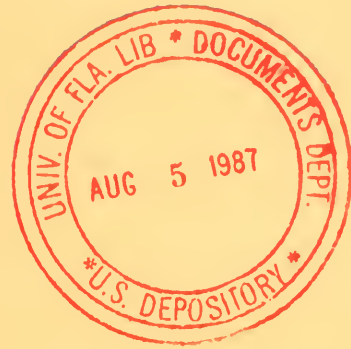


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PANAMA CANAL COMMISSION

ANNUAL REPORT



FISCAL YEAR ENDED SEPTEMBER 30, 1986

PANAMA CANAL COMMISSION

Balboa, Republic of Panama
OFFICE OF THE ADMINISTRATOR

FROM THE ADMINISTRATOR

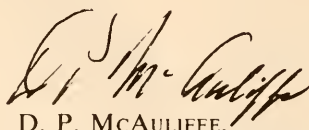
It is a pleasure to submit the annual report of the Panama Canal Commission, for fiscal year 1986.

The seventh year of operation, under the terms of the Panama Canal Treaty, was notably successful. Most major elements of Canal traffic and tolls revenue approached or exceeded record levels. Tolls revenue registered an increase of 7.3 percent over the previous fiscal year and the average size of transiting vessels was the largest in Canal history. PANAMAX-size vessels, the largest vessels capable of navigating the waterway, comprised nearly 22 percent of total oceangoing transits and use of the Canal by such vessels is expected to continue rising.

A number of maintenance, modernization and improvement programs were underway or completed during the year to enhance the efficiency of the Canal. These included the overhaul of four miter gates at Pedro Miguel Locks, completion of the first phase of a long-range project to upgrade marine traffic control capabilities and the continued dredging of the waterway to improve navigational safety. As a result, the Canal remains in excellent operating condition, with a comfortable capacity margin. Additionally, the enactment of the Panama Canal Amendment Act, Public Law 99-209, on December 23, 1985, has served to expedite the settlement of vessel-accident claims, by authorizing the Panama Canal Commission to internally resolve all such claims.

The Commission has been able to enjoy a productive businesslike posture because of the fine performance by many skilled men and women who serve at the Canal. In fulfillment of treaty obligations, it pleases me to report that Panamanians now compose over 81 percent of the work force. Continued emphasis on training programs should further expand the number of Panamanians in key management and supervisory positions.

Thanks to the countless efforts of its employees, the Panama Canal remains an efficient, highly competitive transportation system. I remain confident that the waterway will be capable of handling expected demand for its important transit service well into the future.

A handwritten signature in black ink, appearing to read "D. P. McAuliffe". The signature is fluid and cursive, written over the printed name.

D. P. MCAULIFFE,

Administrator.

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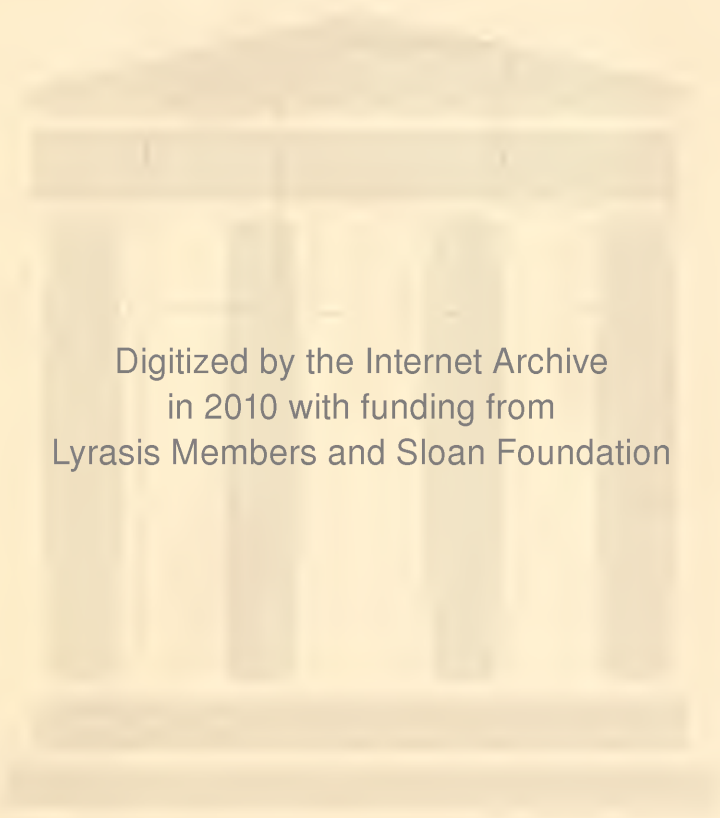
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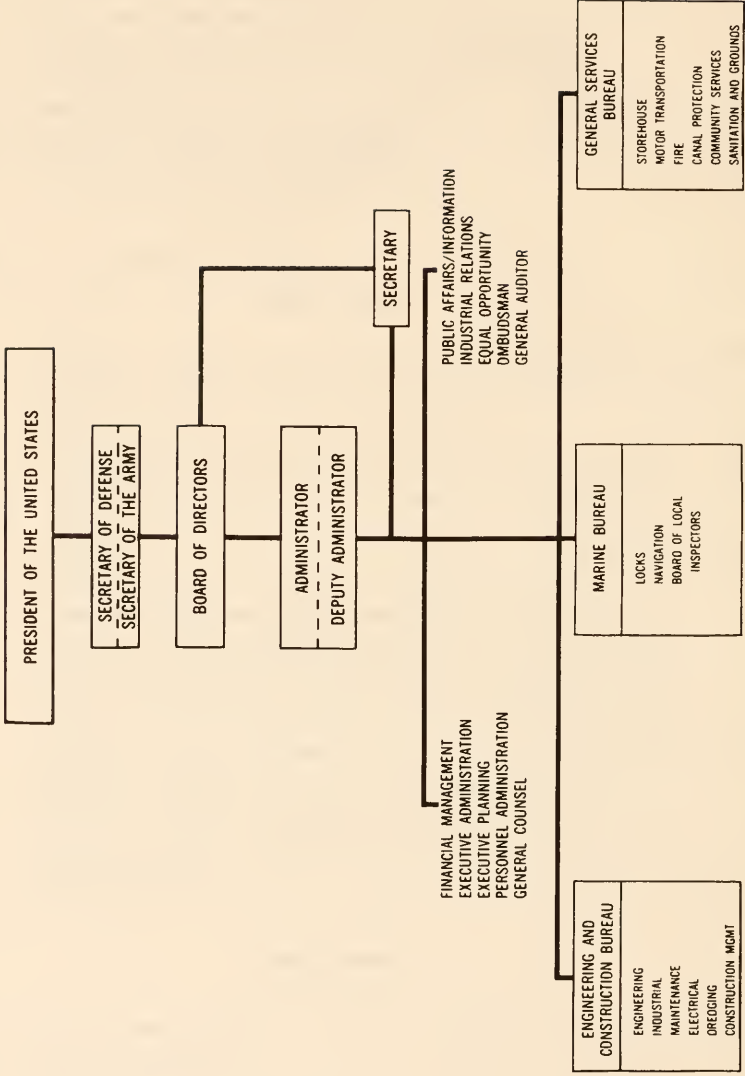
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PANAMA CANAL COMMISSION



INTRODUCTION

ORGANIZATION

The Panama Canal Commission is an agency of the Executive Branch of the United States Government, provided for by the Panama Canal Treaty of 1977, and established by the Panama Canal Act of 1979 (93 Stat. 452; 22 U.S.C. 3601 et seq), enacted September 27, 1979. The authority of the President of the United States with respect to the Commission is exercised through the Secretary of Defense and the Secretary of the Army. The Commission is supervised by a nine-member Board. Five members are nationals of the United States appointed by the President with the advice and consent of the Senate. Four members are nationals of the Republic of Panama who are proposed by the Republic of Panama for appointment by the President.

The Commission was established to carry out the responsibilities of the United States with respect to the Panama Canal under the Panama Canal Treaty of 1977. In fulfilling these obligations, the Commission manages, operates, and maintains the Canal, its complementary works, installations, and equipment, and provides for the orderly transit of vessels through the Canal. The Commission will perform these functions until the treaty terminates on December 31, 1999, when the Republic of Panama will assume full responsibility for the Canal.

The Commission is expected to recover through tolls and other revenues all costs of operating and maintaining the Canal, including interest, depreciation, capital for plant replacement, expansion and improvements, and payments to the Republic of Panama for public services and annuities, in accordance with paragraph 5 of Article III and paragraphs 4(a) and (b) of Article XIII, respectively, of the Panama Canal Treaty of 1977. Revenues from tolls and all other sources are deposited in the U.S. Treasury in an account known as the Panama Canal Commission Fund. Appropriations for operating expenses and capital improvements are enacted annually by the Congress and are limited to the sum of the estimated receipts for the year, plus any unexpended balances in the Panama Canal Commission Fund.

THE CANAL

The Panama Canal is a lock-type canal approximately 51 miles long from deep water to deep water. The minimum width of the navigable channel is 500 feet. Navigable channel depth can vary according to the amount of water

available in Canal storage areas; however, the normal permissible transit draft is 39 feet 6 inches tropical fresh water.

Vessels transiting the Canal are raised in three steps to the level of Gatun Lake, the principal source of Canal water, then lowered to sea level again in three steps. The three sets of Canal locks are paired so as to permit simultaneous lockage of two vessels in the same or opposite direction.

Since August 15, 1914, the official date of its opening, the Panama Canal has served world trade virtually without interruption. Through this fiscal year, a total of 664,077 vessels of all types have transited with 558,009 or 84.0 percent of the total being of the oceangoing commercial class.

TOLL RATES

Toll rates are: (a) on merchant vessels, Army and Navy transports, hospital ships, supply ships, and yachts, when carrying passengers or cargo: \$1.83 per net vessel ton of 100 cubic feet of actual earning capacity, as determined in accordance with the "Rules of Measurement of Vessels for the Panama Canal;" (b) on such vessels in ballast, without passengers or cargo: \$1.46 per net vessel ton; and (c) on other floating craft, \$1.02 per ton of displacement.

By treaty, the United States continues to provide to Colombia free transit through the Canal of its troops, materials of war, and ships of war.

BOARD OF DIRECTORS
Beginning Fiscal Year 1986

Honorable WILLIAM R. GIANELLI,
Chairman, Board of Directors
Panama Canal Commission
Washington, D.C.

Honorable ANDREW E. GIBSON
Short Hills, New Jersey

Honorable LUIS A. ANDERSON
Panama, Republic of Panama

Honorable OYDEN ORTEGA
Panama, Republic of Panama

Honorable JOHN A. BUSHNELL
Deputy Chief of Mission
U.S. Embassy
Buenos Aires, Argentina

His Excellency CARLOS OZORES
Panama, Republic of Panama

Honorable FERNANDO CARDOZE
Panama, Republic of Panama

Honorable WILLIAM SIDELL
Poway, California

Honorable WILLIAM W. WATKIN, Jr.
Beaufort, South Carolina

Executive Committee

Honorable WILLIAM R. GIANELLI,
Chairman
Honorable FERNANDO CARDOZE
Honorable OYDEN ORTEGA
Honorable WILLIAM SIDELL
Honorable WILLIAM W. WATKIN, Jr.

Cut Widening Feasibility Committee

Honorable FERNANDO CARDOZE,
Chairman
Honorable ANDREW E. GIBSON
Honorable OYDEN ORTEGA
Honorable WILLIAM W. WATKIN, Jr.

OFFICIALS IN THE REPUBLIC OF PANAMA

Administrator Honorable D. P. MCAULIFFE
Deputy Administrator Honorable FERNANDO MANFREDO, Jr.

OFFICIAL IN WASHINGTON, D.C.

Secretary MICHAEL RHODE, Jr.

BOARD OF DIRECTORS
Ending Fiscal Year 1986

Honorable WILLIAM R. GIANELLI,
Chairman, Board of Directors
Panama Canal Commission
Washington, D.C.

Honorable LUIS A. ANDERSON
Panama, Republic of Panama

Honorable ANDREW E. GIBSON
Short Hills, New Jersey

Honorable RICHARD N. HOLWILL
Deputy Assistant Secretary
Inter-American Affairs
Department of State
Washington, D.C.

Honorable OYDEN ORTEGA
Panama, Republic of Panama

Honorable CARLOS OZORES
Panama, Republic of Panama

Honorable WALTER V. SHEA
Annapolis, Maryland

Honorable CARLOS VELARDE
Panama, Republic of Panama

Honorable WILLIAM W. WATKIN, Jr.
Beaufort, South Carolina

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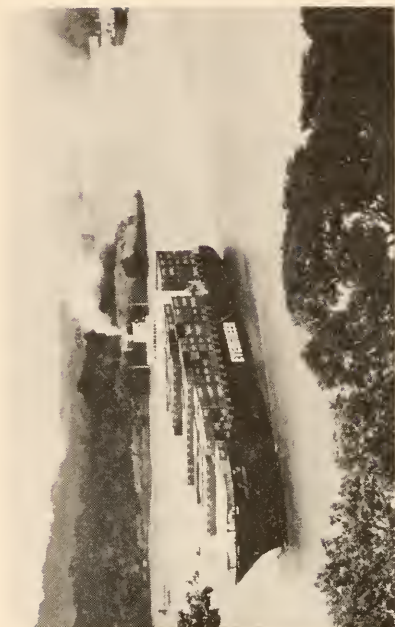
OFFICIALS IN THE REPUBLIC OF PANAMA

Administrator Honorable D. P. MCAULIFFE

Deputy Administrator Honorable FERNANDO MANFREDO, Jr.

OFFICIAL IN WASHINGTON, D.C.

Secretary MICHAEL RHODE, Jr.



Containerships of all shapes and sizes can be seen transiting the Panama Canal daily. This year alone, nearly 1,000 of these vessels, carrying more than one million containers, chose the advantages offered by the all-water route through the Panama Canal.

Chapter I

CANAL TRAFFIC

TRAFFIC

Most major elements of Canal traffic and tolls revenue in fiscal year 1986 were near record levels and sharply above the levels reached during the prior year. The primary factor behind the substantial growth experienced in 1986 was the automobile trade. Contributing also to the strong performance this year were the container and petroleum and product movements.

Oceangoing transits in fiscal year 1986 rose 3.2 percent to 12,023 or 32.9 vessels daily from 11,654 or 31.9 daily the prior year. Vessels owned or operated by the U.S. Government and free Colombian and Panamanian Government vessels made 98 transits during the year compared with 139 transits in fiscal year 1985.

Average ship size continued to increase in fiscal year 1986. Transits of vessels with beams of 100 feet and over rose 10.3 percent to 2,627 or 21.8 percent of total oceangoing transits, from 2,382 or 20.4 percent of total oceangoing transits in fiscal year 1985. Transits by vessels having beams of 80 feet and over accounted for 5,898 or 49.1 percent of total oceangoing transits compared with 5,514 or 47.3 percent of total oceangoing transits in the prior year. Average size of oceangoing commercial vessels, in terms of Panama Canal net tonnage, rose to a record 15,328 tons in fiscal year 1986 from 14,676 tons in 1985.

Total Panama Canal net tonnage increased 7.9 percent to 183.8 million in fiscal year 1986 from 170.3 million tons in the prior year. Correspondingly, tolls revenue rose 7.3 percent to \$322.7 million from the \$300.8 million in 1985.

A two-year summary of the principal elements of Canal traffic and tolls revenue is shown in the following table:

COMPARATIVE HIGHLIGHTS OF OPERATIONS

	<i>Fiscal year</i>	
	1986	1985
Oceangoing transits:		
Commercial	11,925	11,515
U.S. Government	85	129
Free	13	10
Total	<u>12,023</u>	<u>11,654</u>
Daily average	32.9	31.9
Small transits:		
Commercial	912	793
U.S. Government	316	273
Free	27	46
Total	<u>1,255</u>	<u>1,112</u>
Total cargo:		
Commercial	139,948,885	138,643,711
U.S. Government	176,853	259,524
Free	80	23
Total	<u>140,125,818</u>	<u>138,903,258</u>
Total Panama Canal net tons and reconstructed displacement tonnage	183,750,972	170,339,188
Transit revenue:		
Commercial tolls	\$321,163,325	\$298,571,512
U.S. Government tolls	<u>1,570,877</u>	<u>2,236,402</u>
Tolls revenue	<u>\$322,734,202</u>	<u>\$300,807,914</u>
Harbor pilotage, tug, launch, and other services	\$67,363,962	\$61,025,161
Total transit revenue	<u>\$390,098,164</u>	<u>\$361,833,075</u>

COMMODITIES AND TRADE ROUTES

Oceangoing commercial cargo totaled 139.9 million long tons during fiscal year 1986, increasing 0.9 percent from the 138.6 million tons registered the prior year. Twelve key commodity groups, shown on the chart on page 11, accounted for 84.6 percent of that total compared with 85.0 percent in 1985. The commodity mix this year continued to reflect a trend toward declining bulk cargoes and increasing low density cargoes, such as containers and automobiles. This factor accounted for the relatively small increase in cargo tonnage compared with the growth experienced in other elements of traffic.

The most significant development in Canal traffic was the sharp increase attained in the automobile trade, which generated over 70 percent of the gains seen in tolls revenue and oceangoing transits. Automobiles, included in the machinery and equipment commodity group, totaled 2.4 million long

tons, rising 27.8 percent over the 1.8 million tons registered the prior year. Automobile shipments from Japan to the U.S. East Coast constituted 74.2 percent of the total automobile tonnage.

Petroleum and products continued to rank as the principal trade in terms of tonnage in fiscal year 1986, accounting for 22.1 percent of total oceangoing commercial cargo. This increase was primarily due to sharp gains in the products movement, which at 17.9 million long tons, showed an increase of 24.9 percent from 14.3 million tons in 1985. Crude oil shipments totaled 12.9 million long tons, increasing 4.1 percent from 12.4 million long tons in the prior year.

Grains, the second second major commodity group in the Canal cargo tonnage, showed a decline for the fourth consecutive year, dropping 2.7 percent to 22.9 million tons from 23.5 million long tons in 1985. Three components in the group accounted for the drop in the grain trade—wheat, rice and oats—with the largest decline reflected in the wheat trade. The high price of U.S. grain resulting from price support programs and the strength of the U.S. dollar, increased competition from other exporting countries and the attainment of self-sufficiency by some importing countries are factors that continue to adversely affect U.S. grain exports via the Panama Canal. Additionally, wheat shipments to the Far East are increasingly moving through U.S. West Coast ports, bypassing the Canal. Other important components of the grain group, such as corn and soybeans, showed increases. Corn shipments increased 5.1 percent to 8.6 million tons and soybeans rose 6.9 percent to 6.8 million tons. The sorghum movement, totaling 2.3 million tons, remained at the 1985 level. Grain shipments from the U.S. to the Far East constituted 77.1 percent of the total grain movement, with Japan, Taiwan and South Korea being the principal destinations.

Coal and coke, the third commodity group in fiscal year 1986, decreased 11.1 percent to 10.2 million tons from 11.5 million tons the prior year, with most of the decrease due to lower shipments to Japan. Coal tonnage to Japan dropped 21.0 percent to 3.8 million tons in fiscal year 1986 from 4.8 million tons the prior year. The drop in U.S. coal shipments to Japan reflects a number of factors, including a decline in the U.S. market share of Japanese imports and a continued trend toward coal bypass movements via Africa as well as factors of a more permanent nature affecting the steel industry.

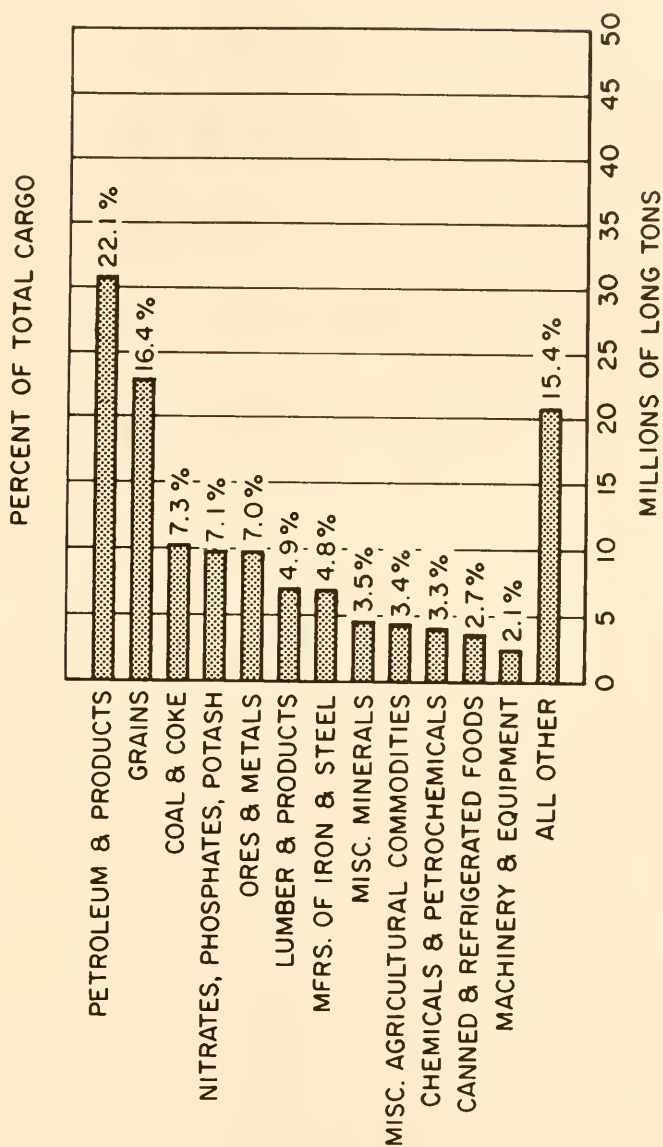
Other commodity groups registering increases during the year were ores and metals, which rose 0.6 percent to 9.8 million long tons; lumber and products, which rose 10.7 percent to 6.9 million long tons; miscellaneous minerals, which rose 9.2 percent to 4.8 million long tons; and canned and refrigerated foods, which rose 4.4 percent to 3.8 million long tons. Machinery and equipment, including automobiles, rose 22.2 percent to 2.9 million long tons.

Commodity groups experiencing decreases during the year were nitrates, phosphates, potash, which dropped 16.4 percent to 9.9 million long tons; manufactures of iron and steel, which dropped 14.3 percent to 6.7 million long tons; and chemicals and petrochemicals, which dropped 7.3 percent to 4.6 million long tons.

Although showing a decline again this year, trade between the East Coast of the United States and Asia remained the leading route in Canal traffic, with 36.1 percent of total commercial cargo shipped over this route. The total cargo tonnage plying the U.S. East Coast-Asia route declined 3.2 percent from 52.2 million long tons to 50.5 million tons.

The following chart and table show the principal commodity groups moving in oceangoing commercial vessels in fiscal year 1986 and a comparison of the major trade routes in fiscal years 1986 and 1985.

PRINCIPAL COMMODITY GROUPS
TRANSITING THE CANAL
OCEANGOING COMMERCIAL CARGO FY 1986



Major Voyage Trade Routes in Canal Traffic

Trade Route	Fiscal year						Percent of Increase or (Decrease)
	1986			1985			
	Panama Canal Net Tons	Long Tons Cargo	Long Tons Cargo	Panama Canal Net Tons	Long Tons Cargo	Long Tons Cargo	
	[In thousands of tons]						
East Coast United States-Asia	71,147	50,583	63,702	52,190	11.6	(3.2)	
East Coast United States-West Coast South America	18,261	12,593	17,627	11,693	3.6	7.7	
Europe-West Coast United States/Canada	16,336	16,507	14,606	14,292	11.7	15.3	
Europe-West Coast South America	9,679	6,684	9,561	6,216	1.2	7.5	
U.S. Intercoastal (including Alaska and Hawaii)	6,121	4,805	4,793	3,770	27.7	27.5	
Central American Intercoastal	4,733	4,009	4,245	3,827	11.5	4.8	
East Coast Canada-Asia	4,545	3,794	4,739	3,779	(4.1)	0.4	
West Indies-Asia	4,331	2,363	4,995	2,556	(13.3)	(7.6)	
East Coast United States/Canada-Oceania	3,927	4,501	4,313	5,058	(8.9)	(11.0)	
West Indies-West Coast South America	3,805	3,643	4,614	4,495	(17.8)	(19.2)	
Asia-Europe	3,428	1,695	4,024	3,014	(14.8)	(43.8)	
Europe-Oceania	2,937	2,222	2,983	2,178	(2.4)	1.5	
Subtotal	149,250	113,399	140,202	113,068	6.4	0.2	
All other routes	33,501	26,546	28,739	25,576	16.9	3.8	
Total	182,751	139,945	168,942	138,643	8.2	0.8	



The tugboat PAZ, shown here assisting a transiting vessel at Pedro Miguel Locks, is the newest addition to the Panama Canal fleet. It is equipped with the latest and most modern technology and has superior maneuvering capability.

Chapter II

CANAL OPERATIONS

Canal operations are comprised of Transit Operations and Maintenance and Related Canal Projects. The various functions are divided among the operating bureaus within the Canal agency.

TRANSIT OPERATIONS

Daily average transits by oceangoing vessels increased from the 31.9 per day during fiscal year 1985 to 32.9 per day during fiscal year 1986. Average time in Canal waters improved from 23.9 hours in fiscal year 1985 to 23.4 hours in fiscal year 1986.

<i>Fiscal year</i>	<i>Vessels of 600-foot length and over</i>	<i>Percent of total oceangoing transits</i>	<i>Vessels of 80-foot beam and over</i>	<i>Percent of total oceangoing transits</i>
1986	4,131	34.4	5,898	49.1
1985	3,862	33.1	5,514	47.3
1984	3,865	33.9	5,496	48.3
1983	4,157	35.1	5,869	49.5
1982	5,534	39.1	7,226	51.1
1981	4,855	34.7	6,364	45.5
1980	4,598	33.8	6,089	44.7
1979	4,089	31.3	5,503	42.1

The number of vessels transiting at more than 36-foot drafts remained virtually unchanged during FY 1986 with 1,463 such vessels transiting the Canal compared to 1,468 last year. The maximum allowable draft remained at 39 feet 6 inches during the entire fiscal year.

Total jobs performed by Commission tugs increased from 34,209 in fiscal year 1985 to 38,833 in fiscal year 1986. The increase of 4,624 jobs is due to an increase in large vessel transits and to the Commission providing tug harbor services for the National Port Authority of the Panamanian Government from October 1, 1985 through March 23, 1986. The National Port Authority reimbursed the Commission for this service. During this period a total of 2,099 tug harbor jobs were performed.



Craftsman labor on the floor of Pedro Miguel Locks performing essential structural inspection and repair of all culverts, valves and miter gates during overhaul. Planned maintenance continues to be the key to the operational effectiveness of the Panama Canal.

	Fiscal year	
	1986	1985
Oceangoing transits	12,023	11,654
Tug jobs (including harbor jobs):		
Balboa	26,939	22,991
Cristobal	11,894	11,218
Tug harbor jobs:		
Balboa	1,005	....
Cristobal	1,094	....
Tug operating hours	60,442	54,889

MAINTENANCE AND RELATED CANAL PROJECTS

Canal dredging activities during fiscal year 1986 focused on the Bohio Curve Widening Project, where 185,400 cubic yards of material was removed. Key benefits to be derived from this project include improved visibility and greater navigational safety. The dredges *Cascadas*, *Christensen* and *Mindi* excavated a total of 761,237 cubic yards of earth and rock.

Solar panels were installed on all lighted buoys, houses, beacons, ranges and towers to recharge the independent power cells. This energy conservation measure is expected to yield yearly savings of over \$100,000. A Power Control and Supply System is also being developed with the objective of improving the utilization of power lines along the banks of the Canal which service various navigational aids.

In conjunction with the Pedro Miguel Locks overhaul, accomplished between October 1985 and March 1986, Miter Gates Nos. 50, 51, 52 and 53 were removed and reconditioned at the Mount Hope Industrial Division. Other important locks maintenance projects included the renovation of eighteen of the 400 transformer rooms at Gatun Locks which service the locomotive tow tracks, miter gates and rising stem valves; major maintenance to the Gatun Locks fendering system; continued replacement and rehabilitation of the locomotive tow track system at all locks; reconditioning of SIP-3 firefighting equipment; and a preliminary design to expand and automate the firefighting system at all locks.

Other significant marine-related maintenance work included rehabilitation of Caisson No. 2; major overhaul of the tugs *Mehaffey*, *Progreso*, and *Walker*; reconditioning of the drillboat *Thor* and the dredge *Mindi*; and maintenance of the drum gates at Madden Dam.

A multi-year contract for \$3.1 million was negotiated to furnish and supervise the installation of a new telecommunications system. This contract provides for the complete refurbishment of the existing Commission telephone system. A wide range of new services and improved capabilities will become available with the installation of advanced communications equipment.

On May 5, 1986, the first phase of a long-range plan to provide increased automated support for Marine Traffic Control was completed. New state-of-the-art computers and accessories now provide for improved traffic scheduling and monitoring. Numerous additional system features and capabilities will be implemented over the next several years.

Chapter III

SUPPORTING OPERATIONS

Supporting operations of the Panama Canal Commission provided essential support services to the operation and maintenance of the waterway and the Agency's facilities, as well as to other U.S. agencies on the Isthmus and to employees and their dependents. These operations included logistical services, community services, sanitation and grounds management, transportation services, public utilities, fire protection, Canal protection, health and safety, and other employee services.

LOGISTICAL SERVICES

The Logistical Support Division provided centralized procurement, inventory management, warehousing, distribution, contract administration, and supply and property disposal support to Canal operations. A total of \$74.5 million in goods and services were procured during fiscal year 1986, including \$22.1 million from sources in Panama. Major contracting obligations included approximately \$9.2 million for Bunker "C" fuel oil for thermoelectric power generation, \$5.9 million for light diesel fuel, \$3.1 million for a new telephone system, \$1.2 million for three pilot/linehandler launches, \$2.3 million for a dredge tender, \$700 thousand for two cargo barges, and \$3.5 million for a tractor tugboat. Additionally, last year's contract for three locks towing locomotives was increased to five, with added component parts being ordered, thereby raising the contract to \$6.2 million.

Approximately \$18 million in Commission inventory items were issued for Commission use, and \$20.5 million was obligated for new inventory purchases during the year. A total inventory of 37,636 line items with an average cost value of \$25.5 million was on hand at year end.

Activities of the Excess Disposal Branch included no-cost transfers to other U.S. Government agencies of excess equipment having an original acquisition value of approximately \$668,303, while surplus property sold to the Government of Panama, at current fair market value, amounted to approximately \$24,625.

The New Orleans Branch of the Logistical Support Division expedited purchases and coordinated all Commission cargo shipments from the United States to Panama. Under the coverage of the Military Sealift

Command's contract, 9,893 measurement tons of containerized and breakbulk cargo were shipped to the Port of Balboa. An additional 3,821 tons of general cargo and vehicles were shipped under commercial contract with an ocean freight shipper from New Orleans to Las Minas, Republic of Panama.

COMMUNITY SERVICES

During fiscal year 1986, the Community Services Division managed employee housing, Commission-owned buildings, a technical resource center (library), and the employee fitness program for the agency.

The housing portion of the operation dedicated its resources to managing, maintaining, repairing, and bringing up to standards the safety and security aspects of the quarters inventory. The agency continued its multi-year housing management plan designed to concentrate its diminishing housing requirements in selected core areas. Implementation of the plan is intended to utilize remaining housing and related maintenance resources in the most cost-effective manner, while at the same time preserving optimum housing for eligible employees and meeting ongoing responsibilities under the Panama Canal Treaty. By March 31, 1986, the Commission transferred an additional 276 housing units, excess to its needs, to the Republic of Panama. At the end of the fiscal year, the agency retained the use of 1,619 housing units for its United States citizen and other eligible employees. This represents only 38% of the inventory of approximately 4,300 units owned by the Panama Canal Company immediately prior to entry into force of the Panama Canal Treaty in 1979, indicating that a total of 62% of those units have been transferred in use to Panama in seven years.

The buildings management activity is responsible for the maintenance and operation of non-residential Commission buildings and structures (not specifically assigned to other Commission units) and for a centralized custodial service. This unit managed the transfer to Panama of two non-residential buildings no longer required by the Commission.

The technical resources center (library) provided mission-support information and research to the Commission and other agencies on the Isthmus, and maintained a collection of library and three-dimensional materials relating to the history and operation of the Panama Canal. The Community Services Division also administered a variety of duty-related, as well as off-duty, fitness programs and facilities for Commission employees and their dependents.

SANITATION AND GROUNDS MANAGEMENT

Approximately 2,900 acres of improved grounds and landscaping were maintained within and around Commission residential areas, buildings, locks and industrial facilities. Vegetation control was maintained by Grounds Branch crews along utility line rights-of-way, earthen saddle dams, Gatun Dam, Canal bank stability drainage systems, and around the aids to navigation towers and targets. Close coordination with Panama officials in the turnover of responsibility for grounds care, resulted in a smooth

transition of services during the transfer of blocks of quarters and buildings within the Commission townsites of Balboa, Diablo Heights, Gamboa and Margarita.

In March 1986, the Entomology Unit consolidated its laboratory facilities at the headquarters complex at Corozal, adding to the effectiveness of the Division's insect surveillance network. *Aedes aegypti* mosquitoes, vectors of dengue and yellow fever, were found on the outskirts of Panama City in 1985 and this infestation has now spread within the city. Although Commission areas so far remain free of this mosquito, the Sanitation Branch augmented its surveillance efforts and intensified mosquito control measures to keep this species from reestablishing itself and to ensure that transmission of such historically important tropical diseases as malaria, yellow fever and dengue does not recur. Additional control efforts were directed against cockroaches, house flies, bats, rats, and other disease vectors.

The number of Africanized honeybee control operations were lower over the past 12 months than in 1985. These dangerous insects, however, continue to present problems within Commission residential areas and work sites, and on vessels in Canal waters. A total of 310 swarms and nests of Africanized bees were destroyed by Commission bee control teams this fiscal year, a decrease of 46 percent from the previous year. Commission bee control teams destroyed 7 swarms on board transiting ships in 1986 compared to 20 shipboard swarms destroyed in 1985. Several severe, work-related stinging incidents have occurred which resulted in hospital treatment of Commission employees in the past year.

The opening of a new Panama metropolitan area sanitary landfill at Cerro Patacon this year added an alternate choice for Pacific area refuse disposal customers. Consequently, the amount of refuse handled by the Commission's Pacific sanitary landfill facility declined 34 percent from 34,000 tons of refuse in 1985 to 22,500 tons during the past fiscal year. The Atlantic landfill site at Mount Hope showed an apparently unrelated 10 percent decrease in refuse tonnage handled in 1986. This facility, for the past four decades, has received all municipal refuse from the Colon metropolitan area and the local U.S. military bases, in addition to that from the Commission's Atlantic residential areas and Canal work sites.

TRANSPORTATION FACILITIES

The Motor Transportation Division operated and maintained a consolidated motor pool of 873 vehicles designed to meet the vehicular transportation requirements of the Commission. The vehicle fleet in fiscal year 1986 included 611 trucks of various types, 208 passenger-carrying vehicles, and 54 special-purpose vehicles. Vehicle mileage increased slightly from 7.1 million miles in fiscal year 1985 to 7.2 million miles in fiscal year 1986. Fully equipped shops, including a tire retreading facility and heavy duty repair shops, provided facilities for overhauls, maintenance and repairs to the Motor Transportation Division fleet and equipment of other Commission units. In addition, some services were contracted out where they were available in required quantity and quality in Panama. The Ancon

area garage, a vehicle inspection facility located within the Motor Transportation Division, was used by the Government of Panama to conduct inspections of privately-owned vehicles and by the Motor Transportation Division to perform Commission vehicle inspections.

PUBLIC UTILITIES AND ENERGY

Panama Canal Commission facilities include electric power generation and distribution systems, communication systems, water purification and distribution systems, and a central chilled water air conditioning system for certain public buildings.

Total Canal area energy demand during fiscal year 1986 was 479 gigawatt hours, a 3.6 percent decrease from the 497 gigawatt hours used last year. The peak hourly demand of 82 megawatts reached on May 28, 1986, was 1.2 percent above the peak of 81 megawatts in the prior year. Agency-directed energy consumption in fiscal year 1986 for electrical power and fuel, calculated together in Btu's, was reduced a total of 23.3 percent in relation to the fiscal year 1975 baseline established by the Federal Energy Management Program. Electrical power consumption by the Commission, 74.9 gigawatt hours, was 0.7 percent above the usage levels recorded for comparable operations in fiscal year 1975; fuel consumption, excluding fuel for power generation, 4.4 million gallons, was 42.9 percent below the corresponding 1975 fiscal year baselines.

The water treatment and distribution systems operated by the Commission provide potable water for the Canal area and areas of the Republic of Panama. The Pacific side system serves the Canal area, Panama City, and suburban areas; and the separate Atlantic side system serves the Canal area, the city of Colon, and suburban areas. During fiscal year 1986, the two systems supplied 3.03 billion cubic feet of potable water to consumers, a decrease of about 4.8 percent from the previous year. Water consumed by Panama City and Colon metropolitan areas amounted to approximately 51.2 million gallons per day.

FIRE PROTECTION

The Panama Canal Commission Fire Division, and the Bomberos of the Republic of Panama, in accordance with the Panama Canal Treaty of 1977, are responsible for providing fire protection, firefighting, and rescue operations in Canal operating areas, defense sites, civilian and military areas of coordination and shipboard firefighting on all vessels in Canal area waters.

A total of 5,804 responses were recorded for FY 1986, versus 4,756 for FY 1985. The increase can be principally attributed to new marine safety measures, which require a Panama Canal Commission Fire Division unit to respond to all lockages of vessels transporting hazardous cargoes. The actual number of these standbys for FY 1986 was 2,752 versus 772 for FY 1985. There were 22 additional marine standbys at locations other than the locks, thereby raising the total to 2,774. There were seven other marine-related

emergencies involving hazardous materials/incidents and 58 which were not marine-related.

Excluding ship fires, there were 528 fires during FY 1986 resulting in a loss of \$363,318 compared to 758 fires and a loss of \$385,892 the previous year. During FY 1986, there were 14 ship fires with a loss of \$117,930 versus 20 ship fires and a loss of \$353,405 in FY 1985. The Fire Division also responded to a number of other emergencies, requests for ambulance service and bomb threats.

CANAL PROTECTION

Routine operational security in the Panama Canal Commission is performed by the Canal Protection Division, whose mission is the protection of installations and facilities devoted to the management, operation, and maintenance of the waterway. Extensive security improvements to the waterway and its support activities continued during the year. Site surveys of installations were updated and essential security hardware was incorporated or upgraded into agency operations. World events have enhanced security awareness of employees throughout the agency, and a formal program has been developed to reinforce this awareness.

HEALTH AND SAFETY

The Occupational Health Division and the Safety Division are components of the Office of Personnel Administration. The Personnel Director is the Designated Agency Safety and Health Official. The Panama Canal Commission is committed to ensuring a safe and healthful workplace for its employees, an objective which enjoys support from top management down.

During fiscal year 1986, the Commission experienced 598 performance-of-duty accidents/illnesses in which the employees required medical attention beyond first aid, as compared to 748 such accidents/illnesses in fiscal year 1985. The incident rate fell sharply from 9.1 in fiscal year 1985 to 7.5 per 200,000 man-hours worked in fiscal year 1986. There were no fatalities recorded in either fiscal year 1986 or fiscal year 1985. The marked decline in the incident rate can be attributed in large part to continued publicity and increased awareness, additional training both on- and off-Isthmus, consolidation of safety staff and programs, issuance of a new comprehensive agency safety and health policy, implementation of aggressive workplace inspection and evaluation procedures, and an augmentation of the industrial hygiene staff. The certified Safety and Health Committee continued its active role in the safety and health program. Also, an additional employee counselor was employed and controlled alcohol and drug testing procedures were implemented as a means to further ensure a safe work environment.

Chapter IV

ADMINISTRATION AND STAFF

PERSONNEL FORCE EMPLOYED AND PAYROLL

At the end of fiscal year 1986, the Canal's Isthmian permanent work force totaled 7,521. The composition by citizenship, was as follows: Panamanians, 6,118 (81.3%), U.S. citizens, 1,239 (16.5%) and third-country nationals, 164 (2.2%). In addition, 15 persons, all U.S. citizens, were employed by the Commission in New Orleans and Washington, D.C.

The total Commission payroll was \$190.8 million in fiscal year 1986 compared to \$182.7 million in fiscal year 1985. Of the total Commission fiscal year 1986 payroll, \$127.7 million was paid to non-U.S. citizen employees and \$63.1 million to U.S. citizen employees.

EQUAL OPPORTUNITY PROGRAM

During FY 1986, the Panama Canal Commission submitted the final Multi-year Affirmative Action Update and Accomplishment Reports in keeping with the FY 1982-1986 Multi-year Affirmative Action Program Plan, requested by the Equal Opportunity Commission (EEOC). The Panama Canal Commission met its stated affirmative action goals and exceeded its employment goal for the severely handicapped. Since the implementation of the Panama Canal Treaty on October 1, 1979, the agency's Hispanic Minority Group has reflected a steady increase as compared to the other four minority groups, which comprise the Commission's work force. Analysis of the composition of the work force reflected the following:

Distribution by Minority Group Designation (MGD)

<i>Hispanic</i>	<i>Black</i>	<i>White</i>	<i>Oriental</i>	<i>Indian</i>
60.2%	24.4%	13.8%	1.3%	0.3%

Distribution by sex

	<i>Fiscal year 1986</i>		<i>Fiscal year 1985</i>	
Male	6,694	(89.0%)	6,744	(89.5%)
Female	831	(11.0%)	791	(10.5%)
Total	7,525		7,535	

Special Emphasis Program activities, such as Women's Week and Employ the Handicapped Week, were accomplished on an ongoing basis. Equal opportunity training was provided in supervisory development programs; and on the prevention of sexual harassment and the increasing participation of women in non-traditional occupations.

PUBLIC AFFAIRS

During fiscal year 1986, the Office of Public Affairs concentrated its efforts on handling media relations for the Panama Canal Commission, locally and internationally, while providing support for marketing efforts and customer relations. Through the Commission publication, *Spillway*, local press releases, and videotapes; employees were provided information on progress in treaty implementation and policies affecting their work and daily lives, as well as news of Canal operations.

As part of the emphasis on customer relations, the Graphic Branch produced two audio-visual presentations for use at two shipping conferences in the United States, and provided an exhibit for an international cruise shipping conference in Miami.

The Graphic Branch also prepared a number of graphic and video training and instructional aids for various bureaus and a new 18-minute film in English and Spanish which provide general information about the Canal; continued filming of the Madden Dam Gate Overhaul; provided assistance in the planning and purchase of new audio-visual equipment for use in the Commission's Board room; and produced nearly one hundred short video presentations in English and Spanish on a variety of topics relevant to the Commission. Written and video material was also provided to cruise shipping lines in support of the Canal's marketing effort.

The Guide Service handled a total of 295,844 visitors at the Canal and conducted 811 VIP tours. Among the visitors were representatives of major news services, officials from various sectors of the shipping industry and shipping related publications, and government and business officials from around the world.

OMBUDSMAN

The Office of the Ombudsman was established pursuant to implementing legislation of the Panama Canal Treaty of 1977. The office responds to employees and dependents' complaints, grievances, and requests for information; and channels many issues to the proper authorities for processing under existing statutes or administrative regulations. Generally, the office of the Ombudsman investigates administrative problems, inefficiencies, omissions, and policy conflicts existing within the Panama Canal Commission and other U.S. Government agencies on the Isthmus of Panama resulting from the Treaty. However, the office provides the widest latitude possible for handling problems affecting employee morale and the quality of life.

During fiscal year 1986, a total of 264 cases were processed by the Ombudsman as compared to 180 cases in FY 1985. A considerable number of complaints stemmed from the evident deterioration and lack of maintenance of highways and streets, including railroad intersections, within the Canal Area, which are outside the responsibility of the Panama Canal Commission.

INDUSTRIAL RELATIONS

For the second year in succession, routine contract administration activity characterized labor-management relations within the Commission. Emphasis in FY 1986 was placed on promoting a more constructive and harmonious labor-management relationship. Communications between management and labor improved and unions continued to enjoy access to top management officials of the Commission. A concerted effort was made to resolve grievances informally at the lowest possible level. Most of the grievances which were arbitrated were cases carried over from FY 1985 and the majority of them involved only one of the Commission's five bargaining units. The collective bargaining agreement covering most of the Commission's employees, the nonprofessionals, was renewed for another three-year period.

GENERAL COUNSEL

Under the legislation enacted to implement the 1977 Panama Canal Treaty, the Panama Canal Act of 1979, Public Law 96-70, the Panama Canal Commission was precluded, by law, from adjusting and paying claims in excess of \$120,000 for accidents occurring in the Panama Canal, or adjacent waters, other than in the locks. At the same time, the Commission was authorized to pay claims for vessel-accidents arising inside the locks, without any monetary limitations. The Panama Canal Act required that the Commission submit to the Congress reports on the "out-of-locks" accidents in which the claimant demanded more than \$120,000.

On December 23, 1985, the President signed into law the Panama Canal Amendments Act, Public Law 99-209, which authorized the Commission to settle all vessel-accident claims, regardless of the amount and irrespective of the site of the accident. At the time of the passage of the Panama Canal Amendments Act, there were 28 out-of-locks vessel-accident claims pending, with either the United States Congress or the Commission, that the agency had no authority to adjudicate. Since the enactment of the Amendments Act, the Commission has made substantial progress in adjudicating this backlog of vessel-accident claims. By the end of FY 1986, 16 of these claims had been settled, and \$5,396,434 (out of a total of \$10,201,670 claimed) have been paid to the aggrieved shipowners.

Chapter V

FINANCIAL REPORT

FINANCIAL STATEMENTS FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1986

The financial statements of the Panama Canal Commission, appearing as Tables I through 6, with accompanying notes, present the financial position of the Commission at September 30, 1986, and the results of its operations for the fiscal year then ended.

The accounts and statements of the Panama Canal Commission have been examined by the Office of General Auditor of the Commission and by the United States General Accounting Office. Detailed audit reports of the United States General Accounting Office are directed to the Congress and are presented as Congressional documents.

Summary information concerning operating results and capital expenditures follows:

RESULTS OF OPERATIONS

Net revenue from operations amounted to \$2.0 million. This amount is payable to the Government of Panama pursuant to the provisions of paragraph 4(c) of Article XIII of the Panama Canal Treaty of 1977 subject to the limitations set forth in chapter 3, subchapter V, section 1341(b)(2) of the Panama Canal Act of 1979 (Public Law No. 96-70).

CAPITAL EXPENDITURES

Accrued capital expenditures for fiscal year 1986 amounted to \$19.9 million. The principal expenditures were \$3.5 million for purchase of towing locomotives, \$2.5 million for purchase of split hull dump barges, \$2.2 million for improvements to electrical power and communications systems, \$1.4 million for purchase of motor vehicles, \$1.3 million for marine traffic development project, and \$1.0 million for improvements to Commission buildings.

Table 1.—Statement of Financial Position

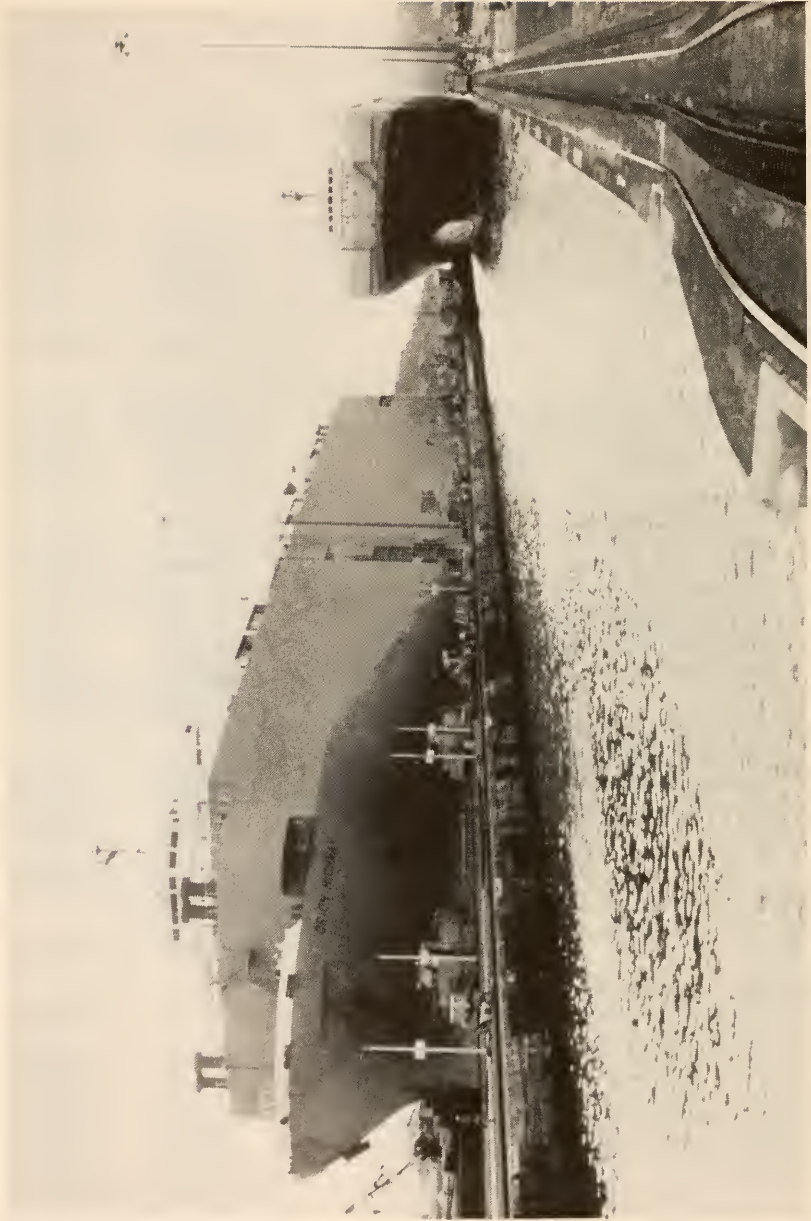
Assets	1986	1985
PROPERTY, PLANT AND EQUIPMENT:		
At cost (Note 1c and 6b).....	\$891,030,194	\$886,120,157
Less accumulated depreciation and valuation allowances (Notes 1e, 2, 3 and 6b)	<u>427,840,218</u>	<u>416,099,843</u>
	<u>463,189,976</u>	<u>470,020,314</u>
CURRENT ASSETS:		
Cash and fund balances (Notes 4 and 5):		
Deposit funds and undeposited receipts:		
Postal fund	140,954	146,195
Trust fund	1,122,442	1,172,298
Cash receipts for deposit into U.S. Treasury ..	<u>579,276</u>	<u>456,513</u>
	<u>1,842,672</u>	<u>1,775,006</u>
Unexpended appropriated funds:		
Operating funds	75,776,159	43,357,867
Capital funds	30,367,019	24,605,692
Emergency fund	<u>10,000,000</u>	<u>10,000,000</u>
	<u>116,143,178</u>	<u>77,963,559</u>
	<u>117,985,850</u>	<u>79,738,565</u>
Accounts receivable:		
Regular	9,956,099	11,310,945
Other (Note 7).....	<u>.....</u>	<u>826,867</u>
	<u>9,956,099</u>	<u>12,137,812</u>
Inventories, less allowance for obsolete and excess stock of \$401,972 and \$423,954, respectively (Note 1g).....		
	<u>34,452,692</u>	<u>40,695,032</u>
Other current assets		
	<u>1,868,675</u>	<u>400,566</u>
	<u>164,263,316</u>	<u>132,971,975</u>
OTHER ASSETS:		
Deferred charges:		
Cost of early retirement benefits (Note 1h)	254,280,000	273,840,000
Retirement benefits to certain former employees of predecessor agencies (Note 1h)	7,599,000	8,740,000
Other	<u>.....</u>	<u>204,106</u>
	<u>261,879,000</u>	<u>282,784,106</u>
TOTAL ASSETS	<u><u>\$889,332,292</u></u>	<u><u>\$885,776,395</u></u>

The accompanying notes are an integral part of this statement.

September 30, 1986 and 1985

Capital and Liabilities	1986	1985
CAPITAL:		
Investment of the United States Government:		
Interest-bearing (11.033% and 10.720%, respectively) (Notes 6c and 8)	\$49,803,121	\$76,901,053
Non-interest-bearing	<u>287,909,798</u>	<u>286,084,032</u>
	337,712,919	362,985,085
Unexpended appropriations (Note 4):		
Obligated operating funds	75,776,159	43,357,867
Obligated capital funds	21,196,656	15,232,473
Unobligated capital funds	9,170,363	9,373,219
Unobligated emergency fund	<u>10,000,000</u>	<u>10,000,000</u>
	116,143,178	77,963,559
	<u>453,856,097</u>	<u>440,948,644</u>
CURRENT LIABILITIES:		
Accounts payable:		
U.S. Government agencies	5,119,155	4,851,421
Government of Panama	6,574,365	6,423,722
Other	<u>11,989,470</u>	<u>9,069,465</u>
	23,682,990	20,344,608
Accrued liabilities:		
Employees' leave	41,845,798	40,368,754
Salaries and wages	5,856,533	5,391,152
Cost of early retirement benefits (Note 1h)	19,560,000	19,560,000
Retirement benefits to certain former employees of predecessor agencies (Note 1h)	1,017,000	1,152,000
Employees' repatriation	930,000	951,000
Marine accident claims (Notes 6d and 7)	26,485,284	5,499,542
Net revenue payable to Government of Panama	2,012,762	1,118,755
Other	<u>2,262,308</u>	<u>2,269,221</u>
	99,969,685	76,310,424
Other current liabilities:		
Unfunded marine accident claims (Notes 6d and 7)		23,052,507
Advances for capital-unexpended (Notes 1d and 9)	16,435,985	9,614,130
Other	<u>1,294,778</u>	<u>1,188,069</u>
	17,730,763	33,854,706
	<u>141,383,438</u>	<u>130,509,738</u>
DEFERRED CREDIT:		
Advances for capital being amortized (Notes 1d, and 9)	<u>28,185,316</u>	<u>26,082,854</u>
LONG-TERM LIABILITIES AND RESERVES:		
Cost of early retirement benefits (Note 1h)	234,720,000	254,280,000
Retirement benefits to certain former employees of predecessor agencies (Note 1h)	6,582,000	7,588,000
Employees' repatriation	6,528,000	7,386,000
Lock overhauls (Note 1i)	3,219,734	2,796,648
Marine accidents (Note 1j)	12,452,991	13,053,215
Casualty losses (Note 1j)	841,679	745,693
Floating equipment repair (Note 1k)	<u>1,563,037</u>	<u>2,385,603</u>
	265,907,441	288,235,159
TOTAL LIABILITIES	<u><u>\$889,332,292</u></u>	<u><u>\$885,776,395</u></u>

The accompanying notes are an integral part of this statement.



Two huge car carriers dwarf the towing locomotives which align and assist transiting vessels through the locks. Vessels in this category accounted for about one-fifth of the total Canal tolls revenue for this year.

**Table 2.—Statement of Operations and Non-Interest-Bearing Investment
Fiscal Years Ended September 30, 1986 and 1985**

	1986	1985
OPERATING REVENUES:		
Tolls (Note 1b).....	\$322,734,202	\$300,807,914
Advances for capital (Note 1d).....	<u>(3,091,000)</u>	<u>.....</u>
Net tolls revenue.....	<u>319,643,202</u>	<u>300,807,914</u>
Other.....	112,012,571	111,669,114
Advances for capital (Note 9).....	<u>(7,354,549)</u>	<u>(5,753,649)</u>
Net other revenues.....	<u>104,658,022</u>	<u>105,915,465</u>
Total operating revenues.....	<u>424,301,224</u>	<u>406,723,379</u>
OPERATING EXPENSES (Note 6a):		
Payments to the Government of Panama:		
Public services.....	10,000,000	10,000,000
Fixed annuity.....	10,000,000	10,000,000
Tonnage.....	<u>56,959,549</u>	<u>52,803,013</u>
	76,959,549	72,803,013
Maintenance of channels and harbors.....	40,256,410	42,384,789
Navigation service and control.....	70,835,092	66,755,872
Locks operation.....	49,260,120	42,881,108
General repair, engineering and maintenance services.....	21,689,776	19,044,297
Supply and logistics.....	17,909,207	15,517,805
Utilities.....	31,783,509	34,680,996
Housing operations.....	4,940,672	6,893,595
General and administrative.....	66,487,315	65,937,035
Interest on interest-bearing investment (Notes 6c and 8).....	6,786,828	7,713,238
Other.....	<u>35,379,984</u>	<u>30,992,876</u>
Total operating expenses.....	<u>422,288,462</u>	<u>405,604,624</u>
NET OPERATING REVENUE (Note 1b).....	2,012,762	1,118,755
INVESTED CAPITAL—NON-INTEREST-BEARING:		
Net revenue payable to Government of Panama.....	(2,012,762)	(1,118,755)
Investment at beginning of fiscal year.....	286,084,032	277,910,116
Miscellaneous receipts deposited into the U.S. Treasury.....	456,513	917,191
Due U.S. Treasury for undeposited receipts.....	(579,276)	(456,513)
Interest on interest-bearing investment (Notes 6c and 8).....	<u>1,948,529</u>	<u>7,713,238</u>
INVESTED CAPITAL—NON-INTEREST-BEARING AT END OF FISCAL YEAR.....	<u>\$287,909,798</u>	<u>\$286,084,032</u>

The accompanying notes are an integral part of this statement.

**Table 3A.—Statement of Changes in the Investment of the United States Government
Fiscal Year Ended September 30, 1986**

	Invested Capital		Emergency Fund	Operating Funds	Capital Funds	Total
	Interest-Bearing	Non-Interest-Bearing				
INVESTMENT AT OCTOBER 1, 1985	\$76,901,053	\$286,084,032	\$10,000,000	\$43,357,867	\$24,605,692	\$440,948,644
Appropriation by the Congress for fiscal year 1986	76,901,053	286,084,032	10,000,000	425,034,000	25,500,000	450,534,000
INCREASES IN INVESTMENT:						
Prior year receipts deposited into the U.S. Treasury		456,513				456,513
Expenditures from capital appropriations	19,738,673				(19,738,673)	
Expenditures from operating appropriations	392,080,587			(392,080,587)		
Interest on interest-bearing investment		1,948,529				1,948,529
Property transferred from other U.S. Government agencies		2,012,762				2,012,762
Net revenue (Note 1b)	411,819,260	4,417,804		(392,080,587)	(19,738,673)	4,417,804
DECREASES IN INVESTMENT:						
Funds to be covered into the U.S. Treasury				535,121		535,121
Receipts deposited into the U.S. Treasury	436,961,276					436,961,276
Due U.S. Treasury for undeposited receipts		579,276				579,276
Property transferred to the Government of Panama	1,948,292					1,948,292
Property transferred to other U.S. Government agencies	7,624					7,624
Net revenue payable to Government of Panama (Note 1b)		2,012,762				2,012,762
INVESTMENT AT SEPTEMBER 30, 1986	438,917,192	2,592,038	\$10,000,000	\$35,121	\$30,367,019	442,044,351
	\$49,803,121	\$287,909,798		\$75,776,159		\$453,856,097

(Notes 6c and 8)

The accompanying notes are an integral part of this statement.

**Table 3B.—Statement of Changes in the Investment of the United States Government
Fiscal Year Ended September 30, 1985**

	Invested Capital		Emergency Fund	Operating Funds	Capital Funds	Total
	Interest-Bearing	Non-Interest-Bearing				
INVESTMENT AT OCTOBER 1, 1984	\$84,014,932	\$277,910,116	\$10,000,000	\$46,185,064	\$28,986,025	\$447,096,137
Appropriation by the Congress for fiscal year 1985	84,014,932	277,910,116	10,000,000	404,646,000	25,200,000	429,846,000
INCREASES IN INVESTMENT:						
Prior year receipts deposited into the U.S. Treasury		917,191				917,191
Expenditures from capital appropriations	29,580,333				(29,580,333)	
Expenditures from operating appropriations	383,034,130			(383,034,130)		
Interest on interest-bearing investment		7,713,238				7,713,238
Property transferred from other U.S. Government agencies	73,414					73,414
Net revenue (Note 1b)		1,118,755				1,118,755
	412,687,877	9,749,184		(383,034,130)	(29,580,333)	9,822,598
DECREASES IN INVESTMENT:						
Funds to be covered into the U.S. Treasury						24,439,067
Receipts deposited into the U.S. Treasury	416,106,788			24,439,067		416,106,788
Due U.S. Treasury for undeposited receipts		456,513				456,513
Property transferred to the Government of Panama	3,437,013					3,437,013
Property transferred to other U.S. Government agencies	257,955					257,955
Net revenue payable to Government of Panama (Note 1b)		1,118,755				1,118,755
	419,801,756	1,575,268		24,439,067		445,816,091
INVESTMENT AT SEPTEMBER 30, 1985	\$76,901,053	\$286,084,032	\$10,000,000	\$43,357,867	\$24,605,692	\$440,948,644
	(Note 8)					

The accompanying notes are an integral part of this statement.

**Table 4.—Statement of Changes in Financial Position
Fiscal Years Ended September 30, 1986 and 1985**

SOURCE OF FUNDS:	1986	1985
From Operations:		
Revenue	\$424,301,224	\$406,723,379
Less operating expenses:		
Interest on interest-bearing investment	6,786,828	7,713,238
Payments to the Government of Panama ...	76,959,549	72,803,013
Other expenses	338,542,085	325,088,373
Total operating expenses	<u>422,288,462</u>	<u>405,604,624</u>
Net operating revenue (Note 1b).....	2,012,762	1,118,755
Net revenue payable to Government of Panama (Note 1b).....	(2,012,762)	(1,118,755)
Add transactions not requiring outlay of funds:		
Depreciation (Notes 1d and 1e)	22,587,367	18,415,373
Provision for lock overhauls (Note 1i).....	4,141,000	3,741,000
Provision for casualty losses (Note 1j).....	5,200,000	5,200,000
Provision for floating equipment repair (Note 1k).....	2,500,000	2,500,000
Other	2,055,856	4,482,630
	<u>36,484,223</u>	<u>34,339,003</u>
Change in investment of the U.S. Government:		
Interest on interest-bearing investment (Notes 6c and 8)	1,948,529	7,713,238
Receipts deposited into U.S. Treasury.....	(436,961,276)	(416,106,788)
Disbursements from appropriated funds	411,819,260	412,614,464
Net property transfers.....	(1,955,916)	(3,621,554)
Other	(122,763)	460,677
	<u>(25,272,166)</u>	<u>1,060,037</u>
Advances for capital (including transit booking fees) utilized (Notes 1d and 9).....	3,623,694	10,217,914
Total source of funds	<u>14,835,751</u>	<u>45,616,954</u>
APPLICATION OF FUNDS:		
Lock overhauls expenditures	3,717,913	6,339,585
Casualty losses expenditures	5,704,238	3,784,427
Accrued capital expenditures.....	19,853,012	29,212,127
Floating equipment repair expenditures	3,322,565	2,614,397
Total application of funds	<u>32,597,728</u>	<u>41,950,536</u>
INCREASE (DECREASE) IN WORKING CAPITAL ..	<u>\$ (17,761,977)</u>	<u>\$3,666,418</u>
ANALYSIS OF CHANGES IN WORKING CAPITAL:		
Increase (decrease) in current assets:		
Cash.....	\$67,666	\$184,853
Receivables	(2,181,713)	(2,533,763)
Inventories	(6,242,340)	(23,168)
Other	1,468,109	137,938
	<u>(6,888,278)</u>	<u>(2,234,140)</u>
Decrease (increase) in current liabilities:		
Accounts payable	(3,338,382)	(785,297)
Accrued liabilities	(23,659,260)	6,196,586
Other current liabilities.....	16,123,943	489,269
	<u>(10,873,699)</u>	<u>5,900,558</u>
INCREASE (DECREASE) IN WORKING CAPITAL ..	<u>\$ (17,761,977)</u>	<u>\$3,666,418</u>

The accompanying notes are an integral part of this statement.

**Table 5.—Statement of Status of Appropriations
Fiscal Years Ended September 30, 1986 and 1985**

	<i>1986</i>	<i>1985</i>
SOURCE OF APPROPRIATIONS:		
Operating funds:		
Current year operating appropriation	\$418,584,000	\$404,646,000
Appropriation anticipated (indefinite)	<u>\$6,450,000</u>	<u>.....</u>
	<u>425,034,000</u>	<u>404,646,000</u>
Obligated operating funds brought forward:		
Fiscal year 1980	713,275	1,692,534
Fiscal years—Merged	3,687,150	6,412,176
Fiscal year 1983 .....	.....	3,887,554
Fiscal year 1984	3,197,827	34,192,800
Fiscal year 1985	<u>35,759,615</u>	<u>.....</u>
	<u>43,357,867</u>	<u>46,185,064</u>
	<u>468,391,867</u>	<u>450,831,064</u>
Capital funds:		
Current year capital appropriation (no year)	<u>25,500,000</u>	<u>25,200,000</u>
Obligated capital funds brought forward:		
Fiscal year 1980	124,574	159,270
Fiscal years 1981 through 1985	<u>15,107,899</u>	<u>19,633,561</u>
	<u>15,232,473</u>	<u>19,792,831</u>
Unobligated capital funds (no year) brought forward:		
Fiscal year 1980	53,346	87,103
Fiscal years 1981 through 1985	<u>9,319,873</u>	<u>9,106,091</u>
	<u>9,373,219</u>	<u>9,193,194</u>
	<u>50,105,692</u>	<u>54,186,025</u>
Emergency fund (no year)	<u>10,000,000</u>	<u>10,000,000</u>
TOTAL SOURCE OF APPROPRIATIONS	<u>\$528,497,559</u>	<u>\$515,017,089</u>

The accompanying notes are an integral part of this statement.

Statement of Status of Appropriations
Fiscal Years Ended September 30, 1986 and 1985

	1986	1985
APPLICATION OF APPROPRIATIONS:		
Operating funds:		
Expenditures from operating appropriations:		
Fiscal year 1980	\$4,111	\$909,463
Fiscal years—Merged	507,114	4,054,389
Fiscal year 1983		1,642,554
Fiscal year 1984	1,317,197	29,914,041
Fiscal year 1985	31,588,926	346,513,683
Fiscal year 1986	<u>358,663,239</u>	<u>.....</u>
	<u>392,080,587</u>	<u>383,034,130</u>
Obligated operating funds:		
Fiscal year 1980	674,235	713,275
Fiscal years—Merged	7,352,546	1,729,337
Fiscal year 1983		1,957,813
Fiscal year 1984	1,862,745	3,197,827
Fiscal year 1985	5,525,097	35,759,615
Fiscal year 1986	<u>60,361,536</u>	<u>.....</u>
	<u>75,776,159</u>	<u>43,357,867</u>
Unobligated operating funds lapsed	<u>535,121</u>	<u>24,439,067</u>
	<u>468,391,867</u>	<u>450,831,064</u>
Capital funds:		
Expenditures from capital appropriations:		
Fiscal year 1980	126,014	68,453
Fiscal years 1981 through 1985		29,511,880
Fiscal years 1981 through 1986	<u>19,612,659</u>	<u>.....</u>
	<u>19,738,673</u>	<u>29,580,333</u>
Obligated capital funds:		
Fiscal year 1980	20,908	124,574
Fiscal years 1981 through 1985		15,107,899
Fiscal years 1981 through 1986	<u>21,175,748</u>	<u>.....</u>
	<u>21,196,656</u>	<u>15,232,473</u>
Unobligated capital funds (no year):		
Fiscal year 1980	30,997	53,346
Fiscal years 1981 through 1985		9,319,873
Fiscal years 1981 through 1986	<u>9,139,366</u>	<u>.....</u>
	<u>9,170,363</u>	<u>9,373,219</u>
	<u>50,105,692</u>	<u>54,186,025</u>
Unobligated emergency fund (no year)	<u>10,000,000</u>	<u>10,000,000</u>
TOTAL APPLICATION OF APPROPRIATIONS	<u><u>\$528,497,559</u></u>	<u><u>\$515,017,089</u></u>

The accompanying notes are an integral part of this statement.

**Table 6.—Statement of Property, Plant and Equipment
September 30, 1986 and 1985**

	1986		1985		
	Estimated service life	Cost	Depreciation and valuation allowances	Cost	Depreciation and valuation allowances
Titles and treaty rights	40 years	\$14,728,889	\$4,878,945	\$14,728,889	\$4,510,723
Interest during construction .....	.....	50,892,311	50,892,311	50,892,311	50,892,311
Canal excavation, fills and embankments	15-100 years	347,536,452	114,551,412	347,536,452	106,030,626
Canal structures and equipment	4-100 years	288,439,752	138,474,168	267,888,940	135,594,921
Supporting and general facilities	5-100 years	122,268,880	76,515,928	126,766,933	76,474,686
Facilities held for future use	10-100 years	2,827,602	2,381,656	2,858,777	2,450,779
Plant additions in progress .....	.....	24,190,510	.....	35,302,057	.....
Suspended construction projects .....	.....	40,145,798	40,145,798	40,145,798	40,145,797
TOTAL		<u>\$891,030,194</u>	<u>\$427,840,218</u>	<u>\$886,120,157</u>	<u>\$416,099,843</u>

The accompanying notes are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies.

The Comptroller General of the United States approved the Accounting Principles and Standards Statement of the Panama Canal Commission in his letter dated September 14, 1982. A summary of significant accounting policies follows:

a. *Accounting and reporting.* As required by section 1311(a) of the Panama Canal Act of 1979 (Public Law 96-70), hereinafter referred to as the Act, the accounts of the Commission are maintained pursuant to the Accounting and Auditing Act of 1950. This requires that the principles, standards and related requirements be met, as prescribed by the Comptroller General of the United States, after consulting with the Secretary of the Treasury and the Director of the Office of Management and Budget concerning their accounting, financial reporting and budgetary needs. The Accounting and Auditing Act of 1950 also requires that the accounts be maintained on an accrual basis.

b. *Cost recovery.* As required by section 1341(e)(1) of the Act, the application of generally accepted accounting principles to the Panama Canal Commission, a United States Government agency comparable to a rate-regulated public utility, determines the manner in which costs are recognized. The basis for tolls rates is prescribed in section 1602(b) of the Act. This section of the Act, known as the "statutory tolls formula," provides that:

"Tolls shall be prescribed at rates calculated to produce revenues to cover as nearly as practicable all costs of maintaining and operating the Panama Canal, together with the facilities and appurtenances related thereto, including unrecovered costs incurred on or after the effective date of this Act, interest, depreciation, payments to the Republic of Panama pursuant to paragraph 5 of Article III and paragraph 4(a) and (b) of Article XIII of the Panama Canal Treaty of 1977, and capital for plant replacement, expansion, and improvements. Tolls shall not be prescribed at rates calculated to produce revenues sufficient to cover payments to the Republic of Panama pursuant to paragraph 4(c) of Article XIII of the Panama Canal Treaty of 1977."

Under this statutory tolls formula, any unrecovered costs are to be recovered from subsequent revenues. The amount for recovery from subsequent revenues is transferred from Invested Capital to an account within the Other Assets classification. Unrecovered costs are charged back to Invested Capital to the extent subsequent annual revenues exceed annual costs.

c. *Property, plant and equipment.* Property, plant and equipment are recorded at cost, or if acquired from another United States Government

agency, at the value determined by the Director of the Office of Management and Budget. Administrative and other related general expenses are recovered currently and therefore not capitalized. The cost of minor items of property, plant and equipment is charged to expense as incurred.

d. *Advances for capital.* A portion of tolls in excess of depreciation recoveries may be programmed annually by the Board of Directors for plant replacement, expansion, or improvements. Such funds are considered capital advances from Canal users. Upon utilization, these advances are amortized through an offset to depreciation expense in an amount calculated to approximate the depreciation on assets acquired with such advances.

e. *Depreciation.* Property, plant and equipment are depreciated over their estimated service lives at rates computed using a straight-line method with additional annual depreciation, identified as composite, to provide for premature plant retirements.

The recurring costs of dredging the waterway are charged to expense. Non-recurring dredging costs for substantial improvements and betterments to the waterway are considered additions to plant and are capitalized and depreciated over their estimated service lives.

f. *Accounts receivable.* Uncollectible accounts receivable of the Panama Canal Commission are recognized as a reduction in revenue when written off. Any subsequent collections of Commission accounts receivable previously written off are recorded as revenue.

g. *Inventories.* Operating materials and supplies are stated at average cost, plus cost of transportation to the ultimate destination on the Isthmus of Panama. An allowance has been established to reflect the estimated cost of obsolete and excess stock.

h. *Retirement benefits.* Employer payments to the contributory United States Civil Service Retirement System and to the Republic of Panama Social Security System are charged to expense. The Commission has no liability for future payments to employees under these systems.

Non-United States citizen employees who retired from predecessor agencies prior to October 5, 1958, are not covered by the United States Civil Service Retirement System but do receive benefits under a separate annuity plan. Payments made under this annuity plan are recorded as a current year expense. Annual amounts expended were \$1.4 million in fiscal year 1986 and \$1.5 million in fiscal year 1985. The liability of the Commission for future annuity payments to these former employees or their eligible widows is reflected in the balance sheet as retirement benefits to certain former employees of predecessor agencies and an equal amount is recorded as a Deferred charge.

As required by the Act, the Panama Canal Commission is liable for the increase in the unfunded liability of the United States Civil Service Retirement Fund which is attributable to benefits payable from that fund to, or on behalf of, employees and their survivors under the early retirement provisions of the Act. The annual installment to liquidate the increased liability is determined by the Office of Personnel Management.

i. *Reserve for lock overhauls.* A reserve is provided through an annual charge to expense to cover the estimated cost of periodic lock overhauls.

j. *Reserve for casualty losses.* A reserve is provided through an annual charge to expense to cover the estimated cost of marine accidents and other casualty losses.

k. *Reserve for floating equipment repair.* A reserve is provided through an annual charge to expense to cover the estimated cost of repairs to major floating equipment.

l. *Housing use rights.* No monetary value is assigned to the rights granted to the United States Government by the Republic of Panama to use Canal Area housing transferred to the Government of Panama under the terms of the Panama Canal Treaty of 1977. The cost to manage, maintain and provide livability improvements to these quarters is charged to expense. Rental income is included in other revenues.

2. Plant Valuation Allowances.

At July 1, 1951, certain valuation allowances for property, plant and equipment transferred from the Panama Canal (agency) to the Panama Canal Company and the Canal Zone Government were established, to reduce to usable value the costs of the assets transferred. At October 1, 1979, such valuation allowances as were applicable to the assets transferred from the Panama Canal Company and the Canal Zone Government to the Panama Canal Commission were carried forward and are comprised of: (a) \$4.7 million at September 30, 1986, and \$4.8 million at September 30, 1985, to reduce to usable value the cost of property, plant and equipment transferred; (b) \$50.9 million at September 30, 1986, and 1985, to offset interest costs imputed for the original Canal construction period; and (c) \$42.3 million at September 30, 1986, and \$42.5 million at September 30, 1985, to offset the cost of defense facilities and suspended construction projects, the latter being principally the partial construction of a third set of locks abandoned in the early part of World War II.

Property, plant and equipment offset by valuation allowances, when fully or partially reactivated, are reinstated by a reduction in the valuation allowance and by an increase to the non-interest-bearing investment of the United States Government in proportion to the value to the Commission of the reactivated asset.

3. Depreciation as a Percentage of Average Cost of Plant.

The provision for depreciation, expressed as a percentage of average cost of depreciable plant exclusive of valuation allowances, was 3.03% for fiscal year 1986 and 2.53% for fiscal year 1985.

4. Cash and Fund Balances.

As of September 30, 1986, the cash and fund balances totaled \$117,985,850. Of this total, \$116,143,178 represents current unexpended appropriated funds for operations, capital and the emergency fund, and \$1,842,672 represents postal and trust funds. These funds are deposited: \$111,480,204 in the United States Treasury, \$2,209,950 in commercial banks and \$4,295,696 on hand.

As of September 30, 1985, the cash and fund balances totaled \$79,738,565. Of this total, \$77,963,559 represented unexpended appropriated funds for operations, capital and the emergency fund, and \$1,775,006 represented postal and trust funds. These funds were deposited: \$74,572,119 in the United States Treasury, \$1,509,718 in commercial banks and \$3,656,728 on hand.

The unexpended appropriated funds for operations are limited to paying operating obligations incurred but not yet liquidated. The unexpended appropriated funds for capital are limited to paying for the acquisition or construction of property, plant and equipment.

The emergency fund represents the amount on deposit in the United States Treasury which is to be used “. . . to defray emergency expenditures and to insure the continuous efficient and safe operation of the Panama Canal when funds appropriated for the operation and maintenance of the Canal prove insufficient for such purposes”

The postal fund consists of outstanding money orders, postal savings and interest accrued thereon. This fund will remain available until liquidated. The trust fund primarily includes deposits made by customers for future tolls and other service payments.

5. Panama Canal Commission Fund.

The Panama Canal Commission Fund as established by the Panama Canal Act of 1979 (the Act) is made up of receipts deposited in the United States Treasury less appropriation warrants issued during the fiscal year. The balance in this account, \$167.7 million as of September 30, 1986, and \$180.8 million as of September 30, 1985, is available for future appropriations.

Section 1302 of the Act provides that all appropriations necessary to operate the Panama Canal shall be issued from the Panama Canal Commission Fund. The appropriations for fiscal year 1980 were issued to the Commission from the General Fund of the United States Treasury. The status of the amount still owed to the General Fund of the United States Treasury for fiscal year 1980 is as follows:

	<i>Millions of Dollars</i>	
Operating Appropriation	\$427.2	
Capital Appropriation	<u>36.6</u>	\$463.8
Repaid to General Fund (07/81)	(350.0)	
Repaid to General Fund (12/82)	<u>(28.2)</u>	<u>(378.2)</u>
Amount owed General Fund of U.S. Treasury as of September 30, 1986		<u><u>\$ 85.6</u></u>

6. Accounting Changes.

a. During fiscal year 1985 the Commission virtually eliminated transfers of costs from performers of services to requesters of these services to simplify and streamline accounting for costs. Additionally, in fiscal year 1985, the operating expenses for storehouse, transportation, sanitation and grounds management services and the employee fitness program were reclassified in order to reflect more closely the Commission's functional alignment of costs.

b. In fiscal year 1986, the Commission discontinued reporting minor plant items as fully depreciated assets, because all minor items are now and have been since 1973, charged to expense at the time of purchase. Continued reporting as fully depreciated assets and expensing at time of purchase is an unnecessary double reporting. For comparability, fiscal year 1985 minor plant items were also taken out from the fixed assets.

c. Effective January 1, 1986, the Commission implemented a change in the treatment of interest required by enactment of Public Law 99-195 on December 23, 1985 which amended, prospectively, the interest provision of the Panama Canal Act of 1979. Under the Act as amended, interest on the United States investment in the Panama Canal will be deposited into the General Fund of the United States Treasury as miscellaneous receipts rather than into the Panama Canal Commission Fund. Accordingly, as of January 1, 1986, interest will no longer reduce the investment base. Interest for fiscal year 1986 amounted to \$6,786,828 of which \$4,838,299 was deposited into the General Fund of the United States Treasury in accordance with the Act, as amended.

d. Public Law 99-209, dated December 23, 1985, amended the Act to authorize the Commission to adjust and pay damages from marine accidents which occurred outside the locks where the amount of the claim exceeded \$120,000. The authority under Public Law 99-209 is retroactive to October 1, 1979. Prior to this amendment, the Commission's authority was limited to those claims for accidents which occurred (i) prior to October 1, 1979, (ii) within the locks after September 30, 1979, or (iii) outside the locks where the claim was \$120,000 or less. Claims exceeding \$120,000 for accidents occurring outside the locks were, prior to the amendment, required to be submitted to Congress for approval and were booked as non-fund liabilities. Beginning in fiscal year 1986, the Commission eliminated the non-fund category of marine accident liabilities and recognized all these liabilities as funded.

7. Other Receivables.

Other receivables represent services provided in connection with marine accidents for which the vessel is considered to be responsible awaiting final settlement. This amount is also included in the computation of estimated liabilities established for marine accident claims.

8. Interest-Bearing investment of the United States Government.

The interest-bearing investment of the United States Government in the Panama Canal is determined based on section 1603(a) of the Act. The interest-bearing investment of the United States Government at September 30, 1986, and September 30, 1985, was determined as follows:

	<i>Millions of Dollars</i>	
Investment at September 30, 1984		\$84.0
Fiscal year 1985 transactions:		
Disbursements	\$412.6	
Receipts	(416.1)	
Net property transfers	<u>(3.6)</u>	
Net change		<u>(7.1)</u>
Investment at September 30, 1985		76.9
Fiscal year 1986 transactions:		
Disbursements	411.9	
Receipts	(437.0)	
Net property transfers	<u>(2.0)</u>	
Net change		<u>(27.1)</u>
Investment at September 30, 1986		<u>\$49.8</u>

9. Advances for Capital—Transit Booking System Fees.

With approval of the Board of Directors, a system was activated in fiscal year 1983 whereby shippers, for a fee, can make an advance reservation for vessel transit. This system generated funds of \$7.4 million in fiscal year 1986 and \$5.8 million in fiscal year 1985. Such funds are considered capital advances from Canal users. By direction of the Board of Directors, these fees are set aside for capital improvements.

10. Contingent Liabilities and Commitments.

In addition to recorded liabilities, the estimated maximum contingent liability which could result from pending claims and lawsuits was \$14.1 million at September 30, 1986, and \$3.4 million at September 30, 1985. In the opinion of management and Commission counsel, these pending claims and lawsuits will be resolved with no material adverse effect on the financial condition of the agency.

Commitments under uncompleted construction contracts and unfilled purchase orders amounted to \$39.9 million at September 30, 1986, and \$25.9 million at September 30, 1985. Of these amounts \$0.1 million in unfilled purchase orders were prepaid as of September 30, 1986, and \$0.2 million at September 30, 1985. In addition, the Panama Canal Commission is liable for an indeterminable amount with respect to death and disability payments under the Federal Employees' Compensation Act.

Cash and negotiable securities of a kind acceptable by the United States Government in the amount of \$8.9 million were held by United States depositories designated by the Panama Canal Commission at September 30, 1986, and \$7.3 million at September 30, 1985, to guarantee payment by third parties of their obligations.

The Panama Canal Treaty of 1977, Article XIII, paragraph 4(c), provides that an annual amount of up to \$10 million per year be paid to the Government of Panama out of operating revenues to the extent that such revenues exceed expenditures. Payment to the Government of Panama is subject to the limitations set forth in section 1341(e) of the Act. In the event operating revenues in any year do not produce a surplus sufficient to cover this payment, the unpaid balance shall be paid from operating surpluses in future years up to the amount available from these surpluses. As of

September 30, 1986, the balance contingently payable to the Government of Panama amounts to \$61.1 million. As of September 30, 1985, the balance contingently payable to the Government of Panama amounted to \$53.1 million.

11. Treaty Impact.

On September 7, 1977, the United States of America and the Republic of Panama signed the Panama Canal Treaty of 1977. The Treaty provided for the establishment of the Panama Canal Commission on October 1, 1979, to assume certain operational responsibilities for the Canal until December 31, 1999. When the Treaty terminates on December 31, 1999, the Republic of Panama shall assume total responsibility for the management, operation, and maintenance of the Panama Canal, which shall be turned over in operating condition and free of liens and debts, except as the two Parties may otherwise agree. The effects of these long-range requirements are not considered in the financial statements.

Chapter VI

STATISTICAL TABLES

Shipping Statistics

Table 1.—Panama Canal Traffic—Fiscal Years 1977 Through 1986

Fiscal year	Total traffic			Traffic assessed tolls on net tonnage basis		Traffic assessed tolls on displacement tonnage basis	
	Number of transits	Tolls	Long tons of cargo	Number of transits	Panama Canal net tonnage	Number of transits	Displacement tonnage
OCEANGOING COMMERCIAL TRAFFIC ¹							
1977	11,896	163,826,571	122,978,785	11,868	133,353,132	28	108,642
1978	12,677	194,773,111	142,518,288	12,647	156,907,260	30	109,798
1979	12,935	208,376,741	154,110,866	12,902	167,470,601	33	136,600
1980	13,507	291,838,590	167,214,935	13,476	182,063,175	31	137,593
1981	13,884	301,762,600	171,221,762	13,847	188,656,491	37	111,418
1982	14,009	323,958,366	185,452,332	13,976	202,884,207	33	129,684
1983	11,707	285,983,805	145,590,759	11,668	169,503,918	39	132,431
1984	11,230	286,677,844	140,470,818	11,199	162,335,342	31	116,335
1985	11,515	298,497,802	138,643,243	11,498	168,941,997	17	86,623
1986	11,925	321,073,748	139,945,181	11,901	182,750,841	24	73,631
OCEANGOING U.S. GOVERNMENT TRAFFIC ¹							
1977	88	805,983	212,677	59	577,483	29	165,148
1978	103	889,093	291,115	70	589,085	33	214,145
1979	111	1,054,169	357,482	80	726,755	31	207,640
1980	101	1,515,326	396,481	73	844,748	28	217,055
1981	89	1,241,442	301,776	68	705,936	21	143,121
1982	110	1,546,746	285,451	67	794,282	43	309,206
1983	125	1,721,925	354,873	77	812,840	48	350,699
1984	137	2,388,272	329,607	88	1,131,865	49	410,682
1985	129	2,223,938	259,524	85	1,148,311	44	248,967
1986	85	1,553,037	176,853	53	708,616	32	309,161
FREE OCEANGOING TRAFFIC ^{1 2}							
1977	13		380	8	21,252	5	10,380
1978	5			4	3,789	1	1,100
1979	10		1	8	4,527	2	2,194
1980	6			3	1,686	3	4,810
1981	11			4	2,248	7	8,544
1982	23			9	5,010	14	21,903
1983	14		2,504	9	9,119	5	5,986
1984	17			4	2,224	13	21,025
1985	10		20	4	2,731	6	8,771
1986	13			1	556	12	20,759
TOTAL OCEANGOING TRAFFIC ¹							
1977	11,997	164,632,554	123,191,842	11,935	133,951,867	62	284,170
1978	12,785	195,662,204	142,809,403	12,721	157,500,134	64	325,043
1979	13,056	209,430,910	154,468,349	12,990	168,201,883	66	346,434
1980	13,614	293,353,916	167,611,416	13,552	182,909,609	62	359,458
1981	13,984	303,004,042	171,523,538	13,919	189,364,675	65	263,083
1982	14,142	325,505,112	185,737,783	14,052	203,683,499	90	460,793
1983	11,846	287,705,730	145,948,136	11,754	170,325,877	92	489,116
1984	11,384	289,066,116	140,800,425	11,291	163,469,431	93	548,042
1985	11,654	300,721,740	138,902,787	11,587	170,093,039	67	344,361
1986	12,023	322,626,785	140,122,034	11,955	183,460,013	68	403,551

Table 1.—Panama Canal Traffic—Fiscal Years 1977 Through 1986
(Continued)

Fiscal year	Total traffic			Traffic assessed tolls on net tonnage basis		Traffic assessed tolls on displacement tonnage basis	
	Number of transits ^a	Tolls	Long tons of cargo	Number of transits	Panama Canal net tonnage	Number of transits	Displacement tonnage
SMALL COMMERCIAL TRAFFIC³							
1977	759	39,960	2,820	751	48,717	8	1,108
1978	792	63,526	6,962	785	57,827	7	1,040
1979	936	76,591	7,718	934	69,229	2	94
1980	788	74,898	787	787	52,052	1	57
1981	791	65,604	1,355	788	44,962	3	279
1982	830	73,228	928	826	50,399	4	315
1983	810	73,887	669	810	48,033	..	.....
1984	802	76,921	652	800	48,008	2	145
1985	793	73,710	468	792	45,694	1	110
1986	912	89,577	3,704	904	55,249	8	470
SMALL U.S. GOVERNMENT TRAFFIC³							
1977	277	12,851	.....	22	953	255	16,769
1978	187	9,504	8	25	1,446	162	10,742
1979	315	14,375	9	48	2,865	267	15,519
1980	276	15,129	.....	29	1,357	247	14,313
1981	225	10,712	2	16	751	209	10,431
1982	241	10,757	.....	12	415	229	10,973
1983	242	11,406	5	12	332	230	11,177
1984	241	11,998	.....	8	336	233	11,282
1985	273	12,464	.....	15	773	258	11,113
1986	316	17,840	.....	20	627	296	16,407
SMALL FREE TRAFFIC^{2 3}							
1977	54	.....	10	50	2,840	4	466
1978	44	.....	20	42	2,986	2	72
1979	55	.....	3	47	2,160	8	632
1980	47	.....	.....	41	2,317	6	560
1981	50	.....	.....	41	2,613	9	1,012
1982	58	.....	70	40	2,803	18	1,172
1983	56	.....	8	39	2,321	17	2,010
1984	96	.....	59	86	4,637	10	1,360
1985	46	.....	3	32	1,721	14	1,103
1986	27	.....	80	20	1,371	7	674
TOTAL PANAMA CANAL TRAFFIC							
1977	13,087	164,685,365	123,194,672	12,758	134,004,377	329	302,513
1978	13,808	195,735,234	142,816,393	13,573	157,562,393	235	336,897
1979	14,362	209,521,876	154,476,079	14,019	168,276,137	343	362,679
1980	14,725	293,443,943	167,612,203	14,409	182,965,335	316	374,388
1981	15,050	303,080,358	171,524,895	14,764	189,413,001	286	274,805
1982	15,271	325,589,097	185,738,781	14,930	203,737,116	341	473,253
1983	12,954	287,791,023	145,948,818	12,615	170,376,563	339	502,303
1984	12,523	289,155,035	140,801,136	12,185	163,522,412	338	560,829
1985	12,766	300,807,914	138,903,258	12,426	170,141,227	340	356,687
1986	13,278	322,734,202	140,125,818	12,899	183,517,260	379	421,102

¹ Oceangoing traffic includes ships of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on displacement basis (dredges, warships, etc.).

² Free traffic includes ships of the Colombian and Panamanian Governments and ships transiting for repair by the Commission.

³ Includes vessels under 300 net tons, Panama Canal measurement (or under 500 displacement tons for vessels assessed on displacement tonnage).

Table 2.—Oceangoing Commercial Traffic by Months—Fiscal Years 1986 and 1985

	Number of Transits		Panama Canal Net Tonnage		Long Tons of Cargo		Tolls	
	1985-86	1984-85	1985-86	1984-85	1985-86	1984-85	1985-86	1984-85
							\$	\$
October	1,023	968	15,755,054	14,116,692	12,421,246	12,071,648	27,728,150	25,040,510
November	999	945	15,500,886	13,641,613	12,068,720	11,503,330	27,200,683	24,142,697
December	973	939	15,070,554	14,017,821	11,601,750	11,758,781	26,657,676	24,888,529
January	1,019	929	15,310,085	13,868,162	11,667,355	11,202,166	26,946,687	24,392,475
February	879	881	13,048,320	13,093,376	9,867,014	10,818,565	22,985,849	23,231,308
March	1,057	1,009	16,149,153	14,113,353	12,201,051	11,599,809	28,271,106	24,913,356
April	1,026	971	15,889,721	13,867,114	12,500,141	11,566,582	27,981,933	24,556,398
May	1,067	1,032	16,713,740	15,017,871	11,811,885	11,586,452	29,118,514	26,471,059
June	972	971	14,976,048	13,946,877	11,441,598	11,029,923	26,329,749	24,651,356
July	1,017	995	15,653,076	14,989,105	11,843,699	12,297,190	27,428,194	26,362,702
August	990	947	15,167,021	14,415,988	11,425,871	11,524,275	26,616,812	25,364,335
September	903	928	13,517,183	13,854,025	11,094,851	11,684,522	23,808,395	24,483,076
Total	11,925	11,515	182,750,841	168,941,997	139,945,181	138,643,243	\$321,073,748	\$298,497,802
Average per month	994	960	15,229,237	14,078,500	11,662,098	11,553,604	\$26,756,146	\$24,874,817

NOTE: The above includes only commercial vessels of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on a displacement tonnage basis. Statistics on these vessels, except as relates to displacement tonnage, have been included in the table above.

Table 3.—Canal Traffic ¹ by Flag of Vessel—Fiscal Year 1986

Flag	Number of transits	Measured tonnage		Tolls	Long tons of cargo
		Panama Canal net	Registered gross ²		
Argentina	3	5,740	7,134	\$12,808	2,016
Australia	3	76,045	93,934	139,162	55,383
Bahamas	135	1,597,722	1,862,109	2,851,601	918,284
Belgium	94	1,258,701	1,391,787	2,242,633	1,228,630
Bermuda	11	198,923	238,925	343,906	169,575
Brazil	29	455,486	560,518	833,539	507,098
Bulgaria	7	73,983	89,595	129,041	50,846
Canada	2	3,057	3,344	4,463	.....
Cayman Islands	38	405,440	318,942	724,574	180,232
Chile	104	1,064,713	1,223,681	1,883,583	920,458
Colombia	192	2,185,921	2,264,662	3,898,783	1,177,009
Costa Rica	4	3,788	3,968	6,932	1,566
Cuba	180	1,056,292	1,258,334	1,907,878	897,590
Cyprus	180	2,118,596	2,315,927	3,761,075	2,017,516
Czechoslovakia	4	38,276	46,738	70,045	55,777
Denmark	243	4,954,107	6,222,172	8,893,693	3,162,299
East Germany	53	328,616	348,383	575,681	60,406
Ecuador	533	4,426,079	5,105,687	7,693,997	2,961,032
El Salvador	3	3,429	3,438	5,852	600
Faroese	4	9,897	4,200	18,112	5,158
Finland	4	27,437	31,386	49,875	21,491
France	62	1,080,768	903,704	1,965,836	678,177
Greece	623	10,065,897	11,466,899	17,773,340	12,249,579
Guatemala	2	7,008	8,256	11,528	2,050
Honduras	7	12,400	15,586	20,802	1,258
Hong Kong	24	409,247	489,551	726,461	437,238
India	21	385,347	467,478	679,778	460,680
Indonesia	3	20,403	24,394	31,533	.....
Israel	69	1,391,243	1,838,363	2,545,975	971,734
Italy	64	899,561	1,118,925	1,637,029	663,018
Japan	1,189	25,027,860	18,552,932	42,490,795	8,179,192
Jordan	1	10,301	12,974	18,851	18,985
Kuwait	10	120,629	155,152	216,258	64,525
Liberia	1,270	26,018,064	24,855,194	45,517,196	23,727,173
Malaysia	10	211,751	247,568	387,504	327,427
Malta	17	264,988	312,841	484,928	370,780
Mauritania	5	52,189	66,369	95,285	35,573
Mexico	118	2,273,774	2,781,031	3,815,616	1,693,082
Morocco	10	103,584	118,420	186,609	107,809
Netherlands	310	2,850,170	3,117,094	5,066,313	1,852,494
New Zealand	2	37,839	46,319	69,245	11,725
Nicaragua	3	23,373	20,757	42,773	10,596
Nigeria	1	9,924	13,197	18,161	2,000
Norway	264	4,740,863	4,876,239	8,387,025	3,143,991
Panama	2,164	33,387,031	32,960,842	58,493,782	26,910,935
People's Republic of China	110	1,966,924	2,351,587	3,534,621	1,845,108
Peru	129	1,023,229	1,106,916	1,849,678	1,013,947
Philippines	267	4,683,063	4,826,260	8,296,061	5,376,452
Poland	105	737,087	822,088	1,325,791	411,119
Portugal	18	131,194	170,156	231,565	75,053
St. Vincent	5	42,479	49,058	74,657	44,870
Samoa	3	27,597	31,650	50,503	20,804
Saudi Arabia	2	13,262	12,164	21,816	1,675
Singapore	219	4,874,782	4,243,925	8,547,242	3,673,932
Somali Republic	2	18,630	21,086	34,093	16,339
South Korea	147	2,326,519	2,701,381	4,185,628	2,816,485
Spain	118	706,784	750,584	1,283,881	515,018
Sri Lanka	20	285,117	364,698	515,118	248,544
Sweden	94	2,634,998	2,130,896	4,713,425	660,871
Switzerland	72	697,808	827,315	1,270,381	315,357
Taiwan	185	4,598,039	5,582,140	8,353,160	4,011,282
Thailand	1	9,536	12,649	17,451	14,781
Turkey	4	37,044	47,198	62,927	32,222
United Arab Emirates	2	38,038	49,398	62,573	32,145
United Kingdom	484	8,747,181	10,476,989	15,772,189	8,198,814
United States	787	10,003,658	10,524,416	17,476,058	7,871,143
Uruguay	2	2,804	2,880	4,613	1,346
U. S. S. R.	575	5,123,860	5,770,374	8,829,224	3,076,550
Vanuatu	15	165,363	136,151	295,016	109,363
Venezuela	137	352,508	406,341	636,741	259,687
West Germany	279	3,094,126	3,544,830	5,606,484	2,199,523
Yugoslavia	68	712,749	843,403	1,292,997	789,764
Total	11,925	182,750,841	185,671,482	\$321,073,748	139,945,181

¹ Includes only commercial vessels of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on displacement basis (dredges, warships, etc.).

² Includes 9 transits where no registered tonnage was reported.

Table 3.—Canal Traffic¹ by Flag of Vessel—Fiscal Year 1986—Continued

NOTE.—In Canal traffic statistics, foreign naval vessels such as transports, supply ships, tankers, etc., with a measurement of 300 net tons (Panama Canal measurement) and over, and vessels of war, dredges, etc., with a displacement of 500 tons and over, are classified as oceangoing commercial vessels. Statistics on these vessels, except as related to displacement tonnage, have been included in the table above. As displacement tonnage cannot be combined with net tonnage, the following table shows statistics covering 24 vessels which transited the Canal during fiscal year 1986 and paid tolls on displacement tonnage.

<i>Flag</i>	<i>Type</i>	<i>Number of transits</i>	<i>Displacement tonnage</i>	<i>Tolls</i>
Argentina	Naval	1	3,300	\$3,366
Chile	Naval	1	3,317	3,383
Ecuador	Naval	2	2,206	2,250
Indonesia	Naval	2	1,710	1,744
Japan	Naval	4	15,492	15,802
Mexico	Naval	2	3,496	3,566
Panama	Dredge	1	4,055	4,136
United Kingdom	Naval	8	27,965	28,524
United States	Dredge	3	<u>12,090</u>	<u>12,332</u>
Total		24	73,631	\$75,104

Statistics compiled by Office of Executive Planning.

Table 4.—Classification of Canal Traffic¹ by Type of Vessel—Fiscal Year 1986

Type of Vessel	Laden			Ballast			Grand Total
	Atlantic to Pacific	Pacific to Atlantic	Total	Atlantic to Pacific	Pacific to Atlantic	Total	
CARGO AND CARGO/PASSENGER SHIPS:							
Bulk Carriers:							
Number of transits	1,538	1,710	3,248	617	72	689	3,937
Panama Canal net tonnage (thousands)	31,369	36,810	68,179	19,390	896	20,286	88,465
Tolls (thousands of dollars)	\$57,405	\$67,363	\$124,768	\$28,310	\$1,308	\$29,618	\$154,386
Cargo (thousands of long tons)	43,048	29,708	72,756	.....	.....	.....	72,756
Container Cargo Ships:							
Number of transits	767	894	1,661	19	10	29	1,690
Panama Canal net tonnage (thousands)	13,808	19,130	32,938	301	76	377	33,315
Tolls (thousands of dollars)	\$25,269	\$35,009	\$60,278	\$440	\$111	\$551	\$60,829
Cargo (thousands of long tons)	9,416	12,050	21,466	.....	.....	.....	21,466
General Cargo Ships:							
Number of transits	809	843	1,652	111	86	197	1,849
Panama Canal net tonnage (thousands)	6,216	6,633	12,849	797	353	1,150	13,999
Tolls (thousands of dollars)	\$11,376	\$12,139	\$23,515	\$1,164	\$515	1,679	\$25,194
Cargo (thousands of long tons)	4,591	5,007	9,598	.....	.....	.....	9,598
Passenger Ships:²							
Number of transits	131	81	212	4	3	7	219
Panama Canal net tonnage (thousands)	2,379	1,366	3,745	21	19	40	3,785
Tolls (thousands of dollars)	\$4,354	\$2,501	\$6,855	\$31	\$28	\$59	\$6,914
Cargo (thousands of long tons) .....	.....	.....	1	.....	.....	.....	1
Refrigerated Cargo Ships:							
Number of transits	559	911	1,470	466	70	536	2,006
Panama Canal net tonnage (thousands)	2,520	4,925	7,445	2,636	278	2,914	10,359
Tolls (thousands of dollars)	\$4,611	\$9,013	\$13,624	\$3,848	\$405	\$4,253	\$17,877
Cargo (thousands of long tons)	572	2,412	2,984	.....	.....	.....	2,984
Tank Ships:							
Number of transits	649	568	1,217	306	266	572	1,789
Panama Canal net tonnage (thousands)	9,675	10,328	20,003	6,948	4,112	11,060	31,063
Tolls (thousands of dollars)	\$17,699	\$18,900	\$36,599	\$10,144	\$6,004	\$16,148	\$52,747
Cargo (thousands of long tons)	14,621	17,622	32,243	.....	.....	.....	32,243

**Table 5.—Laden and Ballast Traffic by Flag of Vessel
Fiscal Year 1986**

	<i>Laden</i>			<i>Ballast</i>		
	<i>Num- ber of transits</i>	<i>Panama Canal net tonnage</i>	<i>Tolls</i>	<i>Num- ber of transits</i>	<i>Panama Canal net tonnage</i>	<i>Tolls</i>
Argentina	1	2,870	\$ 5,252	1	2,870	\$ 4,190
Australia	3	76,045	139,162	.....	.....	.....
Bahamas	112	1,402,505	2,566,584	23	195,217	285,017
Belgium	73	1,094,404	2,002,759	21	164,297	239,874
Bermuda	8	144,536	264,501	3	54,387	79,405
Brazil	29	455,486	833,539	.....	.....	.....
Bulgaria	5	56,826	103,992	2	17,157	25,049
Canada .....	.....	.....	.....	2	3,057	4,463
Cayman Islands	34	358,464	655,989	4	46,976	68,585
Chile	81	880,320	1,610,986	22	184,393	269,214
Colombia	156	1,911,723	3,498,454	36	274,198	400,329
Costa Rica	4	3,788	6,932	.....	.....	.....
Cuba	159	988,356	1,808,692	21	67,936	99,187
Cyprus	156	1,805,203	3,303,521	24	313,393	457,554
Czechoslovakia	4	38,276	70,045	.....	.....	.....
Denmark	208	4,488,370	8,213,717	35	465,737	679,976
East Germany	40	259,194	474,325	13	69,422	101,356
Ecuador	422	3,323,436	6,081,888	109	1,102,643	1,609,859
El Salvador	2	2,286	4,183	1	1,143	1,669
Faroes	4	9,897	18,112	.....	.....	.....
Finland	3	26,532	48,554	1	905	1,321
France	56	1,048,419	1,918,607	6	32,349	47,230
Greece	525	8,316,568	15,219,319	98	1,749,329	2,554,020
Guatemala	1	3,504	6,412	1	3,504	5,116
Honduras	5	7,292	13,344	2	5,108	7,458
Hong Kong	18	348,541	637,830	6	60,706	88,631
India	17	316,680	579,524	4	68,667	100,254
Indonesia .....	.....	.....	.....	1	20,403	29,788
Israel	69	1,391,243	2,545,975	.....	.....	.....
Italy	61	874,783	1,600,853	3	24,778	36,176
Japan	845	16,038,697	29,350,815	340	8,989,163	13,124,178
Jordan	1	10,301	18,851	.....	.....	.....
Kuwait	9	108,486	198,529	1	12,143	17,729
Liberia	1,034	20,353,574	37,248,057	236	5,664,490	8,270,155
Malaysia	10	211,751	387,504	.....	.....	.....
Malta	17	264,988	484,928	.....	.....	.....
Mauritania	4	51,592	94,413	1	597	872
Mexico	67	1,330,650	2,435,090	49	943,124	1,376,961
Morocco	8	95,612	174,970	2	7,972	11,639
Netherlands	239	2,446,120	4,476,400	71	404,050	589,913
New Zealand	2	37,839	69,245	.....	.....	.....
Nicaragua	3	23,373	42,773	.....	.....	.....
Nigeria	1	9,924	18,161	.....	.....	.....
Norway	215	3,960,446	7,247,616	49	780,417	1,139,409
Panama	1,779	26,336,080	48,195,258	384	7,050,951	10,294,388
People's Republic of China	99	1,791,655	3,278,729	11	175,269	255,893
Peru	124	961,523	1,759,587	5	61,706	90,091
Philippines	232	3,942,673	7,215,092	35	740,390	1,080,969
Poland	92	674,713	1,234,725	13	62,374	91,066
Portugal	14	108,168	197,947	4	23,026	33,618
Saint Vincent	4	34,155	62,504	1	8,324	12,153
Samoa	3	27,597	50,503	.....	.....	.....
Saudi Arabia	1	6,631	12,135	1	6,631	9,681
Singapore	185	3,865,028	7,073,001	34	1,009,754	1,474,241
Somali Republic	2	18,630	34,093	.....	.....	.....
South Korea	137	2,132,189	3,901,906	10	194,330	283,722
Spain	112	681,017	1,246,261	6	25,767	37,620
Sri Lanka	18	267,155	488,894	2	17,962	26,225
Sweden	81	2,341,428	4,284,813	13	293,570	428,612
Switzerland	70	679,950	1,244,308	2	17,858	26,073
Taiwan	180	4,432,495	8,111,466	5	165,544	241,694
Thailand	1	9,536	17,451	.....	.....	.....
Turkey	3	23,899	43,735	1	13,145	19,192
United Arab Emirates	1	19,019	34,805	1	19,019	27,768
United Kingdom	424	8,034,542	14,703,212	52	712,639	1,040,453
United States	586	7,725,365	14,137,418	198	2,278,293	3,326,308
Uruguay	1	1,402	2,566	1	1,402	2,047
U.S.S.R.	426	3,644,292	6,669,055	149	1,479,568	2,160,169
Vanuatu	10	144,826	265,032	5	20,537	29,984
Venezuela	119	329,944	603,798	18	22,564	32,943
West Germany	267	2,943,406	5,386,433	12	150,720	220,051
Yugoslavia	64	682,118	1,248,276	4	30,631	44,721
Total	9,746	146,438,336	\$267,982,387	2,155	36,312,505	\$53,016,257

Above table involves only commercial vessels of 300 net tons or over, Panama Canal measurement.

Table 6.—Segregation of Transits¹ by Registered Gross Tonnage—Fiscal Year 1986

Flag	Under 2,000	2,000 to 3,999		4,000 to 5,999		6,000 to 7,999		8,000 to 9,999		10,000 to 14,999		15,000 to 19,999		20,000 to 29,999		30,000 to 39,999		40,000 and over		Total ²	Registered gross tonnage	Average gross tonnage per vessel
Argentina.....		2																		2	7,134	3,567
Australia.....															2					3	93,934	31,311
Bahamas.....		17	5	19	18	17	17	17	17	17	17	20	39	39	39				135	1,862,109	13,793	
Belgium.....		1		58								4	18	18	18	12			94	1,391,787	14,806	
Bermuda.....												2	2	2	2	4			11	238,925	21,720	
Brazil.....												14	4	4	4			6	29	560,518	19,328	
Bulgaria.....												4	1	1	1			7	89,395	12,799		
Canada.....	2																		2	1,672	1,672	
Cayman Islands.....	6	4	19									2		7					38	318,942	8,393	
Chile.....	1	3																	103	1,223,681	11,880	
Colombia.....	18	24	20									81	5	40				190	2,264,662	11,919		
Costa Rica.....	4																	4	3,968	992		
Cuba.....	4	75	2	4	47	44	44	44	44	44	44	4						180	1,258,334	6,991		
Cyprus.....	20	3	18	12	35	33	33	33	33	33	33	21	27	27	10			180	2,315,927	12,866		
Czechoslovakia.....																			4	46,738	11,684	
Denmark.....	52	7	1									2	3	1	1			243	6,222,172	25,606		
East Germany.....		6	15	18	12	12	12	12	12	12	12	5	16	16	38			53	348,383	6,573		
Ecuador.....	1	40	48	198	63	85	85	85	85	85	85	68	28					521	5,103,819	9,612		
El Salvador.....	3																		3	3,438	1,146	
Faeroes.....	4																		4	4,200	1,050	
Finland.....	2																		4	31,386	7,846	
France.....	5	6										21	16	11				61	903,704	14,815		
Greece.....	30	1	12	12	66	163	163	163	163	163	163	114	91					623	11,466,899	18,406		
Guam.....																			2	8,256	4,128	
Honduras.....	5																		7	15,586	2,227	
Hong Kong.....	1											4	2	4	5			24	489,551	20,398		
India.....													9	7	1			21	467,478	22,261		
Indonesia.....																			21	24,394	24,394	
Israel.....																			1	1,838,363	26,643	
Italy.....	1											8	24	20				69	1,118,925	17,483		
Japan.....	163	60	60	110	58	140	140	140	140	140	140	225	204					1,185	18,552,932	15,656		
Jordan.....																			1	12,974	12,974	
Kuwait.....																			10	155,152	15,515	
Liberia.....	3	9	38	65	112	233	233	233	233	233	233	292	262					1,270	24,855,194	19,571		

Table 7.—Principal Commodities Shipped Through Canal by Fiscal Years

Commodity	South Atlantic to Pacific		North Pacific to Atlantic	
	1984	1985	1985	1984
Canned and Refrigerated Foods.....	565	459	3,240	3,202
Canned Foods.....	110	73	127	182
Fish.....	2	3	28	52
Fruit.....	24	7	31	57
Milk.....	68	48	50	55
Other and unclassified.....	16	15	18	17
Refrigerated Foods.....	455	386	3,113	3,020
Bananas.....	7	1,000	883
Dairy Products.....	6	7	38	72
Fish.....	148	113	691	909
Fruit, excluding bananas.....	115	34	667	537
Meat.....	6	7	35	37
Other and unclassified.....	171	224	682	581
Chemicals and Petroleum Chemicals.....	4,180	3,855	922	1,154
Caustic soda.....	927	714	5
Chemicals, unclassified.....	2,376	2,305	855	967
Petroleum Chemicals, miscellaneous.....	877	837	68	182
Coal and Coke (excluding petroleum coke).....	8,115	8,553	2,672	2,929
Grains.....	25,089	20,843	2,521	2,668
Barley.....	16	55	579	421
Corn.....	9,490	8,132	23	60
Oats.....	9	38	1	1
Rice.....	117	93	345	516
Sorghum.....	1,322	2,269	25
Soybeans.....	6,837	6,822	8	10
Wheat.....	7,213	3,742	1,464	1,656
Other and unclassified.....	84	133	75	4
Lumber and Products.....	614	582	6,156	5,644
Boards and planks.....	12	11	3,406	3,102
Plywood, veneers, composition board.....	14	21	787	802
Pulpwood.....	559	514	1,649	1,472
Other and unclassified.....	30	37	314	268
Total.....	4,180	3,855	922	1,154
Total.....	927	714	5
Total.....	2,376	2,305	855	967
Total.....	877	837	68	182
Total.....	8,115	8,553	2,672	2,929
Total.....	25,089	20,843	2,521	2,668
Total.....	16	55	579	421
Total.....	9,490	8,132	23	60
Total.....	9	38	1	1
Total.....	117	93	345	516
Total.....	1,322	2,269	25
Total.....	6,837	6,822	8	10
Total.....	7,213	3,742	1,464	1,656
Total.....	84	133	75	4
Total.....	614	582	6,156	5,644
Total.....	12	11	3,406	3,102
Total.....	14	21	787	802
Total.....	559	514	1,649	1,472
Total.....	30	37	314	268
Total.....	4,180	3,855	922	1,154
Total.....	927	714	5
Total.....	2,376	2,305	855	967
Total.....	877	837	68	182
Total.....	8,115	8,553	2,672	2,929
Total.....	25,089	20,843	2,521	2,668
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Total.....	25,089	20,843	2,521	2,668
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Total.....	25,089	20,843	2,521	2,668
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Total.....	9	38	1	1
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Total.....	1,322	2,269	25
Total.....	6,837	6,822	8	10
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Total.....	927	714	5
Total.....	2,376	2,305	855	967
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Total.....	25,089	20,843	2,521	2,668
Total.....	16	55	579	421
Total.....	9,490	8,132	23	60
Total.....	9	38	1	1
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Total.....	7,213	3,742	1,464	1,656
Total.....	84	133	75	4
Total.....	614	582	6,156	5,644
Total.....	12	11	3,406	3,102
Total.....	14	21	787	802
Total.....	559	514	1,649	1,472
Total.....	30	37	314	268
Total.....	4,180			

550	556	555	Machinery and Equipment	2,352	1,823	1,631
59	54	43	Agricultural machinery and implements	17	23	32
292	341	342	Automobiles, trucks, accessories and parts	2,083	1,589	1,464
91	79	99	Construction machinery and equipment	147	113	69
41	36	28	Electrical machinery and apparatus	23	39	29
2	2	3	Motorcycles, bicycles, and parts	74	4	9
64	44	40	Other and unclassified	8	54	28
1,842	2,725	2,538	Manufactures of Iron and Steel	4,162	5,092	5,424
168	150	240	Angles, shapes, and sections	226	426	294
54	6	12	Nails, tacks, and spikes	60	67	118
869	1,244	1,162	Plates, sheets, and coils	1,706	1,822	2,084
98	136	148	Tubes, pipes, and fittings	713	921	1,039
307	595	570	Wire, bars, and rods	368	279	420
347	594	406	Other and unclassified	1,089	1,578	1,470
177	225	235	Minerals, miscellaneous	4,589	4,194	3,691
18	21	22	Asbestos	5	2	4
5	.....	1	Borax	400	415	414
9	3	3	Infusorial earth	1	3	9
77	77	101	Salt	748	524	696
55	109	84	Soda and sodium compounds	70	198	136
13	16	24	Sulfur	3,365	3,051	2,431
8,617	9,530	7,572	Nitrates, Phosphates, and Potash	2,376	2,331	1,263
535	653	695	Ammonium compounds	11	15	48
.....	2	1	Fishmeal	1,408	1,297	725
84	34	22	Nitrate of soda	245	240	170
6,395	6,764	4,925	Phosphates	338	376	86
113	186	213	Potash	140	335	175
1,490	1,891	1,716	Fertilizers, unclassified	234	67	59
3,636	3,695	4,368	Ores and Metals	5,423	6,037	5,028
888	829	601	Ores	4,065	4,791	3,825
454	227	101	Alumina/bauxite	884	1,145	892
4	4	7	Chrome	31	55	71
.....	13	40	Copper	661	415	390
11	108	56	Iron	184	329	73
11	14	5	Lead	148	144	167
79	101	46	Manganese	192	170	91
.....	1	.....	Tin	30	25	32
131	73	68	Zinc	566	464	572

Table 7.—Principal Commodities Shipped Through Canal by Fiscal Years—Continued

Commodity	South Atlantic to Pacific		North Pacific to Atlantic		
	1984	1985	1986	1985	1984
Metals	2,747	2,866	1,358	1,246	1,203
Aluminum	309	256	91	74	53
Copper	33	77	911	818	885
Iron	87	134	42	7	8
Lead	14	5	81	96	85
Scrap	2,227	2,318	1	5	3
Tin, including tinplate	12	11	19	56	19
Zinc	29	36	173	156	104
Other and unclassified	35	29	40	35	46
Other Agricultural Commodities	1,603	1,384	3,346	3,593	4,026
Beans, edible	43	7	90	57	46
Cocoa and cacao beans	3	3	56	76	49
Coffee, raw and processed	9	12	381	414	458
Copra and coconuts	1	.....	9	11	11
Cotton, raw	15	12	121	146	110
Molasses	3	5	582	781	672
Oilseeds	36	67	61	125	336
Peas, dry	.....	.....	24	63	48
Rubber, raw	.....	.....	70	98	96
Skins and hides	.....	.....	1	7	3
Sugar	1,493	1,273	1,941	1,799	2,179
Wool, raw	.....	.....	10	17	19
Petroleum and Products	12,555	10,837	18,918	15,936	18,107
Asphalt	155	74	8	1	8
Crude oil	3,898	3,397	10,003	9,029	10,267
Diesel oil	1,129	1,094	995	755	815
Fuel oil, residual	3,007	2,378	4,332	3,629	3,836
Gasoline	983	1,206	574	659	760
Jet fuel	593	478	51	12	77
Kerosene	104	45	14	1	.....
Liquefied gas	737	713	71	28	46
Lubricating oil	689	610	275	220	167
Petroleum coke	460	664	2,445	1,553	1,752

[Thousands of long tons]

	78	145	150	52	378
Other and unclassified	10,717	11,045	10,593	9,889	8,699
Miscellaneous	24	29	7	13	11
Bricks and tile	4	22	1	5	1
Carbon black	174	193	23	5	5
Cement	357	357	15	42	25
Clay, fire and china	40	4	25	6	15
Fibers, plant	219	149	1	1	31
Flour, wheat	24	28	6	5	6
Glass and glassware	36	23	44	60	37
Groceries, miscellaneous	16	25	25	21	7
Liquors and wines	41	27	1	1	1
Marble and stone	4	4	52	54	92
Oil, coconut	17	.....	208	174	164
Oil, fish	247	197	164	151	95
Oil, vegetable	761	765	421	461	368
Paper and paper products	3	3	1	1	3
Porcelainware	168	203	9	3	3
Resin	45	20	15	34	38
Rubber, manufactured	1	1	62	12	10
Seeds, excluding oilseeds	72	31	7	15	1
Slag, clinkers, and dross	66	93	42	57	40
Tallow	47	65	33	38	43
Textiles	10	28	2	4	4
Tobacco and manufactures	16	7	5	11	17
Wax, paraffin	8,325	8,837	9,424	8,717	7,682
All other and unclassified	78,259	74,151	67,270	64,492	62,212
Total	<u>78,259</u>	<u>74,151</u>	<u>67,270</u>	<u>64,492</u>	<u>62,212</u>

Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal From Atlantic to Pacific During Fiscal Year 1986
Segregated by Countries in Principal Trade Routes

	[Long tons]													
	To West Coast United States					To West Coast Central America								
	Alaska	Hawaii	Mainland	Total	Canada	Costa Rica	El Salvador	Guatemala	Mexico	Nicaragua	Panama	Central America (other) ¹	Bahia, R.P. ²	Total
EAST COAST NORTH AMERICA:														
United States:														
North Atlantic ports.....	5,871	254,494	260,365	11,813	394	65,564	34,918	106	41,366	22,511	21,902	122,884		
South Atlantic ports.....	1,390	34,646	36,036	153,749	1,639	2,803	32,831	269	32,831	55,554	6,583	74,902		
Great Lakes ports.....					16,249	6,287			539,279	2,659	187,275	55,636		
Gulf ports.....		1,097,769	1,097,769	462,438	181,230	449,769	54,250			2,659	33,552	1,492,355		
United States (other) ¹	1,215	18,687	151,991	171,893	829	2,576				80,774	249,312	39,616		
Total United States.....	1,215	1,538,900	1,566,063	628,000	200,341	526,999	89,168	613,582	269	80,774	24,998	1,785,393		
EAST COAST CANADA:														
Mexico.....		34,769	34,769	.....	17,633	913	.....	7,407	35,425	4,188	8,030	73,596
EAST COAST CENTRAL AMERICA:														
Mexico.....		9,182	9,182	.....	10,868	307,111	253,866	2,856,526	.....	.....	1,178	3,429,549
Panama.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Central America (other) ¹.....		.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Cristobal, R.P. ²	364	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total Central America.....	364	187	551	.....	.....	307,111	253,866	2,856,526	172	.....	.....	172
EAST COAST SOUTH AMERICA:														
Brazil.....		604,759	604,759	63,378	4,648	1,008	.....	1,959	6,016	.....	.....	13,631
Colombia.....		5,371	5,371	.....	.....	1,209	48	54,854	486	.....	340	800
Venezuela.....		161,273	253,582	8,731	7,821	291,280	287,691	8,465	40,763	77	37,712	60,641		
South America (other) ¹		47,908	47,908	5,774	.....	.....	.....	12,383	23,751	453	450	2,016
Total South America.....	92,309	819,311	911,620	77,883	12,469	293,498	287,739	77,661	71,016	530	38,502	63,457		
WEST INDIES:														
Cuba.....		14	14	.....	.....	25	.....	.....	40,226	.....	25,583	65,834
Jamaica.....		7,190	7,190	.....	11,797	.....	.....	.....	.....	.....	.....	11,797
Netherlands West Indies.....		70,024	70,024	.....	.....	636	.....	.....	713	2,366	4,658	3,001
Trinidad/Tobago.....		78,523	78,523	9,869	9,046	.....	.....	.....	2,373	20,815	.....	2,689
West Indies (other) ¹		181,192	181,192	.....	.....	.....	.....	.....	.....	.....	601	2,003
Total West Indies.....		336,943	336,943	9,869	20,843	661	.....	.....	43,337	23,181	30,842	7,693

EUROPE:														
Belgium.....	577,903	89,557	22,563	81,412	3,694	4,714	24,863	1,791	.....	139,037	.....	.....
France.....	184,700	16,509	3,600	31,195	1,001	14,065	18,071	3,618	.....	71,553	3	.....	
Italy.....	264,088	11,519	2,649	3,041	.....	.....	1,027	496	.....	7,213	.....	.....
Netherlands.....	511,060	40,194	1,094	35,993	13,262	127	11,962	569	.....	65,177	2,170	.....	
Norway.....	193,051	114	.....	16,292	.....	.....	15,076	.....	.....	31,368	.....	.....
Spain-Portugal.....	252,383	111,747	2,425	1,854	324	1,312	8,311	1,224	.....	15,450	.....	.....
Sweden.....	173,476	5,033	.....	.....	.....	19	11,639	.....	.....	11,658	.....	.....
United Kingdom.....	119,279	13,228	48	987	.....	5,552	140	22,367	.....	29,094	.....	.....
U.S.S.R.....	38,217	.....	.....	285	.....	57,649	837,293	4,067	.....	899,294	.....	.....
West Germany.....	406,558	40,878	2,591	7,971	3,354	245	15,183	3,200	.....	39,536	47	.....	
Europe (other) ¹	661,289	92,814	5,421	15,699	58,788	18,395	170,376	9,294	.....	277,973	.....	.....
Total Europe.....	13,005	1,240	3,382,004	3,396,249	421,593	40,391	194,729	80,423	102,078	1,113,941	6,945	46,626	2,220	1,587,353
ASIA (MIDDLE EAST)														
.....	13	10,826	27,137
AFRICA														
.....	210	412,380	412,590	92,547	30	47,400	1,524	53	49,011
GRAND TOTAL	14,597	119,707	6,898,273	7,032,577	1,239,074	302,577	1,323,911	711,196	3,720,965	1,282,999	145,466	150,522	386,485	8,024,121
Percent of Pacific-Bound Cargo.....	0.0	0.2	9.5	9.7	1.7	0.4	1.8	1.0	5.1	1.8	0.2	0.2	0.5	11.1

See footnotes at end of table.

Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal From Atlantic to Pacific During Fiscal Year 1986
Segregated by Countries in Principal Trade Areas—Continued

	[Long tons]										
	To West Coast South America					To Oceania					
	Chile	Colombia	Ecuador	Peru	South America (other) ¹	Total	Australia	French Oceania	New Zealand	Oceania (other) ¹	Total
EAST COAST NORTH AMERICA:											
United States:											
North Atlantic ports.....	145,250	13,653	34,693	83,698	4,935	282,229	112,489	5	30,625	66,613	209,732
South Atlantic ports.....	18,982	15,500	82,175	38,708	4,871	160,236	64,315	.....	55,434	24,146	143,895
Great Lakes ports.....	182	.....	4,243	9,758	2,204	16,387	.....	.....	.....	.....	.....
Gulf ports.....	943,863	495,174	625,767	780,150	72,802	2,917,756	1,020,354	26,088	87,491	78,982	1,212,915
United States (other) ¹	84,273	15,828	79,532	82,540	7,362	269,535	57,718	485	90,263	57,243	205,709
Total United States.....	1,192,550	540,155	826,410	994,854	92,174	3,646,143	1,254,876	26,578	263,813	226,984	1,772,251
EAST COAST CANADA:											
.....	7,979	5,559	16,878	32,834	5,163	68,413	40,880	.....	28,412	33,252	102,544
EAST COAST CENTRAL AMERICA:											
Mexico.....	16,442	15,407	81,756	76,341	6,646	196,592	.....	.....	15,468	.....	15,468
Panama.....	70,322	343	5,595	3,955	6,564	86,779	.....	.....	.....	.....	.....
Central America (other) ¹.....	.....	2,005	4,400	855	.....	7,260	.....	.....	.....	.....	.....
Cristobal, R. P. ²	350	.....	202	.....	.....	552	.....	.....	.....	.....	.....
Total Central America.....	87,114	17,755	91,953	81,151	13,210	291,183	.....	.....	15,468	.....	15,468
EAST COAST SOUTH AMERICA:											
Brazil.....	957	1,410	67,482	1,248	890	71,987	.....	.....	.....	.....	.....
Colombia.....	20,333	491,848	4,244	6,973	10,686	534,084	.....	.....	.....	.....	.....
Venezuela.....	1,254,451	21,329	35,111	67,679	46,115	1,424,685	.....	.....	.....	.....	.....
South America (other) ¹	4,360	12,343	8,179	5,652	9,149	39,683	3,617	.....	.....	.....	3,617
Total South America.....	1,280,101	526,930	115,016	81,552	66,840	2,070,439	3,617	.....	.....	.....	3,617
WEST INDIES:											
Cuba.....	.....	.....	1,512	24,930	11,000	37,442	.....	.....	.....	.....	.....
Jamaica.....	300	.....	.....	.....	.....	300	86	.....	.....	.....	5
Netherlands West Indies.....	304,468	12,280	.....	5,000	45,851	367,599	6,747	20,031	8,990	20	35,788
Trinidad ¹ , Tobago.....	.....	.....	12,685	579	.....	13,264	52	.....	.....	.....	157
West Indies (other) ¹	62,634	13,790	9,350	27,294	1,165	114,233	7,497	.....	.....	.....	669
Total West Indies.....	367,402	26,070	23,547	57,803	58,016	532,838	14,382	20,031	41,902	799	77,114

Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal From Atlantic to Pacific During Fiscal Year 1986
Segregated by Countries in Principal Trade Areas—Continued

	To Asia										Grand total	Percent of total Pacific-bound cargo		
	China (Mainland)	China (Taiwan)	Hong Kong	Indonesia	Japan	Philippine Islands	Singapore	South Korea	Thailand	U.S.S.R.			Asia (other) ¹	Total
EAST COAST NORTH AMERICA:														
United States:														
North Atlantic ports	103,792	1,141,873	171,285	3,168	3,061,081	3,497	119,294	1,774,734	.....	7,352	237,193	6,623,269	7,510,292	10.3
South Atlantic ports	43,141	310,867	222,711	.....	866,025	23,732	55,671	112,398	.....	.....	138,626	1,773,308	2,342,126	3.2
Great Lakes ports	38,791	15,818	.....	.....	60,032	.....	.....	42,466	5,843	.....	25,751	188,701	260,724	0.4
Gulf ports	833,827	5,125,296	89,086	51,935	18,854,192	409,729	119,065	3,181,306	101,658	63,535	1,022,355	29,851,984	37,035,217	51.0
United States (other) ¹	259,043	441,288	182,276	568	410,270	8,742	86,005	378,126	11,550	.....	288,150	2,066,018	2,752,771	3.8
Total United States	1,278,594	7,035,142	665,358	55,671	23,251,600	445,700	380,035	5,489,030	119,188	70,887	1,712,075	40,503,280	49,901,120	68.7
EAST COAST CANADA														
	470,105	29,695	13,405	1,373	754,625	.....	123	148,627	6,309	.....	125,716	1,549,978	1,829,300	2.5
EAST COAST CENTRAL AMERICA:														
Mexico	3,108	3,155	11,569	.....	87,105	437	13,856	39,896	17,495	.....	48,176	224,797	3,875,588	5.3
Panama	.....	.....	.....	.....	60	.....	.....	.....	.....	.....	.....	60	179,605	0.2
Central America (other) ¹	25,052	162	.....	.....	12,676	.....	.....	166	.....	.....	2,114	40,170	55,145	0.1
Cristobal, R.P. ³	.....	203	1,199	.....	4,979	.....	.....	.....	.....	.....	.....	725	7,106	0.0
Total Central America	28,160	3,520	12,768	.....	104,820	437	13,856	40,062	17,495	.....	51,015	272,133	4,118,719	5.7
EAST COAST SOUTH AMERICA:														
Brazil	10,878	3,351	2,406	296	76,048	.....	386	8,160	.....	2,854	1,596	105,975	859,730	1.2
Colombia	20,447	.....	.....	.....	147,904	.....	.....	.....	.....	.....	.....	168,351	765,543	1.1
Venezuela	195,654	530	20,290	.....	414,618	.....	.....	10,055	.....	.....	36,307	677,454	3,098,902	4.3
South America (other) ¹	48,666	1,402	2,206	.....	88,785	.....	566	31,836	.....	.....	3,428	176,889	312,925	0.4
Total South America	275,645	5,283	24,902	296	727,355	.....	952	50,051	.....	2,854	41,331	1,128,669	5,037,100	6.9
WEST INDIES:														
Cuba	390,905	39	236	.....	598,158	.....	.....	6,330	.....	112,757	68,507	1,176,932	1,280,222	1.8
Jamaica	.....	64,189	25,484	.....	52,880	19	20,390	20,921	.....	.....	47,366	231,249	250,627	0.3
Netherlands West Indies	.....	290	.....	.....	28,819	.....	.....	.....	.....	.....	.....	29,496	514,281	0.7
Trinidad/Tobago	20,648	.....	8	.....	35,956	.....	.....	108	.....	.....	6	56,726	193,462	0.3
West Indies (other) ¹	.....	5,133	30	.....	46,792	.....	.....	6,646	.....	.....	20,380	78,981	418,113	0.6
Total West Indies	411,553	69,651	25,758	.....	762,605	19	20,390	34,005	.....	112,757	136,646	1,573,384	2,656,705	3.7

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1986 Segregated by Countries in Principal Trade Areas

[Long tons]

	To East Coast United States				To E.C. Canada		To East Coast Central America					
	North Atlantic ports	South Atlantic ports	Great Lakes ports	Gulf ports	United States (other) ¹	Total	Canada	Mexico	Panama	Central America (other) ¹	Cristobal R. P. ²	Total
WEST COAST NORTH AMERICA:												
United States:												
Alaska.....	56,309	.....	.....	465,799	.....	522,108	.....	.....	.....	.....	.....	.....
Hawaii.....	31,966	1,999	.....	239,876	25,338	299,579	.....	.....	.....	.....	.....	.....
Mainland.....	447,766	135,272	.....	2,031,275	294,863	2,909,676	274,705	28,414	16,329	.....	9,044	53,787
Total United States.....	536,041	137,171	.....	2,736,950	320,201	3,730,363	274,705	28,414	16,329	.....	9,044	53,787
WEST COAST CANADA	946,270	483,084	.....	674,090	317,901	2,421,345	146,911	.....	.....	34	.....	34
WEST COAST CENTRAL AMERICA:												
Costa Rica.....	2,655	449	.....	23,179	52,552	78,835	.....	38	4,510	17,168	52	21,768
El Salvador.....	23,342	3,476	.....	70,854	.....	97,672	.....	.....	.....	.....	11,905	11,905
Guatemala.....	82,340	21,309	.....	76,137	8,067	187,853	.....	.....	.....	.....	69	69
Honduras.....	.....	.....	.....	15,987	5,433	21,420	4,500	19	611	.....	3	633
Mexico.....	177,950	85	.....	186,328	.....	364,363	2,137	462,959	.....	.....	118	463,077
Nicaragua.....	.....	.....	.....	.....	.....	.....	9,504	.....	407	11,840	502	12,749
Panama.....	32,314	4,973	.....	105,573	3,623	146,483	.....	.....	.....	.....	.....	.....
Central America (other) ¹	15,865	.....	.....	.....	.....	15,865	128	.....	.....	.....	.....	.....
Balboa, R. P. ²	.....	.....	.....	.....	1,170	1,170	.....	.....	.....	847	.....	847
Total Central America.....	334,466	30,292	.....	478,058	70,845	913,661	16,269	463,016	5,528	29,855	12,649	511,048
WEST COAST SOUTH AMERICA:												
Chile.....	664,393	118,998	.....	305,331	157,978	1,246,700	86,317	35,021	.....	.....	2,032	37,053
Colombia.....	104,970	25,931	.....	424,252	72,896	628,049	232	323	.....	105	10	438
Ecuador.....	1,505,762	56,641	.....	2,806,040	159,846	4,528,289	64	242	584,064	178,710	69	763,085
Peru.....	1,275,890	120,051	.....	659,642	98,479	2,158,062	3,034	2,377	.....	.....	638	3,015
South America (other) ¹	26,292	19,528	.....	44,214	4,398	94,432	98	.....	.....	.....	1,645	1,645
Total South America.....	3,577,307	341,149	.....	4,239,479	493,597	8,651,532	89,745	37,963	584,064	178,815	4,394	805,236
OCEANIA:												
Australia.....	383,647	44,172	35,436	1,577,648	158,139	2,199,042	346,583	98,743	.....	.....	143	98,886
British Oceania.....	.....	.....	.....	.....	13,779	13,779	.....	.....	.....	.....	.....	.....
French Oceania.....	7,939	.....	.....	.....	11,056	18,995	4,000	.....	.....	.....	.....	.....
New Zealand.....	121,660	31,229	.....	130,003	24,074	306,966	43,760	40,280	.....	.....	1,004	41,284
Oceania (other) ¹	101,238	17,596	.....	13,584	49,300	181,718	22,571	.....	.....	.....	.....	.....
Total Oceania.....	614,484	92,997	35,436	1,721,235	256,348	2,720,500	416,824	139,023	.....	.....	1,147	140,170

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1986 Segregated by Countries in Principal Trade Areas—Continued

	To East Coast South America				To West Indies							
	Colombia	Venezuela	South America (other) ¹	Total	Cuba	Haiti/Dominican Republic	Jamaica	Netherlands West Indies	Puerto Rico	Trinidad/Tobago	West Indies (other) ¹	Total
WEST COAST NORTH AMERICA:												
United States:												
Alaska												
Hawaii												
Mainland	206,012	94,399	304,942	304,942	1,218	248,556	126,535	203,835	52,035	255,870	491,302	867,611
Total United States	206,012	94,399	304,942	304,942	1,218	248,556	126,535	203,835	543,337	1,123,481	543,337	1,123,481
WEST COAST CANADA												
	588,970	2,177	302,502	1,829	118,644	6,028	14,188		53,567		21,059	213,486
WEST COAST CENTRAL AMERICA:												
Costa Rica	7,254	25,349	32,603	32,603		9,864	6,837		2,445			19,146
El Salvador	50	9,349	9,399	9,399			20,785		522		25,825	47,132
Guatemala									3,013		12,359	17,099
Honduras									24			11,549
Mexico	74,984		74,984	74,984	10,565	720			240			15,993
Nicaragua	173	1,274	1,506	1,506	15,426				567			25,340
Panama		820	820	820	34				25,306			115,377
Central America (other) ¹		450	31,657	77	46,323		2,279		66,775			1,578
Balboa, R. P. ²						1,178	400					
Total Central America	82,461	9,799	151,496	136	72,348	11,762	30,301	3,037	95,855	38,184	1,727	253,214
WEST COAST SOUTH AMERICA:												
Chile		8,630	144,356	144,356		32,762			36,415		1,149	70,326
Colombia		414,373	417,613	417,613					46,480			46,480
Ecuador	99,258	7,877	108,674	108,674			99,370		1,731,859		49,063	1,880,292
Peru	71	25,092	124,829	124,829	11,816				972,158		85,942	1,199,837
South America (other) ¹		20,756	36,981	36,981	25,616	2,591			2,421			30,628
Total South America	99,329	476,728	832,453	832,453	37,432	35,353	99,370	129,921	2,789,333	49,063	87,091	3,227,563
OCEANIA:												
Australia		104,543	109,636	109,636		3,941	1,341	384			6,237	19,894
British Oceania											652	652
French Oceania											1,319	1,319
New Zealand		3,022	18,854	18,854	17,315	11,992	2,041	145			2,678	39,686
Oceania (other) ¹					3,891				24,684		470	29,045
Total Oceania		107,565	209,255	128,490	21,206	15,933	3,382	529	26,655	8,915	13,976	90,596

ASIA:													
China.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	183,669
Taiwan.....	133	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	119,762
Hong Kong.....	782	1,006	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31,328
Indonesia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58,940
Japan.....	30,975	84,241	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	440,271
Philippine Islands.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	935
Singapore.....	431	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20,289
South Korea.....	528	632	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34,241
Thailand.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,393
U.S.S.R.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	283,210
Asia (other) ¹	15,660	17,147	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	278,400
Total Asia.....	48,509	103,036	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,459,438
GRAND TOTAL.....	1,025,281	703,836	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,367,778
Percent of Atlantic-Bound Cargo.....	1.5	1.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.5

See footnotes at end of table.

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1986 Segregated by Countries in Principal Trade Areas—Continued

[Long tons]

	To Europe													Total
	Belgium	Denmark	Finland	France	Italy	Netherlands	Spain/Portugal	Sweden	United Kingdom	U.S.S.R.	Yugoslavia	West Germany	Europe (other) ¹	
WEST COAST NORTH AMERICA:														
United States:														
Alaska	4,767		3,894		507				11					86,449
Hawaii						26,574			24,605					77,754
Mainland	387,413	39,376	46	228,651	236,314	2,472,355	429,374	101,466	113,995	22,469	2,009	144,994	703,893	4,882,355
Total United States	392,180	39,376	3,940	228,651	236,821	2,498,929	429,374	101,466	138,611	22,469	2,009	165,728	787,004	5,046,558
WEST COAST CANADA	818,734	224,575	527,267	801,026	477,091	1,219,365	203,986	119,052	1,167,556	472,050	3,985	240,990	1,547,090	7,822,767
WEST COAST CENTRAL AMERICA:														
Costa Rica	18			52	118		348					2,062	1,881	4,479
El Salvador	2,053			80	1,464	560	5,218		60	25,045		25,856	14,294	74,630
Guatemala	31			114	5,449	47	1,728			69,528		4,955	29,161	111,013
Honduras					1,135		6,144						3,878	11,157
Mexico	18,774	166		9,407	15,200	3,073	55,346	1,961	3,547			73,157	64,716	245,347
Nicaragua	105,095			11,035	66	737	2,138			48,545		6,035	9,088	182,739
Panama				497	35,000	9,330	1,522					4	1,393	47,746
Central America (other) ¹	986			408	1,245	392	960		60	15,262		24,054	9,245	52,612
Balboa, R. P. ²														
Total Central America	126,957	166		21,593	59,677	14,139	73,404	1,961	3,667	158,380		136,123	133,656	729,723
WEST COAST SOUTH AMERICA:														
Chile	316,346		4,398	102,638	222,221	470,255	134,433	63,785	150,377		54,269	521,802	287,746	2,328,270
Colombia	26,255			622	293	37,778	432	776	358		796	157,461	4,906	229,677
Ecuador	58,789			4,764	55,211	46,134	9,005	553	7,749		16,560	192,499	133,496	524,760
Peru	255,821		7,966	59,441	115,351	55,923	49,741	19,329	74,191	184,706	68,626	281,050	281,664	1,453,809
South America (other) ¹	11,811			32,251	17,710	49,377	11,857	48	10,923	265,689	15,493	37,533	96,503	549,195
Total South America	669,022		12,364	199,716	410,786	659,467	205,468	84,491	243,598	450,395	155,744	1,190,345	804,315	5,085,711
OCEANIA:														
Australia	13,189			229	2,719	4,195	940		17,004			82,812	5,593	126,681
British Oceania							27,558		147,273					174,831
French Oceania	29,212			73,727	3,559		2,420					2,722	14,907	126,547
New Zealand	98,760		3,744	542	639	122,296	333	16,392	40,745	2,541		18,227	19,640	323,859
Oceania (other) ¹	14,832			6,869	657	10,783			32,217				69,125	134,483
Total Oceania	155,993		3,744	81,367	7,574	137,274	31,251	16,392	237,239	2,541		103,761	109,265	886,401
ASIA:														
China						7,844								7,844
Taiwan	992			2,280		11,487						15	1,642	16,416
Hong Kong	16			2,281		5,543	77		36			61	471	8,485
Indonesia														
Japan	4,532	570		6,562	142	54,769	387		10,975			8,468	6,710	93,115
Philippine Islands						13,965								13,965
Singapore				1,538		3,108		154	20			182	983	5,985
South Korea				1,003		7,660						178	612	9,453
Thailand														
U.S.S.R.													4,551	4,551
Asia (other) ¹	64			3,674		20,438	656		2,759			7,222	11,836	46,649
Total Asia	5,604	570		17,338	142	124,814	1,120	154	13,790			16,126	26,805	206,463
GRAND TOTAL	2,168,490	264,687	547,315	1,349,691	1,192,091	4,653,988	944,603	323,516	1,804,461	1,105,835	161,738	1,853,073	3,408,135	19,777,623
Percent of Atlantic-Bound Cargo	3.2	0.4	0.8	2.0	1.8	6.9	1.4	0.5	2.7	1.6	0.2	2.8	5.1	29.4

See footnotes at end of table.

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1986 Segregated by Countries in Principal Trade Areas—Continued

	[Long tons]										Percent of total Atlantic-bound cargo				
	To Asia (Middle East)		To Africa						Grand Total						
	Asia (Middle East)	Algeria	Egypt	Morocco	South Africa	Tunisia	Africa (other) ¹	Total							
WEST COAST NORTH AMERICA:															
United States:															
Alaska.....			13,037								13,037	877,464	1.3		
Hawaii.....												376,333	0.6		
Mainland.....	92,546	39,248	171,828	11,029	12,312	147,127	36,636				418,180	9,803,802	14.6		
Total United States.....	92,546	39,248	184,865	11,029	12,312	147,127	36,636				431,217	11,057,599	16.4		
WEST COAST CANADA	194,705		379,429	787,800	97,217	301,106	98,213				1,663,765	13,358,491	19.8		
WEST COAST CENTRAL AMERICA:															
Costa Rica.....	52			12,000								12,000	168,883	0.2	
El Salvador.....													193,606	0.3	
Guatemala.....		13,779						16,071				29,850	375,917	0.6	
Honduras.....				13,779				8,849				22,628	77,437	0.1	
Mexico.....	1,766	15,131	2,138					2,216				19,485	1,182,708	1.8	
Nicaragua.....												235,636	0.4		
Panama.....	16,663											237,052	0.4		
Central America (other) ¹												216,166	0.3		
Balboa, R. P. ²												3,595	0.0		
Total Central America.....	18,481	28,910	2,138	25,779							40,281	97,108	2,691,000	4.0	
WEST COAST SOUTH AMERICA:															
Chile.....	3,058			1,862								2,063	3,918,143	5.8	
Colombia.....		11,810		25,589								37,399	1,359,888	2.0	
Ecuador.....	6,257		240									3,385	3,625	11.6	
Peru.....	30,977	29,685										8,275	7,815,046	11.6	
South America (other) ¹	3,889											513	37,960	7.4	
Total South America.....	44,181	41,495	240	27,451								513	717,381	1.1	
OCEANIA:															
Australia.....													12,374	81,560	28.0
British Oceania.....														2,900,722	4.3
French Oceania.....														189,262	0.3
New Zealand.....														150,861	0.2
Oceania (other) ¹		22,952												797,271	1.2
Total Oceania.....		22,952												367,817	0.5
Total Oceania.....		22,952												4,405,933	6.6

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
EAST COAST UNITED STATES TO WEST COAST			
UNITED STATES:			
Canned and refrigerated foods, miscellaneous.....	1	5	1
Chemicals and petroleum chemicals	238	321	383
Caustic soda	76	93	188
Chemicals, unclassified	76	116	86
Petroleum chemicals, miscellaneous	86	112	109
Machinery and equipment, miscellaneous	2	.....	3
Manufactures of iron and steel	9	.....	14
Other and unclassified	9	.....	14
Nitrates, phosphates, and potash .....	.....	38	64
Ammonium compounds .....	.....	16	15
Phosphates .....	.....	22	49
Ores and metals	32	.....	137
Ore, alumina/bauxite.....	32	.....	137
Petroleum and products	947	530	479
Fuel oil, residual.....	81	37	61
Gasoline	479	147	75
Jet fuel	184	28	32
Lubricating oil	169	260	251
Petroleum coke .....	.....	57	.....
Other and unclassified	34	1	60
Miscellaneous	311	472	514
All other and unclassified	311	472	514
Total	<u>1,540</u>	<u>1,366</u>	<u>1,595</u>
EAST COAST UNITED STATES TO WEST COAST			
CANADA:			
Nitrates, phosphates, and potash	603	808	937
Phosphates	603	808	937
Miscellaneous	25	10	9
All other and unclassified	25	10	9
Total	<u>628</u>	<u>818</u>	<u>946</u>
EAST COAST UNITED STATES TO WEST COAST			
CENTRAL AMERICA:			
Chemicals and petroleum chemicals, miscellaneous	8	16	10
Coal	138	322	.....
Grains	476	760	697
Corn	80	95	227
Sorghum .....	.....	131	104
Soybeans	134	294	148
Wheat	238	236	210
Other and unclassified	24	4	8
Lumber and products, miscellaneous	9	.....	6
Machinery and equipment, miscellaneous .....	.....	.....	2
Manufactures of iron and steel, miscellaneous .....	.....	2	.....
Minerals, miscellaneous .....	.....	.....	13
Soda and sodium compounds .....	.....	.....	8
Sulfur .....	.....	.....	5
Nitrates, phosphates, and potash	660	490	291
Ammonium compounds	148	116	76
Fertilizers, unclassified	107	136	85
Phosphates	382	219	119
Potash	23	19	11
Other agricultural commodities	34	59	89
Oilseeds	34	59	26
Sugar .....	.....	.....	63

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
EAST COAST UNITED STATES TO WEST COAST CENTRAL AMERICA—Continued			
Petroleum and products	113	171	95
Diesel oil	42	37	.....
Gasoline	29	13	1
Fuel oil, residual	2	94	78
Lubricating oil	1	6	10
Petroleum products, miscellaneous	39	21	6
Miscellaneous	98	64	78
Flour, wheat	2	1	.....
Oil, vegetable	23	6	21
Paper and paper products	15	17	23
Tallow	39	22	14
All other and unclassified	19	18	20
Total	<u>1,536</u>	<u>1,884</u>	<u>1,281</u>
EAST COAST UNITED STATES TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods, miscellaneous	33	23	36
Chemicals and petroleum chemicals	302	231	183
Caustic soda	108	61	42
Chemicals, unclassified	178	164	128
Petroleum chemicals, miscellaneous	16	6	13
Coal and coke	108	162	161
Grains	1,656	1,772	2,806
Corn	257	91	347
Oats	5	1	3
Rice	2	37	85
Sorghum	22	85	22
Soybeans	103	154	137
Wheat	1,262	1,403	2,210
Other and unclassified	5	1	2
Lumber and products	7	8	7
Pulpwood	7	4	5
Other and unclassified .....	.....	4	2
Machinery and equipment	59	52	66
Agricultural machinery and implements	16	15	18
Automobiles, trucks, accessories, and parts	18	14	19
Construction machinery and equipment	13	14	18
Electrical machinery and apparatus	8	6	8
Other and unclassified	4	3	3
Manufactures of iron and steel	33	26	30
Angles, shapes, and sections	6	5	3
Plates, sheets, and coils	7	5	6
Tubes, pipes, and fittings	11	7	12
Wire, bars, and rods	4	3	3
Other and unclassified	5	6	6
Minerals, miscellaneous	17	45	14
Soda and sodium compounds	6	36	14
Sulfur	7	7	.....
Other and unclassified	4	2	.....
Nitrates, phosphates, and potash	482	445	417
Ammonium compounds	32	13	22
Fertilizers, unclassified	150	147	230
Phosphates	281	261	147
Potash	19	24	18
Ores and metals	89	158	132
Ores, miscellaneous	15	26	5

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EAST COAST UNITED STATES TO WEST COAST			
SOUTH AMERICA—Continued			
Ores and metals—Continued			
Metals.....	74	132	127
Scrap.....	68	127	111
Tin, including tinplate.....	3	3	2
Other and unclassified.....	3	2	14
Other agricultural commodities.....	90	5	44
Oilseeds.....	1	4	1
Sugar.....	83	.....	43
Other and unclassified.....	6	1	.....
Petroleum and products.....	134	256	466
Diesel oil.....	16	65	183
Gasoline.....	8	75	142
Jet fuel.....	23	.....	5
Liquified natural gas.....	5	52	54
Lubricating oil.....	57	25	37
Residual fuel oil.....	14	29	38
Other and unclassified.....	11	10	7
Miscellaneous.....	636	577	665
Bricks and tile.....	3	3	3
Carbon black.....	1	1	.....
Clay, fire, and china.....	16	13	17
Flour, wheat.....	27	15	44
Groceries, miscellaneous.....	5	2	.....
Oil, coconut.....	3	1	3
Oil, vegetable.....	41	54	66
Paper and paper products.....	147	111	109
Resin.....	52	36	23
Rubber, manufactured.....	4	4	6
Tallow.....	40	33	43
Textiles.....	11	7	9
All other and unclassified.....	286	297	342
Total.....	3,646	3,760	5,027
EAST COAST UNITED STATES TO BALBOA, R.P.:			
Canned and refrigerated foods, miscellaneous.....	6	9	8
Chemicals and petroleum chemicals, miscellaneous.....	16	13	12
Grains.....	96	84	88
Corn.....	24	33	26
Wheat.....	70	51	60
Other and unclassified.....	2	.....	2
Machinery and equipment, miscellaneous.....	.....	1	4
Ores and metals, miscellaneous.....	9	7	3
Petroleum and products.....	45	169	186
Diesel.....	.....	63	25
Fuel oil, residual.....	34	98	140
Other and unclassified.....	11	8	21
Miscellaneous.....	77	115	128
Oil, vegetable.....	1	11	14
All other and unclassified.....	76	104	114
Total.....	249	398	429
EAST COAST UNITED STATES TO HAWAII:			
Miscellaneous.....	26	46	29
All other and unclassified.....	26	46	29
Total.....	26	46	29
EAST COAST UNITED STATES TO OCEANIA:			
Chemicals and petroleum chemicals.....	523	519	705

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
EAST COAST UNITED STATES TO OCEANIA—			
Continued			
Chemicals and petroleum chemicals—Continued			
Caustic soda	443	430	560
Chemicals, unclassified	79	82	145
Petroleum chemicals, miscellaneous	1	7	.....
Coal and coke	51	.....	.....
Grains	41	48	32
Rice	1	.....	.....
Soybeans	40	48	29
Other and unclassified .....	.....	.....	3
Lumber and products	7	2	9
Pulpwood	7	2	9
Machinery and equipment	3	11	13
Agricultural machinery and implements	1	1	8
Automobiles, trucks, accessories and parts .....	.....	4	1
Construction machinery and equipment	2	5	2
Other and unclassified .....	.....	1	2
Manufactures of iron and steel, miscellaneous	3	.....	.....
Minerals, miscellaneous	8	10	.....
Nitrates, phosphates, and potash	403	743	500
Ammonium compounds	12	10	13
Fertilizers, unclassified	97	191	122
Phosphates	263	510	348
Potash	31	32	17
Petroleum and products	263	338	265
Diesel oil	39	44	.....
Gasoline	58	5	.....
Liquefied gas	71	105	66
Lubricating oil	15	23	16
Residual fuel oil	3	.....	2
Petroleum coke	64	156	177
Other and unclassified	13	5	4
Miscellaneous	470	445	612
Clay, fire and china	24	24	.....
Oil, vegetable	1	3	4
Paper and paper products	22	18	27
Resin	1	1	12
Rubber, manufactured .....	.....	.....	1
All other and unclassified	422	399	568
Total	<u>1,772</u>	<u>2,116</u>	<u>2,136</u>
EAST COAST UNITED STATES TO ASIA:			
Canned and refrigerated foods	166	111	177
Canned foods, miscellaneous .....	.....	3	6
Refrigerated foods:	166	108	171
Fruit	67	28	104
Meat .....	.....	1	1
Other and unclassified	99	79	66
Chemicals and petroleum chemicals	1,973	1,919	2,148
Caustic soda	63	41	49
Chemicals, unclassified	1,404	1,340	1,423
Petroleum chemicals, miscellaneous	506	538	676
Coal and coke	7,000	7,990	7,838
Grains	17,719	17,731	20,962
Barley	106	31	.....
Corn	8,253	7,853	8,878
Rice .....	.....	1	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EAST COAST UNITED STATES TO ASIA—Continued			
Grains—Continued			
Sorghum	2,231	2,033	1,195
Soybeans	6,421	5,725	6,148
Wheat	623	1,984	4,679
Other and unclassified	85	104	62
Lumber and products	400	284	229
Pulpwood	400	279	225
Other and unclassified .....	.....	5	4
Machinery and equipment	41	49	49
Agricultural machinery and implements	3	5	4
Automobiles, trucks, accessories and parts	3	5	10
Construction machinery and equipment	19	14	10
Electrical machinery and apparatus	1	6	9
Other and unclassified	15	19	16
Manufactures of iron and steel	56	41	103
Angles, shapes, and sections	8	1	34
Plates, sheets, and coils .....	.....	9	15
Tubes, pipes, and fittings .....	.....	.....	3
Wires, bars, and rods	3	.....	.....
Other and unclassified	45	31	51
Minerals, miscellaneous	39	4	.....
Nitrates, phosphates, and potash	3,413	5,193	5,207
Ammonium compounds	8	122	93
Fertilizers, unclassified	137	249	329
Phosphates	3,216	4,810	4,775
Potash	52	12	10
Ores and metals	2,942	2,149	1,988
Ores, miscellaneous	54	64	7
Metals	2,888	2,085	1,981
Aluminum .....	.....	1	26
Iron .....	.....	24	.....
Scrap	2,877	2,048	1,946
Tin, including tinplate	1	1	1
Other and unclassified	10	11	8
Other agricultural commodities	1	6	24
Beans, edible .....	.....	2	22
Cotton, raw .....	.....	4	.....
Other and unclassified	1	.....	2
Petroleum and products	1,824	821	598
Gasoline	120	3	4
Kerosene	60	.....	.....
Liquefied gas	324	130	178
Lubricating oil	81	71	103
Petroleum coke	1,106	447	260
Diesel	29	.....	34
Residual fuel oil	82	50	.....
Jet fuel .....	.....	28	.....
Other and unclassified	22	92	19
Miscellaneous	4,929	4,678	4,689
Bricks and tile .....	.....	1	.....
Carbon black	17	24	.....
Clay, fire and china	312	364	320
Fibers, plant .....	.....	6	21
Flour, wheat	13	4	50
Groceries, miscellaneous	1	16	12
Marble and stone	5	9	16
Oil, vegetable	63	70	67

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EAST COAST UNITED STATES TO ASIA—Continued			
Miscellaneous—Continued			
Paper and paper products.....	166	184	164
Resin.....	78	181	80
Rubber, manufactured.....	5	7	27
Tallow.....	5	2	2
Textiles.....	6	50	27
Tobacco and manufactures.....	.....	4	7
All other and unclassified.....	4,258	3,756	3,896
Total.....	<u>40,503</u>	<u>40,976</u>	<u>44,012</u>
EAST COAST CANADA TO WEST COAST UNITED STATES:			
Miscellaneous.....	35	19	46
Pulpwood.....	.....	.....	1
Paper and products.....	16	11	.....
All other and unclassified.....	19	8	45
Total.....	<u>35</u>	<u>19</u>	<u>46</u>
EAST COAST CANADA TO WEST COAST CENTRAL AMERICA:			
Grains, miscellaneous.....	30	.....	8
Manufactures of iron and steel, miscellaneous.....	7	24	.....
Miscellaneous.....	37	20	28
Paper and paper products.....	13	11	12
All other and unclassified.....	24	9	16
Total.....	<u>74</u>	<u>44</u>	<u>36</u>
EAST COAST CANADA TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods, miscellaneous.....	11	3	15
Grains.....	.....	.....	5
Barley.....	.....	.....	5
Machinery and equipment, miscellaneous.....	2	.....	5
Manufactures of iron and steel, miscellaneous.....	2	.....	4
Minerals, miscellaneous.....	14	9	12
Asbestos.....	14	9	12
Ores and metals.....	.....	1	2
Metals.....	.....	1	2
Tin, including tinplate.....	.....	1	.....
Other and unclassified.....	.....	.....	2
Miscellaneous.....	39	76	92
Paper and paper products.....	17	33	48
All other and unclassified.....	22	43	44
Total.....	<u>68</u>	<u>89</u>	<u>135</u>
EAST COAST CANADA TO OCEANIA:			
Miscellaneous.....	103	109	129
Paper and paper products.....	23	.....	10
All other and unclassified.....	80	109	119
Total.....	<u>103</u>	<u>109</u>	<u>129</u>
EAST COAST CANADA TO ASIA:			
Canned and refrigerated foods.....	75	51	43
Canned foods, miscellaneous.....	7	.....	.....
Refrigerated foods.....	68	51	43
Fish.....	32	23	25
Other and unclassified.....	36	28	18
Chemicals and petroleum chemicals, miscellaneous.....	7	5	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EAST COAST CANADA TO ASIA—Continued			
Grains	248	107	176
Soybeans	122	79	176
Wheat	101	.....	.....
Other and unclassified	25	28	.....
Lumber and products	204	185	228
Pulpwood	204	185	226
Other and unclassified .....	.....	.....	2
Machinery and equipment, miscellaneous	6	2	1
Manufactures of iron and steel, miscellaneous	31	25	42
Ores and metals	451	355	335
Ores, miscellaneous	54	48	117
Metals	397	307	218
Aluminum	14	45	40
Copper	2	59	30
Iron	98	48	9
Scrap	241	124	118
Other and unclassified	42	31	51
Miscellaneous	528	796	650
Flour, wheat	51	50	54
Paper and paper products	86	193	70
Resin	23	59	16
All other and unclassified	368	494	510
Total	<u>1,550</u>	<u>1,526</u>	<u>1,475</u>
EAST COAST CENTRAL AMERICA TO WEST COAST UNITED STATES:			
Nitrates, phosphates, and potash .....	.....	.....	14
Ammonium compounds .....	.....	.....	14
Miscellaneous .....	.....	.....	14
All other and unclassified .....	.....	.....	14
Total .....	.....	.....	<u>28</u>
EAST COAST CENTRAL AMERICA TO WEST COAST CENTRAL AMERICA:			
Nitrates, phosphates, and potash	414	536	132
Ammonium compounds	188	45	25
Phosphates .....	.....	86	.....
Fertilizers, unclassified	226	405	107
Petroleum and products	3,042	3,022	4,092
Asphalt	8	49	17
Crude oil	561	745	931
Diesel oil	256	111	79
Liquefied gas	441	327	312
Fuel oil, residual	1,580	1,734	2,337
Gasoline	196	17	.....
Other and unclassified .....	.....	39	416
Miscellaneous	10	24	16
All other and unclassified	10	24	16
Total	<u>3,466</u>	<u>3,582</u>	<u>4,240</u>
EAST COAST CENTRAL AMERICA TO WEST COAST SOUTH AMERICA:			
Nitrates, phosphates, and potash	11	2	26
Fertilizers, unclassified	11	2	26
Other agricultural commodities .....	.....	.....	5
Sugar .....	.....	.....	5

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EAST COAST CENTRAL AMERICA TO WEST COAST SOUTH AMERICA—Continued			
Petroleum and products	201	138	70
Other and unclassified	201	138	70
Miscellaneous	79	46	106
All other and unclassified	79	46	106
Total	291	186	207
EAST COAST CENTRAL AMERICA TO BALBOA, R.P.:			
Petroleum and products	63	104	65
Diesel oil	10	30	4
Fuel, oil, residual	53	73	61
Other and unclassified .....	.....	1	.....
Miscellaneous	1	.....	.....
Total	64	104	65
EAST COAST CENTRAL AMERICA TO OCEANIA:			
Petroleum products .....	.....	.....	46
Miscellaneous	15	12	11
All other and unclassified	15	12	11
Total	15	12	57
EAST COAST CENTRAL AMERICA TO ASIA:			
Chemicals and petroleum chemicals	34	19	13
Nitrates, phosphates, and potash	14	18	.....
Fertilizers, unclassified	14	18	.....
Ores and metals, miscellaneous	68	90	43
Other agricultural commodities	26	2	2
Coffee	1	2	2
Sugar	25	.....	.....
Miscellaneous	123	109	73
All other and unclassified	123	109	73
Total	265	238	131
EAST COAST SOUTH AMERICA TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous	23	9	16
Chemicals and petroleum chemicals	29	77	74
Lumber and products, miscellaneous	41	26	31
Manufactures of iron and steel, miscellaneous	405	648	171
Ores and metals	89	76	30
Ores	34	74	27
Alumina/bauxite	34	64	27
Other and unclassified .....	.....	10	.....
Metals, miscellaneous	55	2	3
Other agricultural commodities .....	.....	9	6
Cocoa and cacao beans .....	.....	1	.....
Coffee .....	.....	8	6
Petroleum and products	109	95	450
Asphalt .....	.....	.....	107
Crude oil .....	.....	.....	136
Diesel oil	53	22	.....
Fuel oil, residual .....	.....	.....	62
Gasoline	55	28	89
Jet fuel .....	.....	42	32
Liquefied gas .....	.....	.....	24
Petroleum products, miscellaneous	1	1	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EAST COAST SOUTH AMERICA TO WEST COAST UNITED STATES—Continued			
Miscellaneous	123	140	97
Paper and products	14	9	10
All other and unclassified	109	131	87
Total	<u>819</u>	<u>1,080</u>	<u>875</u>
EAST COAST SOUTH AMERICA TO WEST COAST CANADA:			
Manufactures of iron and steel	50	26	43
Miscellaneous	28	18	16
All other and unclassified	28	18	16
Total	<u>78</u>	<u>44</u>	<u>59</u>
EAST COAST SOUTH AMERICA TO WEST COAST CENTRAL AMERICA:			
Coal	54	77	103
Grains	1	49	205
Sorghum .....	.....	21	.....
Soybeans	1	28	197
Other and unclassified .....	.....	.....	8
Manufactures of iron and steel, miscellaneous	30	18	18
Nitrates, phosphates, and potash	3	17	23
Fertilizers, unclassified	3	17	23
Petroleum and products	601	687	594
Crude oil	558	659	594
Other and unclassified	43	28	.....
Other agricultural commodities	31	.....	12
Sugar	31	.....	12
Miscellaneous	61	12	30
All other and unclassified	61	12	30
Total	<u>781</u>	<u>860</u>	<u>985</u>
EAST COAST SOUTH AMERICA TO WEST COAST SOUTH AMERICA:			
Chemicals and petroleum chemicals, miscellaneous	16	8	18
Grains	2	1	7
Oats	2	1	1
Grains, miscellaneous .....	.....	.....	6
Manufactures of iron and steel, miscellaneous	31	170	87
Minerals, miscellaneous	13	6	.....
Salt	13	6	.....
Nitrates, phosphates, and potash	176	91	57
Fertilizers, unclassified	176	91	57
Ores and metals	29	13	28
Ore, alumina/bauxite	10	6	18
Metals, miscellaneous	19	7	10
Other agricultural commodities	11	.....	.....
Other and unclassified	11	.....	.....
Petroleum and products	1,696	1,582	1,568
Crude oil	1,115	1,133	1,085
Diesel oil	174	77	102
Fuel oil, residual	35	32	26
Gasoline	249	271	224
Jet fuel	23	9	25
Liquefied gas	24	.....	.....
Lubricating oil	37	42	23
Other and unclassified	39	18	83

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
EAST COAST SOUTH AMERICA TO WEST COAST SOUTH AMERICA—Continued			
Miscellaneous	96	45	64
All other and unclassified	96	45	64
Total	<u>2,070</u>	<u>1,916</u>	<u>1,829</u>
EAST COAST SOUTH AMERICA TO BALBOA, R.P.:			
Petroleum and products	61	71	42
Diesel oil	35	65	20
Gasoline	26	1	22
Fuel oil, residual .....	.....	5	.....
Miscellaneous	2	7	5
All other and unclassified	2	7	5
Total	<u>63</u>	<u>78</u>	<u>47</u>
EAST COAST SOUTH AMERICA TO HAWAII:			
Petroleum and products	92	60	59
Jet fuel	92	60	26
Kerosene .....	.....	.....	33
Total	<u>92</u>	<u>60</u>	<u>59</u>
EAST COAST SOUTH AMERICA TO OCEANIA:			
Petroleum and products, miscellaneous .....	.....	29	30
Miscellaneous	4	3	3
All other and unclassified	4	3	3
Total	<u>4</u>	<u>32</u>	<u>33</u>
EAST COAST SOUTH AMERICA TO ASIA:			
Canned and refrigerated foods, miscellaneous	38	15	22
Chemicals and petroleum chemicals, miscellaneous	35	70	47
Coal and coke	177	.....	.....
Grains, miscellaneous	3	53	.....
Lumber and products, miscellaneous	23	42	32
Manufactures of iron and steel, miscellaneous	361	357	88
Nitrates, phosphates, and potash	2	.....	.....
Fertilizers, unclassified	2	.....	.....
Ores and metals	<u>269</u>	<u>364</u>	<u>290</u>
Ores	93	146	121
Alumina/bauxite	12	14	49
Iron	32	64	.....
Manganese	31	66	37
Other and unclassified	18	2	35
Metals, miscellaneous	176	218	169
Other agricultural commodities	21	5	.....
Cotton, raw	4	3	.....
Other and unclassified	17	2	.....
Petroleum and products	<u>163</u>	<u>632</u>	<u>1,031</u>
Crude oil .....	.....	508	892
Diesel oil .....	.....	29	.....
Gasoline .....	.....	34	.....
Jet fuel	85	61	92
Liquefied gas	78	.....	.....
Other and unclassified .....	.....	.....	47
Miscellaneous	37	29	27
Paper and products .....	.....	.....	16
All other and unclassified	37	29	11
Total	<u>1,129</u>	<u>1,567</u>	<u>1,537</u>
WEST INDIES TO WEST COAST UNITED STATES:			
Chemicals and petroleum chemicals, miscellaneous	11	.....	17

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST INDIES TO WEST COAST UNITED STATES—			
Continued			
Manufactures of iron and steel, miscellaneous	5	30	30
Minerals, miscellaneous	27	38	24
Salt	27	38	24
Nitrates, phosphates and potash	56	63	82
Ores and metals	5	57	253
Ore, alumina/bauxite	5	57	184
Metals, miscellaneous .....	.....	.....	69
Petroleum and products	227	166	233
Asphalt .....	.....	.....	27
Liquefied gas .....	.....	.....	17
Fuel oil, residual	36	.....	60
Gasoline	139	43	.....
Jet fuel	29	106	60
Lubricating oil	23	17	69
Miscellaneous	6	.....	16
All other and unclassified	6	.....	16
Total	337	354	655
WEST INDIES TO WEST COAST CENTRAL AMERICA:			
Chemicals and petroleum chemicals, miscellaneous	5	1	2
Other agricultural commodities .....	.....	3	18
Sugar .....	.....	3	18
Petroleum and products	41	135	187
Diesel oil	28	44	81
Fuel oil, residual .....	.....	8	.....
Gasoline	7	54	49
Kerosene .....	.....	15	16
Lubricating oil	1	5	6
Other and unclassified	5	9	36
Miscellaneous	73	71	71
Cement	2	15	4
All other and unclassified	71	56	67
Total	119	210	278
WEST INDIES TO WEST COAST SOUTH AMERICA:			
Nitrates, phosphates and potash, miscellaneous	12	41	.....
Other agricultural commodities, miscellaneous	25	.....	53
Minerals, miscellaneous	2	2	6
Sulfur	2	2	6
Ores and metals	9	13	12
Ores, miscellaneous	9	8	7
Metals, miscellaneous .....	.....	5	5
Petroleum and products	462	567	733
Diesel oil	267	232	357
Fuel oil, residual	33	76	91
Gasoline	87	138	147
Jet fuel	45	16	5
Kerosene	5	7	39
Lubricating oil	25	98	79
Other and unclassified .....	.....	.....	15
Miscellaneous	23	7	16
All other and unclassified	23	7	16
Total	533	630	820
WEST INDIES TO BALBOA, R.P.:			
Petroleum and products	6	64	97
Diesel oil	3	55	28

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST INDIES TO BALBOA, R.P.—Continued			
Petroleum and products—Continued			
Fuel oil, residual.....		3	5
Gasoline.....	3	1	22
Other and unclassified.....		5	42
Miscellaneous.....	2	.....	.....
All other and unclassified.....	2	.....	.....
Total.....	8	64	97
WEST INDIES TO HAWAII:			
Petroleum and products.....		115	268
Jet fuel.....		61	268
Residual fuel oil.....		54	.....
Total.....		115	268
WEST INDIES TO OCEANIA:			
Minerals, miscellaneous.....	49	26	38
Salt.....	49	26	38
Other agricultural commodities.....		.....	41
Sugar.....		.....	41
Petroleum and products.....	20	57	180
Diesel oil.....		.....	46
Gasoline.....	20	29	78
Jet fuel.....		.....	34
Lubricating oil.....		5	4
Other and unclassified.....		23	18
Miscellaneous.....	8	.....	3
All other and unclassified.....	8	.....	3
Total.....	77	83	262
WEST INDIES TO ASIA:			
Canned and refrigerated foods.....	18	14	25
Fish, refrigerated.....	17	10	19
Other and unclassified.....	1	4	6
Chemicals and petroleum chemicals, miscellaneous.....	48	71	38
Ores and metals.....	13	46	36
Ores.....	10	46	31
Alumina/bauxite.....	10	43	26
Other and unclassified.....	.....	3	5
Metals, miscellaneous.....	3	.....	5
Other agricultural commodities.....	1,117	1,264	1,162
Sugar.....	1,115	1,264	1,161
Other and unclassified.....	2	.....	1
Petroleum and products.....	73	54	70
Crude oil.....		10	.....
Gasoline.....	24	.....	.....
Jet fuel.....	49	.....	.....
Lubricating oil.....		44	38
Petroleum products, miscellaneous.....		.....	32
Miscellaneous.....	304	164	22
All other and unclassified.....	304	164	22
Total.....	1,573	1,613	1,353
EUROPE TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous.....	57	64	46
Chemicals and petroleum chemicals.....	54	99	23
Caustic soda.....	5	10	5

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EUROPE TO WEST COAST UNITED STATES—			
Continued			
Chemicals and petroleum chemicals—Continued			
Chemicals, unclassified	49	89	18
Lumber and products, miscellaneous	19	21	20
Machinery and equipment	233	246	193
Automobiles, trucks, accessories and parts	212	226	185
Construction machinery and equipment	11	8	5
Electrical machinery and apparatus	2	5	1
Other and unclassified	8	7	2
Manufactures of iron and steel	784	729	780
Angles, shapes, and sections	103	69	53
Plates, sheets, and coils	362	389	469
Tubes, pipes, and fittings	57	48	33
Wires, bars, and rods	93	63	108
Other and unclassified	169	160	117
Nitrates, phosphates, and potash	334	358	346
Ammonium compounds	117	119	100
Fertilizers, unclassified	192	210	200
Nitrate of soda	21	28	42
Other and unclassified	4	1	4
Ores and metals	27	82	51
Ores, miscellaneous	2	56	12
Metals	25	26	39
Iron	15	20	29
Other and unclassified	10	6	10
Petroleum and products	252	252	53
Gasoline	235	248	27
Other and unclassified	17	4	26
Miscellaneous	1,635	1,623	1,428
Bricks and tile	15	25	10
Cement	137	207	92
Glass and glassware	1	1	1
Liquors and wines	19	6	6
Marble and stone	7	7	9
Paper and paper products	149	181	201
Rubber, manufactured	2	1	1
All other and unclassified	1,305	1,195	1,108
Total	3,395	3,474	2,940
EUROPE TO WEST COAST CANADA:			
Canned and refrigerated foods, miscellaneous	8	6	7
Machinery and equipment	22	16	13
Automobiles, trucks, accessories and parts	20	15	6
Other and unclassified	2	1	7
Manufactures of iron and steel	135	193	137
Angles, shapes, and sections	10	15	22
Plates, sheets, and coils	44	84	43
Tubes, pipes, and fittings	16	25	16
Wire, bars, and rods	24	26	26
Other and unclassified	41	43	30
Nitrates, phosphates, and potash .....	.....	8	7
Fertilizers, unclassified .....	.....	8	7
Ores and metals, miscellaneous	94	11	89
Miscellaneous	163	166	194
Bricks and tile	3	3	1
Liquors and wines	2	2	1
All other and unclassified	158	161	192
Total	422	400	447

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
EUROPE TO WEST COAST CENTRAL AMERICA:			
Canned and refrigerated foods, miscellaneous.....	26	17	4
Chemicals and petroleum chemicals, miscellaneous	48	29	13
Grains.....	97	128	53
Corn.....	6	5	4
Rice.....	24	55	14
Wheat.....	60	51	30
Other and unclassified.....	7	17	5
Machinery and equipment.....	44	55	41
Automobiles, trucks, accessories and parts.....	20	22	9
Other and unclassified.....	24	33	32
Manufactures of iron and steel.....	120	90	46
Angles, shapes, and sections.....	19	24	11
Plates, sheets, and coils.....	43	30	15
Tubes, pipes, and fittings.....	2	4	2
Wire, bars, and rods.....	44	23	14
Other and unclassified.....	12	9	4
Nitrates, phosphates, and potash.....	437	327	271
Ammonium compounds.....	45	47	20
Fertilizers, unclassified.....	378	262	240
Potash.....	14	18	11
Ores and metals.....	15	28	10
Metals, miscellaneous.....	15	28	10
Petroleum and products.....	638	415	239
Crude petroleum.....	492	342	201
Other and unclassified.....	146	73	38
Other agricultural commodities.....	1	.....	25
Sugar.....	1	.....	25
Miscellaneous.....	159	143	139
Cement.....	1	1	1
Glass and glassware.....	3	1	.....
Paper and paper products.....	19	17	14
All other and unclassified.....	136	124	124
Total.....	<u>1,585</u>	<u>1,232</u>	<u>841</u>
EUROPE TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods.....	27	26	26
Canned foods.....	15	17	21
Milk.....	12	.....	16
Other and unclassified.....	3	17	5
Refrigerated foods.....	12	9	5
Dairy products.....	1	3	3
Other and unclassified.....	11	6	2
Chemicals and petroleum chemicals.....	46	59	63
Caustic soda.....	12	10	4
Chemicals, unclassified.....	33	48	56
Petroleum chemicals, miscellaneous.....	1	1	3
Coal and coke.....	.....	.....	13
Grains.....	40	41	47
Barley.....	.....	5	5
Oats.....	18	4	3
Wheat.....	5	17	16
Rice.....	.....	.....	5
Other and unclassified.....	17	15	18
Lumber and products.....	.....	.....	3
Pulpwood.....	.....	.....	1
Other and unclassified.....	.....	.....	2

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EUROPE TO WEST COAST SOUTH AMERICA—			
Continued			
Machinery and equipment	57	71	93
Agricultural machinery and implements	10	13	17
Automobiles, trucks, accessories and parts	15	19	22
Construction machinery and equipment	20	19	27
Electrical machinery and apparatus	7	12	15
Other and unclassified	5	8	12
Manufactures of iron and steel	200	149	115
Angles, shapes, and sections	31	31	16
Plates, sheets, and coils	45	60	48
Tubes, pipes, and fittings	9	11	13
Wire, bars, and rods	78	36	19
Other and unclassified	37	11	19
Minerals, miscellaneous	23	43	22
Soda and sodium compounds	20	39	22
Other and unclassified	3	4	.....
Nitrates, phosphates, and potash	237	116	82
Ammonium compounds	28	26	16
Fertilizers, unclassified	197	57	48
Phosphates	9	7	7
Potash	2	25	10
Other and unclassified	1	1	1
Ores and metals	119	132	21
Ores, miscellaneous	89	120	4
Metals	30	12	17
Iron	19	1	1
Tin, including tinplate	4	1	8
Other and unclassified	7	10	8
Other agricultural commodities	7	10	52
Sugar	3	2	52
Other and unclassified	4	8	.....
Petroleum and products	182	119	64
Diesel oil	52	76	42
Gasoline	24	.....	4
Liquefied gas	27	.....	.....
Residual fuel oil	43	37	10
Other and unclassified	36	6	8
Miscellaneous	636	613	478
Ammunition and explosives	3	1	1
Bricks and tile	4	.....	5
Cement	40	.....	3
Flour, wheat	17	23	41
Glass and glassware	6	6	6
Groceries, miscellaneous	9	7	3
Liquors and wines	1	.....	2
Oil, vegetable .....	.....	3	1
Paper and paper products	32	49	33
Resin	2	6	6
Rubber, manufactured	2	1	3
Textiles	5	3	7
Wax, paraffin	2	3	7
All other and unclassified	513	511	360
Total	1,574	1,379	1,079
EUROPE TO OCEANIA:			
Canned and refrigerated foods, miscellaneous	12	13	15
Chemicals and petroleum chemicals	120	139	164
Caustic soda	34	33	45

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EUROPE TO OCEANIA—Continued			
Chemicals and petroleum chemicals—Continued			
Chemicals, unclassified	79	96	108
Petroleum chemicals, miscellaneous	7	10	11
Lumber and products, miscellaneous	32	3	28
Machinery and equipment	28	22	24
Agricultural machinery and implements	2	1	1
Automobiles, trucks, accessories and parts	16	16	14
Construction machinery and equipment	8	2	3
Electrical machinery and apparatus	2	1	2
Other and unclassified .....	.....	2	4
Manufactures of iron and steel	30	22	28
Angles, shapes, and sections	3	.....	4
Plates, sheets, and coils	7	7	7
Tubes, pipes, and fittings	7	5	7
Wire, bars, and rods	8	6	6
Other and unclassified	5	4	4
Minerals, miscellaneous	7	9	10
Salt	5	6	9
Soda and sodium compounds	2	3	1
Nitrates, phosphates, and potash	38	82	69
Ammonium compounds	19	26	13
Fertilizers, unclassified	6	33	19
Phosphates	1	1	.....
Potash	12	22	37
Ores and metals, miscellaneous	16	2	2
Other agricultural commodities, miscellaneous	4	4	6
Petroleum and products	36	19	60
Lubricating oil	9	9	7
Other and unclassified	27	10	53
Miscellaneous	473	465	485
Bricks and tile	1	2	2
Cement	14	13	18
Flour, wheat	11	8	12
Glass and glassware	2	2	2
Groceries, miscellaneous	1	1	4
Liquors and wines	1	2	2
Oil, vegetable	14	16	26
Paper and paper products	19	5	9
Rubber, manufactured	1	1	.....
Textiles .....	.....	1	.....
All other and unclassified	409	414	410
Total	796	780	891
EUROPE TO ASIA:			
Canned and refrigerated foods	15	26	14
Refrigerated foods, miscellaneous	15	26	14
Chemicals and petroleum chemicals	177	218	251
Caustic soda	7	21	19
Chemicals, unclassified	139	161	219
Petroleum chemicals, miscellaneous	31	36	13
Lumber and products, miscellaneous .....	.....	.....	2
Machinery and equipment	30	10	7
Automobiles, trucks, accessories and parts	22	7	7
Other and unclassified	8	3	.....
Manufactures of iron and steel .....	.....	56	.....
Ores and metals, miscellaneous .....	.....	14	48
Petroleum and products, miscellaneous	34	34	54
Miscellaneous	31	69	67

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
EUROPE TO ASIA—Continued			
Miscellaneous—Continued			
Paper and paper products		2	
All other and unclassified	31	67	67
Total	<u>287</u>	<u>427</u>	<u>443</u>
AFRICA TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous	2	3	
Manufactures of iron and steel, miscellaneous	155	82	88
Ores and metals	34	35	40
Metals	10	14	14
Other and unclassified	10	14	14
Ores	24	21	26
Manganese ore	5	16	21
Other and unclassified	19	5	5
Petroleum and products	207	37	143
Crude oil	207		59
Gasoline		37	28
Other and unclassified			56
Miscellaneous	14	16	21
All other and unclassified	14	16	21
Total	<u>412</u>	<u>173</u>	<u>292</u>
AFRICA TO WEST COAST CANADA:			
Manufactures of iron and steel, miscellaneous	1	4	
Miscellaneous	92	39	4
Phosphates	78	35	
All other and unclassified	14	4	4
Total	<u>93</u>	<u>43</u>	<u>4</u>
AFRICA TO WEST COAST SOUTH AMERICA:			
Manufactures of iron and steel, miscellaneous	11		
Petroleum and products, miscellaneous	50	4	
Miscellaneous	7	4	3
All other and unclassified	7	4	3
Total	<u>68</u>	<u>8</u>	<u>3</u>
AFRICA TO ASIA:			
Canned and refrigerated foods	40	38	68
Fish, refrigerated	39	38	68
Other and unclassified	1		
Total	<u>40</u>	<u>38</u>	<u>68</u>
ASIA (MIDDLE EAST) TO WEST COAST UNITED STATES:			
Miscellaneous	374	128	61
Chemicals, miscellaneous		1	
Soybeans		54	
Gasoline	328	26	
Liquefied gas			28
All other and unclassified	46	47	33
Total	<u>374</u>	<u>128</u>	<u>61</u>

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
WEST COAST UNITED STATES TO EAST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous			1
Chemicals and petroleum chemicals	44	94	93
Chemicals, unclassified	40	85	90
Petroleum chemicals, miscellaneous	4	9	3
Lumber and products	1		59
Minerals, miscellaneous		72	105
Soda and sodium compounds		72	68
Salt			37
Petroleum and products	2,996	2,271	2,553
Crude oil	1,847	1,766	1,816
Diesel oil	259	91	327
Fuel oil, residual	539	79	151
Gasoline	102	144	117
Lubricating oil	179	142	96
Other and unclassified	70	49	46
Miscellaneous	391	513	428
All other and unclassified	391	513	428
Total	<u>3,432</u>	<u>2,950</u>	<u>3,239</u>
WEST COAST UNITED STATES TO EAST COAST CANADA:			
Petroleum and products	273	269	327
Residual fuel oil	13	36	59
Diesel oil	99	80	193
Jet fuel	26		
Gasoline			34
Petroleum coke	135	153	41
Miscellaneous	2	2	28
All other and unclassified	2	2	28
Total	<u>275</u>	<u>271</u>	<u>355</u>
WEST COAST UNITED STATES TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	1	3	8
Canned foods, miscellaneous		3	5
Refrigerated foods	1		3
Fruit, excluding bananas			3
Other and unclassified	1		
Chemicals and petroleum chemicals, miscellaneous			8
Coke, coal type			27
Grains	28		60
Wheat			58
Other and unclassified	28		2
Lumber and products	20	24	31
Pulpwood	20	24	31
Machinery and equipment, miscellaneous			3
Manufactures of iron and steel, miscellaneous			1
Minerals, miscellaneous	65	40	45
Borax	5	2	3
Salt	3		6
Soda and sodium compounds	56	38	28
Infusorial earth	1		8
Nitrates, phosphates, and potash	16		1
Nitrate of soda	15		
Ammonium compounds	1		1

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST UNITED STATES TO EAST COAST			
SOUTH AMERICA—Continued			
Ores and metals .....	.....	.....	1
Metals, miscellaneous .....	.....	.....	1
Other agricultural commodities	5	10	15
Beans, edible	3	6	11
Peas, dry	2	4	4
Petroleum and products	99	15	.....
Petroleum coke	71	15	.....
Diesel oil	28	.....	.....
Miscellaneous	71	62	80
Clay, fire and china .....	.....	5	8
Flour, wheat .....	.....	.....	1
Oil, vegetable .....	.....	3	6
Paper and paper products	16	12	17
All other and unclassified	55	42	48
Total	305	154	279
WEST COAST UNITED STATES TO WEST INDIES:			
Canned and refrigerated foods, miscellaneous .....	.....	3	1
Grains	127	67	95
Rice	127	67	95
Petroleum and products	996	883	1,091
Diesel oil	181	277	89
Gasoline	20	.....	.....
Residual fuel oil	792	594	918
Other and unclassified	3	12	84
Miscellaneous .....	.....	4	7
All other and unclassified .....	.....	4	7
Total	1,123	957	1,194
WEST COAST UNITED STATES TO EUROPE:			
Canned and refrigerated foods	128	121	71
Canned foods, miscellaneous .....	.....	1	1
Refrigerated foods	128	120	70
Fish	64	54	4
Fruit, excluding bananas	2	11	10
Other and unclassified	62	55	56
Chemicals and petroleum chemicals, miscellaneous	62	66	65
Coal and coke	368	56	102
Grains	39	137	344
Rice	14	119	298
Wheat	25	18	46
Lumber and products	379	395	566
Boards and planks	158	141	222
Plywood, veneers, composition board	49	38	75
Pulpwood	160	201	217
Other and unclassified	12	15	52
Manufactures of iron and steel, miscellaneous	1	.....	2
Minerals, miscellaneous	437	477	434
Borax	385	410	411
Sulfur	42	67	23
Soda and sodium compound	10	.....	.....
Nitrates, phosphates, and potash	13	9	1
Fishmeal	13	9	1
Ores and metals	49	48	81
Ores	26	3	43
Lead	5	.....	.....

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	<i>1986</i>	<i>1985</i>	<i>1984</i>
WEST COAST UNITED STATES TO EUROPE—			
Continued			
Ores and metals—Continued			
Zinc.....	15	.....	.....
Other and unclassified.....	6	3	43
Metals.....	<u>23</u>	<u>45</u>	<u>38</u>
Aluminum.....	.....	27	8
Copper.....	.....	11	30
Lead.....	2	.....	.....
Other and unclassified.....	21	7	.....
Other agricultural commodities.....	<u>4</u>	<u>21</u>	<u>102</u>
Beans, edible.....	1	.....	1
Cotton, raw.....	3	21	41
Molasses.....	.....	.....	43
Oilseeds.....	.....	.....	17
Petroleum and products.....	<u>2,672</u>	<u>1,502</u>	<u>1,538</u>
Diesel oil.....	212	99	.....
Petroleum coke.....	2,100	1,279	1,538
Residual fuel oil.....	270	123	.....
Gasoline.....	38	.....	.....
Other and unclassified.....	52	1	.....
Miscellaneous.....	<u>817</u>	<u>770</u>	<u>669</u>
Clay, fire and china.....	12	11	16
Groceries, miscellaneous.....	25	.....	2
Oil, vegetable.....	8	15	6
Paper and paper products.....	45	26	55
Slag.....	.....	15	.....
All other and unclassified.....	<u>727</u>	<u>703</u>	<u>590</u>
Total.....	<u><u>4,969</u></u>	<u><u>3,602</u></u>	<u><u>3,975</u></u>
WEST COAST UNITED STATES TO AFRICA:			
Grains.....	178	576	636
Rice.....	11	185	.....
Wheat.....	167	391	583
Soybeans.....	.....	.....	53
Lumber and products, miscellaneous.....	22	.....	15
Minerals, miscellaneous.....	<u>183</u>	<u>112</u>	<u>128</u>
Sulfur.....	183	47	101
Soda and sodium compound.....	.....	65	27
Petroleum and products, miscellaneous.....	.....	.....	28
Miscellaneous.....	<u>48</u>	<u>58</u>	<u>15</u>
Cotton, raw.....	31	27	.....
Oil, vegetable.....	.....	.....	10
Nitrate of soda.....	12	.....	.....
All other and unclassified.....	5	31	5
Total.....	<u><u>431</u></u>	<u><u>746</u></u>	<u><u>822</u></u>
WEST COAST CANADA TO EAST COAST UNITED STATES:			
Chemicals and petroleum chemicals, miscellaneous.....	149	257	181
Coal and coke, coal type.....	.....	74	.....
Lumber and products.....	<u>1,750</u>	<u>1,605</u>	<u>1,196</u>
Boards and planks.....	1,717	1,520	1,188
Pulpwood.....	.....	35	7
Other and unclassified.....	33	50	1
Minerals, miscellaneous.....	.....	.....	<u>49</u>
Sulfur.....	.....	.....	49
Nitrates, phosphates, potash.....	<u>20</u>	<u>280</u>	<u>124</u>
Potash.....	20	280	124

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST CANADA TO EAST COAST UNITED STATES—Continued			
Ores and metals .....	.....	1	.....
Other and unclassified .....	.....	1	.....
Petroleum and products	495	100	85
Crude oil	402	56	.....
Diesel oil	27	44	85
Gasoline	11	.....	.....
Residual fuel oil	49	.....	.....
Others and unclassified	6	.....	.....
Miscellaneous	7	21	11
All other and unclassified	7	21	11
Total	<u>2,421</u>	<u>2,338</u>	<u>1,646</u>
WEST COAST CANADA TO EAST COAST SOUTH AMERICA:			
Coal	146	194	.....
Grains	277	285	51
Wheat	277	285	51
Lumber and products	55	61	56
Pulpwood	55	61	56
Minerals, miscellaneous	250	265	256
Sulfur	250	250	256
Other and unclassified .....	.....	15	.....
Nitrates, phosphates, and potash	110	19	34
Fertilizers, unclassified	23	.....	.....
Potash	87	18	32
Other and unclassified .....	.....	1	2
Ores and metals, miscellaneous .....	.....	17	2
Miscellaneous	57	44	27
Paper and paper products	45	38	23
All other and unclassified	12	6	4
Total	<u>895</u>	<u>885</u>	<u>426</u>
WEST COAST CANADA TO WEST INDIES:			
Chemicals and petroleum chemicals, miscellaneous	20	2	2
Lumber and products	36	36	31
Boards and planks	36	36	31
Nitrates, phosphates, and potash	8	17	37
Minerals, miscellaneous	111	136	121
Sulfur	111	136	121
Other agricultural commodities .....	.....	.....	31
Peas, dried .....	.....	.....	31
Petroleum and products	21	10	150
Diesel oil	21	10	.....
Crude oil .....	.....	.....	150
Miscellaneous	17	24	4
Paper and paper products	5	17	4
All other and unclassified	12	7	.....
Total	<u>213</u>	<u>225</u>	<u>376</u>
WEST COAST CANADA TO EUROPE:			
Canned and refrigerated foods, miscellaneous	42	24	34
Chemicals and petroleum chemicals, miscellaneous	92	198	331
Coal and coke	1,800	2,103	1,446
Grains	974	664	877
Barley	385	354	483
Wheat	509	310	278

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
WEST COAST CANADA TO EUROPE—Continued			
Grains—Continued			
Other and unclassified	80	.....	116
Lumber and products	2,554	1,926	2,304
Boards and planks	1,043	642	1,064
Plywood, veneers, composition board.....	157	192	171
Pulpwood.....	1,155	968	923
Other and unclassified	199	124	146
Minerals, miscellaneous.....	1,492	1,281	1,021
Asbestos	3	1	3
Sulfur	1,481	1,280	1,018
Sulfur	8	.....	.....
Nitrates, phosphates, and potash.....	56	.....	1
Potash	14	.....	.....
Fishmeal.....	4	.....	1
Fertilizer, unclassified	38	.....	.....
Ores and metals	56	49	55
Ores	15	21	17
Copper .....	.....	.....	6
Zinc.....	.....	4	4
Lead	12	12	7
Other and unclassified	3	5	.....
Metals.....	41	28	38
Aluminum	2	.....	1
Lead ..	17	14	17
Zinc.....	22	14	19
Other and unclassified .....	.....	.....	1
Other agricultural commodities	56	80	294
Oilseeds	47	68	291
Other and unclassified	9	12	3
Petroleum and products	92	86	118
Petroleum coke	92	66	103
Other and unclassified .....	.....	20	15
Miscellaneous	609	547	346
Paper and paper products.....	252	305	157
All other and unclassified	357	242	189
Total	7,823	6,958	6,827
WEST COAST CANADA TO AFRICA:			
Coal and coke.....	.....	.....	35
Grains	379	547	659
Wheat	379	547	659
Lumber and products	1	264	299
Boards and planks .....	.....	253	261
Pulpwood.....	1	11	29
Other and unclassified .....	.....	.....	9
Minerals, miscellaneous.....	1,257	1,189	855
Sulfur	1,257	1,189	855
Nitrates, phosphates, and potash.....	18	15	13
Potash	18	15	13
Miscellaneous	9	55	38
All other and unclassified	9	55	38
Total	1,664	2,070	1,899
WEST COAST CANADA TO ASIA (MIDDLE EAST):			
Grains.....	154	172	.....
Barley	129	67	.....

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST CANADA TO ASIA (MIDDLE EAST)—			
Continued			
Grains—Continued			
Wheat	25	105	.....
Lumber and products .....	.....	13	.....
Other and unclassified .....	.....	13	.....
Minerals, miscellaneous	41	82	.....
Sulfur	41	82	.....
Total	195	267	.....
WEST COAST CENTRAL AMERICA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	31	34	114
Refrigerated foods	31	34	114
Bananas	31	32	114
Other and unclassified .....	.....	2	.....
Chemicals and petroleum chemicals, miscellaneous	23	23	.....
Minerals, miscellaneous	313	58	203
Salt	313	58	194
Sulfur .....	.....	.....	9
Nitrates, phosphates, and potash	14	26	4
Fishmeal	14	26	4
Other agricultural commodities	490	558	666
Coffee	11	27	33
Molasses	159	188	215
Sugar	320	341	416
Other and unclassified .....	.....	2	2
Petroleum and products	29	46	6
Miscellaneous	12	39	6
All other and unclassified	12	39	6
Total	912	761	999
WEST COAST CENTRAL AMERICA TO EAST COAST CENTRAL AMERICA:			
Grains, miscellaneous	33	.....	43
Nitrates, phosphates, and potash	351	310	87
Phosphates	338	302	85
Fertilizer, unclassified	13	8	2
Petroleum and products	101	7	17
Diesel oil	30	5	16
Gasoline	70	1	1
Kerosene	1	1	.....
Miscellaneous	13	7	12
All other and unclassified	13	7	12
Total	498	324	159
WEST COAST CENTRAL AMERICA TO WEST INDIES:			
Canned and refrigerated foods	132	78	24
Refrigerated foods, miscellaneous	132	78	24
Lumber and products	17	23	22
Boards and planks	17	23	19
Other and unclassified .....	.....	.....	3
Other agricultural commodities	46	26	19
Molasses .....	.....	6	.....
Sugar, raw	46	13	12
Other and unclassified .....	.....	7	7
Petroleum and products, miscellaneous .....	.....	29	123

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST CENTRAL AMERICA TO WEST INDIES—Continued			
Miscellaneous	58	22	16
Rice.....	17	.....	.....
All other and unclassified	41	22	16
Total.....	253	178	204
WEST COAST CENTRAL AMERICA TO EUROPE:			
Canned and refrigerated foods	156	89	99
Refrigerated foods	156	89	99
Bananas	99	43	76
Other and unclassified	57	46	23
Chemicals and petroleum chemicals, miscellaneous .....	.....	6	.....
Grains, miscellaneous.....	.....	.....	13
Lumber and products	10	9	9
Boards and planks	10	9	9
Manufactures of iron and steel, miscellaneous .....	.....	.....	15
Nitrates, phosphates, and potash.....	5	.....	4
Fertilizers, unclassified.....	.....	.....	4
Fishmeal.....	5	.....	.....
Ores and metals	175	141	205
Ores	174	140	201
Copper	166	135	196
Other and unclassified	8	5	5
Metals.....	1	1	4
Other and unclassified	1	1	4
Other agricultural commodities	316	340	169
Beans, edible .....	.....	.....	5
Cocoa and cocoa beans .....	.....	.....	6
Coffee	90	123	79
Cotton, raw	22	69	46
Molasses.....	10	59	5
Oilseeds	2	7	14
Peas, dried.....	21	37	7
Sugar	171	45	7
Miscellaneous	68	75	99
Seeds, excluding oilseeds.....	7	2	3
Textiles.....	1	1	.....
Tobacco and manufactures.....	1	1	1
All other and unclassified	59	71	95
Total.....	730	660	613
WEST COAST CENTRAL AMERICA TO AFRICA:			
Canned and refrigerated foods.....	11	6	.....
Bananas	9	6	.....
Other and unclassified	2	.....	.....
Lumber and products, miscellaneous	7	11	9
Manufactures of iron and steel, miscellaneous	15	.....	54
Other agricultural commodities	58	36	66
Coffee .....	.....	1	11
Peas, dried.....	.....	6	.....
Sugar, raw	56	29	55
Other and unclassified	2	.....	.....
Miscellaneous	6	1	1
All other and unclassified	6	1	1
Total.....	97	54	130

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST SOUTH AMERICA TO EAST COAST			
UNITED STATES:			
Canned and refrigerated foods	787	737	561
Canned foods, miscellaneous	14	18	24
Refrigerated foods	773	719	537
Canned and refrigerated foods—Continued			
Bananas	470	435	305
Fish	25	31	27
Fruit, excluding bananas	264	243	194
Refrigerated, miscellaneous	14	10	11
Chemicals and petroleum chemicals, miscellaneous	40	11	28
Chemicals, miscellaneous	17	5	19
Benzene	15	2	5
Toulene	4	.....	.....
Petrochemicals, miscellaneous	4	4	4
Lumber and products	44	57	28
Boards and planks	21	24	11
Pulpwood	9	11	3
Other and unclassified	14	22	14
Manufactures of iron and steel, miscellaneous	10	26	5
Minerals, miscellaneous	332	467	472
Salt	331	462	460
Soda and sodium compounds .....	.....	5	11
Other and unclassified	1	.....	1
Nitrates, phosphates, and potash	229	255	135
Fishmeal	109	114	33
Nitrate of soda	97	141	102
Fertilizers, miscellaneous	23	.....	.....
Ores and metals	581	630	555
Ores	275	399	232
Copper	15	26	11
Iron	181	217	19
Lead	2	20	36
Tin	4	3	9
Zinc	44	29	20
Other and unclassified	29	104	137
Metals	306	231	323
Copper	225	178	267
Iron	19	.....	.....
Lead	6	10	14
Zinc	46	31	30
Other and unclassified	10	12	12
Other agricultural commodities	501	647	588
Beans, edible .....	.....	1	.....
Cocoa and cacao beans	30	61	27
Coffee	139	143	175
Cotton, raw	4	3	5
Molasses	109	172	139
Sugar	219	267	242
Petroleum and products	5,874	4,596	5,603
Crude oil	4,294	2,686	3,567
Fuel oil, residual	1,481	1,743	1,725
Diesel oil	28	49	45
Gasoline	25	118	113
Other and unclassified	46	.....	153
Miscellaneous	250	234	199
Fibers, plant	3	4	5

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
WEST COAST SOUTH AMERICA TO EAST COAST			
UNITED STATES—Continued			
Miscellaneous—Continued			
Groceries, miscellaneous	6	6	7
Oil, fish .....	.....	3	.....
Paper and products	14	9	9
Textiles	10	8	11
All other and unclassified	217	204	167
Total	<u>8,648</u>	<u>7,660</u>	<u>8,174</u>
WEST COAST SOUTH AMERICA TO EAST COAST			
CANADA:			
Nitrates, phosphates, and potash	4	4	4
Nitrate of soda	4	4	4
Ores and metals, miscellaneous	81	97	76
Other agricultural commodities .....	.....	.....	32
Molasses .....	.....	.....	19
Sugar .....	.....	.....	12
Other and unclassified .....	.....	.....	1
Petroleum and products .....	.....	.....	52
Crude oil .....	.....	.....	52
Miscellaneous	5	6	4
All other and unclassified	5	6	4
Total	<u>90</u>	<u>107</u>	<u>168</u>
WEST COAST SOUTH AMERICA TO EAST COAST			
CENTRAL AMERICA:			
Manufactures of iron and steel, miscellaneous .....	.....	2	5
Ores and metals	3	8	52
Ores, miscellaneous	3	3	47
Metals, miscellaneous .....	.....	5	5
Other agricultural commodities	27	38	2
Other and unclassified	27	38	2
Petroleum and products	763	662	939
Crude oil	760	629	939
Other and unclassified	3	33	.....
Miscellaneous	8	3	1
All other and unclassified	8	3	1
Total	<u>801</u>	<u>713</u>	<u>999</u>
WEST COAST SOUTH AMERICA TO EAST COAST			
SOUTH AMERICA:			
Canned and refrigerated foods	2	7	5
Canned foods, miscellaneous .....	.....	2	.....
Fruit refrigerated, excluding bananas .....	.....	1	.....
Other and unclassified	2	4	5
Chemicals and petroleum chemicals, miscellaneous	9	11	13
Lumber and products, miscellaneous	46	28	75
Manufactures of iron and steel, miscellaneous	1	.....	1
Minerals, miscellaneous	40	3	.....
Ores and metals, miscellaneous	90	82	51
Other agricultural commodities	27	110	40
Beans, edible	24	2	23
Sugar	2	80	16
Other and unclassified	1	28	1
Petroleum and products	543	995	922
Crude oil	512	905	907
Gasoline	31	90	10

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST SOUTH AMERICA TO EAST COAST			
SOUTH AMERICA—Continued			
Petroleum and products—Continued			
Other and unclassified			5
Miscellaneous	74	85	41
Oil, fish		1	4
Oil, vegetable	36	16	6
Paper and paper products	23	17	15
All other and unclassified	15	51	16
Total	832	1,321	1,151
WEST COAST SOUTH AMERICA TO WEST INDIES:			
Canned and refrigerated foods	38	54	44
Canned foods, miscellaneous		1	4
Fish, refrigerated	38	53	40
Grains, miscellaneous			2
Lumber and products	60	61	26
Boards and planks	59	57	22
Other and unclassified	1	4	4
Nitrates, phosphates, and potash	16	72	9
Fishmeal	16	20	9
Phosphates		52	
Petroleum and products	3,098	3,818	3,392
Crude oil	1,960	2,875	2,624
Diesel oil		44	
Fuel oil, residual	1,138	899	730
Other and unclassified			38
Miscellaneous	16	10	27
All other and unclassified	16	10	27
Total	3,228	4,015	3,500
WEST COAST SOUTH AMERICA TO EUROPE:			
Canned and refrigerated foods	941	1,018	699
Canned foods, miscellaneous	9	15	24
Refrigerated foods	932	1,003	675
Bananas	370	307	238
Fish, refrigerated	281	506	297
Fruit, excluding bananas	218	140	139
Other and unclassified	63	50	1
Chemicals and petroleum chemicals, miscellaneous	21	5	9
Coke, coal type	12		
Grains, miscellaneous	18		45
Lumber and products	214	123	118
Boards and planks	39	22	13
Pulpwood	167	96	98
Other and unclassified	8	5	7
Manufactures of iron and steel	10		11
Nitrates, phosphates, and potash	1,277	1,171	733
Ammonium compounds			23
Fertilizers, unclassified	1		
Fishmeal	1,159	1,073	646
Nitrate of soda	117	95	64
Potash		3	
Ores and metals	1,768	1,664	1,415
Ores	955	918	759
Copper	296	176	111
Iron	3	112	
Lead	101	100	101

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
WEST COAST SOUTH AMERICA TO EUROPE—			
Continued			
Ores and metals—Continued			
Tin	26	22	21
Zinc	498	420	500
Other and unclassified	31	88	26
Metals	813	746	656
Copper	672	581	563
Lead	43	52	34
Zinc	90	92	40
Other and unclassified	8	21	19
Other agricultural commodities	203	149	209
Cocoa and cacao beans	26	11	12
Coffee	133	111	143
Cotton, raw	15	21	11
Molasses	6	.....	13
Oilseeds	9	.....	5
Sugar .....	.....	.....	12
Wool, raw	6	6	10
Other and unclassified	8	.....	3
Petroleum and products .....	.....	106	.....
Fuel oil, residual .....	.....	86	.....
Other and unclassified .....	.....	20	.....
Miscellaneous	622	490	346
Groceries, miscellaneous	7	6	12
Oil, fish	157	106	109
Paper and paper products	5	1	13
Seeds, excluding oilseeds .....	.....	1	1
Textiles	9	7	7
All other and unclassified	444	369	204
Total	5,086	4,726	3,585
HAWAII TO EAST COAST UNITED STATES:			
Other agricultural commodities	286	168	129
Sugar	286	168	129
Miscellaneous	13	7	12
All other and unclassified	13	7	12
Total	299	175	141
OCEANIA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	356	324	311
Refrigerated foods	356	324	311
Dairy products	1	.....	.....
Fruit, refrigerated	19	20	8
Meat	29	14	23
Other and unclassified	307	290	280
Chemicals and petroleum chemicals, miscellaneous	60	1	10
Manufactures of iron and steel, miscellaneous	68	22	64
Ores and metals	1,316	1,492	1,175
Ores	1,254	1,488	1,156
Alumina/bauxite	646	894	611
Iron .....	.....	.....	53
Lead	10	5	5
Manganese	92	57	61
Other and unclassified	506	532	426
Metals	62	4	19
Aluminum metal	54	.....	.....
Lead metal .....	.....	4	11

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
OCEANIA TO EAST COAST UNITED STATES—			
Continued			
Ores and metals—Continued			
Zinc.....	3	.....	.....
Other and unclassified	5	.....	8
Other agricultural commodities	329	400	445
Molasses.....	177	273	203
Sugar	150	127	242
Wool, raw	2	.....	.....
Petroleum and products	277	112	241
Crude oil	177	.....	.....
Fuel oil, residual.....	39	32	160
Liquified natural gas	47	2	.....
Lubricating oil	14	30	52
Other and unclassified .....	.....	48	29
Miscellaneous	314	379	382
All other and unclassified	314	379	382
Total	2,720	2,730	2,628
OCEANIA TO EAST COAST CANADA:			
Canned and refrigerated foods.....	61	40	33
Refrigerated foods	61	40	33
Other and unclassified	61	40	33
Ores and metals	48	24	76
Ores, miscellaneous	48	24	76
Other agricultural commodities	266	298	347
Sugar	266	298	347
Miscellaneous	42	56	35
All other and unclassified	42	56	35
Total	417	418	491
OCEANIA TO EAST COAST CENTRAL AMERICA:			
Canned and refrigerated foods, miscellaneous.....	18	37	28
Coal .....	.....	.....	22
Ores and metals	120	136	37
Manganese ore	87	93	22
Ores, miscellaneous	33	43	15
Miscellaneous	1	.....	4
All other and unclassified	1	.....	4
Total	139	173	91
OCEANIA TO WEST INDIES:			
Canned and refrigerated foods.....	73	93	143
Canned foods, miscellaneous	16	8	10
Refrigerated foods	57	85	133
Dairy products	12	14	6
Fish, refrigerated	27	56	113
Meat .....	.....	.....	5
Other and unclassified	18	15	9
Petroleum and products .....	.....	47	39
Miscellaneous	18	13	19
All other and unclassified	18	13	19
Total	91	153	201
OCEANIA TO EUROPE:			
Canned and refrigerated foods.....	190	160	186
Canned foods, miscellaneous .....	.....	5	.....
Refrigerated foods	190	155	186

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
OCEANIA TO EUROPE—Continued			
Canned and refrigerated foods—Continued			
Dairy products		2	
Fruit, excluding bananas	148	123	92
Meat	3	20	2
Other and unclassified	39	10	92
Chemicals and petroleum chemicals, miscellaneous	113	227	115
Grains, miscellaneous			74
Ores and metals	131	37	72
Ores	116	29	58
Alumina/bauxite			38
Copper	93		
Other and unclassified	23	29	20
Metals	15	8	14
Other and unclassified	15	8	14
Other agricultural commodities	186	224	271
Copra	8		7
Molasses	28	30	20
Oilseeds	1		
Sugar	147	184	236
Wool, raw	2	10	8
Miscellaneous	266	247	287
Oil, coconut	2	4	8
Oil, vegetable		7	26
Tallow	23	16	32
All other and unclassified	241	220	221
Total	886	895	1,005
ASIA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	115	135	175
Canned foods	19	50	90
Fruit	19	45	85
Vegetables			1
Other and unclassified		5	5
Refrigerated foods	96	85	85
Fruit, refrigerated	12		9
Other and unclassified	84	85	76
Chemicals and petroleum chemicals, miscellaneous	210	206	69
Chemicals, miscellaneous	143	93	35
Benzene	48	61	31
Toulene	16	44	
Petrochemicals, miscellaneous	3	8	3
Coal and coke	229	447	183
Lumber and products	686	745	693
Boards and planks	81	150	58
Plywood, veneers, composition board	545	541	591
Other and unclassified	60	54	44
Machinery and equipment	2,021	1,519	1,369
Agricultural machinery	9	17	24
Automobiles, trucks, accessories and parts	1,840	1,369	1,275
Construction machinery and equipment	116	88	45
Electrical machinery and apparatus	8	9	12
Other and unclassified	48	36	13
Manufactures of iron and steel	3,650	4,596	4,931
Angles, shapes, and sections	213	399	277
Nails, tacks, and spikes	51	64	102
Plates, sheets, and coils	1,520	1,624	1,852

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
ASIA TO EAST COAST UNITED STATES—Continued			
Manufactures of iron and steel—Continued			
Tubes, pipes, and fittings	615	741	951
Wire, bars, and rods	258	221	320
Other and unclassified	993	1,547	1,429
Nitrates, phosphates, and potash	20	2	2
Fertilizers, unclassified	20	2	2
Ores and metals	839	1,418	1,054
Ores	780	1,344	1,018
Alumina/bauxite	164	168	143
Chrome	13	49	28
Manganese	10	.....	7
Other and unclassified	593	1,127	840
Metals	59	74	36
Aluminum	35	43	30
Copper .....	.....	2	1
Iron	19	1	.....
Other and unclassified	5	28	5
Other agricultural commodities	310	348	532
Coffee	4	3	5
Copra .....	.....	2	3
Rubber, raw	66	94	92
Sugar	240	248	428
Other and unclassified .....	.....	1	4
Petroleum and products	353	235	676
Crude petroleum	52	.....	209
Diesel oil	17	.....	.....
Gasoline	174	164	365
Liquefied natural gas	18	.....	8
Lubricating oil	75	23	18
Petroleum coke	11	40	43
Petroleum miscellaneous	6	8	33
Miscellaneous	5,777	5,241	4,660
Bricks and tile	1	8	3
Cement	20	.....	.....
Clay, fire and china .....	.....	25	1
Fibers, plant .....	.....	.....	1
Glass and glassware .....	.....	.....	2
Groceries, miscellaneous .....	.....	6	10
Oil, coconut	26	32	43
Oil, vegetable	78	37	5
Porcelainware .....	.....	.....	2
Rubber, manufactured	1	26	33
Textiles	1	5	16
All other and unclassified	5,650	5,102	4,544
Total	14,210	14,892	14,344
ASIA TO EAST COAST CANADA:			
Canned and refrigerated foods, miscellaneous	4	4	5
Machinery and equipment	10	1	.....
Other and unclassified	10	1	.....
Manufactures of iron and steel	20	26	7
Plates, sheets, and coils	1	15	.....
Tubes, pipes, and fittings	4	4	4
Other and unclassified	15	7	3
Ores and metals	70	97	55
Ores	70	89	55

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1986	1985	1984
ASIA TO EAST COAST CANADA—Continued			
Ores and metals—Continued			
Alumina/bauxite	42	76	55
Other and unclassified	28	13	.....
Metals .....	.....	8	.....
Other and unclassified .....	.....	8	.....
Miscellaneous	305	296	327
All other and unclassified	305	296	327
Total	<u>409</u>	<u>424</u>	<u>394</u>
ASIA TO EAST COAST CENTRAL AMERICA:			
Grains, miscellaneous .....	.....	42	21
Machinery and equipment, miscellaneous .....	.....	3	3
Manufactures of iron and steel, miscellaneous	6	41	8
Miscellaneous	37	9	15
Diesel oil	14	.....	.....
All other and unclassified	23	9	15
Total	<u>43</u>	<u>95</u>	<u>47</u>
ASIA TO EAST COAST SOUTH AMERICA:			
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	2
Coal and coke	19	33	.....
Grains, miscellaneous .....	.....	48	21
Machinery and equipment	46	39	42
Automobiles, trucks, accessories and parts	19	14	16
Construction machinery and equipment	2	5	6
Electrical machinery and apparatus	8	12	9
Other and unclassified	17	8	11
Manufactures of iron and steel	130	223	161
Plates, sheets, and coils	44	62	72
Tubes, pipes, and fittings	51	128	46
Wires, bars, and rods	18	14	10
Other and unclassified	17	19	33
Nitrates, phosphates, and potash	22	4	.....
Fertilizers, unclassified	22	4	.....
Ores and metals	66	26	15
Ores	65	20	2
Alumina/bauxite	9	.....	.....
Other and unclassified	56	20	2
Metals	1	6	13
Tin, including tinplate	1	1	6
Other and unclassified .....	.....	5	7
Other agricultural commodities	2	2	3
Rubber, raw	2	2	3
Miscellaneous	160	176	136
Resin	1	1	1
Rubber, manufactured	8	3	1
Textiles	2	1	1
All other and unclassified	149	171	136
Total	<u>445</u>	<u>551</u>	<u>380</u>
ASIA TO CRISTOBAL, R.P.:			
Machinery and equipment	6	7	12
Electrical machinery and apparatus	1	1	2
Other and unclassified	5	6	10
Manufactures of iron and steel, miscellaneous	32	26	22

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1986	1985	1984
ASIA TO CRISTOBAL, R.P.—Continued			
Miscellaneous	110	100	93
Textiles .....	.....	.....	1
All other and unclassified	110	100	92
Total	<u>148</u>	<u>133</u>	<u>127</u>
ASIA TO WEST INDIES:			
Canned and refrigerated foods	37	51	50
Canned foods, miscellaneous	21	33	24
Refrigerated foods	16	18	26
Fish, refrigerated	15	16	24
Other and unclassified	1	2	2
Chemicals and petroleum chemicals, miscellaneous .....	.....	13	10
Coal and coke	11	18	8
Grains	134	118	94
Corn .....	.....	1	6
Rice	126	104	83
Soybeans	7	10	5
Grains, miscellaneous	1	3	.....
Lumber and products	233	196	184
Boards and planks	204	165	160
Plywood veneers	14	13	13
Pulpwood	15	10	10
Other and unclassified .....	.....	8	1
Machinery and equipment	233	232	182
Automobiles, trucks, accessories and parts	206	193	161
Electrical machinery and apparatus	6	15	5
Other and unclassified	21	24	16
Manufactures of iron and steel	196	118	124
Plates, sheets, and coils	66	63	67
Tubes, pipes, and fittings	29	24	32
Wires, bars, and rods	66	13	8
Other and unclassified	35	18	17
Nitrates, phosphates and potash	35	2	33
Fertilizers, unclassified	26	1	31
Fishmeal	9	1	2
Ores and metals	22	54	14
Metals, miscellaneous	11	23	7
Ores, miscellaneous	11	31	7
Petroleum and products	80	119	121
Diesel oil	1	.....	4
Gasoline	72	119	117
Kerosene	7	.....	.....
Miscellaneous	478	400	291
Bricks and tile	1	2	3
Glass and glassware	4	3	2
Groceries, miscellaneous	1	2	.....
Paper and paper products	5	12	13
Porcelainware	1	1	1
Resin	1	1	.....
Rubber, manufactured	6	4	4
Textiles	8	11	6
All other and unclassified	451	364	262
Total	<u>1,459</u>	<u>1,321</u>	<u>1,111</u>

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	<i>1986</i>	<i>1985</i>	<i>1984</i>
ASIA TO EUROPE:			
Canned and refrigerated foods	5	16	4
Chemicals and petroleum chemicals, miscellaneous . . .	19	10	3
Machinery and equipment	1	2	4
Automobiles, trucks, accessories and parts		2	2
Other and unclassified	1		2
Ores and metals, miscellaneous		3	2
Petroleum and products, miscellaneous	6	1	4
Miscellaneous	175	101	83
Oil, coconut	14	4	24
Oil, fish	39	44	37
Oil, vegetable	1	5	2
All other and unclassified	121	48	20
Total	206	133	100

Table 12.—Principal Canal Commodities by Direction—Fiscal Year 1986

[Long tons]

<i>Commodity</i>	<i>Atlantic to Pacific</i>	<i>Pacific to Atlantic</i>	<i>Total</i>
Ammonium compounds	695,086	10,795	705,881
Asbestos	21,563	4,642	26,205
Asphalt	46,314	7,745	54,059
Automobiles, trucks, and accessories	342,459	2,083,281	2,425,740
Bananas	9,837	1,000,826	1,010,663
Barley	114,978	578,890	693,868
Beans, edible	3,867	90,282	94,149
Benzene	37,751	65,889	103,640
Borax	1,008	400,367	401,375
Bricks and tile	28,877	7,262	36,139
Canned food products	111,797	126,287	238,084
Carbon black	21,999	1,435	23,434
Caustic soda	786,336	122	786,458
Cement	193,037	22,942	215,979
Chemicals, petroleum various	700,460	67,662	768,122
Chemicals, various	2,169,622	768,857	2,038,479
Clay, fire and china	357,335	14,502	371,837
Coal and coke (excluding petroleum coke)	7,534,098	2,672,110	10,206,208
Cocoa and cacao beans	1,528	56,058	57,586
Coffee	9,549	381,374	390,923
Coke, petroleum	1,203,189	2,445,128	3,648,317
Copra and coconuts	8,543	8,543	8,543
Corn	8,621,554	23,359	8,644,913
Cotton, raw	17,854	121,088	138,942
Fertilizers, various	1,715,985	234,378	1,950,363
Fibers, plant	4,035	24,627	28,662
Fishmeal	1,176	1,408,324	1,409,500
Flour, wheat	148,563	1,371	149,934
Gasoline	2,206,159	573,960	2,780,119
Glass and glassware	28,067	5,707	34,774
Grains, various	160,260	74,861	235,121
Groceries, various	22,838	44,245	67,083
Infusorial earth	3,467	988	4,455
Jet fuel	564,623	50,505	615,128
Kerosene	86,174	13,913	100,087
Liquefied gas	1,072,023	71,394	1,143,417
Liquors	24,758	25,046	49,804
Lumber and products (excluding pulpwood)	47,576	4,507,012	4,554,588
Machinery, agricultural	43,347	16,782	60,129
Machinery, construction	98,862	146,621	245,483
Machinery, electrical	27,790	23,056	50,846
Machinery, various	43,083	82,351	125,434
Manufactures of iron and steel	2,538,228	4,162,152	6,700,380
Metal, aluminum	212,133	91,274	303,407
Metal, copper	9,815	910,890	920,705
Metal, iron	217,439	41,775	259,214
Metal, scrap	3,225,378	1,202	3,226,580
Metals, various (including tinplate)	102,787	312,102	414,889
Molasses	4,428	582,375	586,803
Nitrate of soda	21,682	244,844	266,526
Oats	31,677	1,485	33,162
Oil, coconut	3,871	52,039	55,910
Oil, crude	2,933,268	10,003,154	12,936,422
Oil, diesel	1,118,651	994,693	2,113,344
Oil, fish	100	208,449	208,549
Oil, lube	467,648	274,801	742,449
Oil, residual fuel	2,087,696	4,332,499	6,420,195
Oil, vegetable	195,946	164,432	360,378
Oilseeds	51,272	60,824	112,096
Ore, alumina/bauxite	100,703	883,993	984,696
Ore, copper	39,898	660,674	700,572

**Table 12.—Principal Canal Commodities by Direction—Fiscal Year 1986—
Continued**

[Long tons]

<i>Commodity</i>	<i>Atlantic to Pacific</i>	<i>Pacific to Atlantic</i>	<i>Total</i>
Ore, iron	55,508	184,099	239,607
Ores, various	403,514	2,336,378	2,739,892
Paper and paper products	764,544	421,339	1,185,883
Peas, dry	2,047	24,073	26,120
Petroleum products, various	144,600	149,839	294,439
Phosphates	4,924,525	3,337,854	5,262,379
Potash	212,837	139,629	352,466
Pulpwood	715,095	1,649,367	2,364,462
Refrigerated food products (excluding bananas).....	467,663	2,113,574	2,581,237
Resin	203,114	8,611	211,725
Rice	28,025	344,961	372,986
Rubber, manufactured.....	20,420	14,941	35,361
Rubber, raw	2,590	69,578	72,168
Salt	100,755	748,430	849,185
Seeds, excluding oilseeds.....	530	61,667	62,197
Slag, clinkers, and dross	31,471	7,220	38,691
Soda and sodium compounds	84,000	70,341	154,341
Sorghum	2,252,990	25,349	2,278,339
Soybeans	6,830,545	7,644	6,838,189
Sugar	1,298,926	1,941,275	3,240,201
Sulfur	24,448	3,365,117	3,389,565
Tallow	92,836	42,435	135,271
Textiles.....	28,419	33,015	61,434
Tobacco and manufactures.....	777	1,556	2,333
Toluene	28,334	19,836	48,170
Wax, paraffin	5,449	4,540	9,989
Wheat	2,377,036	1,464,493	3,841,529
Wool, raw	1,480	10,301	11,781
All other	8,880,994	9,424,499	18,305,493
Total	<u>72,674,976</u>	<u>67,270,205</u>	<u>139,945,181</u>

Other Statistics

Table 13.—Water Supply and Usage

	Fiscal year		Percent of usage fiscal year	
	1986	1985	1986	1985
	(Acre feet)			
MADDEN AND GATUN LAKE WATER SUPPLY:				
Total runoff, Madden Lake Basin	2,010,239	1,866,707		
Evaporation from Madden Lake	— 49,004	— 45,164		
Available for Madden Lake usage	1,961,235	1,821,543		
Municipal water use Madden Lake	—106,648	— 83,275		
Available for downstream usage	1,854,587	1,738,268		
Total runoff, Gatun Lake (area below Madden) ...	1,699,672	2,160,585		
Subtotal	3,554,259	3,898,853		
Evaporation from Gatun Lake	—436,190	—453,739		
Available for Gatun watershed usage	<u>3,118,069</u>	<u>3,445,114</u>		
MADDEN LAKE WATER USAGE:				
Hydroelectric power	1,738,613	1,648,530	88	82
Leakage	14,479	14,479	1	1
Spillway discharge	115,657	256,589	6	13
Municipal	106,648	83,275	5	4
Total Madden Lake usage	<u>1,975,397</u>	<u>2,002,873</u>	<u>100</u>	<u>100</u>
GATUN LAKE WATER USAGE:				
Hydroelectric power	807,094	1,089,761	25	29
Lockages, Gatun and Pedro Miguel	2,009,160	1,948,325	63	53
Municipal and other usages	96,924	100,173	3	3
Spillway discharge	302,365	565,909	9	15
Total Gatun Lake usage	<u>3,215,543</u>	<u>3,704,168</u>	<u>100</u>	<u>100</u>

Table 14.—Dredging Operations—Fiscal Year 1986

	(Cubic yards)		
	Earth	Rock	Total
Pacific District .....	.....	.....	.....
Central District	207,525	400,575	608,100
Atlantic District	153,137	.....	153,137
Grand Total	<u>360,662</u>	<u>400,575</u>	<u>761,237</u>

Table 15.—Electrical Power Generated

(Gigawatt hours) ¹

	Fiscal year	
	1985	1986
Generation:		
Gatun hydro station	67	49
Madden hydro station.....	179	190
Thermal generating stations.....	283	251
Gross generated by Panama Canal Commission	529	490
Less station service usage	(13)	(10)
Net total generated by Panama Canal Commission.....	516	480
Power Purchases:		
Through interconnect from Panama.....	4	10
Net Energy received for Wheeling.....	10	2
Power Sales:		
Through interconnect to Panama	(33)	(13)
Net power generated and purchases for Canal area only	497	479
Other power generated by military for own use .....	.....	1
Total Canal area requirements	497	480
Power distributed to Comission's customers	462	454
Distribution losses	35	26
Peak load (thousands of kilowatts).....	81	82
Date of peak load	May 3	May 28
Canal area load factor ²	70%	67%

¹ One gigawatt hour equal to 1 million kilowatt hours.² Total Canal area requirements divided by number of hours per year times peak load.

Table 16.—Fire Statistics

	Fiscal Year 1986		Fiscal Year 1985	
	Num- ber of fires	Property loss	Num- ber of fires	Property loss
PCC.....	73	\$26,720	93	\$89,910
Armed Forces *	256	19,057,309	315	90,078
Private (including ships).....	51	215,713	55	520,012
R.P.**	162	121,506	275	19,295
Total	542	\$19,421,248	738	\$719,295
Value of Property involved in ship fires		\$515,971,386		\$216,160,238
Value of Property involved in other fires		137,894,808		89,093,040
Calls for emergency aid ***		5,142		3,812
Total number of calls (all types) responded to		5,804		4,756

* \$19,000,000 of this amount represents the loss of a KC 135 U.S. Air Force aircraft that crashed at Rodman, U.S. Naval Military Base, Rodman, R.P.

** Statistics started as of October 1, 1979 due to the Treaty implementation.

*** Includes Fire Apparatus and Ambulance.

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