-0.2
Coal and Coke	0	0	0	0	56	44	45	44	43	42	42	41	38	36	NA	-1.2	-0.2	-1.5	-1.0
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	25	0	82	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Lumber Products	536	478	556	547	457	473	491	496	499	505	509	527	532	527	-2.5	1.5	0.7	0.2	-0.2
Pulpwood	0	0	0	0	0	2	2	2	2	2	2	2	2	2	NA	2.2	2.7	1.1	0.9
Iron and Steel	50	70	37	27	99	160	161	158	154	151	147	132	116	101	26.3	-1.7	-2.2	-2.6	-2.8
Misc. Minerals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	0	0	0	21	22	22	22	22	21	21	21	20	19	18	NA	-0.7	-0.6	-1.2	-1.1
Alumina/Bauxite	142	25	38	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	28	18	145	48	109	47	50	52	54	56	59	72	86	102	10.9	4.5	4.2	3.6	3.5
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	181	250	92	166	71	102	104	103	103	102	102	100	97	94	-10.8	-0.1	-0.4	-0.6	-0.5
Petroleum Coke	0	0	6	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	260	172	253	327	520	301	314	320	326	332	339	380	417	459	3.0	2.4	2.3	1.9	1.9
Chemicals	17	52	99	19	38	32	34	34	35	36	37	42	46	49	13.5	2.9	2.6	1.6	1.5
Petroleum Chemicals	0	1	2	7	13	27	29	30	32	33	34	43	51	59	360.5	5.0	4.8	3.2	3.0
Crude Petroleum	0	0	0	48	0	66	72	76	79	84	88	116	143	174	NA	5.8	5.6	4.4	4.0
Petroleum Residual	0	0	0	29	42	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Products	55	1	4	71	96	6	7	7	7	8	8	10	13	17	-35.6	5.7	5.4	5.1	5.1
Other Food & Agriculture	188	118	149	155	331	169	173	173	173	172	171	169	164	160	-2.1	0.3	-0.3	-0.5	-0.6
General Cargo/Reefer	95	96	119	126	142	114	117	117	117	117	117	117	118	120	3.7	0.6	0.1	0.2	0.2
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	36	35	46	44	43	26	27	27	27	28	28	29	31	32	-6.4	1.7	0.8	1.1	1.0
Other Metals	3	0	0	0	22	0	0	0	0	0	0	0	0	0	-42.3	-0.2	-0.1	-0.4	-0.4
All Others	57	61	73	82	78	88	90	90	90	89	89	88	88	87	9.2	0.2	-0.2	-0.1	-0.1
RoRo/Vehicles																			
Automotives	67	99	90	82	44	98	100	99	98	98	97	92	86	80	7.9	-0.2	-1.1	-1.2	-1.5
Containerized Cargo																			
Containerized Cargo	1,440	1,648	1,564	1,638	1,532	1,621	1,699	1,732	1,760	1,795	1,829	1,986	2,122	2,238	2.4	2.4	1.7	1.3	1.1
Total, Major Routes	2,799	2,855	2,925	2,982	3,135	2,984	3,104	3,144	3,178	3,221	3,263	3,469	3,634	3,777	1.3	1.8	1.2	0.9	0.8
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: Centl Am./Carib. to Centl Am./Carib.

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	840	885	879	416	506	445	448	439	432	424	417	404	369	341	-11.9	-1.3	-0.6	-1.8	-1.5
Coal and Coke	0	0	0	0	0	14	14	13	13	12	12	11	9	8	NA	-3.7	-1.0	-4.0	-3.3
Soybeans	0	0	0	1	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	74	29	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	30	15	20	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	9	0	15	6	1	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	16	36	13	28	26	21	22	21	21	20	20	19	17	16	6.3	-1.5	-0.7	-2.1	-1.9
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	4	15	13	31	120	124	124	121	118	116	113	109	97	87	98.1	-1.8	-0.7	-2.4	-2.1
Misc. Minerals	39	0	0	3	10	53	53	51	50	48	47	45	39	34	6.0	-2.3	-0.8	-2.9	-2.5
Phosphates	296	343	203	0	48	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	348	232	321	127	173	77	78	78	78	78	78	77	76	75	-26.1	0.2	-0.1	-0.3	-0.3
Alumina/Bauxite	0	0	0	0	0	3	3	3	3	3	2	2	2	1	NA	-4.7	-1.7	-4.8	-4.0
Other Ores	0	58	215	128	74	130	131	129	127	125	123	119	109	101	NA	-1.2	-0.7	-1.7	-1.5
Scrap Metals	0	1	0	0	10	1	1	1	1	1	1	1	0	0	NA	-3.9	-1.4	-4.2	-3.5
Sugar	52	141	83	71	43	22	23	22	22	22	22	22	20	20	-15.4	-0.4	-0.3	-1.0	-0.9
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	2	0	0	0	0	0	0	0	0	0	0	0	0	0	-56.1	0.3	-0.1	-0.2	-0.2
Tanker	1,437	1,124	2,085	2,378	2,083	2,631	2,713	2,732	2,754	2,776	2,798	2,935	3,053	3,178	12.9	1.2	1.0	0.8	0.8
Chemicals	36	0	58	49	40	31	31	30	30	29	29	29	26	24	-3.1	-1.1	-0.1	-1.9	-1.6
Petroleum Chemicals	3	0	1	0	9	0	0	0	0	0	0	0	0	0	-28.4	-3.6	-0.9	-4.2	-3.6
Crude Petroleum	452	322	362	229	70	136	138	138	137	137	136	136	135	134	-21.4	0.1	0.0	-0.2	-0.1
Petroleum Residual	371	133	615	951	403	617	634	636	638	640	642	654	661	669	10.7	0.8	0.4	0.2	0.2
Petroleum Products	521	578	968	1,082	1,488	1,787	1,849	1,868	1,890	1,911	1,933	2,058	2,177	2,301	28.0	1.6	1.3	1.1	1.1
Other Food & Agriculture	54	90	80	67	75	60	61	60	59	58	58	58	53	50	2.2	-0.9	0.1	-1.7	-1.4
General Cargo/Reefer	124	58	36	122	140	93	93	92	92	91	91	94	101	113	-5.5	-0.4	0.7	1.4	2.4
Bananas	0	7	0	3	3	1	1	1	1	0	0	0	0	0	NA	-5.0	-5.0	-5.0	-5.0
Other Reefer	94	46	29	28	17	32	34	35	37	39	41	52	67	85	-19.3	5.0	5.0	5.0	5.0
Other Metals	25	0	0	35	65	26	24	23	22	21	20	15	12	9	0.6	-5.0	-5.0	-5.0	-5.0
All Others	5	6	6	56	55	35	35	33	32	31	30	26	22	19	47.2	-3.0	-2.5	-3.4	-3.0
RoRo/Vehicles																			
Automotives	1	1	0	0	0	1	1	1	1	1	1	2	2	2	0.7	1.3	2.0	0.8	0.8
Containerized Cargo																			
Containerized Cargo	44	6	13	23	55	133	140	143	146	149	153	174	192	211	24.7	2.7	2.6	2.0	2.0
Total, Major Routes	2,446	2,074	3,012	2,939	2,784	3,304	3,396	3,408	3,425	3,442	3,460	3,609	3,716	3,846	6.2	0.9	0.8	0.6	0.7
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: Oceania to US East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	2,665	2,095	1,269	889	953	867	897	904	911	918	926	961	992	1,022	-20.1	1.3	0.8	0.6	0.6
Coal and Coke	170	170	170	217	174	120	123	123	124	124	124	126	128	130	-6.8	0.7	0.2	0.3	0.3
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Lumber Products	0	0	0	1	3	1	1	1	1	1	1	1	2	2	NA	2.8	2.3	1.9	1.7
Pulpwood	0	0	0	0	1	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Iron and Steel	62	140	164	198	185	237	245	247	248	250	252	260	266	271	30.7	1.2	0.6	0.5	0.4
Misc. Minerals	56	1	3	0	2	7	7	7	7	7	7	8	8	8	-34.1	1.2	0.6	0.5	0.4
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Alumina/Bauxite	1,639	1,237	285	5	31	22	24	25	26	27	29	36	42	49	-57.7	5.2	4.5	3.4	3.0
Other Ores	588	410	430	403	375	375	388	392	395	399	402	418	431	444	-8.6	1.4	0.8	0.6	0.6
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	149	138	130	65	101	105	108	109	109	110	110	113	116	119	-6.7	1.0	0.5	0.5	0.5
Petroleum Coke	0	0	87	0	82	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	449	440	220	401	341	298	303	301	298	295	293	281	267	254	-7.9	-0.4	-0.8	-1.0	-1.0
Chemicals	20	83	0	1	3	1	1	1	1	1	1	1	1	1	-44.6	1.7	1.1	1.0	0.9
Petroleum Chemicals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Crude Petroleum	0	0	0	34	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Residual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	161	116	86	30	48	32	32	32	32	32	31	31	29	28	-27.7	-0.3	-0.4	-0.8	-0.8
Other Food & Agriculture	269	241	135	336	290	265	270	267	265	263	260	249	237	224	-0.3	-0.4	-0.8	-1.1	-1.1
General Cargo/Reefer	486	503	453	531	479	501	515	517	518	519	521	525	530	535	0.6	0.8	0.2	0.2	0.2
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	451	486	429	501	429	470	483	484	485	485	486	488	491	492	0.8	0.7	0.1	0.1	0.1
Other Metals	24	11	16	13	14	6	6	6	6	6	7	7	7	7	-23.7	1.3	0.2	0.1	-0.2
All Others	11	7	9	16	36	25	26	26	27	27	28	30	33	36	17.1	2.7	1.3	2.1	1.8
RoRo/Vehicles																			
Automotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Containerized Cargo																			
Containerized Cargo	244	276	364	270	323	258	264	263	262	261	260	256	252	248	1.1	0.1	-0.3	-0.3	-0.3
Total, Major Routes	3,844	3,315	2,307	2,091	2,096	1,925	1,979	1,984	1,989	1,994	1,999	2,023	2,042	2,058	-12.9	0.8	0.2	0.2	0.2
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: South Am. East to Central Am./Carib.

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	234	354	426	532	512	573	606	618	631	646	662	787	866	953	19.6	3.0	3.5	1.9	1.9
Coal and Coke	0	71	132	173	86	10	10	10	10	9	9	8	6	5	NA	-2.7	-2.9	-3.6	-3.5
Soybeans	0	0	0	12	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	0	0	0	0	0	2	2	2	2	2	2	2	2	2	NA	-0.3	2.8	-1.0	-0.3
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	0	2	1	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	133	175	262	237	256	196	209	219	229	240	252	324	393	466	8.1	5.1	5.2	3.9	3.5
Misc. Minerals	0	0	0	31	126	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Phosphates	0	0	0	46	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	19	48	23	30	38	79	81	81	81	81	80	83	77	70	32.5	0.5	0.6	-1.6	-1.9
Alumina/Bauxite	0	0	0	1	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Ores	0	3	5	3	4	286	304	307	310	314	319	370	388	409	NA	2.2	3.0	0.9	1.1
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	81	55	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	1	0	2	0	1	0	0	0	0	0	0	0	0	0	-56.5	1.8	4.7	0.5	0.9
Tanker	1,564	1,501	1,679	1,772	2,644	2,565	2,685	2,755	2,834	2,913	2,995	3,468	3,958	4,507	10.4	3.1	3.0	2.7	2.6
Chemicals	1	0	0	2	2	2	2	2	2	2	2	2	1	1	5.3	-1.4	-0.2	-2.5	-2.2
Petroleum Chemicals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Crude Petroleum	935	1,241	1,377	1,548	1,987	1,749	1,816	1,849	1,887	1,923	1,961	2,176	2,423	2,713	13.3	2.3	2.1	2.2	2.3
Petroleum Residual	493	46	233	69	290	377	407	431	457	484	512	674	819	964	-5.2	6.3	5.7	4.0	3.3
Petroleum Products	127	201	63	147	365	431	453	467	482	497	513	607	705	819	27.7	3.6	3.4	3.0	3.0
Other Food & Agriculture	8	13	7	7	0	6	7	7	7	7	7	8	9	10	-3.7	2.6	2.9	1.8	1.8
General Cargo/Reefer	24	10	31	98	38	33	38	43	49	55	62	122	185	267	6.8	12.9	14.7	8.7	7.7
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	1	1	1	1	0	1	1	1	1	1	1	1	1	1	-0.1	2.2	2.6	1.5	1.3
Other Metals	20	6	2	14	29	30	35	39	44	50	57	116	177	258	8.2	13.7	15.3	8.9	7.8
All Others	3	3	28	83	9	3	3	3	3	3	4	5	6	8	-3.2	7.0	6.7	5.1	4.4
RoRo/Vehicles																			
Automotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-37.3	0.6	0.2	0.4	0.3
Containerized Cargo																			
Containerized Cargo	23	12	25	18	19	51	55	57	60	63	66	81	98	115	17.5	5.2	4.1	3.9	3.4
Total, Major Routes	1,845	1,878	2,161	2,420	3,213	3,222	3,385	3,473	3,574	3,677	3,785	4,458	5,107	5,842	11.8	3.3	3.3	2.8	2.7
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: Central Am./Carib. to US East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	1,207	1,369	1,433	1,524	2,796	2,445	2,525	2,542	2,557	2,573	2,589	2,679	2,749	2,821	15.2	1.2	0.7	0.5	0.5
Coal and Coke	0	0	0	5	6	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	97	63	61	126	966	896	930	940	949	959	969	1,019	1,052	1,078	56.1	1.6	1.0	0.6	0.5
Misc. Minerals	537	556	536	491	1,214	1,118	1,143	1,140	1,135	1,131	1,125	1,098	1,061	1,021	15.8	0.1	-0.5	-0.7	-0.8
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	10	8	2	19	15	16	17	17	17	17	17	17	17	16	11.4	0.5	0.3	-0.2	-0.9
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	143	177	168	316	117	230	246	256	267	277	289	354	425	508	9.9	4.7	4.2	3.7	3.6
Scrap Metals	0	0	0	0	0	2	2	2	2	2	3	3	4	5	131.9	5.4	5.5	4.0	3.8
Sugar	420	565	666	567	478	182	187	187	186	187	187	188	190	193	-15.4	0.5	0.2	0.2	0.3
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	362	454	839	909	305	531	541	537	534	531	528	523	510	499	8.0	-0.1	-0.2	-0.5	-0.4
Chemicals	150	174	268	256	51	250	254	251	248	245	243	235	223	213	10.8	-0.6	-0.7	-1.0	-0.9
Petroleum Chemicals	0	7	20	0	0	13	13	13	12	12	12	11	9	8	NA	-2.8	-1.6	-3.2	-2.8
Crude Petroleum	0	0	52	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Residual	0	0	96	100	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Products	3	13	49	335	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Food & Agriculture	209	259	355	218	254	267	274	274	274	274	274	277	277	278	5.0	0.5	0.2	0.0	0.1
General Cargo/Reefer	4	16	47	16	1	24	25	24	24	23	23	23	21	19	42.6	-1.3	0.1	-1.9	-1.5
Bananas	1	14	28	8	0	1	1	1	1	1	1	1	1	1	-7.3	1.7	1.4	1.0	1.0
Other Reefer	2	2	1	3	1	3	3	3	3	3	3	4	3	3	12.4	0.3	0.8	-0.6	-0.5
Other Metals	0	0	15	0	0	17	17	17	17	16	16	16	14	13	NA	-1.8	0.1	-2.5	-2.0
All Others	1	0	3	4	0	3	3	3	3	3	2	2	2	2	23.6	-1.0	-1.3	-1.2	-1.1
RoRo/Vehicles																			
Automotives	5	0	0	0	1	0	0	0	0	0	0	0	0	0	-64.6	1.8	0.9	0.0	-1.4
Containerized Cargo																			
Containerized Cargo	3	9	11	5	3	2	2	3	3	3	3	4	5	5	-2.4	5.6	4.7	4.2	3.1
Total, Major Routes	1,580	1,847	2,330	2,454	3,107	3,003	3,093	3,106	3,117	3,130	3,143	3,229	3,284	3,345	13.7	0.9	0.5	0.3	0.4
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: Europe to South Am. West

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	765	633	631	941	1,353	1,305	1,339	1,337	1,337	1,337	1,337	1,346	1,336	1,322	11.3	0.5	0.1	-0.2	-0.2
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	17	29	23	45	380	47	48	48	49	49	49	50	50	50	22.5	0.6	0.6	0.0	0.0
Corn	0	0	0	0	4	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	26	11	51	13	27	47	48	48	48	48	48	48	48	47	12.7	0.3	0.2	-0.3	-0.3
Lumber Products	0	0	1	0	3	2	2	2	2	2	2	2	2	2	307.1	-0.9	0.1	-1.5	-1.3
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Iron and Steel	119	129	153	166	305	572	586	584	583	582	580	576	566	554	37.0	0.3	-0.2	-0.4	-0.4
Misc. Minerals	25	22	10	31	101	136	139	139	139	139	139	143	141	140	40.1	0.5	0.5	-0.2	-0.2
Phosphates	8	6	6	10	4	5	4	4	4	4	4	4	4	3	-7.1	-6.4	-0.3	-1.0	-0.9
Other Fertilizers	443	356	340	630	452	423	435	435	436	437	438	443	444	444	-1.0	0.7	0.2	0.1	0.0
Alumina/Bauxite	0	0	0	0	0	3	3	3	3	3	3	3	3	3	NA	-0.4	1.0	-1.1	-0.6
Other Ores	7	7	10	1	14	16	17	17	17	17	17	17	17	16	19.0	0.3	0.4	-0.4	-0.3
Scrap Metals	0	0	5	0	0	0	0	0	0	0	0	0	0	0	-17.2	-0.8	0.4	-1.6	-1.2
Sugar	58	27	0	1	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	62	46	33	44	63	54	56	56	56	57	57	60	61	63	-3.0	1.3	0.8	0.6	0.5
Tanker	549	311	164	258	273	234	236	234	231	228	226	216	205	196	-15.7	-0.7	-0.8	-1.1	-0.9
Chemicals	37	72	39	119	29	23	23	23	22	22	22	22	21	20	-9.6	-0.4	-0.4	-0.7	-0.5
Petroleum Chemicals	26	1	1	3	1	0	0	0	0	0	0	0	0	0	-59.3	-1.0	-0.3	-1.3	-1.0
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	118	36	1	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	307	144	42	60	142	108	109	107	105	103	101	93	85	77	-18.8	-1.4	-1.6	-1.9	-1.8
Other Food & Agriculture	61	58	81	75	101	103	105	104	104	103	103	102	99	98	11.1	0.0	-0.2	-0.4	-0.3
General Cargo/Reefer	196	129	141	127	133	225	228	227	226	224	223	219	218	219	2.9	-0.2	-0.3	-0.2	0.1
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	4	8	10	17	14	12	12	13	13	13	13	14	15	16	23.2	2.0	1.2	1.2	1.1
Other Metals	13	8	28	15	28	45	45	44	43	42	41	38	34	31	28.2	-1.9	-1.5	-2.0	-1.6
All Others	178	112	104	95	90	169	171	171	170	170	169	168	169	171	-1.1	0.1	-0.1	0.1	0.3
RoRo/Vehicles																			
Automotives	15	12	33	43	54	77	83	84	86	88	91	99	105	109	38.9	3.3	1.8	1.2	0.6
Containerized Cargo																			
Containerized Cargo	568	631	796	848	938	1,221	1,308	1,340	1,379	1,423	1,467	1,676	1,878	2,073	16.5	3.7	2.7	2.3	2.0
Total, Major Routes	2,093	1,715	1,764	2,217	2,751	3,062	3,193	3,222	3,259	3,301	3,343	3,557	3,742	3,918	7.9	1.8	1.3	1.0	0.9
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: South Am. East to East Asia

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	993	777	789	944	633	1,030	1,020	1,029	1,042	1,055	1,070	1,193	1,258	1,326	0.7	0.8	2.2	1.1	1.1
Coal and Coke	52	91	59	114	25	84	40	39	39	39	38	38	36	34	10.0	-14.6	-0.3	-1.1	-1.0
Soybeans	41	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	44	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	5	25	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	0	0	0	135	127	348	362	366	370	375	381	431	454	471	NA	1.8	2.5	1.0	0.8
Pulpwood	5	43	23	14	46	67	69	68	68	68	67	72	69	68	71.4	0.2	1.4	-0.8	-0.5
Iron and Steel	349	195	221	142	33	74	77	77	78	78	79	84	85	86	-26.7	1.3	1.2	0.3	0.3
Misc. Minerals	45	110	106	90	37	54	55	55	55	54	54	57	56	55	3.9	0.0	1.2	-0.6	-0.5
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	149	0	0	0	0	14	14	14	14	14	14	15	15	14	-37.8	0.3	1.1	-0.5	-0.4
Alumina/Bauxite	72	65	74	55	40	30	31	31	31	32	32	37	38	39	-15.9	1.2	2.7	0.6	0.9
Other Ores	223	240	292	379	325	333	348	355	364	373	382	437	486	541	8.3	2.8	2.7	2.2	2.2
Scrap Metals	6	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	12	0	25	25	24	23	23	22	23	20	18	NA	-2.2	0.7	-2.7	-2.4
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	2	8	14	3	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	227	112	582	392	160	339	357	370	382	395	409	499	589	694	8.4	3.8	4.1	3.4	3.3
Chemicals	22	10	8	16	23	15	16	16	16	17	17	19	20	20	-6.8	1.8	2.3	0.8	0.7
Petroleum Chemicals	0	9	11	41	22	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Crude Petroleum	0	0	52	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Petroleum Residual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	194	88	488	334	115	324	341	354	366	379	392	480	569	674	10.8	3.9	4.1	3.5	3.4
Other Food & Agriculture	10	5	24	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
General Cargo/Reefer	661	559	495	638	466	663	722	757	795	846	897	1,191	1,482	1,785	0.1	6.2	5.8	4.5	3.8
Bananas	4	2	4	6	3	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	46	13	14	15	10	3	3	3	3	3	3	2	2	2	-42.8	-1.3	-1.6	-1.8	-1.5
Other Metals	594	528	469	566	441	528	571	596	624	664	705	934	1,169	1,406	-2.3	6.0	5.8	4.6	3.8
All Others	16	14	9	51	11	132	148	158	169	179	189	255	311	376	52.8	7.4	6.1	4.1	3.9
RoRo/Vehicles																			
Automotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Containerized Cargo																			
Containerized Cargo	42	9	5	8	5	3	3	3	3	3	3	2	2	1	-39.9	-5.0	-5.0	-5.0	-5.0
Total, Major Routes	1,923	1,457	1,871	1,981	1,263	2,035	2,102	2,159	2,222	2,299	2,378	2,884	3,330	3,806	1.1	3.2	3.9	2.9	2.7
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: Central Am./Carib. to East Asia

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	1,495	1,590	1,483	710	697	1,040	1,062	1,058	1,057	1,055	1,053	1,068	1,081	1,106	-7.0	0.3	0.3	0.3	0.5
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	0	0	0	1	0	1	1	1	1	1	1	1	1	1	50.9	-3.3	0.0	-3.7	-3.1
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	121	119	103	119	100	60	61	61	60	60	60	61	59	57	-13.2	0.1	0.3	-0.6	-0.6
Misc. Minerals	0	0	27	0	0	4	4	4	4	4	3	3	3	2	NA	-4.0	-0.9	-4.1	-3.4
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	149	247	57	0	0	29	29	29	29	29	29	29	28	28	-28.0	0.0	0.0	-0.3	-0.3
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	2	4	2	5	55	75	76	76	76	75	75	78	76	76	110.9	0.2	0.7	-0.4	-0.2
Scrap Metals	0	0	0	35	0	15	15	15	15	15	14	15	14	14	NA	0.0	1.1	-1.2	-1.0
Sugar	1,223	1,220	1,289	547	543	855	874	871	871	869	869	879	898	928	-6.9	0.3	0.2	0.4	0.6
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	0	0	5	4	0	2	2	2	2	2	2	2	1	1	NA	-2.5	0.4	-3.5	-2.8
Tanker	288	157	283	419	718	222	228	228	228	229	229	232	233	234	-5.1	0.6	0.3	0.1	0.1
Chemicals	22	33	29	26	15	55	56	56	56	56	57	57	58	58	19.8	0.7	0.3	0.1	0.1
Petroleum Chemicals	108	41	41	65	83	53	55	55	55	55	55	55	55	54	-13.1	0.5	0.1	-0.1	-0.1
Crude Petroleum	0	0	0	0	0	32	33	32	32	32	32	32	32	32	NA	0.2	0.1	-0.3	-0.2
Petroleum Residual	0	0	39	0	0	1	1	1	1	1	1	1	1	1	NA	1.1	0.9	0.5	0.5
Petroleum Products	155	62	172	328	617	77	79	80	80	80	81	82	84	85	-13.0	0.8	0.4	0.3	0.3
Other Food & Agriculture	3	21	3	0	3	4	4	4	4	4	4	5	5	5	8.6	0.5	0.2	0.0	0.1
General Cargo/Reefer	32	44	72	46	121	84	85	83	82	80	79	73	67	63	21.1	-1.3	-1.5	-1.7	-1.4
Bananas	2	4	5	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	30	24	20	18	11	6	7	6	6	6	6	7	6	6	-26.2	-0.1	0.2	-0.4	-0.6
Other Metals	0	15	47	0	0	2	2	2	2	2	2	2	1	1	32.3	-2.9	-0.9	-3.5	-3.0
All Others	0	1	0	28	109	76	76	75	74	72	71	65	60	55	290.2	-1.4	-1.7	-1.7	-1.5
RoRo/Vehicles																			
Automotives	0	0	0	11	1	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Containerized Cargo																			
Containerized Cargo	153	120	107	119	104	116	123	127	130	135	139	162	185	208	-5.3	3.6	3.1	2.7	2.4
Total, Major Routes	1,968	1,912	1,945	1,305	1,641	1,463	1,497	1,496	1,498	1,498	1,500	1,535	1,567	1,611	-5.8	0.5	0.5	0.4	0.6
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: Central Am./Carib. to South Am. West

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	201	159	298	206	337	432	444	445	447	449	452	475	476	474	16.6	0.9	1.0	0.1	-0.1
Coal and Coke	0	0	0	16	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	1	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Lumber Products	0	0	0	0	0	1	1	1	1	1	1	1	1	1	NA	-0.3	1.4	-1.2	-0.7
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Iron and Steel	15	33	52	29	35	125	129	129	129	129	130	136	136	136	52.4	0.8	0.9	0.0	-0.1
Misc. Minerals	1	1	1	10	32	29	30	30	30	30	30	32	32	33	83.0	0.8	1.4	0.0	0.0
Phosphates	4	1	1	35	1	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	150	95	229	103	247	237	245	245	247	248	250	260	259	254	9.6	1.1	0.8	-0.1	-0.3
Alumina/Bauxite	0	0	5	0	2	5	2	2	2	2	2	2	2	2	NA	-16.1	-0.7	-2.7	-2.2
Other Ores	3	6	1	4	1	12	13	13	13	13	14	16	17	18	35.4	2.1	2.6	1.4	1.5
Scrap Metals	26	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	13	0	0	0	1	1	1	1	1	2	2	2	2	NA	0.7	1.0	0.6	0.8
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	2	11	9	8	18	22	23	23	23	24	24	27	28	29	55.0	1.8	2.1	0.9	0.9
Tanker	722	494	590	528	878	861	885	886	887	888	890	903	910	918	3.6	0.7	0.3	0.2	0.2
Chemicals	3	20	9	33	33	21	22	21	21	21	21	20	19	18	43.7	-0.7	-0.2	-1.3	-1.2
Petroleum Chemicals	0	0	1	1	6	0	0	0	0	0	0	0	0	0	15.2	-1.8	-0.4	-2.3	-1.9
Crude Petroleum	105	0	28	0	1	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	36	23	41	0	138	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	572	444	504	488	698	810	833	835	837	839	842	856	867	878	7.2	0.8	0.3	0.3	0.3
Other Food & Agriculture	5	7	6	6	3	30	30	29	28	28	27	27	24	22	40.8	-1.7	-0.4	-2.1	-1.8
General Cargo/Reefer	26	27	36	31	35	37	37	37	37	37	37	39	39	39	6.7	0.2	1.0	-0.1	0.2
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	2	0	0	0	1	7	8	8	8	8	8	11	12	13	26.2	3.3	4.9	2.4	2.5
Other Metals	2	0	2	1	6	8	8	8	8	8	8	8	7	6	31.5	-1.6	0.6	-2.4	-1.9
All Others	22	27	34	29	28	21	21	21	21	21	21	20	20	19	-0.9	-0.2	-0.6	-0.6	-0.6
RoRo/Vehicles																			
Automotives	6	5	12	14	11	11	13	14	14	16	17	23	31	39	13.1	8.4	6.9	5.7	4.9
Containerized Cargo																			
Containerized Cargo	65	70	81	111	210	310	344	364	388	415	443	608	808	1,050	36.6	7.4	6.5	5.9	5.4
Total, Major Routes	1,021	755	1,017	890	1,470	1,651	1,723	1,745	1,773	1,805	1,839	2,048	2,263	2,520	10.1	2.2	2.2	2.0	2.2
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: East Asia to Central Am./Carib.

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	451	363	324	375	132	165	168	167	166	165	164	165	159	155	-18.2	-0.1	0.1	-0.7	-0.6
Coal and Coke	15	0	5	0	0	15	15	15	14	14	14	13	11	10	-0.4	-2.1	-0.9	-2.7	-2.3
Soybeans	90	39	19	18	21	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Corn	3	2	3	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	35	86	239	246	21	32	33	33	33	32	32	32	31	30	-1.6	-0.1	0.0	-0.7	-0.7
Lumber Products	221	81	7	0	0	0	0	0	0	0	0	0	0	0	-84.8	1.3	0.9	0.7	0.6
Pulpwood	3	0	7	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	47	28	37	32	48	89	91	91	91	91	91	92	92	91	13.4	0.5	0.2	-0.1	-0.2
Misc. Minerals	11	9	3	1	5	6	6	6	6	6	5	5	5	4	-11.7	-1.3	-0.3	-2.0	-1.7
Phosphates	0	0	0	0	0	1	1	0	0	0	0	0	0	0	NA	-5.3	-0.7	-2.6	-2.2
Other Fertilizers	5	8	1	2	3	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Alumina/Bauxite	0	20	0	41	4	17	17	17	17	17	16	17	16	15	NA	-0.8	0.4	-1.4	-1.1
Other Ores	4	85	4	30	30	5	5	5	5	5	5	5	4	4	5.2	-0.7	0.0	-1.3	-1.1
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	17	5	0	4	0	0	0	0	0	0	0	0	0	0	-63.9	-0.2	0.1	-1.0	-0.9
Tanker	141	123	233	187	111	95	102	106	111	115	120	144	170	197	-7.7	4.9	3.7	3.3	3.0
Chemicals	19	56	126	91	49	16	18	19	19	20	21	27	32	37	-2.4	5.5	4.3	3.7	3.2
Petroleum Chemicals	3	2	3	9	23	7	7	8	8	8	8	9	11	12	16.9	3.9	2.5	2.3	1.8
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	1	0	21	8	0	2	3	3	3	3	3	5	6	7	35.1	6.7	5.8	5.2	4.6
Other Food & Agriculture	119	65	83	79	38	69	74	77	80	84	87	104	122	141	-10.3	4.7	3.6	3.3	2.9
General Cargo/Reefer	141	132	99	76	69	61	61	60	59	57	56	51	46	42	-15.5	-1.6	-1.8	-2.0	-1.9
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	30	18	7	17	8	8	8	8	8	8	8	9	9	9	-23.0	0.4	1.2	-0.3	-0.3
Other Metals	6	4	3	7	0	2	2	2	1	1	1	1	1	1	-22.6	-4.3	-2.5	-4.1	-3.3
All Others	105	109	88	52	60	51	51	50	49	48	46	41	37	33	-13.4	-1.9	-2.4	-2.4	-2.3
RoRo/Vehicles																			
Automotives	90	95	107	125	116	131	134	134	136	137	138	145	152	161	7.8	1.0	1.0	1.0	1.2
Containerized Cargo																			
Containerized Cargo	304	335	402	520	436	417	463	502	547	595	646	957	1,353	1,846	6.5	9.2	8.2	7.2	6.4
Total, Major Routes	1,127	1,048	1,164	1,283	864	869	927	969	1,018	1,070	1,125	1,463	1,880	2,401	-5.1	5.3	5.4	5.2	5.0
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: South Am. West to South Am. East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	1990-95	95-2000	2000-05	2005-10	2010-15
															-------Compound Annual Growth Rates-------				
Major Routes																			
Bulk	113	180	255	424	320	545	556	568	580	592	604	664	708	751	36.9	2.1	1.9	1.3	1.2
Coal and Coke	0	0	0	53	22	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Soybeans	7	0	1	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Grains	0	0	2	0	0	2	2	2	2	2	2	2	2	2	30.3	1.2	2.8	0.8	0.6
Lumber Products	6	7	23	27	9	4	4	4	4	4	4	5	5	5	-8.1	1.6	1.2	1.0	1.0
Pulpwood	31	17	29	36	48	70	70	71	72	74	75	82	86	88	18.0	1.3	1.9	0.9	0.5
Iron and Steel	1	1	1	1	2	3	3	3	3	3	3	3	4	4	17.9	1.8	3.1	2.0	1.8
Misc. Minerals	2	3	1	0	8	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Fertilizers	5	2	3	14	37	16	15	15	15	14	14	14	12	11	23.8	-1.8	-0.8	-2.3	-2.3
Alumina/Bauxite	0	0	0	0	0	9	4	4	4	4	4	4	4	3	NA	-15.0	-0.5	-1.9	-1.6
Other Ores	30	63	43	14	54	69	72	74	77	79	82	96	110	126	18.0	3.5	3.3	2.8	2.7
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Sugar	24	79	143	254	132	360	371	380	389	398	405	442	468	493	72.4	2.4	1.8	1.1	1.1
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	7	7	8	25	9	14	14	14	15	15	15	16	18	19	16.2	1.4	1.9	1.3	1.3
Tanker	45	68	453	508	715	256	261	255	250	245	241	224	206	190	41.7	-1.2	-1.4	-1.7	-1.6
Chemicals	6	1	5	2	8	0	0	0	0	0	0	0	0	0	-54.4	-2.4	-2.8	-3.1	-2.7
Petroleum Chemicals	0	0	0	0	1	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Crude Petroleum	0	17	357	428	691	182	185	184	184	183	182	176	168	159	NA	-0.1	-0.6	-0.9	-1.1
Petroleum Residual	0	0	0	0	0	46	47	44	40	37	35	27	20	16	NA	-5.6	-4.8	-5.5	-4.6
Petroleum Products	10	8	4	21	1	3	3	3	2	2	2	2	1	1	-22.2	-4.0	-4.3	-4.4	-4.2
Other Food & Agriculture	29	42	87	55	15	25	25	25	24	23	22	20	16	14	-2.8	-2.2	-2.8	-3.3	-3.2
General Cargo/Reefer	51	54	102	92	88	112	114	116	119	123	126	146	167	180	17.0	2.4	3.0	2.8	1.4
Bananas	8	2	4	1	7	0	0	0	0	0	0	0	0	1	-61.3	14.6	14.3	10.1	8.9
Other Reefer	8	8	28	37	34	57	57	61	64	68	72	94	116	129	47.1	4.6	5.4	4.4	2.2
Other Metals	26	35	53	40	37	38	39	39	39	39	39	39	39	39	8.2	0.5	0.1	0.0	0.0
All Others	9	9	16	15	11	17	17	17	16	16	15	13	12	11	13.5	-1.5	-2.8	-2.4	-2.0
RoRo/Vehicles																			
Automotives	0	0	0	0	2	0	0	0	0	0	0	0	0	1	52.4	8.6	8.2	4.3	3.4
Containerized Cargo																			
Containerized Cargo	15	26	51	51	64	153	157	174	194	217	243	418	680	1,058	59.0	9.7	11.5	10.2	9.2
Total, Major Routes	224	328	860	1,075	1,189	1,067	1,088	1,113	1,144	1,178	1,214	1,453	1,762	2,180	36.6	2.6	3.7	3.9	4.3
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (in Thousands of Long Tons)
Route: US West to South Am. East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	202	238	228	361	194	326	327	336	349	363	379	472	555	640	10.1	3.0	4.5	3.3	2.9
Coal and Coke	4	0	0	0	25	63	62	61	60	60	59	58	54	51	77.6	-1.2	-0.3	-1.4	-1.3
Soybeans	0	0	0	1	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Wheat	0	0	0	17	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	0	1	8	4	4	4	4	4	5	6	6	6	1215.3	2.9	5.2	1.2	0.3
Lumber Products	0	0	4	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Pulpwood	5	10	13	0	6	1	1	1	1	1	1	2	2	3	-26.8	4.9	6.6	3.7	2.6
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Misc. Minerals	144	148	149	261	92	142	140	145	153	161	170	219	264	305	-0.3	3.7	5.2	3.8	2.9
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	0	0	0	3	3	26	25	24	24	23	23	22	18	15	1812.0	-2.2	-1.0	-3.3	-3.9
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	31	67	30	10	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	9	5	30	65	59	91	95	100	107	114	121	165	210	260	58.9	5.8	6.4	4.9	4.4
Paper	10	8	1	4	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	128	82	91	42	37	117	120	130	144	160	177	317	481	720	-1.7	8.6	12.3	8.7	8.4
Chemicals	0	12	0	0	27	52	50	52	56	60	65	99	120	138	238.5	4.6	8.9	3.9	2.8
Petroleum Chemicals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-19.1	5.4	10.3	3.6	2.8
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	127	0	46	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	0	70	38	40	9	66	70	78	88	100	113	218	361	582	222.8	11.4	14.1	10.6	10.0
Other Food & Agriculture	0	0	7	3	1	0	0	0	0	0	0	0	0	0	417.2	6.6	8.3	6.6	6.1
General Cargo/Reefer	2	28	11	13	22	31	31	33	36	39	43	65	98	143	78.7	6.7	9.0	8.4	7.9
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	0	6	9	5	17	29	29	31	34	37	41	64	96	141	1862.4	7.1	9.3	8.6	8.0
Other Metals	0	21	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
All Others	2	2	1	8	5	2	2	2	2	2	2	2	2	1	1.7	-0.8	-0.8	-1.4	-1.2
RoRo/Vehicles																			
Automotives	0	0	1	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Containerized Cargo																			
Containerized Cargo	12	30	45	27	21	48	50	54	60	66	73	116	176	254	31.0	8.8	9.6	8.7	7.6
Total, Major Routes	344	378	376	444	274	522	527	553	588	628	672	970	1,310	1,757	8.7	5.2	7.6	6.2	6.0
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: East Asia to South Am. East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	1990-95	95-2000	2000-05	2005-10	2010-15
															-------Compound Annual Growth Rates-------				
Major Routes																			
Bulk	88	147	144	160	159	286	274	281	290	301	312	390	456	533	26.6	1.7	4.6	3.1	3.2
Coal and Coke	0	0	1	0	0	21	21	21	21	21	21	24	24	24	NA	0.4	2.5	-0.1	-0.1
Soybeans	0	0	0	0	5	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Lumber Products	0	0	0	0	1	0	0	0	0	0	0	0	0	0	-1.9	1.8	5.0	1.5	1.8
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	42	30	33	24	34	116	113	115	117	120	123	137	148	155	22.5	1.2	2.2	1.5	1.0
Misc. Minerals	1	1	2	1	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Phosphates	0	0	0	0	0	25	6	6	6	6	5	5	4	4	NA	-26.4	-1.0	-3.8	-3.2
Other Fertilizers	1	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Alumina/Bauxite	20	23	15	10	7	18	19	19	20	20	21	26	28	32	-2.1	3.0	5.1	1.4	2.2
Other Ores	24	93	93	125	112	107	114	120	127	134	142	198	252	319	34.6	5.8	6.9	4.9	4.9
Scrap Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Tanker	4	3	3	5	22	8	8	8	9	9	9	10	10	10	17.8	1.4	1.7	0.9	0.8
Chemicals	2	2	1	1	10	0	0	0	0	0	0	0	0	0	-68.3	0.6	1.2	0.0	0.0
Petroleum Chemicals	0	0	1	0	1	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Food & Agriculture	2	1	1	3	11	8	8	8	9	9	9	10	10	10	36.4	1.4	1.7	0.9	0.8
General Cargo/Reefer	24	50	81	95	39	25	26	26	26	25	25	25	24	24	0.7	0.1	-0.4	-0.5	-0.4
Bananas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Reefer	1	1	1	2	1	1	1	1	1	1	1	1	1	1	-3.2	0.9	1.7	0.5	0.3
Other Metals	3	1	2	5	3	0	0	0	0	0	0	0	0	0	-49.0	1.0	3.5	0.6	0.4
All Others	20	48	78	88	35	24	25	25	24	24	24	24	23	22	3.4	0.0	-0.5	-0.5	-0.4
RoRo/Vehicles																			
Automotives	2	4	19	38	32	47	48	50	52	55	59	76	97	121	80.9	4.5	5.2	5.1	4.5
Containerized Cargo																			
Containerized Cargo	43	63	55	77	81	32	34	35	37	39	41	51	63	76	-5.8	4.8	4.5	4.4	3.9
Total, Major Routes	162	268	302	374	333	399	389	400	413	429	445	551	650	765	19.8	2.2	4.4	3.4	3.3
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Estimates of PCC Traffic by Product (In Thousands of Long Tons)
Route: Central Am./Carib. to South Am. East

Predominant Ship Type/Product	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	-------Compound Annual Growth Rates------- 1990-95	95-2000	2000-05	2005-10	2010-15
Major Routes																			
Bulk	76	74	208	215	463	240	244	241	239	237	236	234	224	215	25.9	-0.4	-0.1	-0.9	-0.8
Coal and Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Soybeans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Grains	0	0	1	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Lumber Products	3	0	2	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Pulpwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Iron and Steel	0	0	0	0	0	4	4	4	3	3	3	3	3	3	NA	-1.7	-0.2	-2.0	-1.7
Misc. Minerals	1	0	1	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Phosphates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Fertilizers	5	13	7	10	9	14	14	13	13	13	13	12	11	10	22.4	-1.5	-0.4	-2.0	-1.7
Alumina/Bauxite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Ores	30	43	95	171	249	36	37	36	36	36	36	36	35	35	4.0	0.0	0.2	-0.6	-0.5
Scrap Metals	0	0	2	0	1	1	1	1	1	1	1	1	1	1	NA	-1.8	-0.3	-2.3	-1.9
Sugar	37	18	101	34	204	185	188	187	185	184	182	181	173	167	37.8	-0.3	-0.1	-0.9	-0.8
Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29.2	-2.0	-0.2	-2.4	-1.9
Tanker	10	0	14	35	6	58	57	57	58	59	61	79	83	88	41.9	0.8	5.4	1.0	1.1
Chemicals	3	0	0	0	0	41	40	40	41	43	44	59	62	67	69.7	1.2	5.9	1.3	1.4
Petroleum Chemicals	4	0	0	0	6	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Crude Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Residual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Petroleum Products	3	0	0	33	0	0	0	0	0	0	0	0	0	0	-100.0	NA	NA	NA	NA
Other Food & Agriculture	0	0	13	1	1	17	17	16	16	17	17	20	20	21	NA	-0.1	4.0	0.0	0.3
General Cargo/Reefer	57	68	72	62	55	58	60	60	60	60	60	61	61	62	0.5	0.7	0.1	0.2	0.2
Bananas	0	0	4	2	2	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Other Reefer	56	67	68	59	52	57	59	59	59	59	59	60	60	61	0.6	0.7	0.2	0.2	0.2
Other Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
All Others	1	0	1	1	2	1	1	1	1	1	1	1	1	1	-6.2	0.0	-1.8	-0.7	-0.7
RoRo/Vehicles																			
Automotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	1.0	2.1	1.3	1.1
Containerized Cargo																			
Containerized Cargo	1	3	2	11	12	21	21	22	22	23	23	26	29	31	70.6	2.0	2.5	1.9	1.7
Total, Major Routes	144	145	296	323	536	378	382	380	379	379	380	400	397	396	21.2	0.1	1.1	-0.2	0.0
Total, Minor Routes	21,747	22,915	21,824	21,309	23,667	23,982	24,940	25,429	25,927	26,484	27,062	30,366	33,998	38,198	2.0	2.4	2.3	2.3	2.4
Total, PCC Traffic	157,071	162,695	159,273	157,704	170,538	190,303	197,912	201,788	205,740	210,157	214,747	240,967	269,784	303,119	3.9	2.4	2.3	2.3	2.4
% Change		3.6%	-2.1%	-1.0%	8.1%	11.6%	4.0%	2.0%	2.0%	2.2%	2.2%								

Appendix C: Detailed Value of Vessels' Time Information

This appendix presents detailed information in support of the analysis of the value of vessel delay time from Section 2. Cargo vessel operating cost information was assembled with information from the Panama Canal Commission, Lloyd's Maritime Information Services, the U.S. Army Corps of Engineers Institute for Water Resources Navigation Division, and ICF Kaiser research. For comparability across types of ships and routes, vessel costs and delay costs are presented for the most recent year available, fiscal year 1995. Formulas were used that allowed for the determination of costs for a given deadweight of a vessel, and for relating the costs to draft, beam, and other dimensions as listed below. Weights (deadweight, fuel consumption, etc.) are measured in metric tons. As commonly used within the Panama Canal Commission, vessel dimensions are measured in feet.

The estimate of fixed costs of vessel ownership reflects the average age of vessels in the world fleet of that type and size. Underlying amortized replacement costs for vessels are based on a ten year average to dampen upward and downward shifts in prices. For tanker vessels, there is an adjustment to reflect the recent shift towards double-hull tanker in the world fleet. Prices and costs reflect 1995 price levels in U.S. dollars.

Fixed operating costs include: Wages, Benefits, Subsistence; Stores and Supplies; Maintenance and Repair; Insurance; Other; and, Administration. Variable operating costs were represented by fuel consumption and fuel prices. Fuel prices used to produce the fuel costs are based on the overall average monthly prices at nine bunkering locations. The bunkering locations used for the fuel price analysis are New York, Houston, Los Angeles, Tokyo, Singapore, Jeddah, Durban, the Mediterranean, and Rotterdam. No attempt was made to match bunkering locations with individual vessel routes in this analysis. The fuel consumption formulas are calculated separately for main and auxiliary use at sea and in port but not by route. From these formulas a total daily fuel cost is calculated for vessels by type, size and speed.

The vessel weight and size categories used in the analysis are shown in Table C-1 below. Note that the definition of the size class for cellular containerships is in terms of TEUs while all other vessels are classified according to deadweight tonnage ranges. A few specialized vessel categories such as vehicle carriers, reefer ships, and gas tankers are not disaggregated by size range category. Also note that specialized cargo vessels are grouped together in the other ships category.

Table C-1
Cargo Vessel Types and Size Ranges Used in the Analysis
Deadweight is Measured in Metric Tons

VESSEL TYPE	SIZE RANGE
General Cargo	Less Than 10,000 DWT
General Cargo	Over 10,000 DWT
Cellular Containerships	Less Than 1000 TEU
Cellular Containerships	1000-2499 TEU
Cellular Containerships	2500-3999 TEU
Cellular Containerships	4000-5999 TEU
Bulk	Less Than 20,000 DWT
Bulk	20,000-40,000 DWT
Bulk	40,000-80,000 DWT
Bulk	80,000-100,000 DWT
Bulk	100,000-175,000 DWT
Bulk	Over 175,000 DWT
Combos	Less Than 20,000 DWT
Combos	20,000-40,000 DWT
Combos	40,000-80,000 DWT
Combos	80,000-100,000 DWT
Combos	100,000-175,000 DWT
Combos	Over 175000 DWT
Reefer Ships	All
ROROs	Less Than 10,000 DWT
ROROs	Over 10,000 DWT
Gas Tankers	All
Product Tankers	Less Than 16,500 DWT
Product Tankers	16,500-25,000 DWT
Product Tankers	25,000-45,000 DWT
Product Tankers	45,000-80,000 DWT
Product Tankers	80,000-160,000 DWT
Tankers	Less Than 16,500 DWT
Tankers	16,500-25,000 DWT
Tankers	25,000-45,000 DWT
Tankers	45,000-80,000 DWT
Tankers	80,000-160,000 DWT
Tankers	160,000-250,000 DWT
Tankers	Over 250,000 DWT
Vehicle Carriers	All
Other Vessels	All

The costs of ships time represented as a share of total voyage costs in FY 1995 is presented in Table C-2 by vessel type and size for each major route.

Table C-2
Cost of One Day of Ships' Time as a Percent of Total Voyage Cost Through Panama Canal by Route and Vessel Class

	Cellular Container Vessels (in TEUs)				RoRo (DWT)		Bulk Vessels (DWT)					
Route Abbreviation	<1000	1000-2499	2500-3999	4000-5999	<10K	>10K	<20K	20-40K	40-80K	80-100K	100-175K	>175K
ECSA-N.ASIA	3.5%	3.1%	NA	NA	3.2%	3.4%	3.1%	3.0%	2.9%	NA	2.9%	2.5%
ECSA-S.E.ASIA	3.6%	4.2%	NA	NA	3.6%	3.7%	3.7%	3.2%	3.2%	NA	3.1%	3.0%
ECSA-USWC	NA	NA	NA	NA	3.3%	NA	NA	3.0%	3.1%	NA	NA	NA
EUROPE-USWC	NA	4.3%	3.8%	NA	3.4%	4.0%	NA	3.3%	3.7%	NA	3.2%	NA
EUROPE-WCSA	4.0%	4.8%	NA	NA	5.0%	5.5%	4.0%	4.2%	4.7%	4.4%	5.4%	4.4%
N.ASIA-ECSA	3.1%	NA	NA	NA	NA	3.2%	2.8%	3.1%	3.0%	NA	2.8%	2.6%
N.ASIA-USEC	NA	3.4%	2.8%	NA	2.9%	3.1%	NA	3.0%	2.8%	2.9%	2.7%	2.6%
N.ASIA-USWC	6.2%	6.7%	7.0%	7.2%	5.7%	6.2%	4.8%	4.9%	5.4%	5.6%	5.1%	NA
S.E.ASIA-ECSA	3.7%	NA	NA	NA	NA	4.2%	2.8%	2.9%	3.1%	2.3%	2.6%	3.0%
S.E.ASIA-USEC	NA	2.7%	2.2%	NA	NA	2.5%	2.1%	2.3%	2.3%	2.3%	2.0%	2.1%
USEC-N.ASIA	2.8%	3.8%	2.7%	NA	3.1%	3.1%	NA	3.1%	3.3%	NA	3.1%	2.8%
USEC-S.E.ASIA	NA	2.8%	2.1%	NA	2.3%	2.4%	2.1%	2.2%	2.2%	NA	2.4%	2.2%
USEC-WCSA	6.3%	6.3%	NA	NA	5.7%	7.2%	5.9%	5.9%	5.8%	NA	5.9%	NA
USWC-ECSA	NA	NA	NA	NA	NA	3.1%	3.1%	3.1%	3.2%	NA	3.4%	NA
USWC-EUROPE	NA	3.5%	3.5%	NA	3.1%	NA	NA	3.3%	3.2%	NA	3.8%	NA
USWC-N.ASIA	4.9%	6.0%	6.2%	7.2%	5.2%	5.6%	4.4%	4.4%	4.9%	5.8%	4.0%	NA
WCSA-EUROPE	4.9%	5.3%	NA	NA	3.6%	5.0%	3.8%	4.1%	4.6%	6.6%	5.4%	NA
WCSA-USEC	6.5%	6.8%	NA	NA	5.9%	8.0%	6.0%	6.0%	6.0%	6.3%	6.0%	NA

Table C-2 (Continued)
Cost of One Day of Ships' Time as a Percent of Total Voyage Cost Through Panama Canal by Route and Vessel Class

Route Abbreviation	Combination Vessels (DWT) <80K	80-100K	100-175K	>175K	General Cargo (DWT) <10K	>10K	Reefer (DWT)	Vehicle Carriers (DWT)	Other (DWT)
ECSA-N.ASIA	NA	NA	3.2%	3.0%	2.8%	3.1%	2.8%	3.2%	NA
ECSA-S.E.ASIA	NA	2.7%	3.1%	2.8%	2.5%	3.6%	2.8%	3.6%	NA
ECSA-USWC	NA	NA	3.6%	NA	NA	2.8%	2.9%	3.0%	NA
EUROPE-USWC	NA	NA	NA	NA	NA	3.4%	3.2%	3.8%	NA
EUROPE-WCSA	4.0%	4.1%	4.8%	NA	4.0%	4.6%	3.8%	3.4%	NA
N.ASIA-ECSA	NA	NA	2.8%	3.0%	3.2%	3.0%	2.8%	3.3%	3.1%
N.ASIA-USEC	NA	2.7%	2.8%	2.5%	NA	2.9%	2.3%	2.9%	2.5%
N.ASIA-USWC	NA	4.6%	5.0%	5.1%	4.6%	5.1%	3.8%	5.1%	3.2%
S.E.ASIA-ECSA	2.8%	2.2%	2.8%	2.8%	2.4%	3.2%	2.5%	3.3%	2.3%
S.E.ASIA-USEC	2.3%	2.2%	2.5%	1.9%	1.9%	2.4%	2.0%	2.3%	2.3%
USEC-N.ASIA	NA	2.8%	3.0%	2.5%	2.6%	2.8%	2.8%	3.0%	2.9%
USEC-S.E.ASIA	2.3%	2.4%	2.6%	NA	2.1%	2.2%	2.1%	2.3%	2.0%
USEC-WCSA	5.4%	5.4%	5.1%	NA	5.4%	6.6%	5.0%	6.4%	3.8%
USWC-ECSA	NA	NA	NA	NA	NA	2.8%	3.1%	2.8%	NA
USWC-EUROPE	NA	NA	NA	NA	NA	3.4%	3.2%	3.4%	NA
USWC-N.ASIA	NA	4.9%	5.0%	NA	4.5%	4.9%	3.7%	4.8%	3.7%
WCSA-EUROPE	4.8%	5.3%	5.1%	3.5%	4.1%	4.7%	4.0%	3.7%	NA
WCSA-USEC	6.5%	5.5%	6.0%	NA	5.5%	6.9%	5.0%	6.0%	4.3%

Table C-2 (Continued)
Cost of One Day of Ships' Time as a Percent of Total Voyage Cost Through Panama Canal by Route and Vessel Class

	Gas	Product Tankers (DWT)					Tanker (DWT)						
Route Abbreviation	Tankers	<16.5K	16.5-25K	25-45K	45-80K	80-160K	<16.5K	16.5-25K	25-45K	45-80K	80-160K	160-250K	>250K
ECSA-N.ASIA	3.2%	NA	2.4%	2.9%	3.0%	NA	3.3%	NA	NA	2.0%	2.5%	NA	NA
ECSA-S.E.ASIA	3.1%	2.4%	2.2%	3.2%	3.1%	NA	4.2%	2.9%	NA	3.0%	2.5%	NA	3.0%
ECSA-USWC	NA	2.6%	NA	NA	2.7%	NA	NA	NA	NA	2.7%	NA	NA	NA
EUROPE-USWC	NA	3.1%	3.0%	3.8%	3.2%	3.2%	NA	NA	NA	NA	NA	NA	NA
EUROPE-WCSA	3.3%	4.1%	NA	2.4%	2.3%	4.0%	3.1%	4.3%	NA	3.7%	3.2%	NA	NA
N.ASIA-ECSA	3.3%	2.8%	2.8%	2.9%	3.0%	2.9%	3.8%	NA	NA	NA	2.7%	NA	NA
N.ASIA-USEC	3.2%	2.6%	2.6%	2.9%	2.8%	2.9%	NA	NA	NA	2.9%	2.6%	2.7%	2.7%
N.ASIA-USWC	5.9%	4.9%	4.4%	5.2%	5.2%	5.3%	5.7%	NA	4.7%	4.8%	5.0%	NA	4.8%
S.E.ASIA-ECSA	3.1%	2.8%	2.5%	2.6%	2.8%	2.8%	2.6%	NA	2.2%	2.5%	2.3%	NA	2.8%
S.E.ASIA-USEC	2.4%	2.0%	2.1%	2.2%	2.2%	2.4%	NA	NA	1.9%	2.5%	2.3%	2.4%	2.0%
USEC-N.ASIA	3.1%	2.4%	NA	3.1%	2.9%	2.7%	NA	NA	NA	2.4%	2.6%	NA	2.3%
USEC-S.E.ASIA	2.5%	NA	2.6%	2.4%	2.2%	2.4%	NA	NA	NA	2.1%	2.2%	NA	2.2%
USEC-WCSA	6.0%	5.4%	5.1%	5.6%	5.9%	6.5%	NA	5.5%	5.6%	5.8%	5.1%	NA	NA
USWC-ECSA	3.6%	NA	NA	NA	3.5%	NA	NA	NA	NA	2.0%	NA	NA	NA
USWC-EUROPE	3.8%	4.0%	3.0%	3.6%	NA	NA	NA	NA	NA	NA	2.4%	NA	NA
USWC-N.ASIA	6.5%	4.3%	4.3%	4.6%	4.6%	5.2%	5.7%	NA	3.7%	4.6%	4.6%	NA	NA
WCSA-EUROPE	4.5%	3.3%	NA	3.1%	2.9%	3.2%	3.1%	NA	NA	3.2%	3.2%	NA	NA
WCSA-USEC	5.8%	5.6%	5.4%	6.1%	6.4%	7.4%	5.6%	NA	5.5%	5.6%	4.9%	NA	NA

Appendix D: Sample User Perceptions Survey

The Panama Canal Commission has contracted with ICF Kaiser to assess the implications of Canal users' perceptions with respect to the scheduled transfer of the Canal to Panamanian control at the end of 1999. As part of this effort, ICF/LBI is conducting a survey of Canal users to obtain information on their needs and expectations. Your company has been selected to participate in this survey. We are particularly interested in your views regarding:

1) the role of the Canal in your company's operations and how it may be changing,
2) how the Canal affects your company's competitiveness, and
3) what are the most important issues and/or problems that concern you about the Canal transfer.

We appreciate your participation in this survey. All responses will be considered confidential and will only be used for analysis purposes. The results will be used by the Canal Board and management in planning improvements to better serve Canal users.

A. **General Information**

A1. Name of Company or Organization:_____Date:
A2. Name and Title of Interviewee:
A3. Company Address:_____City:
Country:
A4. Telephone:_____Fax:_____E-mail:

A5. Size of Company: (revenues)_____(employees)
(vessels)

A6. Fleet breakdown by vessel type

Vessel type	Number of vessels	Number of Canal transits during calendar year 1995
Dry bulk		
Tanker		
Full Container		
Break-bulk/General Cargo		
RO/RO		
Vehicle Carrier		
Reefer		
Passenger Cruise		
Other (specify)		
Total		

A7. Total expenses in Canal transit and related services in calendar year 1995:

Item	Expenses (US$)
Tolls	
Advanced booking fees	
Other related services (tugs, linehandlers, etc)	
Estimated value of transit delays	
Total	

B. **Overview of Canal Requirements and Demand**

B1. Information on trade routes in which your vessels operate and whether they use the Canal.

Trade Route	No. Vessels	Use Canal? (Y/N)	If no, since when?	Canal transits calendar yr. 1995
ECNA-WCSA				
ECNA-CA				
ECNA-OC				
ECNA-AS				
EU-WCNA				
EU-CA				
EU-WCSA				
EU-OC				
EU-AS				

EC = East CoastNA = North AmericaCA = Central AmericaEU = Europe
WC = West CoastSA = South AmericaAS = AsiaOC = Oceania

B2. Why is Canal not used on certain routes? (Rank on a scale of 1 to 5, where 1 is most important)

Size of Vessel	
Canal transit time	
Canal transit costs	
Reliability of Canal transit time	
Vessel damages during Canal transit	
Other (specify)	

B3. What types of goods do you handle on a regular basis and % you would categorize as?

High value_____%Low value_____% Bulk_____%Heavy____%Perishable_____%
Time-sensitive or Just-in-time_____%Hazardous Materials_____%\
Other specify)_____%

B4. Have the service requirements of your customers changed in the last few years? If so, how?

B5. On your Canal routes and transits, whom do you view as your competitors?

Other company's vessels transiting the Canal? Yes____ No____

Intermodal operators who do not use the Canal? Yes___ No____

Others (specify)

B6. On a scale of 1-5 (1 being very important and 5 unimportant), how important do you feel Canal transit cost, transit time and reliability are to your competitiveness as compared to your competitors? Please explain.

Transit Cost 1 2 3 4 5 Transit Time 1 2 3 4 5 Reliability 1 2 3 4 5

Canal Transit Cost

Canal Transit Time

Reliability

B7. Do you see the importance of these factors increasing or decreasing in relation to other factors that affect your competitiveness? If so, why?

Canal Transit Cost

Canal Transit Time

Reliability

B8. Rank in order of importance the factors related to Canal services that you feel are most important to increase your market share and your competitiveness (number 1 is most

important, 2 second, etc.)?

Size of Vessel	
Canal transit time	
Canal transit costs	
Reliability of Canal transit time	
Other (specify)	

B9. What percentage of your revenues involve long-term and/or short-term contracts?

Long-term_____% Short-term_____%

B10. Is the cost of using the Canal a significant component of the overall cost of the transportation service you provide (greater than 2-3%)? If so, please indicate percentage?_____%

B11. If you don't know %'s, in your view, how important is the Canal to your operating costs and to what extent do you make decisions on fleet deployment and routes based on service level and/or costs of the Canal?

B12. Do the Canal costs represent a higher or lower % of transportation costs than in the past (Please circle one)?

More than 5% Higher

About the same

More than 5% Lower

C. **Trends and User Concerns**

C1. What are the most important recent trends affecting your use of the Canal and your transit requirements?

C2. What changes in vessel size and or number of transits do you foresee in your company's use of the Canal over the next 10 years?

C3. How are alliances and other industry trends affecting your operations recently?

C4. Are you using or anticipate using post-Panamax vessels and in what trade routes?

C5. Would improvements in Canal transit cost, time or reliability increase your use of the Canal? If so, please explain.

Canal Transit Cost

Canal Transit Time

Reliability

C6. What are the major problems that need to be addressed to encourage your increased use of the Canal and its benefits your company?

C7. What short-term improvements in Canal services do you think would help increase your use of the Canal?

C8. Do you currently use the advance booking system to reserve a slot for Crossing the Canal on specific dates?

Yes (always)_____ Yes (sometimes)_____ No_____

C9. What suggestions do you have to improve the advance booking system?

C10. Would you be willing to pay an extra fees to guarantee a crossing on a specific date regardless of Canal traffic conditions (even during lane outages) beyond those of the current advanced booking system? If so, how much?

D. **Comments on the Canal Transfer**

D1. What is your general perception of the ongoing transition of the Canal to Panamanian control?

D2. Do you expect that the Canal will be operated by Panama
the same
more efficiently
less efficiently

D3. How do you expect that the transfer will affect:

Canal tolls

Congestion

Service level

Reliability

Safety

Other aspects

D4. What actions could be taken by the Panama Canal Commission or the Panama Government to assure you that the transfer will not have negative effects on your business?

D5. Is the Canal transfer and/or your perception of the transfer implications having an effect on your fleet deployment plans and route service strategies?

Yes_____ No

If yes, how?

D6. Do you foresee that the transfer will eventually result in major changes in your use of the Canal?

Yes_____ No

If yes, do you foresee a significant increase or decrease in Canal use?

Appendix E: Glossary

Board - the nine member Board of the Panama Canal Commission

Booked for Transit-means that a vessel has been assigned a date on which it will be moved through the Panama Canal

Booking fees: For vessels measured using PC/UMS Net Tonnage, the fee will be $0.26 per PC/UMS Net Ton. For vessels subject to Transitional Relief Measures the feel will be $0.23 per Panama Canal Gross Ton per the last certificate issued by PCC between 3/23/76 and 9/30/94. The minimum booking fee for any vessel is $1500. Booking fees may be retained by the Authority if vessels arrive late or fail to cancel their bookings in accordance to the Panama Canal Regulations. If the vessel does not begin its transit on the day it was booked due to a decision by the authorities, the operator may request a full refund and the ship will be listed on the regular transit schedule or the operator can let the Commission retain the fee, and the vessel will transit on a preferred basis.

Commission - the Panama Canal Commission

Enclosed spaces-all spaces which are bounded by the ships hull, by fixed or portable partitions or bulkhead, by decks or coverings other than permanent or moveable awnings. No break in a deck, nor any opening in the ship's hull, in a deck or in a covering of a space, or in the partitions or bulkheads of a space, not the absence of a partition or bulkhead, shall preclude a space from being included in the enclosed space.

Excluded spaces - these are spaces not included in the volume of enclosed spaces

Hearing - a public proceeding at which interested persons are afforded an opportunity to participate in rulemaking through submission of written data, views, or arguments with or without oral presentation.

Length Overall (LOA) - the length of the ship in meters from the foremost to the aftermost points, including a bulbous bow if present.

Moulded depth - the vertical distance measured from the top of the keel to the underside of the upper deck side.

Panel - the members of the Board of Panama Canal Commission who are designated by the Chairman of the Board to conduct a hearing

Party - an individual, partnership, corporation, association, or public or private organization other than an agency of the U.S. government.

Passenger steamers - Regular passenger steamers with accommodations for 50 or more passengers, when carrying mail and running on fixed, published schedules, will be given preference over other vessels in transiting regardless of the number of passengers actually on board.

PCS/UMS Net Tonnage: Shall be determined as follows:

- For all vessels with tolls fixed with rates of toll, unless subject to transitional relief measures, the formula for determining PC/UMS Net Tonnage is :

$= K_4(V) + K_5(V)$ in which formula:

$K_4 = (0.25 + [0.02 \times \text{Log}_{10}(V)] \times 0.830$

$K_5 = [\text{Log}_{10}(DA-19)]/\{[\text{Log}_{10}(DA-16)] \times 17\}$

$(N_1 + N_2)$ is greater than 100, or DA is equal to or less than 20.0 meters, then K_5 is equal to zero.

V= Total volume of all enclosed spaces of the ship in cubic meters and is identical to V as specified in the 1968 International Convention on Tonnage Measurement of Ships.

DA (Average depth)= the result of the division of Total Volume by the product of the length in meters multiplied by the moulded breadth in meters DA=V/(L x MB)

L (length) = 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or the length from the fore side of the stem to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake or keel, the waterline on which this length is measured shall be parallel to the designed waterline.

Moulded breadth - the maximum breadth of the ship, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material.

N1 = number of passengers in cabins with not more than 8 berths.

N2 = number of other passengers.

N1 + N2 = total number of passengers the ship is permitted to carry as indicated in the ship's passenger certificate.

For vessels subject to *transitional relief measures (TRM)* the existing Panama Canal Net Tonnage as specified on the certificate issued by the PCC shall be the PC/UMS Net Tonnage. For these ships, the formula for determining PC/UMS Net Tonnage = Panama Canal Net Tonnage

A vessel whose PC/UMS Net Tonnage is determined by the previous formula shall retain that tonnage until the vessel undergoes a significant structural change or if V changes.

Rates of Toll: The following rates of toll shall be paid by vessels using the Panama Canal:

- On merchant vessels, yachts, army and navy transports, colliers, hospital ships, and supply ships, when carrying passengers or cargo, **$2.21 per PC/UMS Net Ton.**
- On vessels in ballast without passengers or cargo, **$1.76 per PC/UMS Net Ton.**
- On other floating craft including warships, other than transports, colliers, hospital ships, and supply ships, **$1.23 per ton of displacement.**

Regular transit-means the movement through the Canal of a vessel that has not been booked for transit

Significant Structural Change - An actual change of at least 10% in the total volume of the vessel. Vessels without comparative ITC 69 total volumes, or other suitable sources of total volume comparison, shall have a fair and equitable volume comparison made by the Commission to determine if a significant structural change had occurred.

Summer loaded displacement (SLDISP) the actual weight in metric tons of the water displaced by the vessel when immersed to her SLD.

Summer loaded draft - (SLD) the maximum depth to which the vessel's hull may be immersed when in a summer zone.

Transit bookings-There will be two periods during which bookings may be made for a given date.

- In the first period, a limited number of bookings (not to exceed seven) will be available between 21 days and 4 days prior to the date of intended transit.

- In the second period, an additional number of bookings (not to exceed nine), plus any first-period bookings not taken or any bookings which have been canceled, will be available on the third and second days prior to the date of the transit.

The Canal authorities may cease accepting request for bookings during times of high traffic congestion at the Canal. If there is a loss in Canal capacity, the number of bookings available may be reduced. The specific order of transit will be determined by the Canal authorities. Except as proven herein, a vessel may not transit prior to the date for which it has been booked, unless the Canal authorities determine that an early transit would promote efficiency of the Canal and would not result in delay for any regular transits. In the event that a vessel transits prior to the date for which it is booked, the fee will be retained by the Commission. Substitution of booked transits will be permitted under conditions specified by the Canal authorities.

Preference: If, on any day during the first period, or on either day of the second period, requests *exceed* the number of bookings remaining available, preference for the remaining bookings will be given in the following order:

1. Vessels carrying primarily perishable cargoes, in the order of frequency of transit during a specified period.
2. All other vessels in the order of frequency of booked transits during a specified period.
3. If two or more vessels are found to have equal number of booked transits under the procedure above, then preference will be given in the order of frequency of transit during a specified period.
4. If two or more vessels are still found to have equal number of transits under the procedures above, then preference will be given to the vessel transited most recently.

Tolls on warships, dredges and floating drydocks - these operators shall present documents stating the tonnage of displacement at each possible mean draft. Tolls will be levied on actual displacement at the time of their application to transit the Canal.

Transitional Relief Measures - For vessels which have transited the Canal between 3/23/76 and 9/30/94 without introducing any significant structural changes since the last transit during this period and can present their existing Panama Canal Tonnage Certificate on their first transit after 9/30/94.

Upper deck - the uppermost complete deck exposed to weather and sea, having permanent means of weathertight closings of all openings in the weather part, and below which all openings in the sides of the ship are fitted with permanent means of watertight closing.

Warship - any vessel of government ownership which is employed by its owners for military or naval purposes and shall include armed coast guard vessels and naval training vessels, but does not include naval auxiliary vessels (tankers, ammunition ships, refrigerator ships, repair ships, tenders used to transport general military supplies.)

Appendix F: Trade Forecast and Analysis of Commodities, Routes and Vessel Types

1. Bananas

Route Analysis

The banana trade moving through the Panama Canal is concentrated on three main trade routes: WCSA to Europe, W. Central America to Europe, and WCSA to USEC. A total of 2.53 million long tons was transported through the Canal in Fiscal Year (FY) 1995. Much of the recent growth in exports is due to increased demand in the Eastern European market, primarily in Germany, Poland, the Czech Republic, and Hungary. Table F-1 summarizes the 1995 banana trade.

Table F-1
1995 Overview

Group Components	Bananas 100%
1995 Trade Level	2.53 million long tons
Major Canal Traffic Routes	WCSA to Europe W. Central America to Europe WCSA to USEC
Average Annual Growth in Exports by Route (1990 - 1994)	WCSA to Europe 21.9% W. Central America to Europe -0.5% WCSA to US 2.9%

Route Alternatives

Much of the banana trade does not pass through the Canal. Central American bananas exported from the Pacific cost are almost entirely targeted at Pacific markets, thereby avoiding the Canal. Similarly, Atlantic-exported bananas are shipped to Atlantic markets and also avoid the Canal. Banana shipments from WCSA- Ecuador- to USEC through the Canal must compete, however, with increasing volumes from Venezuela and Colombia, which do not transit the Canal.

Forecast

The forecasted growth in banana exports is shown in Table F-2 for each of the key Canal trade routes listed above. Strong growth is expected from the WCSA as the European market expands. Some of the US demand will be met by producers not using the Canal, such as Venezuela, Colombia, and Mexico.

Table F-2
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
WCSA to Europe	$431	$1,427	$2,709	$4,494
W. Central America to Europe	$1,505	$1,835	$2,682	$3,799
WCSA to US	$527	$892	$1,689	$3,072

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
WCSA to Europe	21.9%	7.0%	6.6%	5.2%
W. Central America to Europe	-0.5%	3.7%	3.9%	3.5%
WCSA to US	2.9%	7.1%	6.6%	6.2%

2. Reefer, Other

Route Analysis

This commodity group includes dairy products and refrigerated fish, meat, fruit, and miscellaneous items. In FY 1995, 4.2 million long tons of these refrigerated food products were moved through the Canal. The most significant routes for this trade are: USEC to Asia, WCSA to Europe, WCSA to USEC, Oceania to USEC, Oceania to Europe, and Europe to Asia. High rates of income growth in Asia are a driver for a large portion of this trade. Table F-3 summarizes the 1995 refrigerated food products trade.

Table F-3
1995 Overview

Group Components	Refrigerated Food Products 100%
1995 Trade Level	4.2 million long tons
Major Canal Traffic Routes	USEC to Asia WCSA to Europe WCSA to USEC Oceania to USEC Oceania to Europe Europe to Asia
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia 12.9% WCSA to Europe 12.8% WCSA to US 14.9% Oceania to US -3.6% Oceania to Europe 3.1% Europe to Asia 24.8%

Route Alternatives

Growth is expected on several routes that do not transit the Canal. Both South Africa and Argentina have begun aggressively exporting high-quality fruit and vegetables to the US and European markets, not requiring Canal transit. In addition, much of the growing Asian demand is anticipated to be filled by sources not using the Canal.

Forecast

Growth in refrigerated food products exports is expected due to increasing Asian and Eastern European demand, anticipated trade liberalization in Japan regarding meat and fruit imports, and economic recovery in Western Europe and Japan. The breakbulk reefer trade will slow, however, as containerization becomes increasingly more popular. Table F-4 shows the forecasted growth in refrigerated food products exports for each of the key Canal trade routes listed above.

Table F-4
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$4,860	$11,862	$20,173	$29,500
WCSA to Europe	$382	$1,066	$1,793	$2,417
WCSA to US	$784	$2,019	$3,322	$4,752
Oceania to US	$1,591	$1,561	$1,711	$1,692
Oceania to Europe	$1,357	$1,888	$2,441	$2,924
Europe to Asia	$2,089	$7,693	$13,003	$18,751

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	12.9%	7.0%	5.5%	3.9%
WCSA to Europe	12.8%	9.5%	5.3%	3.0%
WCSA to US	14.9%	6.7%	5.1%	3.6%
Oceania to US	-3.6%	2.2%	0.9%	-0.1%
Oceania to Europe	3.1%	3.6%	2.6%	1.8%
Europe to Asia	24.8%	7.2%	5.4%	3.7%

3. Chemicals

Route Analysis

This commodity group includes caustic soda and miscellaneous other chemicals. The major chemical trade routes include USEC to Asia, USEC to Oceania, and Asia to

USEC. In FY 1995, 7.8 million long tons of chemicals were shipped through the Canal. Canal volumes are dominated by the USEC-to-Asia route, as basic intermediate chemicals, such as inputs to plastics and building materials, are important to the expanding industrial sectors in Asia, especially the NIE's and China. In addition, the US has become a very competitive world supplier, due to the weakening of the dollar against the yen since 1986, and the restructuring of the chemical industry during the 1980s. Table F-5 summarizes the 1995 trade in chemicals.

Table F-5
1995 Overview

Group Components	Chemicals Misc. 87% Caustic Soda 13%
1995 Trade Level	7.8 million long tons
Major Canal Traffic Routes	USEC to Asia USEC to Oceania Asia to USEC
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia 2.8% US to Oceania -2.9% Asia to US 14.5%

Route Alternatives

While the growth in Asia is expected to continue, and the US will remain competitive, new supplies of chemicals in Asia itself are likely to affect Canal flows. China is likely to develop its chemical industry quickly to meet its own demand as well as to export to other Asian markets. Such development will slow growth on the USEC-to-Asia route through the Canal, as reflected in the forecast. Also, Mexico's rapidly expanding chemical industry may find niche markets in Asia and be able to export from its Pacific ports, thereby satisfying some of the Asian demand and taking market share away from the US. These Mexico-to-Asia shipments would not require Canal transit.

Forecast

Economic prospects for the principal Asian markets are very strong. The US is expected to remain a principal supplier of chemicals to Asia in view of its competitive position. The weak dollar against the yen helps make US chemical prices competitive, and the US has a low manufacturing cost structure, which it is likely to maintain. With the current high level of chemical prices, however, China is expected to push its exports. The net result of these factors is that Canal chemical volumes are likely to continue expanding, but at somewhat more moderate rates than in recent years. Table F-6 shows the forecasted growth in chemical exports for each of the key Canal trade routes listed above.

Table F-6
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$1,779	$2,441	$3,171	$3,814
US to Oceania	$112	$108	$115	$120
Asia to US	$468	$967	$1,255	$1,562

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	2.8%	3.5%	2.7%	1.9%
US to Oceania	-2.9%	1.4%	0.6%	0.4%
Asia to US	14.5%	3.1%	2.6%	2.2%

4. Petroleum Chemicals

Route Analysis

This commodity group, consists of benzene, toluene, and various miscellaneous petroleum-based chemicals. In 1995, 2.3 million long tons passed through the Canal. The vast majority of this volume was southbound from USEC to Asia, where demand has been growing steadily. Another, smaller, route is Asia to USEC. Table F-7 provides an overview of the 1995 petrochemical trade.

Table F-7
1995 Overview

Group Components	Benzene 8% Toluene 10% Petrochemicals, Misc. 82%
1995 Trade Level	2.3 million long tons
Major Canal Traffic Routes	USEC to Asia Asia to USEC
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia 4.5% Asia to US 10.4%

Route Alternatives

Much of the trade in petrochemicals is intra-European and intra-Asian, and therefore does not pass through the Canal. Shipments from Asia to USEC can bypass the Canal by means of rail transport from the West Coast to the East Coast of the US.

Forecast

The USEC-to-Asia route is expected to grow, but at a declining rate. Expanding capacity in Asia is projected to supply increasing amounts of petrochemicals to the US and Europe. Table F-8 shows the expected trend in export revenue for each of the primary Canal petrochemical trade routes.

Table F-8
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$3,213	$5,271	$7,686	$9,776
Asia to US	$1,164	$2,429	$3,862	$5,641

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	4.5%	5.5%	3.8%	2.4%
Asia to US	10.4%	5.8%	4.7%	3.9%

5. Coal and Coke

Route Analysis

The three primary routes through the Canal for the coal and coke trade are USEC to Asia, W. Canada to Europe, and Asia to USEC. A total of 2.53 million long tons were moved through the Canal in 1995. Table F-9 summarizes the 1995 coal and coke trade.

Table F-9
1995 Overview

Group Components	Coal 100%
1995 Trade Level	2.53 million long tons
Major Canal Traffic Routes	USEC to Asia **W. Canada to Europe** **Asia to USEC**
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia -7.1% **Canada to Europe 5.8%** **Asia to US 23.9%**

Route Alternatives

The use of Cape-size bulk carriers (too large to transit the Canal) on the USEC-to-Asia route has grown over time, taking volume away from the Canal. These vessels carry US export coal eastward from the Gulf, often topping off at Richard's Bay, South Africa, before proceeding to the principal Asian markets. New USWC coal exporting facilities can draw additional traffic away from the East Coast. The Port of Los Angeles is building a large coal terminal mainly to handle US steam coal exports to Japan and other parts of Asia. Although targeted to handle US western coal, the Port is hopeful that favorable rail economics may extend its reach into the Eastern US mines. Other suppliers who do not need to transit the Canal, such as Australia, South Africa, and Indonesia have also gained share in the growing Asian market.

Forecast

The use of Cape-size vessels is forecast to grow, and new Asian demand is expected to be met from suppliers that do not require Canal transit, namely Australia, South Africa, Indonesia, and USWC. In the long term, China may also begin exporting to local Asian markets.

Shipments of coal from Western Canada to Europe are not expected to show much additional growth. The changes in the EU coal business, including stricter environmental controls, privatization, and corporate rationalization, may increase demand for imported coal. However, this demand is more likely to be met by South Africa and Australia, which have been increasing their shares of the EU market. Also, the more natural market for Canada's coal is Asia. Table F-10 presents the export forecast for the three currently dominant coal and coke Canal trade routes.

Table F-10
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$888	$542	$424	$334
Canada to Europe	$128	$199	$285	$376
Asia to US	$66	$160	$174	$196

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	-7.1%	-3.3%	-2.4%	-2.4%
Canada to Europe	5.8%	3.6%	3.7%	2.8%
Asia to US	23.9%	0.4%	0.9%	1.2%

6. Grains, Other

Route Analysis

This commodity group consists of barley, oats, rice, sorghum, and miscellaneous grains. In 1995, 4.2 million long tons passed through the Canal. The vast majority of this tonnage moved on the USEC to Asia route. Table F-11 presents an overview of the 1995 grain trade.

Table F-11
1995 Overview

Group Components	**Barley 13%** **Oats 1%** **Rice 18%** **Sorghum 45%** **Grains, Misc. 23%**
1995 Trade Level	4.2 million long tons
Major Canal Traffic Routes	USEC to Asia USEC to W. Central America
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia 15.0% US to Central America 12.3%

Route Alternatives

The main alternative to the USEC-to-Asia route is the USWC-to-Asia route. The amount of grain exported via the West Coast fluctuates as a function of total production, water levels in the Mississippi, availability of rail cars and their rates, and available export terminal capacity in the Gulf as opposed to the West Coast. In the long term, new suppliers to the Asian market, such as Argentina, may bypass the Canal.

Forecast

In the medium term, there will be modest growth in US exports of sorghum to Asia as populations there shift to higher protein diets. In the longer term, more modest shipments of grain from USEC to WCSA and West Central America are expected to show moderate growth through 2000. The forecast assumes steady continuation in the trend toward high-protein diets in the Asian region. The demand for poultry and beef imports in China, Taiwan, Korea, and Southeast Asian nations will rise with incomes in those countries. This trend will increase the demand for imported feed stuffs, including animal sorghum, and the US is the largest supplier of these inputs to support growing domestic animal production. Deregulation in Japan, combined with the strong yen, will make imports an increasingly popular alternative to domestically produced products, including for the first time, rice. In the long term, other nations are expected to gain some market share in the growing Asian market. Argentina, in particular, is likely to become a competitor in

sorghum. These shipments will not require Canal transit. Table F-12 shows the export forecast for grains on the US-to-Asia and US-to-Central America routes

Table F-12
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$927	$2,536	$4,184	$6,095
US to Central America	$791	$1,850	$3,273	$4,436

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	15.0%	7.6%	5.2%	3.8%
US to Central America	12.3%	6.7%	5.9%	3.1%

7. Soybeans

Route Analysis

The US is the world's largest producer and exporter of soybeans. In 1995, 8.4 million long tons of soybeans passed through the Canal, predominantly from USEC to Asia and to W. Central America. A summary of the 1995 soybean trade is provided in Table F-13.

Table F-13
1995 Overview

Group Components	Soybeans 100%
1995 Trade Level	8.4 million long tons
Major Canal Traffic Routes	**USEC to Asia** **USEC to W. Central America**
Average Annual Growth in Exports by Route (1990 - 1994)	**US to Asia 7.4%** **US to Central America 28.5%**

Route Alternatives

The concentration of the US crop in the midwestern and lower Mississippi Valley states favors export through the US Gulf Coast. The geographic location of US soybean production and the established export infrastructure through the Gulf make the percentage of USEC-to-Asia soybean exports that moves through Gulf Coast ports relatively insensitive to the volumes being exported. Brazil and

Argentina, however, are becoming increasingly competitive exporters of soybeans and have the ability to bypass the Canal.

Forecast

Canal volumes are forecast to grow as the US participates in the expected strong growth of the Japanese, Taiwanese, Korean, and Chinese markets. Japan and China have been large purchasers of US soybeans and, along with Taiwan and Korea, are expected to remain strong buyers. (As incomes rise and diets shift to higher protein, soybeans will be in greater demand.) The US is expected to hold its share of the Asian market against its Brazilian and Argentinean competitors in the near term, as the US soybean is higher quality, and the US sells the entire bean, with crushing performed in the end market, which is preferred by the importer. Growth in exports of soybeans from the US to Asia will eventually slow, however, as China's internal production capability improves over time and as Brazil and Argentina gain share in the Asian market. Table F-14 presents the forecasted growth of soybean exports for the Canal trade routes listed above.

Table F-14
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$1,499	$2,648	$4,579	$8,002
US to Central America	$264	$1,389	$3,566	$8,644

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	7.4%	4.8%	5.6%	5.7%
US to Central America	28.5%	11.6%	9.9%	9.3%

8. Wheat

Route Analysis

A total of 7.6 million long tons of wheat were moved through the Canal in 1995. The four dominant trade routes for this commodity group are USEC to Asia, USWC to Africa, USEC to WCSA, and USEC to W. Central America. The USEC-to-Asia route and the USWC-to-Africa route are quite volatile. Canal flows on the USEC-to-Asia route are strongly influenced by the wheat production area in the US and by the level of production in any given year, and by Chinese demand for wheat and its local production. Production levels are influenced by weather conditions and are, therefore, difficult to predict. Shipments of wheat to Africa from USWC

are tied to US aid programs and to the location of the most readily available stocks. Table F-15 summarizes the 1995 wheat trade.

Table F-15
1995 Overview

Group Components	Wheat 100%
1995 Trade Level	7.6 million long tons
Major Canal Traffic Routes	USEC to Asia USWC to Africa USEC to WCSA USEC to W. Central America
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia 4.2% US to Africa/Middle East 15.8% US to WCSA -10.5% US to Central America 8.8%

Route Alternatives

Farmers in many of the most productive wheat growing states can either ship by barge down to the Mississippi or by rail to the USWC. The decision is made on the basis of market conditions and transport costs, which fluctuate from year to year, although rail rates to the USWC have become progressively more competitive during the past few years. Barge transport, and ultimate export via the US Gulf, becomes a more viable option in years of high export volumes to Asia. The "excess" amounts of wheat that cannot be carried economically to the US West Coast are exported across US Gulf ports. There is a growing trend to export US wheat via USWC ports, bypassing the Canal. The number of other potential wheat suppliers to Asia is also growing. Many, such as Australia, Brazil, Canada, Eastern Europe, and Ukraine, could bypass the Canal.

Forecast

Future wheat volume through the Canal is expected to show slow growth on average, although substantial weather-induced fluctuations are likely to occur from year to year. Future volumes transiting the Canal will be a function of: growth in the Asian market and the percentage of US wheat exports that will move across US Gulf ports; occasional food aid programs, which are difficult to predict; and competition from other major suppliers such as Canada, Australia, and Argentina, as well as smaller suppliers such as Eastern Europe, and Ukraine.

The main positive factor driving the forecast of Canal wheat volume is the continued growing demand in Asia outside China and Japan. The main negative factors driving the forecast of Canal wheat volume are the trend toward USWC exports to Asia, not using the Canal, and the increased availability of wheat on the

world market from other suppliers. Japanese and Chinese markets' demand for wheat will grow little in the future. Chinese production is expected to increase dramatically, thereby holding its import requirements fairly steady, and Japanese demand will slow. The other importing markets in Asia (Taiwan, Korea) are currently growing. The Canal will see increases in USEC-to-Asia wheat flows only during years of increased production in the US and strong demand in Asia. This implies that Canal flows will continue to be volatile.

Other suppliers of wheat to the world markets are developing quickly, and in the long term, the position of the US will be considerably weaker. Australia, Argentina, and Brazil have the potential to meet the wheat import requirements of the Asian market. Other nations have changed from being importers to exporters, such as Poland, Hungary, Bulgaria, and Saudi Arabia; this will make the near term world wheat market much more competitive. Ukraine, Russia, and other Independent States may also develop their internal production capabilities and become significant exporters to the world market. The forecasted growth in wheat exports is shown in Table F-16 for each of the key Canal trade routes listed above. The expected bad wheat harvest in the US in 1996 will lower the Canal trade volume considerably.

Table F-16
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$1,698	$2,616	$3,653	$4,556
US to Africa/Middle East	$1,037	$2,260	$2,927	$3,515
US to WCSA	$187	$156	$235	$342
US to Central America	$227	$404	$568	$768

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	4.2%	4.5%	3.4%	2.2%
US to Africa/Middle East	15.8%	3.3%	2.6%	1.8%
US to WCSA	-10.5%	4.5%	4.2%	3.8%
US to Central America	8.8%	4.0%	3.5%	3.1%

9. Lumber Products

Route Analysis

This commodity group includes boards and planks; plywood and veneer; and other miscellaneous lumber products. A total of 6.6 million long tons of lumber products moved through the Canal in 1995. The dominant trade routes for this

commodity group are USEC to Asia, W. Canada to Europe, W. Canada to USEC, and Asia to USEC. Table F-17 presents a summary of the 1995 trade in lumber products.

Table F-17
1995 Overview

Group Components	Lumber Products 100%
1995 Trade Level	6.6 million long tons
Major Canal Traffic Routes	**USEC to Asia** **W. Canada to Europe** **W. Canada to USEC** **Asia to USEC**
Average Annual Growth in Exports by Route (1990 - 1994)	**US to Asia 3.1%** **Canada to Europe -8.6%** **Canada to US 23.9%** **Asia to US 6.3%**

Route Alternatives

Rail transport has become a major alternative to the Canal on the W. Canada to USEC route. Developing lumber sources in Eastern Europe, Belarus, Ukraine, and New Zealand can also reach the European and Asian markets without transiting the Canal.

Forecast

The outlook calls for moderate growth in the short-term, followed by slower growth in the long term, as new supply sources will not require use of the Canal. High demand growth is expected in China and Taiwan, with continued but slower growth in Japan, through the year 2000. The residential and nonresidential construction fields will grow in line with overall economic expansion. New non-Canal suppliers, however, are shipping lumber to the Asian market. Chile, after shipping logs for many years, is now developing dimensional lumber export capacity. New Zealand's log exports to the Japanese and Korean markets have jumped dramatically. In the longer term, the vast lumber resources of eastern Russia will be developed, and these supplies will easily supplant higher priced US lumber.

The European market, depressed during the 1991 to 1993 recession, is picking up, but local supplies and the lumber resources from Ukraine and Belarus will later undercut Canadian lumber. Therefore the forecast calls for slow growth in the W. Canada to Europe trade. Table F-18 projects future Canal lumber exports for each of the trade routes listed above.

Table F-18

Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$3,805	$6,268	$9,329	$12,431
Canada to Europe	$982	$977	$1,459	$1,971
Canada to US	$3,767	$12,681	$18,976	$24,779
Asia to US	$1,065	$1,613	$1,763	$1,675

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	3.1%	6.5%	4.1%	**2.9%**
Canada to Europe	-8.6%	6.1%	4.1%	**3.1%**
Canada to US	23.9%	6.1%	4.1%	**2.7%**
Asia to US	6.3%	2.9%	0.9%	-0.5%

10. Pulpwood

Route Analysis

In 1995, 4.1 million long tons of pulpwood transited the Canal. The major routes were the USEC to Asia route and the W. Canada to Europe route. Table F-19 summarizes the 1995 pulpwood trade.

Table F-19
1995 Overview

Group Components	Pulpwood 100%
1995 Trade Level	4.1 million long tons
Major Canal Traffic Routes	**USEC to Asia** **W. Canada to Europe**
Average Annual Growth in Exports by Route (1990 - 1994)	**US to Asia 5.0%** **Canada to Europe 3.0%**

Route Alternatives

The primary alternative to the current routes is rail transport across Canada or the US. New sources which are expected to develop in Eastern Europe, Ukraine, and Belarus would also bypass the Canal.

Forecast

Slow growth is expected in the W. Canada to Europe route with moderate growth in the USEC to Asia route over the projection period, due to increasing number of European and Asian sources of pulpwood. These new sources will create new intra-European and intra-Asian routes, which will bypass the Canal, thereby lowering growth in pulpwood transits. Table F-20 presents the export forecast for pulpwood.

Table F-20
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$1,573	$2,713	$4,149	$5,677
Canada to Europe	$1,430	$2,107	$3,027	$4,171

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	5.0%	6.0%	4.3%	3.2%
Canada to Europe	3.0%	4.6%	3.7%	3.3%

11. Automobiles

Route Analysis

This commodity group includes unboxed autos and trucks. In 1995, 1.8 million long tons of these automobiles transited the Canal, predominantly on the Asia-to-USEC, Europe-to-USWC, and USEC-to-WCSA routes. Table F-21 summarizes the 1995 automobile trade.

Table F-21
1995 Overview

Group Components	Automobiles 100%
1995 Trade Level	1.8 million long tons
Major Canal Traffic Routes	Asia to USEC Europe to USWC USEC to WCSA
Average Annual Growth in Exports by Route (1990 - 1994)	Asia to US -4.2% Europe to US -0.5% US to WCSA 48.8%

Forecast

The shift of much Japanese automobile production to the US is significantly reducing US imports. The forecast is a continuing decline in line with increased American transplanted production and a weak US market for high priced Japanese luxury cars. Table F-22 presents the forecast for automobile exports along the dominant Canal trade routes.

Table F-22
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Asia to US	$20,804	$15,960	$11,349	$7,037
Europe to US	$8,566	$6,944	$4,209	$2,232
US to WCSA	$32	$318	$684	$1,209

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Asia to US	-4.2%	-1.6%	-3.4%	-4.7%
Europe to US	-0.5%	-3.1%	-4.9%	-6.1%
US to WCSA	48.8%	12.8%	8.0%	5.9%

12. Iron and Steel

Route Analysis

This commodity group includes a variety of iron steel manufactures: angles, shapes, and sections; nails, tacks, and spikes; plates, sheets, and coils; tubes, pipes, and fittings; wires, bars, and rods; and miscellaneous manufactures. A total of 9.2 million long tons moved through the Canal in 1995. The primary routes through the Canal for iron and steel manufactures are Asia to USEC, Europe to USWC, ECSA to WCSA, and W. Central America to USEC. A summary of the 1995 iron and steel trade is presented in Table F-23.

Table F-23
1995 Overview

Group Components	Manufactures of iron and steel 100%
1995 Trade Level	9.2 million long tons
Major Canal Traffic Routes	Asia to USEC Europe to USWC ECSA to WCSA W. Central America to USEC
Average Annual Growth in Exports by Route (1990 - 1994)	Asia to US -7.1% Europe to US 16.6%

	ECSA to WCSA 10.9% Central America to US -2.9%

Forecast

Table F-24 shows the export forecast for iron and steel manufactures along the dominant Canal trade routes.

Table F-24
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Asia to US	$2,981	$1,822	$1,184	$718
Europe to US	$3,255	$6,244	$6,002	$5,371
ECSA to WCSA	$300	$655	$999	$1,279
Central America to US	$573	$601	$717	$801

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Asia to US	-7.1%	-3.2%	-4.2%	-4.9%
Europe to US	16.6%	0.6%	-0.4%	-1.1%
ECSA to WCSA	10.9%	6.3%	4.3%	2.5%
Central America to US	-2.9%	2.8%	1.8%	1.1%

13. Minerals Misc.

Route Analysis

This commodity group contains minerals not elsewhere included: asbestos; cement; borax, carbon black; clay, fire, and china; infusorial earth; salt; soda and sodium compounds; and sulfur. In 1995, 6.8 million tons of these minerals transited the Canal. Dominant trade routes include WCSA to USEC, W. Central America to USEC, W. Canada to Africa, USEC to Asia, USWC to Europe, and USWC to Africa. This commodity group is very volatile from year to year. Salt, which has become a more significant component of this commodity group, is especially subject to great fluctuations, as exports are influenced by the demand for road salt in the winter, which is dependent on the weather and therefore difficult to predict. Table F-25 presents a summary of the 1995 trade in minerals.

Table F-25
1995 Overview

Group Components	**Asbestos <1%** **Cement 8%** **Borax 5%** **Carbon Black <1%** **Clay, Fire and China 12%** **Infusorial Earth <1%** **Salt 38%** **Soda and Sodium Compounds 6%** **Sulfur 30%**
1995 Trade Level	6.8 million long tons
Major Canal Traffic Routes	**WCSA to USEC** **W. Central America to USEC** **W. Canada to Africa** **USEC to Asia** **USWC to Europe** **USWC to Africa**
Average Annual Growth in Exports by Route (1990 - 1994)	**WCSA to US 7.3%** **Central America to US 5.9%** **Canada to Africa/Middle East -17.3%** **US to Asia 7%** **US to Europe 8.1%** **US to Africa/Middle East 7.7%**

Route Alternatives

The principal sources of salt for the US market, which is concentrated in the East Coast, are West Coast Mexico and Chile, thereby potentially using Canal transit. Improved efficiency in the Mexican railway system and the need for US bulk shippers to find back-haul cargo, however, could make the overland route to the US market more attractive. Other sources for the US market are Canada and the Bahamas, which do not require Canal transit.

The most important sulfur route for the Canal has been the West Coast of Canada to Africa (primarily Morocco and Tunisia). Morocco and Tunisia, however, are expected to move to lower-cost suppliers in the future, such as Saudi Arabia and Poland, which do not require Canal transit. European demand for sulfur is also expected to be filled increasingly by Poland.

Forecast

Salt exports from W. Central America to USEC are expected to increase in the short term. Most of this salt comes from the Pacific side of Mexico, using Canal transit. However, in the long term, with improved efficiency in the Mexican railway

system and the need for US bulk shippers to find back-haul cargo, salt could start to move to the US market overland. Northbound shipments on the WCSA-to-USEC route are also expected to increase based on early data, but decline in the longer term. Fluctuations caused by weather conditions, however, could easily swing the actual tonnage up or down in any given year. Sulfur shipments through the Canal on the West Coast of Canada-to-Africa route are expected to decline. Morocco and Tunisia will switch to lower-cost suppliers than Canada, such as Saudi Arabia and Poland. European nations are expected to buy more from Poland, which has been aggressively penetrating the European sulfur market. Table F-26 provides a forecast for minerals exports along the six main Canal trade routes for the commodity group.

Table F-26
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
WCSA to US	$49	$52	$33	$20
Central America to US	$399	$490	$443	$386
Canada to Africa/Middle East	$197	$91	$82	$66
US to Asia	$654	$1,221	$1,933	$2,727
US to Europe	$570	$976	$1,229	$1,377
US to Africa/Middle East	$62	$101	$132	$160

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
WCSA to US	7.3%	-3.7%	-4.3%	-4.8%
Central America to US	5.9%	-0.4%	-1.0%	-1.3%
Canada to Africa/Middle East	-17.3%	-0.3%	-1.0%	-2.2%
US to Asia	7.0%	6.1%	4.7%	3.5%
US to Europe	8.1%	3.8%	2.3%	1.1%
US to Africa/Middle East	7.7%	3.4%	2.7%	1.9%

14. Phosphates

Route Analysis

In 1995, 9.5 million long tons of phosphates moved through the Canal. Most of this commodity moved along one of four routes: USEC to Asia, USEC to Oceania, Africa to W. Canada, or Africa to W. Central America. A summary of the 1995 phosphate trade is presented in Table F-27.

Table F-27
1995 Overview

Group Components	Phosphates 100%
1995 Trade Level	9.5 million long tons
Major Canal Traffic Routes	USEC to Asia USEC to Oceania Africa to W. Canada Africa to W. Central America
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia -5.4% US to Oceania 3.6% Africa/Middle East to Canada -0.2% Africa/Middle East to Central America 10.8%

Forecast

Table F-28 presents the export forecast for phosphates along each of the four primary Canal routes.

Table F-28
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$138	$106	$106	$103
US to Oceania	$14	$15	$20	$33
Africa/Middle East to Canada.	$26	$24	$15	$19
Africa/Middle East to Central America	$29	$91	$143	$196

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	-5.4%	-0.6%	0.0%	-0.3%
US to Oceania	3.6%	-1.5%	2.9%	5.0%
Africa/Middle East to Canada.	-0.2%	-0.7%	-4.7%	2.6%
Africa/Middle East to Central America	10.8%	12.7%	4.6%	3.2%

15. Fertilizers

Route Analysis

This commodity group includes ammonium compounds, nitrate of soda, fishmeal, potash, and miscellaneous fertilizers. A total of 6.4 million long tons transited the Canal in 1995. The fertilizer trade is concentrated in three routes involving the Canal: WCSA

to Europe, USEC to Asia, and Europe to W. Central America. Table F-29 presents a summary of the 1995 fertilizer trade.

Table F-29
1995 Overview

Group Components	Ammonium Compounds 10% Nitrate of Soda 4% Fertilizers, Misc. 62% Fishmeal 15% Potash 9%
1995 Trade Level	6.4 million long tons
Major Canal Traffic Routes	WCSA to Europe USEC to Asia Europe to W. Central America
Average Annual Growth in Exports by Route (1990 - 1994)	WCSA to Europe -1.1% US to Asia 8.3% Europe to Central America 12.2%

Forecast

The export forecast for fertilizers along each of the trade routes listed above is provided in Table F-30.

Table F-30
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
WCSA to Europe	$13	$12	$12	$13
US to Asia	$964	$2,037	$3,490	$4,962
Europe to Central America	$108	$139	$93	$57

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
WCSA to Europe	-1.1%	-0.9%	0.0%	1.3%
US to Asia	8.3%	7.4%	5.5%	3.6%
Europe to Central America	12.2%	-3.5%	-4.0%	-4.8%

16. Alumina/Bauxite

Route Analysis

A total of 0.5 million long tons of alumina/bauxite ore transited the Canal in 1995. The most significant route to Canal volume is Asia to USEC. The ECSA-to-USWC route has also grown in recent years. Table F-31 summarizes the 1995 trade in alumina/bauxite ore.

Table F-31
1995 Overview

Group Components	Alumina/Bauxite Ore 100%
1995 Trade Level	0.5 million long tons
Major Canal Traffic Routes	Asia to USEC ECSA to USWC
Average Annual Growth in Exports by Route (1990 - 1994)	Asia to US 9.0% ECSA to US 0.5%

Forecast

The volume of alumina/bauxite transiting the Canal has historically fluctuated substantially from year to year. The largest route, and one of the fastest growing over the past few years, is Asia to the USEC. Demand for alumina/bauxite is correlated with overall economic growth; therefore, continued moderate growth is expected along the Asia to USEC route and for the commodity group as a whole. In any given year, US demand can be met by supplies from Jamaica, Surinam, and Venezuela. In recent years, there has been increased tonnage from ECSA (Surinam, Venezuela) to the USWC to feed the aluminum plants there. Table F-32 provides a forecast of alumina/bauxite ore exports along the trade routes listed above.

Table F-32
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Asia to US	$44	$105	$209	$369
ECSA to US	$189	$328	$656	$1,160

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Asia to US	9.0%	9.3%	7.2%	5.9%
ECSA to US	0.5%	9.3%	7.2%	5.9%

17. Ores, Other

Route Analysis

This commodity group contains ores not included elsewhere: chrome ore; copper ore; iron ore; lead ore; manganese ore; tin ore; zinc ore; and miscellaneous ore. In 1995, 6.5 million long tons of these ores moved through the Canal. The five largest routes through the Canal are Asia to USEC, WCSA to Europe, Oceania to USEC, ECSA to Asia, and Asia to ECSA. Table F-33 summarizes the 1995 trade in these ores.

Table F-33
1995 Overview

Group Components	Chrome Ore <1% Copper Ore 14% Iron Ore 12% Lead Ore 2% Manganese Ore 4% Tin Ore <1% Zinc Ore 15% Ore, Misc. 52%
1995 Trade Level	6.5 million long tons
Major Canal Traffic Routes	Asia to USEC WCSA to Europe Oceania to USEC ECSA to Asia Asia to ECSA
Average Annual Growth in Exports by Route (1990 - 1994)	Asia to US 1.5% WCSA to Europe 2.4% Oceania to US 2.0% ECSA to Asia 3.2% Asia to ECSA 16.1%

Forecast

The forecast for ore exports along each of the Canal routes listed above is shown in Table F-34.

Table F-34
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Asia to US	$41	$72	$157	$327
WCSA to Europe	$772	$1,147	$1,798	$2,728
Oceania to US	$69	$89	$110	$129
ECSA to Asia	$983	$1,897	$4,332	$9,423
Asia to ECSA	$9	$36	$118	$346

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Asia to US	1.5%	8.8%	8.1%	7.6%
WCSA to Europe	2.4%	5.2%	4.6%	4.3%
Oceania to US	2.0%	2.8%	2.1%	1.6%
ECSA to Asia	3.2%	9.3%	8.6%	8.1%
Asia to ECSA	16.1%	13.8%	12.6%	11.4%

18. Scrap Metal

Route Analysis

A total of 1.7 million long tons of scrap metal passed through the Canal in 1995. The most significant route is USEC to Asia. Table F-35 summarizes the 1995 scrap metal trade.

Table F-35
1995 Overview

Group Components	Scrap Metal 100%
1995 Trade Level	1.7 million long tons
Major Canal Traffic Routes	USEC to Asia
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia -8.9%

Forecast

The forecast for scrap metal exports on the US-to-Asia route is shown in Table F-36.

Table F-36
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$889	$997	$1,915	$3,120

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	-8.9%	8.5%	6.7%	5.0%

19. Metals, Other

Route Analysis

This commodity group includes metals not listed elsewhere: aluminum metal; copper metal; iron metal; zinc metal; and miscellaneous metals. In 1995, 2.0 million long tons of these metals transited the Canal. The WCSA-to-Europe route carries much of the trade. Table F-37 presents an overview of the 1995 metals trade.

Table F-37
1995 Overview

Group Components	Aluminum Metal 37% Copper Metal 31% Iron Metal 19% Zinc Metal 5% Metals, Misc. 5%
1995 Trade Level	2.0 million long tons
Major Canal Traffic Routes	WCSA to Europe
Average Annual Growth in Exports by Route (1990 - 1994)	WCSA to Europe -4.7%

Forecast

Table F-38 provides a forecast of metals exports for the WCSA-to-Europe route.

Table F-38
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
WCSA to Europe	$2,163	$2,358	$3,632	$5,327

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
WCSA to Europe	-4.7%	4.8%	4.4%	3.9%

20. Sugar

Route Analysis

In 1995, 8.4 million long tons of sugar passed through the Canal. Five routes account for most of the Canal sugar volume: W. Indies to Asia; Oceania to E. Canada; W. Central America to USEC; Oceania to Europe; and WCSA to USEC. Table F-39 summarizes the 1995 sugar trade.

Table F-39
1995 Overview

Group Components	Sugar 100%
1995 Trade Level	8.4 million long tons
Major Canal Traffic Routes	W. Indies to Asia Oceania to E. Canada W. Central America to USEC Oceania to Europe WCSA to USEC
Average Annual Growth in Exports by Route (1990 - 1994)	Central America to Asia -10.4% Oceania to Canada 112.7% Central America to US -2.2% Oceania to Europe 8.2% WCSA to US -17.6%

Forecast

The export forecast for sugar is presented in Table F-40 for each of the trade routes listed above.

Table F-40
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Central America to Asia	$387	$242	$295	$418
Oceania to Canada	$0	$10	$11	$9
Central America to US	$361	$332	$348	$374
Oceania to Europe	$142	$235	$291	$349
WCSA to US	$172	$79	$80	$82

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Central America to Asia	-10.4%	-0.5%	2.0%	3.5%
Oceania to Canada	112.7%	1.4%	0.7%	-1.8%
Central America to US	-2.2%	0.1%	0.5%	0.7%
Oceania to Europe	8.2%	3.2%	2.2%	1.8%
WCSA to US	-17.6%	0.0%	0.1%	0.2%

21. Petroleum

Route Analysis

A total of 10.9 million long tons of crude petroleum transited the Canal in 1995. WCSA to USEC, ECSA to W. Central America, ECSA to USWC, and WCSA to W. Indies are the dominant routes through the Canal. Table F-41 presents a summary of the 1995 petroleum trade.

Table F-41
1995 Overview

Group Components	Crude Petroleum 100%
1995 Trade Level	10.9 million long tons
Major Canal Traffic Routes	**WCSA to USEC** **ECSA to W. Central America** **ECSA to USWC** **WCSA to W. Indies**
Average Annual Growth in Exports by Route (1990 - 1994)	**WCSA to US -0.2%** **ECSA to Central America 1.4%** **ECSA to US 7.2%** **WCSA to Central America -12.0%**

Forecast

The importance of routes will shift over time as the US focuses more on Latin America as a source of crude imports and decreases its dependence on Arabian Gulf sources. Venezuela and Mexico will be important sources, not requiring Canal transit except for limited flows from ECSA to USWC. **Continued growth in ECSA-to-USWC (southbound transit) is expected, with Venezuelan crude feeding US West Coast refineries. The northbound crude flows from WCSA to USEC are expected to remain the largest single flow in tonnage terms, with Ecuador and Peru remaining the main source of crude through the Canal. Growth on this route will be held down as the US increasingly meets its import demand from Venezuela, not requiring Canal transit.**

The forecast also calls for increases in some smaller, short-haul routes such as ECSA to West Coast Central America (southbound), and WCSA to East Coast Central America (northbound), although the growth will be modest. The outlook foresees growth in the southbound ECSA-to-WCSA trade and a decline in the opposite northbound WCSA-to-ECSA trade. Table F-42 forecasts petroleum exports for each of the trade routes listed above.

Table F-42
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
WCSA to US	$1,564	$2,296	$3,917	**$6,098**
ECSA to Central America	$1,575	$2,170	$3,612	**$6,132**
ECSA to US	$4,468	$12,031	$35,170	**$93,975**
WCSA to Central America	$482	$304	$385	$591

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
WCSA to US	-0.2%	6.8%	5.5%	**4.5%**
ECSA to Central America	1.4%	4.5%	5.2%	**5.4%**
ECSA to US	7.2%	12.6%	11.3%	**10.3%**
WCSA to Central America	-12.0%	0.9%	2.4%	4.4%

22. Petroleum, Residual

Route Analysis

In 1995, 2.6 million long tons of residual fuel oil passed through the Canal. The major trade routes for this commodity are Asia to USEC, WCSA to USEC, WCSA to W.

Indies, ECSA to W. Indies, and ECSA to USWC. Table F-43 summarizes the 1995 residual fuel oil trade.

Table F-43
1995 Overview

Group Components	Residual Fuel Oil 100%
1995 Trade Level	2.6 million long tons
Major Canal Traffic Routes	Asia to USEC WCSA to USEC WCSA to W. Indies ECSA to W. Indies ECSA to USWC
Average Annual Growth in Exports by Route (1990 - 1994)	Asia to US 3.4% WCSA to US 61.9% WCSA to Central America 30.0% ECSA to Central America 6.0% ECSA to US -27.9%

Forecast

The forecast for residual fuel oil exports is shown in Table F-44.

Table F-44
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Asia to US	$29	$35	$37	$37
WCSA to US	$0	$4	$7	$12
WCSA to Central America.	$0	$0	$1	$2
ECSA to Central America	$82	$189	$617	$1,408
ECSA to US	$12	$5	$9	$17

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Asia to US	3.4%	1.0%	0.5%	0.1%
WCSA to US	61.9%	7.0%	6.5%	6.1%
WCSA to Central America.	30.0%	9.9%	9.3%	6.2%
ECSA to Central America	6.0%	10.5%	12.6%	8.6%
ECSA to US	-27.9%	7.0%	6.5%	6.1%

23. Petroleum Coke

Route Analysis

A total of 2.5 million long tons of petroleum coke moved through the Canal in 1995. This commodity, a byproduct of the refining process, moves mainly on the northbound Canal trade from California to Europe. Other northbound trades are California to Eastern Canada, and Asia to the USEC. A summary of the 1995 trade in petroleum coke is provided in Table F-45.

Table F-45
1995 Overview

Group Components	Petroleum Coke 100%
1995 Trade Level	2.5 million long tons
Major Canal Traffic Routes	USWC to Europe USWC to E. Canada Asia to USEC
Average Annual Growth in Exports by Route (1990 - 1994)	US to Europe -10.5% US to Canada -7.0% Asia to US -4.5%

Forecast

Table F-46 presents the export forecast for petroleum coke along the trade routes listed above.

Table F-46
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Europe	$463	$319	$481	$805
US to Canada	$135	$92	$100	$146
Asia to US	$7	$5	$4	$3

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Europe	-10.5%	1.2%	4.2%	5.3%
US to Canada	-7.0%	-1.6%	0.9%	3.8%
Asia to US	-4.5%	-3.1%	-2.5%	-2.1%

24. Petroleum Products

Route Analysis

This commodity group consists of a variety of products, including gasoline, diesel oil, liquefied gas, jet fuel, lube oils, asphalt, kerosene, and miscellaneous petroleum products. The largest single route is the southbound USEC-to-Asia route. Other routes include ECSA to USWC, USEC to WCSA, and ECSA to WCSA. In 1995, 11.4 million tons of petroleum products transited the Canal. Table F-47 presents a summary of the 1995 trade in petroleum products.

Table F-47
1995 Overview

Group Components	Asphalt 3% Diesel Oil 27% Gasoline 22% Jet Fuel 10% Kerosene <1% Liquefied Gas 15% Lubricating Oil 5% Petroleum Products, Misc. 17%
1995 Trade Level	11.4 million long tons
Major Canal Traffic Routes	USEC to Asia ECSA to USWC USEC to WCSA ECSA to WCSA
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia 1.4% ECSA to US -3.6% US to WCSA 21.3% ECSA to WCSA 18.0%

Forecast

Growth rates are expected to decline in view of expanded Asian and Australian capacity to produce these same petroleum products. Refinery expansion in Asia is described in the earlier description of crude petroleum flows, and Australia's LNG production is expanding quickly. Therefore, over time, much of Asia's demand will be met locally. Additionally, Pemex, the Mexican state oil company, will soon be stopping its all-water LNG shipments from the East to the West coasts of Mexico following the completion of a new pipeline.

Relatively strong growth can be expected in southbound flows from ECSA (Venezuela) to the USWC and from USEC to WCSA, as countries along the West Coast of South America continue to expand. Also, shipments of asphalt, which

occurs in a natural state in Venezuela, are expected to increase in the ECSA-to-WCSA route. The forecast for petroleum products exports is shown in Table F-48.

Table F-48
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$1,517	$2,390	$4,676	$9,286
ECSA to US	$3,422	$3,213	$3,710	$4,288
US to WCSA	$99	$364	$794	$1,667
ECSA to WCSA	$167	$649	$1,784	$3,901

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	1.4%	6.9%	6.9%	7.1%
ECSA to US	-3.6%	1.4%	1.4%	1.5%
US to WCSA	21.3%	9.3%	8.1%	7.7%
ECSA to WCSA	18.0%	12.3%	10.6%	8.1%

25. Paper

Route Analysis

In 1995, 1.4 million long tons of paper and paper products moved through the Canal. The most important routes for the Canal are the West Coast of Canada to Europe route and the USEC to Asia route. Table F-49 presents a summary of the 1995 paper trade.

Table F-49
1995 Overview

Group Components	Paper and Paper Products 100%
1995 Trade Level	1.4 million long tons
Major Canal Traffic Routes	W. Canada to Europe USEC to Asia
Average Annual Growth in Exports by Route (1990 - 1994)	Canada to Europe 5.2% US to Asia 15.0%

Forecast

Table F-50 provides the export forecast for paper and paper products.

Table F-50
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
Canada to Europe	$477	$814	$1,259	$1,741
US to Asia	$1,083	$3,153	$5,955	$10,006

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
Canada to Europe	5.2%	5.7%	4.5%	3.3%
US to Asia	15.0%	8.8%	6.6%	5.3%

26. Food and Agriculture

Route Analysis

This commodity group includes the following products: beans, edible; canned fish, fruit, milk, vegetables, and miscellaneous; cocoa, raw and processed; coffee, raw and processed; cotton, raw; plant fibers; wheat flour; groceries; liquors; molasses; fish, coconut, and vegetable oils; oilseeds; dried peas; rubber, raw; skins and hides; tobacco and tobacco products; wines; and wool, raw. In 1995, 3.7 million long tons transited the Canal.

27. All Other

Route Analysis

This commodity group includes the following products: ammunition and explosives; bricks and tile; glass and glassware; machinery; agricultural implements; autos and trucks, boxed and boxed accessories; machinery, construction and equipment; machinery, electric and apparatus; machinery, miscellaneous; marble and stone; US military cargo; miscellaneous cargo; porcelain ware; resin; seeds, excluding oilseeds; slag, clinkers, and dross; tallow; textiles; and paraffin wax. A total of 2.3 million tons moved through the Canal in 1995.

28. Containerized

Route Analysis

In 1995, 24.9 tons of container cargo passed through the Canal. The main trade routes for this commodity group are USEC to Asia, Asia to USEC, USWC to Europe,

Europe to USWC, USEC to WCSA, and WCSA to USEC. Table F-51 presents a summary of the 1995 container trade.

Table F-51
1995 Overview

Group Components	Container Cargo 100%
1995 Trade Level	24.9 million long tons
Major Canal Traffic Routes	USEC to Asia Asia to USEC USWC to Europe Europe to USWC USEC to WCSA WCSA to USEC

29. Corn

Route Analysis

In 1995, 23.9 million long tons of corn passed through the Canal. Most of that volume was carried on the USEC to Asia route. Table F-52 summarizes the 1995 corn trade.

Table F-52
1995 Overview

Group Components	Corn 100%
1995 Trade Level	23.9 million long tons
Major Canal Traffic Routes	USEC to Asia
Average Annual Growth in Exports by Route (1990 - 1994)	US to Asia -2.1%

Route Alternatives

The primary alternative to the USEC-to-Asia route is to export via the US West Coast. The share of US corn shipments to Asia exported through the USWC rather than the USEC fluctuates according to production levels and available export terminal and transport capacity. In late 1994, China stopped exporting corn to neighboring Asian markets, thereby opening those markets to the US. China prefers US corn to be shipped through Gulf ports, however, following an unsatisfactory experience with a corn fungus twelve years ago when the US shipped corn to China from West Coast ports.

In addition, terminal capacity for corn exports is very limited on the West Coast; no such limitation exists in the Gulf. Not only are major corn terminals limited in the West Coast, but also no nearby expansion space is available. The rail lines serving the West Coast (Union Pacific, Burlington Northern) are at maximum capacity and prefer to haul wheat. Their efficiency improvements have been significant, so rates are already as low as they are likely to get. The Gulf corn export terminals can be served by both barge and rail (through Houston), and there is sufficient capacity to handle additional export volumes. Barge transport from the Mississippi is cheaper than rail shipment to the West Coast.

Forecast

In the medium term, modest growth is expected in US exports of corn to Asia as populations shift to higher protein diets and in response to China's cessation of corn exports to the region. In the longer term, growth will slow as other suppliers of feed corn gain market share in Asia. Ukraine could emerge as a net exporter of corn, thereby providing yet another optional supplier to the Asian market. Such corn shipments would not transit the Canal. Argentina is also likely to become a competitor in corn, increasing exports to Asia, again not requiring Canal transit. The export forecast for corn is presented in Table F-53.

Table F-53
Export Forecast
(millions of 1987 US$)

Route	1990	2000	2010	2020
US to Asia	$2,916	$2,843	$3,455	$4,361

Average Annual Growth Rate

Route	1990 - 1994	1994 - 2000	2000 - 2010	2010 - 2020
US to Asia	-2.1%	1.0%	2.0%	2.4%