United States Port Development Expenditure Report

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INTRODUCTION

This report is the eleventh in a series of reports that continues the capital expenditure survey first begun by the Port Authority of New York and New Jersey in 1956. Subsequent reports were published by the American Association of Port Authorities (AAPA) and currently by the U.S. Maritime Administration (MARAD).

In 1991, MARAD published the United States Port Development Expenditure Report, which summarized the findings of the earlier expenditure efforts as well as several AAPA capital expenditure surveys. That report provided a 44-year history of the expenditure pattern of the U.S. public port industry from 1946 through 1989. Since that report, MARAD has produced annual reports covering the industry's current and proposed capital expenditures.

This report analyzes the results of the AAPA capital expenditure survey for 2000. The survey included the capital expenditures for 2000 and proposed expenditures for the period 2001 through 2005 along with the funding sources used to finance these expenditures. The survey data were obtained by AAPA from its corporate membership.

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CAPITAL EXPENDITURES FOR U.S. PUBLIC PORT DEVELOPMENT

From 1946 through 2000, the U.S. public port industry has invested $21.9 billion in capital improvements to its port facilities and related infrastructure. The investments made over the past five years account for 29.3 percent of the historical expenditures. These investments cover expenditures for the construction of new facilities and the modernization and rehabilitation of existing ones. Table 1 summarizes the historical expenditures by coastal region. During this 55-year period, the South Pacific region accounted for nearly one-third (30.3%) of these expenditures. Other regions with substantial investments include the Gulf (18.2%), North Atlantic (17.7%), South Atlantic (14.8%) and the North Pacific (11.8%).

Table 1
U.S. Port Capital Expenditures for 1946 - 2000
(Thousands of Dollars)

Region	Expenditures	Percent
North Atlantic	$3,874,395	17.7%
South Atlantic	$3,240,105	14.8%
Gulf	$4,004,722	18.2%
South Pacific	$6,655,503	30.3%
North Pacific	$2,593,922	11.8%
Great Lakes	$566,225	2.6%
AK, HI, PR, and VI*	$820,575	3.7%
Guam, Saipan	$193,242	0.9%
Total	$21,948,689	100.0%

* Alaska, Hawaii, Puerto Rico, & Virgin Islands

CAPITAL EXPENDITURES - 2000[1]

This section analyzes the U.S. public port expenditures for 2000. The public port industry's annual capital expenditures exceeded the one billion-dollar mark for the sixth consecutive year. The 2000 expenditures totaled approximately $1.1 billion--virtually the same as last year. Over the last five years, the public port industry averaged nearly $1.3 billion in capital improvements. This level of investment reflects the public port industry's efforts to address the increasing demands being placed on waterborne transportation through improvements to their marine terminal facilities and related land and waterside connections. Appendix A contains a list of the 54 ports that responded to the 2000 expenditure survey. Of those responding, 49 ports provided expenditure data and 5 ports showed no expenditures.

Table 2 shows the annual expenditures from 1996 to 2000 broken down by region. For 2000, the South Pacific remains as the leading region with $263 million (24.9%). Compared to 1999, both the

[1] In comparing annual data, it should be noted that there was some variation in the respondents from year to year.

relative share and the dollar value declined significantly. The North Atlantic region was second with $233.1 million (22.0%) and had the largest increase in both relative share and dollar value. It was followed closely by the Gulf region with $233.1 million (22.0%). Other regions with significant levels of expenditures include the South Atlantic with $192.5 (18.2%) and the North Pacific with $130.4 million (12.3%). The total investments by the Atlantic regions exceeded the Pacific regions for the first time since 1993.

Table 2
U.S. Port Capital Expenditures for 1996 - 2000
(Thousands of Dollars)

Region	1996		1997		1998		1999		2000	
	Expenditure	Pct.	Expenditure	Pct.	Expenditure	Pct.	Expenditure	Pct.	Expenditure	Pct.
North Atlantic	$96,357	7.4%	$95,151	6.2%	$126,486	8.9%	$50,893	4.6%	$233,186	22.0%
South Atlantic	140,944	10.8%	212,721	13.8%	306,620	21.7%	245,634	22.0%	192,567	18.2%
Gulf	134,311	10.3%	233,462	15.1%	193,101	13.7%	265,054	23.8%	233,160	22.0%
South Pacific	642,941	49.5%	683,749	44.3%	457,309	32.3%	454,614	40.7%	263,030	24.9%
North Pacific	241,254	18.5%	231,937	15.0%	244,612	17.3%	95,160	8.5%	130,461	12.3%
Great Lakes	245	-	10,792	0.7%	28,871	2.0%	4,325	0.4%	5,046	0.6%
AK, HI, PR, & V.I.*	45,100	3.5%	25,529	1.7%	50,306	3.6%	-	-	-	-
Guam, Saipan	-	-	49,113	3.2%	7,092	0.5%	-	-	203	-
Total	$1,301,152	100.0%	$1,542,454	100.0%	$1,414,397	100.0%	$1,115,680	100.0%	$1,057,653	100.0%

* Alaska, Hawaii, Puerto Rico, & Virgin Islands

Capital Expenditures - by Facility Type

Table 3 provides a break down of capital expenditures by type of facility. Each of the five cargo type categories includes expenditures for pier or wharf structures, storage facilities, and handling equipment. Infrastructure expenditures cover improvements, such as roadways, rail, and utilities that are located on or off terminal property. Dredging consists of local port expenditures associated with the dredging--deepening and/or maintenance--of Federal and non-Federal channels and berths as well as the local costs for land, easements, rights-of-way, and disposal areas. The "other" category includes those structures and fixtures not directly related to the movement of cargo, such as maintenance and administrative facilities.

As shown in Table 3, specialized general cargo facilities continued to be the leading expenditure category. This category accounted for $330 million (31.2%) of 2000 investments. This represents an 8 percent decline in the relative share and a $106 million drop in dollar value compared to the 1999 figures. The South Pacific region accounted for $181.9 million (55.1%) of these expenditures followed by the South Atlantic region with $74.1 million (22.4%) and the North Atlantic $40.3 million (12.2%).

General cargo investment was the second leading cargo category with $241.4 million (22.8%) of the total expenditures. This represents a near doubling of relative share and dollar value from 1999. The Gulf region remained as the leading region accounting for 39.1 percent general cargo expenditures

followed by the North Atlantic region with 24.6 percent, the South Atlantic with 16.5 percent, and the North Pacific with14.5 percent. The latter three regions all showed sharp increases in dollar value. The passenger segment fell slightly from 6.4 percent to 5.7 percent with the South Atlantic region totaling 71.2 percent of these expenditures followed by the Gulf with 24.2 percent. Bulk facilities, dry and liquid, represent 3.5 percent and 0.8 percent of the 2000 expenditures. The Gulf region accounted for nearly three-quarters (73.2%) of the dry bulk expenditures with the North Pacific region totaling 12.9 percent. The Gulf and South Pacific regions accounted for virtually all of the liquid bulk expenditures--the Gulf with 50.6 percent and the South Pacific with 49.4 percent. "Other" expenditures declined slightly from 9.0 percent to 8.2 percent. They were largely divided among two regions--North Pacific (36.9%) and Gulf (33.7%).

Table 3
U.S. Port Capital Expenditures by Type of Facility for 2000
(Thousands of Dollars)

Region	Type of Facility									
	General Cargo	Specialized General Cargo	Dry Bulk	Liquid Bulk	Passenger	Other	Infrastructure		Dredging	Total
							On-Terminal	Off-Terminal		
North Atlantic	$59,595	$40,360	-	-	$2,184	$12	$39,001	$52,324	$39,710	$233,186
South Atlantic	39,851	74,117	$2,335	$18	42,626	15,556	12,798	410	4,856	192,567
Gulf	94,407	16,340	27,158	4,119	14,548	29,095	11,044	1,936	34,513	233,160
South Pacific	8,084	181,949	2,532	4,031	423	9,517	14,661	10,396	31,437	263,030
North Pacific	34,920	17,240	4,808	-	68	31,805	7,417	27,334	6,869	130,461
Great Lakes	4,567	-	225	-	-	-	150	-	104	5,046
Guam, Saipan	-	-	-	-	-	203	-	-	-	203
Total	$241,424	$330,006	$37,058	$8,168	$59,849	$86,188	$85,071	$92,400	$117,489	$1,057,653
Percent by Facility Type	22.8%	31.2%	3.5%	0.8%	5.7%	8.2%	8.0%	8.7%	11.1%	100.0%

Port infrastructure improvements were the third largest category overall with 16.7 percent of the 2000 expenditures--basically unchanged from 1999. These expenditures were almost equally divided between on and off-terminal investments. The North Atlantic region accounted for 45.9 percent of the on-terminal expenditures followed by the South Pacific region with 17.2 percent, South Atlantic with 14.9 percent, and the Gulf with 12.9 percent. For off-terminal improvements, the North Atlantic expenditures accounted for 56.6 percent of the total with the North Pacific representing 29.5 percent. Dredging expenditures accounted for 11.1 percent of the total and were divided among three regions--North Atlantic (33.8%), Gulf (29.4%), and South Pacific (26.7%).

Table 4 provides a more detailed examination of the public port industry's infrastructure investments. The table breaks down the on and off terminal infrastructure investments into four sub-categories--roadways, rail, utilities, and other. Off-terminal infrastructure expenditures account for slightly over half (52.1%) of these investments. The North Atlantic region accounted for over half of the infrastructure expenditures.

Table 4
U.S. Port Capital Infrastructure Expenditures for 2000
(Thousands of Dollars)

Region	On-Terminal				Off-Terminal				Total
	Road	Rail	Utilities	Other	Road	Rail	Utilities	Other	
North Atlantic	$3,827	$92	$16,315	$18,767	$1,626	$36,781	$3,730	$10,187	$91,325
South Atlantic	1,351	176	733	10,538	90	316	-	4	13,208
Gulf	4,180	3,254	641	2,969	1,449	462	-	25	12,980
South Pacific	9,769	3,752	69	1,071	10,232	-	7	157	25,057
North Pacific	439	275	173	6,530	1,388	145	518	25,283	34,751
Great Lakes	150	-	-	-	-	-	-	-	150
Total	$19,716	$7,549	$17,931	$39,875	$14,785	$37,704	$4,255	$35,656	$177,471
	23.2%	8.9%	21.1%	46.8%	16.0%	40.8%	4.6%	38.6%	

Capital Expenditures - New Construction vs. Modernization\Rehabilitation

Table 5 summarizes the public port expenditures by type of expenditure--new construction and modernization/rehabilitation (M&R) and by type of facility. For 2000, expenditures for new construction accounted for two-thirds of the total expenditures--same as last year. Among the five cargo type categories, specialized general cargo facilities represented 43.7 percent of the new construction expenditures--down from 51.8 percent in 1999. The balance of the new construction expenditures was distributed primarily among the following categories--general cargo (21.2%), other (10.8%), and dredging (10.1%). The South Pacific region remained as the leader in new construction expenditures with $239.9 million (34.8%) followed by the Gulf region at $179.3 million (26.0%) and the South Atlantic region at $111.9 million (16.2%).

Within the specialized general cargo category, the South Pacific region accounted for $178.3 million (59.2%) followed by the South Atlantic region with $60 million (19.9%). The Gulf region continued as the center of general cargo investments with $76.2 million (52.1%) followed by the South Atlantic and North Atlantic regions with $26.5 million (18.1%) and $22 million (15.0%). The majority of the dredging activity was divided between the South Pacific (44.7%) and Gulf (39.5%) regions. The North Atlantic led the total infrastructure expenditures with $24.5 million (44.0%) followed by the South Pacific with $14.4 million (25.8%). For bulk investments, the Gulf region captured 68.6 percent of the dry bulk and all of the liquid bulk expenditures. The Gulf and South Atlantic regions were the focus of the passenger facility investments with $11.1 million (54.4%) and $7.7 million (37.7%).

Table 5
U.S. Port Capital Expenditures by Type of Expenditure and Facility for 2000
(Thousands of Dollars)[2]

Region	New Construction									
	General Cargo	Specialized General Cargo	Dry Bulk	Liquid Bulk	Passenger	Other	Infrastructure		Dredging	Total
							On-Terminal	Off-Terminal		
North Atlantic	$22,063	$37,022	-	-	$1,120	-	-	$24,551	$829	$85,585
South Atlantic	26,510	60,079	$1,734	-	7,784	$9,667	$1,813	316	4,013	111,916
Gulf	76,266	12,562	12,075	$3,993	11,137	27,850	6,261	1,588	27,659	179,391
South Pacific	5,999	178,397	62	-	383	9,453	14,308	124	31,251	239,977
North Pacific	13,202	13,037	3,710	-	-	27,584	4,781	2,060	6,063	70,437
Great Lakes	2,188	-	-	-	-	-	-	-	-	2,188
Total	$146,228	$301,097	$17,581	$3,993	$20,424	$74,554	$27,163	$28,639	$69,815	$689,494
Percent by Facility Type	21.2%	43.7%	2.5%	0.6%	3.0%	10.8%	3.9%	4.2%	10.1%	

Region	Modernization/Rehabilitation									
	General Cargo	Specialized General Cargo	Dry Bulk	Liquid Bulk	Passenger	Other	Infrastructure		Dredging	Total
							On-Terminal	Off-Terminal		
North Atlantic	$37,532	$3,338	-	-	$1,064	$12	$39,001	$27,773	$38,881	$147,601
South Atlantic	13,341	14,038	$601	$18	34,842	5,889	10,985	94	843	80,651
Gulf	18,141	3,778	15,083	126	3,411	1,245	4,783	348	6,854	53,769
South Pacific	2,085	3,552	2,470	4,031	40	64	353	10,272	186	23,053
North Pacific	21,718	4,203	1,098	-	68	4,221	634	-	806	32,748
Great Lakes	2,379	-	225	-	-	-	150	-	104	2,858
Total	$95,196	$28,909	$19,477	$4,175	$39,425	$11,431	$55,906	$38,487	$47,674	$340,680
Percent by Facility Type	27.9%	8.5%	5.7%	1.2%	11.6%	3.4%	16.4%	11.3%	14.0%	

For M&R expenditures, general cargo expenditures remained as the leading category with $95.1 million (27.9%) of the $340.6 million invested in M&R. Infrastructure M&R was the second leading category with $94.3 million (27.7%) followed by dredging with $47.6 million (14.0%) and passenger facilities at $39.4 million (11.6%). The North Atlantic region led total M&R expenditures with $147.6 million (43.3%) followed by the South Atlantic region at $80.6 million (23.7%) and the Gulf region at $53.7 million (15.8%).

Within the general cargo segment, the North Atlantic region accounted for 39.4 percent of these expenditures followed by the North Pacific with 22.8 percent. Infrastructure investments were

[2] Excludes $27,479,000 in expenditures that were not broken down by type of construction.

concentrated in the North Atlantic region with $66.7 million (70.7%). Similarly, the North Atlantic captured 81.5 percent of the $47.6 million of dredging activity. The South Atlantic accounted for 88.3 percent of the passenger facility M&R. The South Atlantic led the specialized general cargo improvements with $14 million (48.4%). The Gulf region accounted for 77.3 percent of the dry bulk improvements with South Pacific capturing 96.6 percent of the liquid bulk investments.

Capital Expenditures - Comparison of Annual Expenditures 1988 - 2000

Table 6 provides a comparative summary of the relative expenditures by category type for the period 1988 through 2000. As with previous reports, the overall expenditure pattern and trends have remained relatively constant[3]. Total general cargo expenditures (general cargo and specialized general cargo) accounted for 54% of the total industry expenditures. Within these expenditures, there were some significant shifts. Specialized general cargo expenditures decreased from 39.2 percent in 1999 to 31.2 percent in 2000 while general cargo expenditures nearly doubled rising to 22.8 percent in 2000. For the remaining expenditure categories, virtually all of them stayed within a range of +/- one percent of the 1999 figures. The relatively constant investment pattern is reflective of the public port industry's focus on specialized general cargo and general cargo business.

Over the past five years, the public port industry has maintained a high level of investment to meet the growing demands of waterborne commerce. The tragic events of September 11, 2001, caused this nation to reexamine its security capabilities, especially the transportation industry. The port industry responded quickly to increase security at its facilities. As government and industry continue to assess future security needs, it seems apparent that additional security measures will be required. How this will affect the port industry's future development plans remains to be seen.

3 As noted in previous reports, the additional detail contained in the surveys beginning in 1992 makes it difficult to determine the significance of the relative shift in general cargo and specialized general cargo expenditures that occurred in 1992 without knowing how the infrastructure, dredging, and "other" expenditures were allocated in prior surveys.

Table 6
Comparison of Annual Expenditures by Type of Facility for 1988 - 2000

Year	Type of Expenditure												
	General Cargo			Bulk			Passenger	Other	Infrastructure			Dredging	Total Expenditures[4] (000)
	General Cargo	Specialized	Total	Dry	Liquid	Total			On-Term.	Off-Term.	Total		
2000	22.8%	31.2%	54.0%	3.5%	0.8%	4.3%	5.7%	8.2%	8.0%	8.7%	16.7%	11.1%	$1,057,653
1999	11.5%	39.2%	50.7%	5.2%	1.4%	6.6%	6.4%	9.0%	8.8%	8.6%	17.4%	9.9%	$1,115,680
1998	10.9%	35.8%	46.7%	6.4%	0.2%	6.6%	1.9%	15.7%	7.1%	11.2%	18.3%	10.8%	$1,414,397
1997	14.8%	35.5%	50.3%	8.3%	0.1%	8.4%	3.8%	8.5%	14.0%	6.7%	20.7%	8.3%	$1,542,454
1996	14.7%	41.0%	55.7%	5.9%	0.5%	6.4%	2.7%	4.8%	10.7%	8.8%	19.5%	10.9%	$1,301,152
1995	22.2%	28.8%	51.0%	3.0%	0.9%	3.9%	4.7%	8.2%	18.0%	3.1%	21.1%	11.1%	$1,203,455
1994	22.8%	34.8%	57.6%	5.6%	0.3%	5.9%	4.7%	7.3%	15.1%	6.0%	21.1%	3.4%	$686,620
1993	24.5%	27.6%	52.1%	4.5%	1.7%	6.2%	5.6%	11.9%	11.6%	3.6%	15.2%	9.0%	$653,663
1992	23.9%	31.8%	55.7%	4.8%	0.2%	5.0%	7.5%	9.5%	9.0%	3.8%	12.8%	9.5%	$671,768
1991	12.1%	48.3%	60.4%	N.A.	N.A.	7.6%	N.A.	31.9%	N.A.	N.A.	N.A.	N.A.	$679,744
1990	13.6%	51.4%	65.0%	N.A.	N.A.	7.4%	N.A.	27.6%	N.A.	N.A.	N.A.	N.A.	$653,174
1989	20.4%	53.2%	73.6%	N.A.	N.A.	6.2%	N.A.	20.2%	N.A.	N.A.	N.A.	N.A.	$606,234
1988	18.8%	54.0%	72.8%	N.A.	N.A.	5.6%	N.A.	21.7%	N.A.	N.A.	N.A.	N.A.	$499,963

[4] Excludes expenditures that were not broken down by type of facility:
1995 - $200,900,000 1994 - $243,000,000 1991 - $2,295,000
1990 - $14,919,000 1989 - $82,984,000 1988 - $184,800,000

Capital Expenditures - Leading Port Authorities

Table 7 shows the leading U.S. public port authorities based on total 2000 capital expenditures. These ten organizations accounted for two-thirds of all capital expenditures by the public ports surveyed. For the third consecutive year, the Port of Long Beach was the leading port with annual investments of $153.7 million. Of the top 10 port authorities listed, six were located on the East Coast, one on the Gulf Coast and three on the West Coast.

Table 7
Leading Port Authorities for 2000
By Total Capital Expenditures
(Thousands of Dollars)

Rank	Port Authority	Expenditures
1	Port of Long Beach	$153,750
2	Port Authority of New York/New Jersey	153,377
3	Port of Los Angeles	101,058
4	Maryland Port Administration	61,461
5	Port of Seattle	50,467
6	Port of Houston Authority	49,849
7	Jacksonville Port Authority	47,750
8	Port Everglades	36,112
9	Georgia Ports Authority	30,013
10	Port of Miami	29,828
	Total Top Ten Ports	$713,665
	Total Expenditures	$1,057,653
	Percent of Total	67.5%

Capital Expenditures - Distribution Pattern

The distribution of the 2000 capital expenditures is shown in Table 8. The table includes the 49 ports that submitted expenditure data. The data continue to reveal the high degree of concentration in terms of how the expenditures are distributed among the ports responding to the AAPA survey. As shown, the top three ports (6.1%) accounted for 38.6 percent of the public port industry's 2000 expenditures. The top five ports (10.2%) represented 49.2 percent of the expenditures while the top 13 ports (26.5%) accounted for 75.6 percent. The overall distribution pattern remains similar to previous reports with a slight decline in the concentration of the top three ports. These ports were primarily involved in developing major new terminal facilities, improving related infrastructure, or dredging projects or combinations of these activities.

Table 8
Distribution of 2000 Capital Expenditures

Annual Investment (Millions of Dollars)	Public Ports		Percent of 2000 Expenditures
	No.	Pct.	
>$100	3	6.1%	38.6%
>$50 To <$75	2	4.1%	10.6%
>$25 To <$50	8	16.3%	26.4%
>$10 To <$25	9	18.4%	14.3%
>$5 To <$10	8	16.3%	6.1%
>$1 To <$5	14	28.6%	3.8%
>$0 To <$1	5	10.2%	0.2%
Total	49	100.0%	100.0%

PROPOSED CAPITAL EXPENDITURES - 2001 TO 2005

The 2000 AAPA capital expenditure survey included proposed expenditures for 2001 through 2005. Table 9 summarizes these expenditures by coastal region. During this five-year period, public port expenditures are predicted to reach a record total of $9.4 billion--an increase of 12.8 percent compared to last year. Appendix A contains a list of the 54 survey respondents of which 47 provided information on proposed expenditures.

The South Pacific region continues as the focus of future investment activity with proposed expenditures of $3.1 billion (33.8%). Four other regions are projecting investment levels in excess of $1 billion--the South Atlantic at $1.7 billion (18.8%), the Gulf at $1.6 billion (17.1%), the North Atlantic at $1.5 billion (16.6%), and the North Pacific at $1.2 billion (12.8%). From a coastwise perspective, the West Coast is projecting to invest over $4.3 billion (46.6%) with East Coast expenditures at $3.3 billion (35.4%) and the Gulf at $1.6 billion (17.1%).

Table 9
U.S. Port Capital Expenditures for 2001 - 2005
(Thousands of Dollars)

Region	Expenditures	Percent
North Atlantic	$1,563,764	16.6%
South Atlantic	1,772,685	18.8%
Gulf	1,619,322	17.1%
South Pacific	3,190,488	33.8%
North Pacific	1,203,669	12.8%
Great Lakes	38,575	0.4%
AK, HI, PR, & VI *	45,032	0.5%
Total	$9,433,535	100.0%

* Alaska, Hawaii, Puerto Rico, & Virgin Islands

Comparison of Historical Projected Expenditures Versus Actual Expenditures

Table 10 provides information comparing the public port industry's projected expenditures against what they actually spent for those periods. The available data permit an analysis of the projections contained in the 1992 through 1995 AAPA surveys. The 1995 survey contained projections of $6.0 billion for the period 1996 to 2000. The actual expenditures amounted to $6.4 billion, which exceeded projections by 6.5 percent. The results of the 1992 through 1994 surveys produced similar results with actual expenditures exceeding projected expenditures.

Table 10
Comparison of Projected Capital Expenditures
(Thousands of Dollars)

Survey Year	5-Year Projections	Projected Expenditures	Actual Expenditures	Percent Change
1992	1993 - 1997	$5,525,360	$5,831,244	(+) 5.5%
1993	1994 - 1998	$5,871,408	$6,591,978	(+)12.3%
1994	1995 - 1999	$4,691,257	$6,778,038	(+)44.4%
1995	1996 - 2000	$6,036,051	$6,431,336	(+) 6.5%

Capital Expenditures - by Facility Type

Table 11 shows the proposed expenditures by type of facility. Specialized general cargo is the leading category with proposed expenditures of $4.1 billion. Compared to last year's projections, the dollar volume was virtually unchanged and the relative share decreased from 49.3 percent to 44.4 percent. The South Pacific region is expected to account for 41.1 percent of the proposed expenditures in this category with $1.7 billion. Other regions include the South Atlantic with $916.7 million (21.9%), North Pacific with $624.6 million (14.9%), the North Atlantic with $462.1 million (11.0%) and the Gulf with $451.3 million (10.8%).

Table 11
U.S. Port Capital Expenditures by Type of Facility for 2001 - 2005
(Thousands of Dollars)

Region	Type of Facility									
	General Cargo	Specialized General Cargo	Dry Bulk	Liquid Bulk	Passenger	Other	Infrastructure		Dredging	Total
							On-Terminal	Off-Terminal		
North Atlantic	$135,493	$462,199	$1,670	-	$17,902	$250	$359,026	$157,426	$429,798	$1,563,764
South Atlantic	104,119	916,778	31,143	$31,386	256,342	99,418	97,080	81,976	154,443	1,772,685
Gulf	422,550	451,309	49,993	11,320	93,788	102,201	173,093	68,743	246,325	1,619,322
South Pacific	80,024	1,720,820	38,895	5,069	17,979	360,171	117,102	205,543	644,885	3,190,488
North Pacific	178,002	624,699	1,655	-	223	192,653	46,453	78,152	81,832	1,203,669
Great Lakes	6,200	-	13,000	-	11,500	-	7,300	-	575	38,575
AK,HI,PR, & VI*	2,637	14,991	2,768	4,865	10,963	-	-	-	8,808	45,032
Total	$929,025	$4,190,796	$139,124	$52,640	$408,697	$754,693	$800,054	$591,840	$1,566,666	$9,433,535
Percent by Facility Type	9.8%	44.4%	1.5%	0.6%	4.3%	8.0%	8.5%	6.3%	16.6%	

* Alaska, Hawaii, Puerto Rico, & Virgin Islands

General cargo expenditures will account for $929 million (9.8%) of the proposed investments with the dollar volume up significantly from last year's projections of $624.4 million. General cargo development is centered in the Gulf region with $422.5 million (45.5%) followed by the North Pacific with $178 million (19.2%) and the North Atlantic with $135.4 (14.6%). Dry and liquid bulk facility expenditures represent 2.1 percent of future investments with dollar value down by approximately $100 million under last year's figures. Three regions are projected to capture the majority of dry bulk expenditures--Gulf (35.9%), South Pacific (27.9%), and the South Atlantic (22.4%). Liquid bulk expenditures are focused in the South Atlantic (59.5%) and Gulf (21.5%) regions. The investment in passenger facilities is expected to account for 4.3 percent of the total with the South Atlantic (62.7%) and Gulf (22.9%) regions continuing to be the center of development.

Projected infrastructure investments are the second largest category of expenditures and are expected to total nearly $1.4 billion (14.8%) with on-terminal expenditures accounting for 57.5 percent. The North Atlantic and South Pacific regions are projected to capture 37.1 percent and 23.2 percent of these investments with the Gulf region at 17.4 percent. Table 12 provides a detailed break down of the proposed infrastructure expenditures by region.

Dredging expenditures will account for 16.6 percent of the projected total with the South Pacific accounting for 41.2 percent of the $1.5 billion followed by the North Atlantic (27.4%), and Gulf (15.7%) regions.

Table 12
U.S. Port Capital Infrastructure Expenditures for 2001-2005
(Thousands of Dollars)

Region	On-Terminal				Off-Terminal				Total
	Road	Rail	Utilities	Other	Road	Rail	Utilities	Other	
North Atlantic	$19,939	$500	$49,590	$288,997	-	$113,551	$706	$43,169	$516,452
South Atlantic	41,375	33,617	9,588	12,500	$21,626	4,850	10,100	45,400	179,056
Gulf	31,134	22,372	16,523	103,064	19,220	2,000	2,000	45,523	241,836
South Pacific	46,356	52,491	1,698	16,557	192,343	1,000	9,700	2,500	322,645
North Pacific	4,382	3,189	2,454	36,428	4,825	73,327	-	-	124,605
Great Lakes	4,800	2,500	-	-	-	-	-	-	7,300
Total	$147,986	$114,669	$79,853	$457,546	$238,014	$194,728	$22,506	$136,592	$1,391,894
	18.5%	14.3%	10.0%	57.2%	40.2%	32.9%	3.8%	23.1%	

Capital Expenditures - Comparison of 2000 and 2001 - 2005

Table 13 provides a comparison of the relative investment levels by facility type between the actual 2000 expenditures and those proposed for 2001-2005. General cargo expenditures show a sharp decline (13%) from actual to projected expenditures. In 2000, these expenditures nearly doubled over the 1999 level. The projected level is more in line with recent relative expenditure levels (see Table 6). The opposite is true for specialized general cargo expenditures. The actual 2000 expenditures were slightly below recent expenditure patterns while the projected figures are above average. Projected dredging expenditures show a gain of 5.5 percent reflecting the increased dredging activity. The remaining categories all showed modest declines ranging from 0.2 percent for liquid bulk to 2.0 percent for dry bulk expenditures.

Table 13
Comparison of Current and Projected Expenditures

Expenditure Type	2000 Expenditures	2001 – 2005 Expenditures	Relative Change 2000 vs. 2001-2005
General Cargo	22.8%	9.8%	-13.0%
Specialized General Cargo	31.2%	44.4%	+13.2%
Dry Bulk	3.5%	1.5%	-2.0%
Liquid Bulk	0.8%	0.6%	-0.2%
Passenger	5.7%	4.3%	-1.4%
Other	8.2%	8.0%	-0.2%
Infrastructure	16.7%	14.8%	-1.9%
Dredging	11.1%	16.6%	+5.5%
Total	100.0%	100.0%	

Capital Expenditures - Leading Port Authorities

Table 14 lists the leading U.S. port authorities based on the projected capital expenditures for the 2001-2005 period. These ten ports account for $7.6 billion (80.8%) of the proposed $9.4 billion in capital expenditures. Of the top 10 port authorities listed, five were located on the East Coast, four on the West Coast, and one on the Gulf Coast.

Table 14
Leading Port Authorities for 2001 - 2005
By Total Capital Expenditures
(Thousands of Dollars)

Rank	Port Authority	Expenditures
1	Port of Los Angeles	$1,865,846
2	Port Authority of New York/New Jersey	1,448,986
3	Port of Long Beach	1,207,503
4	Port of Houston Authority	692,704
5	Port of Seattle	585,741
6	Virginia Port Authority	514,956
7	Port of Tacoma	361,734
8	Port of Miami	357,983
9	Port Everglades	349,327
10	Georgia Ports Authority	241,200
	Total Top Ten Ports	$7,625,980
	Total Expenditures	$9,433,535
	Percent of Total	80.8%

Capital Expenditures - Distribution Pattern

Table 15 shows the distribution of the proposed 2001-2005 capital expenditures. The degree of concentration for the projected expenditures is higher than that exhibited for the actual 2000 expenditures (see Table 8). As shown, the top three ports (6.4%) accounted for 47.9 percent of the public port industry's proposed expenditures. The top nine ports (19.2%) represented 78.2 percent and the top 16 ports (34.1%) total 90.9 percent of these expenditures. The proposed investments by these ports continues to focus on developing major new marine facilities, improving infrastructure, or dredging projects or combinations of these activities.

Table 15
Distribution of 2001 - 2005 Capital Expenditures

Annual Investment (Millions of Dollars)			Public Ports		Percent of 2001-2005 Expenditures
			No.	Pct.	
>$1000			3	6.4%	47.9%
>$500	to	<$1000	3	6.4%	19.0%
>$250	to	<$500	3	6.4%	11.3%
>$100	to	<$250	7	14.9%	12.7%
>$50	to	<$100	6	12.8%	4.1%
>$25	to	<$50	7	14.9%	2.6%
>$10	to	<$25	11	23.3%	1.9%
>$1	to	<$10	7	14.9%	0.5%
>$0	to	<$1	-	-	-
		Total	47	100.0%	100.0%

METHODS OF FINANCING CAPITAL EXPENDITURES

The 2000 AAPA expenditure survey also included information on the methods used by the U.S. public port industry to finance its capital expenditure programs. The survey utilized the following six funding categories to classify the financing sources: port revenues, general obligation bonds (GO bonds), revenue bonds, loans, grants, and other. The "other" funding category includes all financing sources that were not described above, such as state transportation trust funds, state and local appropriations, taxes (property, sales), and lease revenue.

This section describes the financing methods used to fund the 2000 expenditures and the proposed methods for the projected 2001-2005 expenditures. Table 16 provides a basis for comparing the historical changes in the primary financing methods used by the public port industry. The table highlights the shift in financing methods that occurred over the last 27 years.

Table 16
Comparison of Financing Methods for 1973 - 2000
(Thousands of Dollars)

Financing Method	1973-1978 Survey	1979-1989 Survey	1990-2000 Surveys
	Percent	Percent	Percent
Port Revenues	26.7%	47.7%	38.8%
GO Bonds	30.6%	14.8%	9.5%
Revenue Bonds	29.1%	27.0%	30.6%
All Other	13.6%	10.5%	21.1%
Total	100.0%	100.0%	100.0%
Total Expenditures[5]	$876,326	$3,992,897	$10,698,019

Throughout this period, there have been a number of shifts in the financing methods used. During the 1970s, financing sources were evenly divided among port revenues, GO bands, and revenue bonds. In the 1980s, there was a sharp increase in the use of port revenues and a corresponding decline in GO bonds. For the 1990s and 2000, port revenues continued as the leading financing method, although their relative share declined. Likewise, the use of GO bonds continued to decline. Revenue bond financing remained the second leading method with a slight increase in use. The combined share of port revenues and revenue bonds continues to accounts for nearly 70 percent of current financing sources. “All other” sources doubled its usage as a funding source in the 1990s. These funding methods are desirable from a port’s perspective, because, besides loans, they include grants, state trust funds, appropriations, and tax revenues. However, these sources tend to be limited in amount and availability.

[5] Excludes expenditures for which there was no information on funding source.
1990/2000 - $742,855,000 1979/1989 - $1,643,175,000

Funding Sources - 2000

Table 17 provides a comparative summary of financing methods used during the 1996-2000 period. By comparing the annual percentages shown for the various funding types in Table 17 with the historical averages in Table 16, one can see the variable nature of port expenditure financing.

In 2000, port revenues remained as the principal funding source accounting for $431.2 million or 48.1 percent of the public port financing. The relative share increased slightly from 44.4 percent in 1999 with the dollar volume declining by 8.9 percent. Revenue bonds usage dropped from the second leading funding source in 1999 to fourth with the relative share falling from 21.4 percent to 10.9 percent. The revenue bonds were the primary funding source from 1996 through 1998. The relative use of GO bonds increased slightly in 2000--7.8 percent to 9.1 percent--with virtually no change in dollar volume. As a group, the use of loans, grants, and "other" rose from 26.4 percent in 1999 to 30.9 percent in 2000. Within this group, loan usage fell by 2.8 percent while grants posted a 2 percent increase and "other" more than doubled from 5.8 percent to 12.1 percent.

Table 17
U.S. Port Capital Expenditures by Type of Financing Method for 1996 - 2000[6]
(Thousands of Dollars)

Method	1996		1997		1998		1999		2000	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Port Revenues	$392,408	31.7%	$449,862	30.4%	$457,565	33.8%	$472,978	44.4%	431,265	48.1%
GO Bonds	116,508	9.4%	147,643	10.0%	89,825	6.6%	82,879	7.8%	82,040	9.1%
Revenue Bonds	529,015	42.6%	696,090	47.1%	554,486	40.9%	228,187	21.4%	97,946	10.9%
Loans	13,734	1.1%	6,203	0.5%	15,435	1.1%	70,207	6.6%	34,477	3.8%
Grants	31,383	2.5%	120,376	8.1%	140,506	10.4%	149,665	14.0%	143,579	16.0%
Other	157,485	12.7%	58,012	3.9%	97,175	7.2%	62,245	5.8%	108,609	12.1%
Total	$1,240,533	100.0%	$1,478,186	100.0%	$1,354,992	100.0%	$1,066,161	100.0%	$897,916	100.0%

Table 18 examines the distribution of 2000 funding sources by coastal region. Port revenues were the primary financing method in three regions with grants leading in two regions and "other" leading in the remaining region.

The South Pacific region remained as the principal user of port revenues with $205 million (47.6%) followed by the Gulf region with 26.6 percent and the North Pacific region with 16.5 percent. The Gulf region was the primary user of GO bonds with $50 million (61.0%) followed by the North Pacific at $26.9 million (32.9%).

The South Atlantic and South Pacific regions were the principal users of revenue bonds with $44 million (45.0%) and $32.6 million (33.4%) respectively. The South Atlantic region continued to

[6] Excludes expenditures for which there was no information on funding source: 2000 - $159,737,000 1999 - $49,519,000 1998 - $59,405,000 1997 - $64,268,000 1996 - $60,619,00 1995 - $41,568,000 1994 - $53,185,000

account for virtually all the commercial loan financing--$31.5 million (91.4%). The South Atlantic and Gulf regions were the primary grant beneficiaries--the South Atlantic with $71.4 million (49.8%) and the Gulf with $40.5 million (28.2%). Three regions accounted for nearly 90 percent of the "other" funding sources--the North Atlantic with $63.7 million (58.7%), The North Pacific with $18.6 million (17.2%), and the Gulf with $14.4 million (13.3%).

Table 18
U.S. Port Capital Expenditures by Type of Financing Method for 2000[7]
(Thousands of Dollars)

Region	Facility Expenditures by Financing Method												
	Port Revenues	Pct.	GO Bonds	Pct.	Revenue Bonds	Pct.	Loans	Pct.	Grants	Pct.	Other	Pct.	Total
North Atlantic	$2,184	0.5%	-	-	-	-	-	-	$7,880	5.5%	$63,744	58.7%	$73,808
South Atlantic	36,843	8.5%	$2,182	2.6%	$44,093	45.0%	$31,514	91.4%	71,441	49.8%	6,494	6.0%	192,567
Gulf	114,624	26.6%	50,028	61.0%	10,578	10.8%	2,963	8.6%	40,527	28.2%	14,440	13.3%	233,160
South Pacific	205,050	47.6%	2,853	3.5%	32,684	33.4%	-	-	17,210	12.0%	5,233	4.8%	263,030
North Pacific	71,257	16.5%	26,977	32.9%	10,591	10.8%	-	-	2,782	1.9%	18,698	17.2%	130,305
Great Lakes	1,307	0.3%	-	-	-	-	-	-	3,739	2.6%	-	-	5,046
Total	$431,265	100.0%	$82,040	100.0%	$97,946	100.0%	$34,477	100.0%	$143,579	100.0%	$108,609	100.0%	$897,916
Percent by Funding Source	48.1%		9.1%		10.9%		3.8%		16.0%		12.1%		

Funding Sources - 2001 to 2005

Table 19 shows the anticipated funding sources for the U.S. public port industry's proposed 2001-2005 capital expenditure program. Port revenues and revenue bonds continue as the principal funding sources with projected use accounting for over 75 percent of the overall funding. Port revenues are the primary source of funding with 46.5 percent followed by revenue bonds with 31.1 percent. Port revenues are projected to be the leading funding source in four coastal regions with grants leading in the two regions and revenue bonds in one.

[7] Excludes expenditures of $159,737,000 for which there was no information on funding source.

Table 19
U.S. Port Capital Expenditures by Type of Financing Method for 2001 - 2005[8]
(Thousands of Dollars)

Region	Facility Expenditures by Financing Method												
	Port Revenues	Pct.	GO Bonds	Pct.	Revenue Bonds	Pct.	Loans	Pct.	Grants	Pct.	Other	Pct.	Total
North Atlantic	$12,200	0.3%	-	-	-	-	-	-	$19,302	3.3%	-	-	$31,502
South Atlantic	356,937	10.3%	$17,700	3.4%	$575,583	24.9%	$156,000	72.4%	351,776	60.3%	$61,409	17.8%	1,519,405
Gulf	686,090	19.8%	359,170	68.1%	156,013	6.7%	20,255	9.4%	81,574	14.0%	177,908	51.5%	1,481,010
South Pacific	1,849,331	53.3%	3,800	0.7%	1,127,986	48.7%	22,515	10.5%	115,173	19.7%	20,783	6.0%	3,139,588
North Pacific	533,036	15.4%	146,654	27.8%	444,978	19.2%	-	-	1,223	0.2%	76,167	22.1%	1,202,058
Great Lakes	3,100	0.1%	-	-	12,000	0.5%	-	-	14,500	2.5%	8,975	2.6%	38,575
AK, HI, PR, & VI*	28,461	0.8%	-	-	-	-	16,571	7.7%	-	-	-	-	45,032
Total	$3,469,155	100.0%	$527,324	100.0%	$2,316,560	100.0%	$215,341	100.0%	$583,548	100.0%	$345,242	100.0%	$7,457,170
Percent by Funding Source	46.5%		7.1%		31.1%		2.9%		7.8%		4.6%		

* Alaska, Hawaii, Puerto Rico, & Virgin Islands

The South Pacific is the primary user of port revenues with $1.8 billion (53.3%) followed by the Gulf region with $686 million (19.8%) and the North Pacific with $533 million (15.4%). The Gulf region will account for $359.1 million (68.1%) of the GO bond financing with the North Pacific at $146.6 million (27.8%). The South Pacific accounts for nearly half of the proposed revenue bond funding with $1.1 billion followed by the South Atlantic at $575.5 million (24.9%) and the North Pacific at $444.9 million (19.2%).

The South Atlantic region continues as the principal user of loans with $156 million (72.4%). The South Atlantic region is also the projected to lead in the use of grants with $351.7 million (60.3%) followed by the South Pacific region with $115.1 million (19.7%). The Gulf region accounts for the 51.5% of "other" funding with the North Pacific at 22.1 percent and the South Atlantic at 17.8%.

Funding Sources - Comparison of 2000 and 2001 - 2005

In Table 20, the funding sources used to finance the port industry's 2000 expenditure program are compared with those projected for 2001-2005. Port revenues are the primary funding source for both

[8] Excludes expenditures of $1,976,365,000 for which there was no information on funding source.

periods with a modest decline projected for the 2001-2005 period. Likewise, GO bonds are predicted to drop slightly--2 percent. The projected increase in the use of revenues bonds shows the largest increase rising by 20.2 percent to a 31.1 percent share. This increase returns revenue bonds to their historic levels. It is uncertain as to why their use dropped sharply in 2000. Loans are projected to remain at the same level. Grants and "other" show declines for the projected period returning to more typical levels of funding.

Table 20
Comparison of Current and Projected Funding Sources

Financing Method	2000 Expenditures	2001 - 2005 Expenditures	Relative Change 2000 vs. 2001-2005
Port Revenues	48.1%	46.5%	(-) 1.6%
GO Bonds	9.1%	7.1%	(-) 2.0%
Revenue Bonds	10.9%	31.1%	(+) 20.2%
Loans	3.8%	2.9%	(-) 0.9%
Grants	16.0%	7.8%	(-) 8.2%
Other	12.1%	4.6%	(-) 7.5%
Total	100.0%	100.0%	

Appendix A - 2001 AAPA Capital Expenditure Survey Respondents

Respondent	2000 Survey	2001-2005 Survey
North Atlantic		
Albany Port District Commission	X	X
Maryland Port Administration	X	-
Massachusetts Port Authority	X	X
The Port Authority of New York & New Jersey	X	X
Port of Richmond (VA)	X	X
South Jersey Port Corporation	X	X
South Atlantic		
Georgia Ports Authority	X	X
Jacksonville Port Authority	X	X
Port of Miami	X	X
North Carolina State Ports Authority	X	X
Port Everglades Port Authority	X	X
Port of Palm Beach	X	X
Virginia Port Authority	X	X
Gulf		
Greater Baton Rouge Port Commission	X	X
Lake Charles Harbor and Terminal District	X	X
Panama City port Authority	X	X
Port of Beaumont	X	X
Port of Corpus Christi Authority	X	X
Port of Freeport	X	X
Port of Galveston	X	X
Greater Lafourche Port Commission	X	X
Mississippi State Port Authority at Gulfport	X	X
Port of Houston Authority	X	X
Port Manatee	X	X
Port of New Orleans	X	X
Port of Pensacola	X	X
Port of Port Arthur	X	X
Port of Port Lavaca	X	X
Port of South Louisiana	X	X
Tampa Port Authority	X	X
St. Bernard Port, Harbor & Terminal District	X	-
South Pacific		
Port of Hueneme	X	X
Humboldt Bay Harbor District	-	-
Port of Long Beach	X	X
Port of Los Angeles	X	X
Port of Redwood City	X	X
San Francisco	-	-

Respondent	2000 Survey	2001-2005 Survey
Port of Sacramento	X	X
San Diego Unified Port District	X	X
Port of Stockton	X	X
North Pacific		
Port of Bellingham	X	X
Port of Everett	X	X
Port of Kalama	X	X
Port of Longview	X	-
Port of Portland	X	X
Port of Seattle	X	X
Port of Tacoma	X	X
Port of Vancouver	X	X
Great Lakes		
Detroit/Wayne County Port Authority	-	X
Indiana Port Commission	X	-
Port of Green Bay	-	X
Seaway Port Authority of Duluth	X	X
Non-Contiguous		
Commonwealth Port Authority of Saipan	X	-
Puerto Rico Ports Authority	-	X

(-) Indicates no expenditures or data not provided