

DRAFT

California Marine Affairs and Navigation Conference

**STATEWIDE ECONOMIC BENEFITS
OF CALIFORNIA PORTS AND HARBORS**

**Edgar Rust, Ph.D.
Planning and Applied Economics
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This study is based in part upon data prepared for the California Association of Port Authorities and is used here with the permission of that organization.

CALIFORNIA PORT BENEFIT FACT SHEET

National Economic Benefits of California Ports (current dollars, 2000)

- Impact on Federal Revenue \$10 billion
- Impact on Gross Domestic Product \$57 billion (0.6%)
- Impact on Total Employment 1,626,000 jobs (1.2%)
- Impact on Personal Income \$30.5 billion (0.4%)

State Economic Benefits of California Ports (current dollars, 2000)

- Impact on State and Local Revenue \$1.42 billion
- Impact on Gross State Product \$30.2 billion (~2.3%)
- Impact on Total Employment 941,000 jobs (5.8%)
- Impact on Personal Income \$28.6 billion (2.6%)

Value of Waterborne International Trade, 1999

\$ millions	<u>Imports</u>	<u>Exports</u>	<u>Total</u>
California	\$169,631	\$40,235	\$209,866
CA as % of US	37.78%	22.19%	33.30%
U.S.	\$448,941	\$181,356	\$630,298

source: "U.S. Port Totals by Type Service," Maritime Administration, US Dept. of Transportation

California Port Cargo Growth, 1995-2000

- Total tonnage +39.9%
- Containerized +46.5%
- Bulk Cargo +7.6%
- Other Cargo +14.4%

source: Pacific Maritime Association Annual Report, 2001

California Port Labor Input Growth, 1995-2000

- Total hours +55.0%
- Total wages (current dollars) +82.6%

source: Pacific Maritime Association Annual Report, 2001

California Ports' Project Needs

FY2002 C-MANC Federal Appropriations Recommendations*	\$183.0 million
FY2002 President's Budget	\$49.4 million
Unfunded Project Needs	\$133.6 million

- California Marine Affairs and Navigation Conference, April 19, 2001

Compiled by Planning & Applied Economics
August 16, 2001

Summary

Economic activity that depends on California ports creates over a million jobs, contributes billions to the Gross Domestic Product and returns over \$11 billion in Federal, State and local revenues. California's complex of large and small ports, harbors, marine terminals and associated industries handle 33% of the nation's waterborne international trade.

Much of the state's harbor infrastructure has been developed and maintained by the Army Corps of Engineers in the national interest under Congressional mandate. The benefits of this policy to the Federal Treasury far exceed its costs. The Federal government, however, is shifting increasing shares of infrastructure costs to local agencies. Those agencies cannot absorb the cost of the increased local share – in many cases double or more – without threatening their competitiveness and solvency. The nation and the State of California both have a major economic interest in assisting with those cost sharing payments, as both share richly in the economic benefits of California ports that are documented in this report.

Scope

This study is an update and adaptation of Economic Benefit Study of California Ports and Harbors by Edgar Rust and Philip King, Public Research Institute, San Francisco State University, prepared for the California Marine Affairs and Navigation Conference, February 28, 1997, ("C-MANC study"). That study identified the specific users of California ports and harbors, verified their needs for ocean access, measured the specific benefits they contribute to the U.S. economy, including output, jobs and taxes, and showed what would happen to these benefits if existing Federal navigation projects were not maintained. The purpose of this revision is to measure the economic benefits of port operations of California ports and harbors at the State rather than national level. The study applies to all California ports and harbors, and includes data on benefits from cargo shipping, petroleum refining and other water-transportation-dependent industry, ferry and work boat operations, commercial fishing, cruise ship operations, recreational boating, shipbuilding and repair, offshore mineral production support, and public safety uses of the ocean access channels. It does not address the premium values many ports and harbors create for adjacent non-maritime businesses, nor does it consider long-term effects on economic growth and development, both of which would be worthwhile additions to future studies. It is simply a snapshot of the industries that directly use California ports and harbors, and the personal income, jobs and economic output those industries stimulate throughout the economy as a whole.

Approach

The benefits of California ports and harbors have been measured as the contribution of the ports and port-dependent industries to state economic output, and to employment, personal income and tax revenues. The analysis includes the following building-blocks:

1. The first complete inventory of economic activity dependent upon the ports and harbors of California. The survey was conducted in 1996 by the Public Research Institute of San Francisco State University for the California Marine Affairs and Navigation Conference (C-MANC) and is reused here with the permission of C-MANC.
2. An estimate of the impact of this port-dependent economic activity on the overall economy at the state level, using IMPLAN input-output multipliers calculated by the Minnesota Impact Group. The C-MANC data were re-analyzed for this report using state-level IMPLAN input-output multipliers.
3. An estimate of the value of port-dependent economic activity for 1995, in terms of output, employment, federal tax payments, including customs revenues. The value of port use to shippers and consignees both in and out-of-state is included.
4. An update of conclusions from 1995 to 2000 based upon growth in cargo tonnage, port labor inputs, State income, gross State product and State tax revenues.

Information on these topics has been gathered from the following sources:

1. Published data and prior studies, including U.S. business census, customs and waterborne commodity flow data and the California Department of Finance.
2. In-depth interviews with representatives of all California public ports and harbors, Corps of Engineers district offices, and representative private port user organizations.
3. A structured telephone interview survey of 500 individual port and harbor users. The questions confirmed or corrected the establishment name and industrial classification and requested information on which California ports and harbors the establishment uses, what percent of its business depends upon California ports and harbors, how many people it employs, and its annual revenues.
4. Annual reports of the Pacific Maritime Association covering port labor inputs and cargo tonnage at ILWU-served ports of California for 1995 and 1999.
5. Updated port impact estimates for 1999 prepared by Planning and Applied Economics for the California Association of Port Authorities in August, 2000, and used with their permission.

APPENDIX: SUPPORTING DATA AND CALCULATIONS

ECONOMIC VALUE OF CALIFORNIA PORT AND HARBOR USE

The user inventory, prepared for the 1996 C-MANC (California Marine Affairs and Navigation Conference) Economic Benefit Study, contains information on the name, address, telephone and standard industrial classification (SIC) of 1,342 establishments (places of business) confirmed to be users of California ports or harbors (Table 1). Included are construction businesses, raw materials producers, manufacturers, ocean and land freight and passenger carriers, warehouse and terminal businesses, transportation services, wholesalers, marine fuel and supply dealers, marine research and engineering, and governmental services. Separate installations belonging to the same company (e.g. Dow Chemical's plants in Pittsburg and San Pedro) are listed separately, consistent with the definition of "establishment" used by the US Census Bureau. Excluded from the inventory and survey because recent information was already available, but included in the study, were commercial fishing businesses, marinas, boat dealers and yacht clubs. Confirmation of port user status was obtained by field observation, by telephone inquiry, or by interviews and correspondence with port and harbor staff in 1996.

TABLE 1. CONFIRMED USERS OF CALIFORNIA PORTS AND HARBORS BY SIC

Source: Edgar Rust and Philip King, Economic Benefits of California Ports, California Marine Affairs and Navigation Conference, 1996

SIC	Name	Confirmed Establishments
1629	Marine construction, dredging, crane barges	49
2032	Food Manufacturing	1
2044	Rice mills	12
2048	Animal feeds	3
2076	Oils, vegetable	1
910	Com Fishing	CF&G ¹
2097	Ice, manufactured or artificial	2
2421	Lumber	9
2611	Pulp	1
2899	Salt manuf.	2
2911	Petroleum refining	22
2996	Motor oil	1
3241	Cement	2
3272	Concrete beams	1
3275	Gypsum products	2
3312	Steel	4
3531	Cranes	2
3731	Ship building and repairing	28
3732	Boat building and repairing	62
4013	Railroad	10
4213	Long distance trucking	61
4221	Grain warehousing	2
4222	Refrigerated Warehousing and Storage	16
4226	Petroleum and chemical bulk terminals	26
4412,	Deep sea transportation of freight	103
4426		

¹ Data on fishing obtained from then California Department of Fish and Game.

SIC	Name	Confirmed Establishments
4413	Barge Lines & Operators	2
4481	Cruise Lines	16
4482	Ferries	8
4489	Passenger water transportation	7
4491	Marine Cargo Handling	89
4492	Towing and tugboat services	28
4493	Marinas	PRI ²
4499	Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)	43
4731	Arrangement of Transportation of Freight and Cargo	329
4783	Container freight stations	28
4785	Fixed Facilities and Inspection and Weighing Services for Motor Freight	3
4959	Sanitary Services, nec (Oilspill)	13
5051	Iron & steel wholesaling	1
5052	Bulk coal wholesaling	2
5088	Marine equipment & supplies wholesaling	24
5093	Scrap metal terminals	3
5099	Wood chips	2
5146	Fish & seafood wholesaling	45
5148	Wholesale fruit	1
5153	Wholesale grains	1
5171	Petroleum bulk stations and terminals	16
5541	Marine fuel dealers	18
5551	Boat dealers-retail	PRI ³
5941	Marine supplies-retail	4
7389	Divers, commercial	65
7997	Membership Sports and Recreation Clubs	
7999	Charter boats & sport fishing	45
8412	Museum	1
8611	Trade associations	4
8711	Marine engineering services	59
8733	Noncommercial Research Organizations	4
9229	Government Bureau (USCG)	27
9621	Port	32
	TOTAL	1342

² Data obtained from a previous report, *The Economic Impact of Boating in California*, prepared for the Public Research Institute at San Francisco State University, 1995. The Study was prepared for the California Department of Boating and Waterways.

³ See previous footnote.

As part of the 1996 C-MANC study, the user inventory was utilized to conduct a telephone survey with over 500 respondents. All of these businesses were asked what percentage of their total revenues was port dependent, (if the ports and harbors ceased to be usable, how much business would be lost) and 441 provided usable answers. As one can see in the following table (Table 2) a significant percentage of revenues were port dependent and a large number of firms would not be viable without these ports. Port users surveyed attributed on average two-thirds of their total business to California ports and harbors.

TABLE 2. PERCENT OF REVENUES DEPENDENT ON CALIFORNIA PORT USE BY SIC
Source: Edgar Rust and Philip King, Economic Benefits of California Ports, California Marine Affairs and Navigation Conference, 1996

SIC	Name	Respondents	Mean % of Revenues Dependent on California Ports
1629	Marine construction, dredging, crane barges	12	45
2044	Rice mills	7	51
910	Com Fishing	2	100
2097	Ice, manufactured or artificial	1	100
2899	Salt manuf.	1	30
2911	Petroleum refining	1	100
3241	Cement	1	100
3275	Gypsum products	1	75
3531	Cranes	2	48
3731	Ship building and repairing	13	74
3732	Boat building and repairing	24	86
4013	Railroad	8	41
4213	Long distance trucking	32	67
4221	Grain warehousing	1	50
4222	Refrigerated Warehousing and Storage	12	41
4226	Petroleum and chemical bulk terminals	15	57
4412	Deep sea foreign transportation of freight	26	44
4413	Barge Lines & Operators	1	30
4481	Cruise Lines	5	42
4482	Ferries	6	98
4491	Marine Cargo Handling	42	89
4492	Towing and tugboat services	9	83
4499	Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)	25	86
4731	Arrangement of Transportation of Freight and Cargo	80	74
4783	Container freight stations	5	90
4959	Sanitary Services, nec (Oilspill)	2	100
5088	Marine equipment & supplies wholesaling	6	61
5146	Fish & seafood wholesaling	16	70
5541	Marine fuel dealers	2	80
7389	Divers, commercial	22	81

SIC	Name	Respondents	Mean % of Revenues Dependent on California Ports
7999	Charter Boats & Sport fishing	11	100
8711	Marine engineering services	13	57
8733	Noncommercial Research Organizations	1	90
9229	Government Bureau (USCG)	1	80
9621	Port	30	100
	All respondents to this question	441	67

At least \$24 billion in business revenues and 278,000 jobs depend upon direct use of California ports and harbors. Estimates by industry are summarized in Tables 3 and 4, together with the estimating method used. Estimating methods were selected for each industry according to the availability and quality of information on each, and where possible alternative methods were checked against each other.

Survey-based estimates use the mean port-dependent revenue and employment per establishment for that industry's sample multiplied by the number of confirmed users listed for that industry in the inventory. Census-based estimates use the mean total revenue per establishment for that industry in California from the 1992 Census of Businesses, the port user inventory population, and if known, the average percent of port users' business that is port-dependent in that industry (from Table 2).

Tonnage-based estimates use the tonnage of commodities specific to that industry (e.g. crude oil, wood chips, grain) passing through California ports and harbors as reported in the *1994 Waterborne Commerce of the United States* (US Army Corps of Engineers, 1997) and the average 1995 value per ton of the commodity as reported in various trade journals. Railroad revenues reflect only intermodal container cargo and are pro-rated on a tonnage basis from tonnage and revenue figures for 1995 provided by the American Association of Railroads and intermodal cargo estimates from the ports and the Pacific Maritime Association. Commercial fishing revenues are based on value of fish landed in 1995 as estimated by the California Department of Fish and Game.

Boating industry data are taken from PRI's *The Economic Impact of Boating in California* (Department of Boating and Waterways, 1997), with adjustments to eliminate lake-related boating businesses. Ocean research facilities were not forthcoming with data but one employee ventured the opinion that shore support of a research vessel costs "about a million a year." Employment for industries where survey data are not adequate is calculated using a revenue multiplier (employment per million dollars revenue) for that industry for California from the *IMPLAN Multiplier Reports* (Minnesota Impact Group, Inc., 1997).

TABLE 3. PORT-DEPENDENT REVENUES BY SIC

Source: Edgar Rust and Philip King, Economic Benefits of California Ports, California Marine Affairs and Navigation Conference, 1996

SIC	Name	1995 Estimate Basis
1629	Marine construction, dredging, crane barges	\$ 46,400,282 survey
2032	Food Manufacturing	\$ 24,612,903 census
2044	Rice mills	\$ 390,575,000 tonnage
2048	Animal feeds	\$ 31,685,455 census
2076	Oils, vegetable	\$ 16,687,037 census
910	Com Fishing	\$ 159,503,472 CF&G
2097	Ice, manufactured or artificial	\$ 2,378,378 census
2421	Lumber	\$ 94,428,000 census
2611	Pulp	\$ 12,311,830 census
2899	Salt manuf.	\$ 2,347,545 census
2911	Petroleum refining	\$ 3,581,570,570 tonnage
2996	Motor oil	\$ 539,906,250 census
3241	Cement	\$ 47,654,545 census
3272	Concrete beams	\$ 3,016,803 census
3275	Gypsum products	\$ 18,007,143 census
3312	Steel	\$ 346,228,571 census
3531	Cranes	\$ 2,460,000 census
3731	Ship building and repairing	\$ 73,908,335 survey
3732	Boat building and repairing	\$ 64,486,200 survey
4013	Railroad	\$ 1,363,646,018 AAR & Ports
4213	Long distance trucking	\$ 5,390,910,882 survey
4221	Grain warehousing	\$ 1,128,161 census
4222	Refrigerated Warehousing and Storage	\$ 33,560,000 survey
4226	Petroleum and chemical bulk terminals	\$ 108,333,333 survey
4412	Deep sea foreign transportation of freight	\$ 3,492,150,000 survey
4413	Barge Lines & Operators	incl. in 4412
4481	Cruise Lines	\$ 52,776,528 census
4482	Ferries	\$ 53,042,000 survey
4489	Passenger water transportation	\$ 54,975,550 census
4491	Marine Cargo Handling	\$ 2,645,994,722 survey
4492	Towing and tugboat services	\$ 56,687,290 census
4493	Marinas	\$ 194,301,959 table -
4499	Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)	\$ 37,480,950 survey
4731	Arrangement of Transportation of Freight and Cargo	\$ 833,672,292 survey
4783	Container freight stations	\$ 33,530,091 census
4785	Fixed Facilities and Inspection and Weighing Services for Motor Freight	\$ 3,991,678 census
4959	Sanitary Services, nec (Oilspill)	\$ 52,000,000 survey
SIC	Name	1995 Estimate Basis

5051	Iron & steel wholesaling	\$	7,549,856 census
5052	Bulk coal wholesaling	\$	93,604,000 tonnage
5088	Marine equipment & supplies wholesaling	\$	334,160,000 survey
5093	Scrap metal terminals	\$	135,360,000 tonnage
5099	Wood chips	\$	148,736,000 tonnage
5146	Fish & seafood wholesaling	\$	135,075,000 survey
5148	Wholesale fruit	\$	9,146,889 census
5153	Wholesale grains	\$	80,700,000 tonnage
5171	Petroleum bulk stations and terminals	\$	428,772,827 census
5541	Marine fuel dealers	\$	8,091,411 PRI survey
5551	Boat dealers-retail	\$	827,560,176 PRI survey
5941	Marine supplies-retail	\$	421,479,993 PRI survey
7389	Divers, commercial	\$	47,680,583 survey
7997	Membership Sports and Recreation Clubs	\$	11,814,928 PRI survey
7999	Charter Boats & Sport fishing	\$	90,900,000 survey
8412	Museum	\$	1,000,000 see text
8611	Trade associations	\$	2,440,689 census
8711	Marine engineering services	\$	243,186,200 survey
8733	Noncommercial Research Organizations	\$	1,000,000 see text
9229	Government Bureau (USCG)	\$	145,000,000 see text
9621	Port	\$	725,445,605 survey
	TOTAL	\$	23,765,053,930

TABLE 4. PORT-DEPENDENT EMPLOYMENT BY SIC

Source: Edgar Rust and Philip King, Economic Benefits of California Ports, California Marine Affairs and Navigation Conference, 1996

SIC	Name	Selected Estimate Basis
1629	Marine construction, dredging, crane barges	6,339 survey
2032	Food Manufacturing	78 revenue
2044	Rice mills	284 survey
2048	Animal feeds	87 revenue
2076	Oils, vegetable	32 revenue
910	Com Fishing	2,764 revenue
2097	Ice, manufactured or artificial	10 survey
2421	Lumber	554 revenue
2611	Pulp	39 revenue
2899	Salt manuf.	144 survey
2911	Petroleum refining	2,789 revenue
2996	Castor oil	363 revenue
3241	Cement	182 revenue
3272	Concrete beams	24 revenue
3275	Gypsum products	114 revenue
3312	Steel	1,208 revenue

SIC	Name	Selected Estimate	Basis
3531	Cranes	74	survey
3731	Ship building and repairing	1,584	survey
3732	Boat building and repairing	987	survey
4013	Railroad	8,410	AAR & Ports
4213	Long distance trucking	4,547	survey
4221	Grain transportation	13	revenue
4222	Refrigerated Warehousing and Storage	414	survey
4226	Petroleum and chemical bulk terminals	1,767	survey
4412	Deep sea foreign transportation of freight	39,282	survey
4413	Barge Lines & Operators	18	survey
4481	Cruise Lines	233	revenue
4482	Ferries	234	revenue
4489	Passenger water transportation	242	revenue
4491	Marine Cargo Handling	29,227	survey
4492	Towing and tugboat services	3,140	survey
4493	Marinas	2,956	PRI
4499	Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)	41,375	survey
4731	Arrangement of Transportation of Freight and Cargo	86,830	survey
4783	Container freight stations	1,092	survey
4785	Fixed Facilities and Inspection and Weighing Services for Motor	46	revenue
4959	Sanitary Services, nec (Oilspill)	618	survey
5051	Iron & steel	73	revenue
5052	Bulk Coal	900	revenue
5088	Marine Equipment & Supplies	889	survey
5093	Scrap metal terminals	1,301	revenue
5099	Wood chips wholesale		revenue

	1,429	
5146 Fish & Seafood Wholesale		survey
	2,819	
5148 Wholesale fruit		revenue
	88	
5153 Grains		revenue
	776	
5171 Petroleum bulk stations and terminals		revenue
	4,121	
5541 Marine fuel dealers		PRI
	82	
5551 Boat dealers-retail		PRI
	2,597	
5941 Marine supplies		PRI
	4,602	
7389 Divers, commercial		survey
	9,144	
7997 Membership Sports and Recreation Clubs		PRI
	5,661	
7999 Charter Boats & Sport fishing		survey
	765	
8412 Museum		revenue
	28	
8611 Trade associations		revenue
	31	
8711 Marine engineering services		survey
	1,856	
8733 Noncommercial Research Organizations		survey
	32	
9229 Government Bureau		survey
	367	
9621 Port		survey
	2,038	
TOTAL	277,694	

In addition to jobs and revenues directly generated by California ports and harbors, the increased spending power attributable to the existence of California's ports and harbors will benefit other businesses in the local economy, the state economy and the national economy. The increased spending power takes the form of procurements of supplies and services from businesses outside the port-dependent sector, as well as personal consumption spending. For example, a marine construction firm will purchase fuel and construction materials from local suppliers, and its workers will spend part of their paychecks at local retailers or on goods and services created throughout the U.S. economy. These spillover or "multiplier" effects are well known to economists and can be estimated accurately. For this study we used multipliers for each specific industry (SIC).

The multipliers used in this analysis were derived from a 500-sector multiregional input-output model of the U.S. Economy for 1994 called IMPLAN, generated by the Minnesota Impact Group, Inc. IMPLAN's model was originally derived from a model created by the U.S., Forest Service. The IMPLAN model closely follows the accounting conventions, format, and methodology used in the "Input-Output Study of the U.S. Economy" put out by the U.S. Government's Bureau of Economic Analysis. It takes account, however, of changes in the volume of business and personal income on a county-by-county basis since the original model was developed, and represents the most current available source of detailed multipliers.

In the analysis below, to avoid double-counting, we first applied a value added factor to total revenues. This is the most conservative methodology that one can use and so we can be confident that these numbers are not over-estimating the total impact. We multiplied port-dependent revenues by the value added factor to derive the total addition to GDP that can be attributed to Federal maintenance of California's ports and harbors. This information is summarized in Table 5.

TABLE 5. VALUE ADDED DEPENDENT ON CALIFORNIA PORT USE BY SIC

Source: Edgar Rust and Philip King, Economic Benefits of California Ports, California Marine Affairs and Navigation Conference, 1996

SIC	Name	<u>Port-Dependent Gross Revenues</u>	<u>Value Added Factor*</u>	<u>Value Added</u>
1629	Marine construction, dredging, crane barges	\$ 46,400,282	0.571598543	\$ 26,522,334
2032	Food Manufacturing	\$ 24,612,903	0.354883617	\$ 8,734,716
2044	Rice mills	\$ 390,575,000	0.216303633	\$ 84,482,792
2048	Animal feeds	\$ 31,685,455	0.122150951	\$ 3,870,408
2076	Oils, vegetable	\$ 16,687,037	0.250416789	\$ 4,178,714
910	Com Fishing	\$ 159,503,472	0.774610799	\$ 123,553,112
2097	Ice, manufactured or artificial	\$ 2,378,378	0.736287277	\$ 1,751,170
2421	Lumber	\$ 94,428,000	0.404159365	\$ 38,163,960
2611	Pulp	\$ 12,311,830	0.381137069	\$ 4,692,495
2899	Salt manuf.	\$ 2,347,545	0.373013281	\$ 875,665
2911	Petroleum refining	\$ 3,581,570,570	0.235310782	\$ 842,782,171
2996	Motor oil	\$ 539,906,250	0.242941148	\$ 131,165,444
3241	Cement	\$ 47,654,545	0.43305608	\$ 20,637,091
3272	Concrete beams	\$ 3,016,803	0.555811191	\$ 1,676,773
3275	Gypsum products	\$ 18,007,143	0.333809444	\$ 6,010,954
3312	Steel	\$ 346,228,571	0.271831336	\$ 94,115,775
3531	Cranes	\$ 2,460,000	0.329883876	\$ 811,514
3731	Ship building and repairing	\$ 73,908,335	0.591787905	\$ 43,738,059

SIC Name	<u>Port-Dependent Gross Revenues</u>	<u>Value Added Factor*</u>	<u>Value Added</u>
3732 Boat building and repairing	\$ 64,486,200	0.491598419	\$ 31,701,314
4013 Railroad	\$ 1,363,646,018	0.490571606	\$ 668,966,018
4213 Long distance trucking	\$ 5,390,910,882	0.42662604	\$ 2,299,902,963
4221 Grain warehousing	\$ 1,128,161	0.42662604	\$ 481,303
4222 Refrigerated Warehousing and Storage	\$ 33,560,000	0.42662604	\$ 14,317,570
4226 Petroleum and chemical bulk terminals	\$ 108,333,333	0.42662604	\$ 46,217,821
4412 Deep sea foreign transportation of freight	\$ 3,492,150,000	0.30770494	\$ 1,074,551,806
4413 Barge Lines & Operators	incl. in 4412	0.30770494	incl. in 4412
4481 Cruise Lines	\$ 52,776,528	0.30770494	\$ 16,239,598
4482 Ferries	\$ 53,042,000	0.30770494	\$ 16,321,285
4489 Passenger water transportation	\$ 54,975,550	0.30770494	\$ 16,916,248
4491 Marine Cargo Handling	\$ 2,645,994,722	0.30770494	\$ 814,185,647
4492 Towing and tugboat services	\$ 56,687,290	0.30770494	\$ 17,442,959
4493 Marinas	\$ 194,301,959	0.30770494	\$ 59,787,673
4499 Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)	\$ 37,480,950	0.30770494	\$ 11,533,073
4731 Arrangement of Transportation of Freight and Cargo	\$ 833,672,292	0.467498187	\$ 389,740,285
4783 Container freight stations	\$ 33,530,091	0.467498187	\$ 15,675,257
4785 Fixed Facilities and Inspection and Weighing Services for Motor Freight	\$ 3,991,678	0.467498187	\$ 1,866,102
4959 Sanitary Services, nec (Oilspill)	\$ 52,000,000	0.298898731	\$ 15,542,734
5051 Iron & steel wholesaling	\$ 7,549,856	0.610098233	\$ 4,606,154
5052 Bulk coal wholesaling	\$ 93,604,000	0.610098233	\$ 57,107,635
5088 Marine equipment & supplies wholesaling	\$ 334,160,000	0.610098233	\$ 203,870,426
5093 Scrap metal terminals	\$ 135,360,000	0.610098233	\$ 82,582,897
5099 Wood chips	\$ 148,736,000	0.610098233	\$ 90,743,571
5146 Fish & seafood wholesaling	\$ 135,075,000	0.610098233	\$ 82,409,019
5148 Wholesale fruit	\$ 9,146,889	0.610098233	\$ 5,580,501
5153 Wholesale grains	\$ 80,700,000	0.610098233	\$ 49,234,927
5171 Petroleum bulk stations and terminals	\$ 428,772,827	0.610098233	\$ 261,593,544
5541 Marine fuel dealers	\$ 8,091,411	0.7334921	\$ 5,934,986
5551 Boat dealers-retail	\$ 827,560,176	0.7334921	\$ 607,008,852
5941 Marine supplies-retail	\$ 421,479,993	0.790586242	\$ 333,216,284
7389 Divers, commercial	\$ 47,680,583	0.645510084	\$ 30,778,297
7997 Membership Sports and Recreation Clubs	\$ 11,814,928	0.881177443	\$ 10,411,048
7999 Charter Boats & Sport fishing	\$ 90,900,000	0.662765687	\$ 60,245,401
8412 Museum	\$ 1,000,000	0.488749896	\$ 488,750
8611 Trade associations	\$ 2,440,689	0.540428548	\$ 1,319,018
8711 Marine engineering services	\$ 243,186,200	0.63984417	\$ 155,601,272
8733 Noncommercial Research Organizations	\$ 1,000,000	0.684561199	\$ 684,561
9229 Government Bureau (USCG)	\$ 145,000,000	1	\$ 145,000,000
9621 Port	\$ 725,445,605	0.495006847	\$ 359,100,542
TOTAL	\$ 23,765,053,930		\$ 9,496,670,486

* Value added factor is total value added divided by total output by industry, 1994 IMPLAN California Model, Feb. 5, 1997

Table 6 estimates the total impact on California's Gross State Product, including multiplier effects. The value added from each industry is multiplied by the relevant multiplier to derive the total impact on California's economy of ports and harbors. In other words, if ports and harbors were not maintained, the California GSP Impact tells us the total loss to California's Gross State Product attributable to losses in each of these sectors. The total loss would have been \$21.5 billion, or 2.4% of 1996 GSP. (The long-term losses would be much greater due to depressed economic growth, which is outside the scope of this study.)

TABLE 6. CALIFORNIA GROSS STATE PRODUCT EFFECT OF CALIFORNIA PORT USE
Source: Edgar Rust and Philip King, Economic Benefits of California Ports, California Marine Affairs and Navigation Conference, 1996

Name	<u>Value Added</u>	<u>California Value Added Multiplier</u>	<u>California GSP Impact</u>
Marine construction, dredging, crane barges	\$ 26,522,334	1.757018	\$ 46,600,218
Food Manufacturing	\$ 8,734,716	2.263187	\$ 19,768,296
Rice mills	\$ 84,482,792	2.255209	\$ 190,526,352
Animal feeds	\$ 3,870,408	3.168088	\$ 12,261,794
Oils, vegetable	\$ 4,178,714	1.97711	\$ 8,261,778
Com Fishing	\$ 123,553,112	1.397077	\$ 172,613,211
Ice, manufactured or artificial	\$ 1,751,170	1.539945	\$ 2,696,705
Lumber	\$ 38,163,960	2.270177	\$ 86,638,945
Pulp	\$ 4,692,495	2.276922	\$ 10,684,444
Salt manuf.	\$ 875,665	2.211588	\$ 1,936,611
Petroleum refining	\$ 842,782,171	1.956637	\$ 1,649,018,779
Motor oil	\$ 131,165,444	2.841111	\$ 372,655,586
Cement	\$ 20,637,091	1.989944	\$ 41,066,655
Concrete beams	\$ 1,676,773	1.748076	\$ 2,931,127
Gypsum products	\$ 6,010,954	2.305958	\$ 13,861,008
Steel	\$ 94,115,775	2.674674	\$ 251,729,017
Cranes	\$ 811,514	2.07985	\$ 1,687,828
Ship building and repairing	\$ 43,738,059	1.64797	\$ 72,079,008

Boat building and repairing	\$	31,701,314	1.822838	\$	57,786,360
Railroad	\$	668,966,018	2.144403	\$	1,434,532,735
Long distance trucking	\$	2,299,902,963	2.497061	\$	5,742,997,992
Grain warehousing	\$	481,303	2.497061	\$	1,201,842
Refrigerated Warehousing and Storage	\$	14,317,570	2.497061	\$	35,751,845
Petroleum and chemical bulk terminals	\$	46,217,821	2.497061	\$	115,408,718
Deep sea foreign transportation of freight	\$	1,074,551,806	2.761803	\$	2,967,700,401
Barge Lines & Operators		incl. in 4412	2.761803		incl. in 4412
Cruise Lines	\$	16,239,598	2.761803	\$	44,850,572
Ferries	\$	16,321,285	2.761803	\$	45,076,175
Passenger water transportation	\$	16,916,248	2.761803	\$	46,719,345
			California		
			Value Added		California
Name		Value Added	Multiplier		GSP Impact
Marine Cargo Handling	\$	814,185,647	2.761803	\$	2,248,620,362
Towing and tugboat services	\$	17,442,959	2.761803	\$	48,174,017
	\$	59,787,673	2.761803	\$	165,121,773
Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)	\$	11,533,073	2.761803	\$	31,852,077
Arrangement of Transportation of Freight and Cargo	\$	389,740,285	2.267851	\$	883,872,894
Container freight stations	\$	15,675,257	2.267851	\$	35,549,147
Fixed Facilities and Inspection and Weighing Services for Motor Freight	\$	1,866,102	2.267851	\$	4,232,041
Sanitary Services, nec (Oilspill)	\$	15,542,734	2.997707	\$	46,592,563
Iron & steel wholesaling	\$	4,606,154	1.901424	\$	8,758,252

Table 7 summarizes the personal income effects derived from California Port Use, again applying the multiplier analysis to each industry. The total loss to personal income measures the amount of actual purchasing dollars that Californians would lose if the state's port and harbor channels were not usable.

TABLE 7. STATE PERSONAL INCOME EFFECT OF CALIFORNIA PORT USE

SIC	Name	Output	Direct Effects Multiplier	Total Effects Multiplier, CA	Total Effects, California
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1629	Marine construction, dredging, crane barges	\$	46,400,282	0.371355	2.685595	\$	46,275,425
2032	Food Manufacturing	\$	24,612,903	0.143816	5.160433	\$	18,266,536
2044	Rice mills	\$	390,575,000	0.098219	6.187391	\$	237,359,988
2048	Animal feeds	\$	31,685,455	0.108878	6.810018	\$	23,493,533
2076	Oils, vegetable	\$	16,687,037	0.09439	7.334212	\$	11,552,040
910	Com Fishing	\$	159,503,472	0.339893	2.211115	\$	119,873,640
2097	Ice, manufactured or artificial	\$	2,378,378	0.464731	2.094923	\$	2,315,531
2421	Lumber	\$	94,428,000	0.220091	3.934413	\$	81,767,933
2611	Pulp	\$	12,311,830	0.175249	4.231781	\$	9,130,642
2899	Salt manuf	\$	2,347,545	0.227649	3.452157	\$	1,844,889
2911	Petroleum refining	\$	3,581,570,570	0.072265	5.668399	\$	1,467,107,484
2996	Motor oil	\$	539,906,250	0.117502	6.198668	\$	393,243,896
3241	Cement	\$	47,654,545	0.206438	3.937728	\$	38,738,222
3272	Concrete beams	\$	3,016,803	0.35215	2.751658	\$	2,923,271
3275	Gypsum products	\$	18,007,143	0.204335	4.192238	\$	15,425,296
3312	Steel	\$	346,228,571	0.225053	3.967310	\$	309,131,917
3531	Cranes	\$	2,460,000	0.239875	3.903940	\$	2,303,686
3731	Ship building and repairing	\$	73,908,335	0.496331	1.978724	\$	72,585,528
SIC	Name		Output	Direct Effects Multiplier	Total Effects Multiplier, CA		Total Effects, California
3732	Boat building and repairing	\$	64,486,200	0.304299	3.035251	\$	59,560,992
4013	Railroad	\$	1,363,646,018	0.308918	3.208588	\$	1,351,633,098
4213	Long distance trucking	\$	5,390,910,882	0.259481	3.710782	\$	5,190,786,384
4221	Grain warehousing	\$	1,128,161	0.259481	3.710782	\$	1,086,280
4222	Refrigerated Warehousing and Storage	\$	33,560,000	0.259481	3.710782	\$	32,314,166
4226	Petroleum and chemical bulk terminals	\$	108,333,333	0.259481	3.710782	\$	104,311,721
4412	Deep sea foreign transportation of freight	\$	3,492,150,000	0.147277	5.973924	\$	3,072,469,018
4413	Barge Lines & Operators		incl in 4412	0.147277	5.973924		
4491	Marine Cargo Handling	\$	2,645,994,722	0.147277	5.973924	\$	2,328,003,323
4492	Towing and tugboat services	\$	56,687,290	0.147277	5.973924	\$	49,874,702
4493	Marinas	\$	194,301,959	0.147277	5.973924	\$	170,951,061

4783	Container freight stations	\$	33,530,091	0.345306	3.103535	\$	35,933,168
4785	Fixed Facilities and Inspection and Weighing Services for Motor Freight	\$	3,991,678	0.345306	3.103535	\$	4,277,758
4959	Sanitary Services, nec (Oilspill)	\$	52,000,000	0.27118	3.773582	\$	53,212,638
5051	Iron & steel wholesaling	\$	7,549,856	0.408659	2.490407	\$	7,683,695
5052	Bulk coal wholesaling	\$	93,604,000	0.408659	2.490407	\$	95,263,340
5088	Marine equipment & supplies wholesaling	\$	334,160,000	0.408659	2.490407	\$	340,083,733
5093	Scrap metal terminals	\$	135,360,000	0.408659	2.490407	\$	137,759,558
5099	Wood chips	\$	148,736,000	0.408659	2.490407	\$	151,372,678
5146	Fish & seafood wholesaling	\$	135,075,000	0.408659	2.490407	\$	137,469,506
5148	Wholesale fruit	\$	9,146,889	0.408659	2.490407	\$	9,309,038
5153	Wholesale grains	\$	80,700,000	0.408659	2.490407	\$	82,130,588
5171	Petroleum bulk stations and terminals	\$	428,772,827	0.408659	2.490407	\$	436,373,783
5541	Marine fuel dealers	\$	8,091,411	0.508207	2.081101	\$	8,557,720
5551	Boat dealers-retail	\$	827,560,176	0.508207	2.081101	\$	875,252,549
5941	Marine supplies-retail	\$	421,479,993	0.526397	1.970887	\$	437,272,429
7389	Divers, commercial	\$	47,680,583	0.399542	2.194568	\$	41,807,388
7997	Membership Sports and Recreation Clubs	\$	11,814,928	0.818141	1.754953	\$	16,963,861
7999	Charter Boats & Sport fishing	\$	90,900,000	0.457953	2.242442	\$	93,348,213
8412	Museum	\$	1,000,000	0.522126	2.403673	\$	1,255,020
8611	Trade associations	\$	2,440,689	0.523087	2.447280	\$	3,124,424
8711	Marine engineering services	\$	243,186,200	0.543357	2.296104	\$	303,400,120
SIC	Name		Output	Direct Effects Multiplier	Total Effects Multiplier, CA		Total Effects, California
8733	Noncommercial Research Organizations	\$	1,000,000	0.623829	2.137962	\$	1,333,723
9229	Government Bureau (USCG)	\$	145,000,000	1	1.618256	\$	234,647,120
9621	Port	\$	725,445,605	0.214669	4.037586	\$	628,776,024
	TOTAL	\$	23,765,053,930			\$	20,418,805,896

Table 8 estimates the total employment effects derived from California's ports. As in the previous tables, we use value added multipliers from IMPLAN to derive the total number of jobs, including spillover effects, derived from ports and harbors.

TABLE 8. STATE EMPLOYMENT EFFECT OF CALIFORNIA PORT USE

SIC	Name	<u>Port- Dependent Employment</u>	<u>California Total Employment Multiplier</u>	<u>California Total Employment Impact</u>
1629	Marine construction, dredging, crane barges	6,339	1.342934	8,513
2032	Food Manufacturing	78	3.611485	283
2044	Rice mills	284	3.213316	911
2048	Animal feeds	87	2.738959	239
2076	Oils, vegetable	32	3.501696	112
910	Com Fishing	2,764	1.342934	3,712
2097	Ice, manufactured or artificial	10	1.605631	16
2421	Lumber	554	2.62989	1,456
2611	Pulp	39	3.818709	148
2899	Salt manuf	144	2.862956	412
2911	Petroleum refining	2,789	5.135623	14,323
2996	Motor oil	1,576	4.11226	6,483
3241	Cement	177	3.042469	539
3272	Concrete beams	28	1.885618	53
3275	Gypsum products	79	2.925698	232
3312	Steel	1,208	3.334697	4,029
3531	Cranes	74	2.360427	174
3731	Ship building and repairing	1,584	1.706714	2,703
3732	Boat building and repairing	987	1.916954	1,891
4013	Railroad	9,122	2.581218	23,547
4213	Long distance trucking	4,547	2.195171	9,982
4222	Refrigerated Warehousing and Storage		2.195171	

		414		909
4226	Petroleum and chemical bulk terminals		2.195171	
		1,767		3,878
4412	Deep sea foreign transportation of freight		3.396495	
		39,282		133,421
4413	Barge Lines & Operators		3.396495	
		18		61
4481	Cruise Lines		3.396495	
		233		790
4482	Ferries		3.396495	
		234		794
4489	Passenger water transportation		3.396495	
		242		823
4491	Marine Cargo Handling		3.396495	
		29,227		99,268
SIC	Name	<u>Port-Dependent Employment</u>	<u>California Total Employment Multiplier</u>	<u>California Total Employment Impact</u>
4492	Towing and tugboat services		3.396495	
		3,140		10,664
4493	Marinas		3.396495	
		2,956		10,040
4499	Water trans. services nec (ship leasing, salvage, marine surveyor, boat rental, etc.)		2.01102	
		41,375		83,206
4731	Arrangement of Transportation of Freight and Cargo		2.01102	
		86,830		174,617
4783	Container freight stations		2.01102	
		1,092		2,196
4785	Fixed Facilities and Inspection and Weighing Services for Motor Freight		2.01102	
		46		92
4959	Sanitary Services, nec (Oilspill)		2.960566	
		618		1,828
5051	Iron & steel wholesaling		2.15325	
		73		156
5052	Bulk coal wholesaling		2.15325	
		900		1,937
5088	Marine equipment & supplies wholesaling		2.15325	
		889		1,914
5093	Scrap metal terminals		2.15325	
		1,301		2,801
5099	Wood chips		2.15325	
		1,429		3,078
5146	Fish & seafood wholesaling		2.15325	
		2,819		6,069
5148	Wholesale fruit		2.15325	
		88		189
5153	Wholesale grains		2.15325	
		776		1,670
5171	Petroleum bulk stations and terminals		2.15325	
		4,121		8,873

5541	Marine fuel dealers		1.702578	
		82		140
5551	Boat dealers-retail		1.702578	
		2,597		4,421
5941	Marine supplies-retail		1.295554	
		4,602		5,962
7389	Divers, commercial		1.561583	
		9,144		14,279
7997	Membership Sports and Recreation Clubs		1.328905	
		5,661		7,523
7999	Charter Boats & Sport fishing		1.39141	
		765		1,064
8412	Museum		1.417725	
		28		40
8611	Trade associations		1.868725	
		31		57
8711	Marine engineering services		2.01283	
		1,856		3,736
8733	Noncommercial Research Organizations		1.813538	
		32		59
9229	Government Bureau (USCG)		1.276338	
		367		469
9621	Port		3.002721	
		2,038		6,119
	TOTAL			
		279,585		672,930

The most current data on California port use are provided by the Pacific Maritime Association (PMA) Annual Reports. PMA, an association of ILWU-served ports, includes all the major general cargo ports and many smaller ports and terminals, although it omits some private non-ILWU marine terminals. While less comprehensive than the Corps of Engineers Data, they include the bulk of port economic activity and are made available several years earlier and are therefore a more useful source for estimating recent trends. Tables 9 and 10 present compilations of California port use and labor input data for 1995 and 1999 from the PMA Annual Reports for those years. The statewide trends calculated in these tables will be used in Table 11 to update the foregoing estimates from 1995 to 1999.

TABLE 9. GROWTH OF CALIFORNIA PORT USE 1995-2000

Source: Pacific Maritime Association data, Planning & Applied Economics calculations

PMA PORT TONNAGE		1995	1999	2000
So Cal		99,599,534	132,152,575	149,668,057
	San D	1,136,757	4,283,309	4,889,973
	LA/LB	96,498,100	125,009,671	141,351,694
	PH	1,964,677	2,859,595	3,426,390
No Cal		26,959,834	25,615,231	27,390,643
	SFBA	23,447,437	22,480,537	24,045,057
	SPA	1,941,079	1,594,555	1,776,425
	Sac	962,144	838,883	941,730
	EurCC	609,174	701,256	627,431
Total		126,559,368	157,767,806	177,058,700
Growth from 1995			24.7%	39.9%

% containerized

So Cal				
	San D	10.9%	0.0%	0.0%
	LA/LB	76.4%	80.6%	82.2%
	PH	1.2%	6.8%	6.7%
No Cal				
	SFBA	84.6%	87.8%	86.6%
	SPA	0.0%	0.0%	0.0%
	Sac	0.0%	0.0%	0.0%
	EurCC	0.0%	0.6%	0.0%

Source: Pacific Maritime Association

tons containerized

So Cal				
	San D	123,907	-	-
	LA/LB	73,724,548	100,757,795	116,191,092
	PH	23,576	194,452	229,568
No Cal				
	SFBA	19,836,532	19,737,911	20,823,019
	SPA	-	-	-
	Sac	-	-	-
	EurCC	-	4,208	-
Growth from 1995		93,708,563	120,694,366	137,243,680
			28.8%	46.5%

% bulk

So Cal				
	San D	54.5%	41.2%	36.2%
	LA/LB	13.8%	10.3%	9.6%
	PH	0.0%	1.5%	2.2%
No Cal				
	SFBA	3.5%	5.3%	5.3%

	SPA	96.3%	94.6%	86.3%
	Sac	92.1%	72.9%	76.4%
	EurCC	57.4%	51.2%	44.4%
tons bulk				
So Cal				
	San D	619,533	1,764,723	1,770,170
	LA/LB	13,316,738	12,875,996	13,569,763
	PH	-	42,894	75,381
No Cal				
	SFBA	820,660	1,191,468	1,274,388
	SPA	1,869,259	1,508,449	1,533,055
	Sac	886,135	611,546	719,482
	EurCC	349,666	359,043	278,579
		17,861,990	18,354,120	19,220,817
Growth from 1995			2.8%	7.6%
tons other				
So Cal				
	San D	393,318	2,518,586	3,119,803
	LA/LB	9,456,814	11,375,880	11,590,839
	PH	1,941,101	2,622,249	3,121,441
No Cal				
	SFBA	26,959,834	25,615,231	27,390,643
	SFBA	2,790,245	1,551,157	1,947,650
	SPA	71,820	86,106	243,370
	Sac	76,009	227,337	222,248
	EurCC	259,508	338,005	348,852
		41,948,649	44,334,551	47,984,846
Growth from 1995			5.7%	14.4%

TABLE 10. GROWTH OF CALIFORNIA PORT LABOR INPUTS 1995-1999

Source: Pacific Maritime Association data, Planning & Applied Economics calculations

Hours	1995	1999	2000
So Cal	9,487,318	13,836,235	15,707,771
San D	111,798	208,425	229,821
LA/LB	9,082,504	13,310,921	15,122,266
PH	293,016	316,889	355,684
No Cal	2,618,976	2,803,808	3,051,681
SFBA	2,371,240	2,577,417	2,783,306
SPA	165,445	113,916	150,910
Sac	55,505	79,752	81,894
EurCC	26,786	32,723	35,571
Total	12,106,294	16,640,043	18,759,452
Growth from 1995		37.4%	55.0%

Wages (000)	1995	1999	2000
So Cal	\$ 305,688	\$ 512,855	\$ 591,192
San D	\$ 3,280	\$ 7,012	7673
LA/LB	\$ 294,798	\$ 495,909	572038
PH	\$ 7,610	\$ 9,934	11481
No Cal	\$ 78,286	\$ 99,052	\$ 109,911
SFBA	\$ 70,927	\$ 91,257	100437
SPA	\$ 4,930	\$ 3,980	5301
Sac	\$ 1,610	\$ 2,646	2905
EurCC	\$ 819	\$ 1,169	1268
Total	\$ 383,974	\$ 611,907	\$ 701,103
Growth from 1995		59.4%	82.6%

Source: Pacific Maritime Association

TABLE 11. UPDATED CALIFORNIA PORT ECONOMIC BENEFIT ESTIMATES

Source: Planning and Applied Economics

All dollar amounts are current values, not constant dollars

	Basis	1995	1999	2000
Impact on Gross Domestic Product				
	Growth from 1995 PMA tonnage		24.7%	39.9%
	State, millions of dollars	\$21,551	\$26,875	\$30,150 \$ millions
	U.S., millions of dollars	\$40,625	\$50,659	\$56,834
Impact on Total Employment				
	Growth from 1995 PMA hours		37.4%	55.0%
	State, thousands of jobs	673	839	941 thousand jobs
	U.S., thousands of jobs	1,162	1,449	1,626
Impact on Personal Income				
	Growth from 1995 PMA wages		59.4%	82.6%
	State, millions of dollars	\$20,419	\$25,462	\$28,566 \$ millions
	U.S., millions of dollars	\$21,852	\$27,249	\$30,571
Gross Domestic Product				
	State (U.S. Dept. of Commerce, BEA)	\$ 924,582	\$ 1,229,098	n.a. \$ millions
	U.S. (U.S. Dept. of Commerce, BEA)	\$ 7,400.5	\$ 9,268.6	\$ 9,872.9 \$ billions
Total Employment				
	State (Calif. Dept. of Finance)	14,203	15,732	16,246 thousand jobs
	U.S. (U.S. Census Bureau)	124,900	133,488	135,208 thousand jobs
Personal Income				
	State (U.S. Dept. of Commerce, BEA)	\$ 771,470	\$ 989,590 *	\$ 1,093,196 \$ millions
	U.S. (U.S. Dept. of Commerce, BEA)	\$ 6,192.2	\$ 7,777.3	\$ 8,319.2 \$ billions
% Impact on Gross Domestic Product				
	State	2.3%	2.2%	n.a.
	U.S.	0.5%	0.5%	0.6%
% Impact on Total Employment				
	State	4.7%	5.3%	5.8%
	U.S.	0.9%	1.1%	1.2%
% Impact on Personal Income				
	State	2.6%	2.6%	2.6%
	U.S.	0.4%	0.4%	0.4%

FISCAL BENEFITS OF CALIFORNIA PORT AND HARBOR USE

California's ports and harbors generate substantial revenue for the state treasury. Table 12 summarizes the amount of revenue generated from three sources: the state personal income tax, state corporation taxes and retail sales taxes on personal consumption stimulated by port-related income. The income tax estimates were derived by applying the percentage of state total income generated by California's ports and harbors for 1999 (CAPA Report) to the actual tax revenues for FY1999-2000. Given the progressive nature of income taxes the use of this method provides a conservative estimate. Sales tax rates are not progressive but are generally higher in California port cities than in the rural and interior parts of the state, again resulting in a conservative estimate.

TABLE 12. EFFECT OF CALIFORNIA PORT USE ON GOVERNMENT REVENUES

California Port Impact on Selected Government Revenues, 2000

	<u>State & Local</u>	<u>Federal</u>
Retail Sales and Use Taxes		
Retail sales and use taxes	\$18,957,484,000	
Port impact on 1999 personal income	2.573%	
Port impact on taxes	\$ 487,777,986	
Corporation Taxes		
Bank & corporation taxes	\$ 5,724,002,000	\$234,700,000,000
Port impact on GDP	2.345%	0.576%
Port impact on taxes	\$ 134,227,847	\$ 1,351,066,029
Personal Income Taxes		
Personal income tax	\$30,891,481,000	\$999,500,000,000
Port impact on 1999 personal income	2.573%	0.350%
Port impact on tax	\$ 794,840,940	\$ 3,501,963,313
Harbor Tax Trust Fund Receipts*		
Est. California Ports Customs Receipts		\$ 2,120,387,500
		\$ 3,000,000,000
Total California Ports Impact	\$ 1,416,846,773	\$ 9,973,416,843

*0.125% of value of 1999 imports