

**Capital
Expenditures for
U.S. Shallow Draft
Public Port
Development**

Maritime Administration

INTRODUCTION

This is the second report on shallow draft inland river public port capital expenditures published by the Maritime Administration (MARAD) in cooperation with industry. The report analyzes investments in shoreside facilities and examines the financing methods used by the shallow draft port industry for 1998, as well as historic data through 1997. Other port data, such as type of operation and type of governance, are also included.

The survey data were obtained for MARAD by two industry associations, the National Waterways Conference (NWC) and the Inland Rivers, Ports & Terminals, Inc. (IRPT). The agency wishes to thank the 45 ports that responded to the survey. These organizations are listed in Appendix A.

MARAD also publishes annually a companion report on deep draft ports, the *United States Port Development Expenditure Report*, the latest version being November 1999. For further information or to obtain copies of either report, please contact Susan Lee at the following MARAD office:

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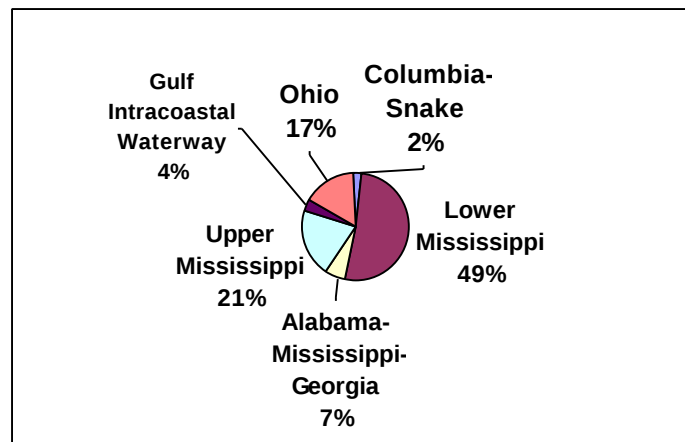
CAPITAL EXPENDITURES FOR U.S. SHALLOW DRAFT PUBLIC PORT DEVELOPMENT

OVERVIEW

Through 1998, the U.S. shallow draft port industry has invested nearly \$500 million in capital improvements to its port facilities and related infrastructure.¹ Investments made in the past three years (1996-1998) account for just under one-third of historical expenditures. These investments cover expenditures for the construction of new facilities and the modernization and rehabilitation of existing

ones. Figure 1 shows the proportional breakout by river system, while Table 1 summarizes the historic expenditures by year and river system. During this period through 1998, the Lower Mississippi River system accounted for half of all expenditures. Two other river systems with substantial investments are the Upper Mississippi (21 percent) and the Ohio (17 percent).

Figure 1. Shallow Draft Port Capital Expenditures Through 1998 by River System



For the first time, there is enough data to start looking at trends in the shallow draft industry (Table 1). For instance, between 1996-1998 the Lower Mississippi consistently outspent the other river systems, accounting for around two-thirds (66 percent) of all expenditures. In contrast, the Upper Mississippi River system started slow in 1996 at 6 percent of the total and steadily increased to 24 percent in 1998.

¹ The reader should be aware and take into account that ports have reported data over vastly different time periods, ranging from 4 years (1994-1998) to 44 years (1955-1998). Because of such large discrepancies in reporting, estimates of the total amount the industry invested in capital structures is likely to be considerably understated.

Definitions of Terms

For the purposes of this report, definitions of facility types and river systems follow below.

Facility Types

- The five cargo categories (general, specialized/project, dry and liquid bulk, and passenger) cover expenditures for the piers, wharves, handling equipment, and open and closed storage facilities.
- "Specialized/Project Cargo" includes container, roll on/roll off (RO/RO), and project (i.e., large, oversized) cargoes.

- “Infrastructure” covers expenditures for road, rail, utility (gas, sewer, water, and electricity), and other improvements.
- “Dredging” includes both improvement and maintenance dredging.
- “Industrial Development” includes industrial parks and water-related or -dependent businesses, among others.
- “Other” includes expenditures for any structure, land, and fixtures not related to cargo movement, such as maintenance or administrative facilities.

River Systems

Alabama-Mississippi-Georgia River System: Tennessee-Tombigbee Waterway and Warrior, Tombigbee, Coosa-Alabama, Mobile, and Apalachicola-Chattahoochee-Flint Rivers.

Columbia-Snake River System: Columbia, Snake, and Willamette Rivers.

Gulf Intracoastal Waterway (GIWW): A navigation channel approximately 1,340 miles long, running from Brownsville, TX, to St. Marks, FL.

Lower Mississippi River System: Mississippi River south of Cairo, IL, including the Ouachita, Arkansas, Red, Verdigris, White, and Yazoo Rivers, as well as Lake Pontchartrain.

Upper Mississippi River System: Mississippi River north of Cairo, IL, plus Illinois, Missouri, and Kaskaskia Rivers.

Ohio River System: Ohio, Tennessee, Cumberland, Monongahela, Allegheny, Kanawha, and Green Rivers.

Table 1. Summary of Shallow Draft Port Capital Expenditures Through 1998 (\$000s) *

River System	Through 1995**		1996		1997		1998		Total	
	\$000s	%	\$000s	%	\$000s	%	\$000s	%	\$000s	Percent by River System
Alabama-Mississippi-Georgia	24,966	7.5%	56	0.1%	1,650	7.9%	3,599	6.6%	\$30,271	6.5%
Columbia-Snake	5,913	1.8%	2,930	5.5%	1,398	6.7%	1,183	2.2%	\$11,425	2.5%
Gulf Intracoastal Waterway	14,805	4.4%	1,652	3.1%	259	1.2%	806	1.5%	\$17,522	3.8%
Lower Mississippi	144,695	43.3%	36,327	67.7%	14,238	68.0%	34,893	64.2%	\$230,154	49.7%
Upper Mississippi	77,495	23.2%	3,222	6.0%	2,737	13.1%	12,881	23.7%	\$96,335	20.8%
Ohio River System	66,001	19.8%	9,461	17.6%	658	3.1%	973	1.8%	\$77,094	16.7%
Total	\$333,875	100.0%	\$53,648	100.0%	\$20,940	100.0%	\$54,336	100.0%	\$462,802	100.0%
Number of Respondents	48		36		36		41			

* Totals may not add up due to rounding.

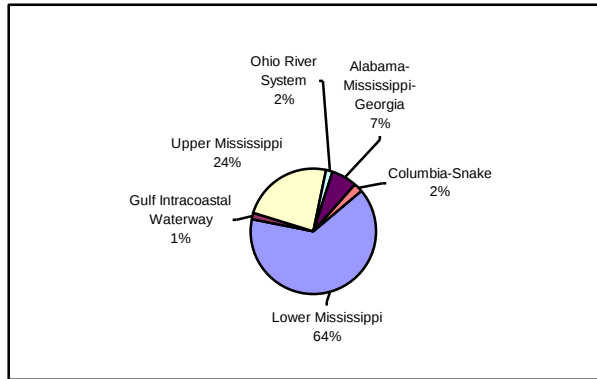
** Years covered varied from 1955-1995, with the bulk of the data between 1990-1995.

CAPITAL EXPENDITURES – 1998

Summary by River System and Facility Type

This section analyzes shallow draft public port expenditures for 1998. That year the industry invested a total of \$54.3 million in capital

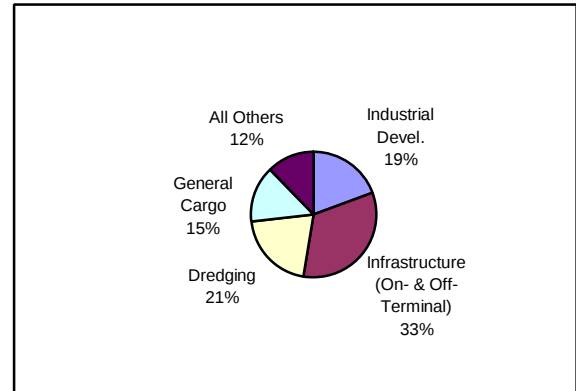
Figure 2. FY 1998 Total Capital Expenditures by River System



improvements to its port facilities. Figures 2 and 3 and Table 2 summarize these expenditures by river system and type of facility, respectively. Accounting for nearly two-thirds of all 1998 expenditures, the

Lower Mississippi continued to outspend the other river systems combined. The second ranked river system by expenditures, the Upper Mississippi, captured 24 percent of 1998 expenditures, with the Alabama-Mississippi-Georgia coming in a remote

Figure 3. FY 1998 Total Capital Expenditures by Type of Facility



third with 7 percent. Appendix A contains a list of the ports responding to the industry-conducted 1998 capital expenditure survey.

Table 2. FY 1998 Summary of Total Capital Expenditures (\$000s) *

River System	1998 Total Expenditures Summary (\$000s)											
	General Cargo	Specialized Project Cargo	Dry Bulk	Liquid Bulk	Passenger	Recreational Boating	Infrastructure		Dredging	Industrial Develop.	Other	Total (\$000s)
							On-Terminal	Off-Terminal				
Alabama-Mississippi-Georgia	3,001	475	--	--	--	--	103	--	--	--	20	\$3,599
Columbia-Snake	--	--	--	--	38	339	81	10	67	553	97	\$1,183
Gulf Intracoastal Waterway	--	--	--	--	--	--	--	--	806	--	--	\$806
Lower Mississippi	3,355	--	147	359	--	--	6,820	9,279	10,263	2,506	2,164	\$34,893
Upper Mississippi	1,544	1,500	100	1,000	--	--	911	200	98	7,500	27	\$12,881
Ohio River System	65	--	350	--	--	--	458	100	--	--	--	\$973
Total	\$7,965	\$1,975	\$597	\$1,359	\$38	\$339	\$8,373	\$9,589	\$11,234	\$10,559	\$2,308	\$54,336
Percent by Facility Type	14.7%	3.6%	1.1%	2.5%	0.1%	0.6%	15.4%	17.6%	20.7%	19.4%	4.2%	100.0%

* Totals may not add up due to rounding.

Infrastructure Investments

Table 3 breaks down the on- and off-terminal infrastructure expenditures into four sub-categories: roadways, rail, utilities, and other. Port infrastructure improvements (both on- and off-terminal) are the

single largest category overall with 33 percent of 1998 expenditures. The off-terminal segment accounted for 53 percent of total infrastructure expenditures, and on-terminal, 47 percent. Ninety cents of every dollar (90 percent) was spent in the Lower Mississippi.

Table 3. FY 1998 Infrastructure Expenditures (\$000s) *

River System	1998 Infrastructure Expenditures Summary (\$000s)									
	On-Terminal				Off-Terminal				Total	
	Road	Rail	Utilities	Other	Road	Rail	Utilities	Other	Amount (\$000s)	Percent by River System
Alabama-Mississippi-Georgia	--	80	--	23	--	--	--	--	\$103	0.6%
Columbia-Snake	--	--	18	63	--	7	--	3	\$90	0.5%
Gulf Intracoastal Waterway	--	--	--	--	--	--	--	--	\$0	0.0%
Lower Mississippi	3,822	2,720	9	269	4,173	3,098	979	1,029	\$16,099	89.6%
Upper Mississippi	203	530	178	--	100	100	--	--	\$1,111	6.2%
Ohio River System	286	150	22	--	--	--	5	95	\$558	3.1%
Total	\$4,311	\$3,481	\$227	\$354	\$4,273	\$3,205	\$984	\$1,127	\$17,962	100.0%
Percent by Facility Type	51.5%	41.6%	2.7%	4.2%	44.6%	33.4%	10.3%	11.8%		
	46.6%				53.4%				100.0%	

* Totals may not add up due to rounding.

New Construction vs. Modernization/Rehabilitation

Table 4 provides expenditure details for 1998 by type of expenditure – new construction and modernization/rehabilitation – and by type of facility. Of the \$54.3 million spent in 1998, the overwhelming majority, 91 percent (or \$49.6 million) was spent on new construction, leaving just 9 percent (\$4.6 million) for facility modernization and rehabilitation.

The three largest categories of new construction, comprising 76 percent of 1998 expenditures, were infrastructure (\$16.3 million at 32 percent), dredging (\$10.9 million at 22 percent), and industrial development (\$10.4 million at 21 percent). The first, second, and third ranked river systems in new construction were the Lower Mississippi with \$33.3 million (67 percent), Upper Mississippi with \$11.6 million (23 percent), and the Alabama-Mississippi-Georgia with \$2.6 million (5 percent).

Table 4. FY 1998 Capital Expenditures by Type of Expenditure and Facility (\$000s) * #

River System	1998 New Construction Summary (\$000s)											
	General Cargo	Specialized Project Cargo	Dry Bulk	Liquid Bulk	Passenger	Recreational Boating	Infrastructure		Dredging	Industrial Develop.	Other	Total (\$000s)
							On-Terminal	Off-Terminal				
Alabama-Mississippi-Georgia	2,000	475	--	--	--	--	80	--	--	--	20	\$2,575
Columbia-Snake	--	--	--	--	38	249	18	4	--	425	38	\$771
Gulf Intracoastal Waterway	--	--	--	--	--	--	--	--	557	--	--	\$557
Lower Mississippi	3,212	--	137	359	--	--	6,644	8,137	10,263	2,480	2,051	\$33,283
Upper Mississippi	1,544	1,500	--	--	--	--	886	--	98	7,500	27	\$11,556
Ohio River System	--	--	350	--	--	--	427	100	--	--	--	\$877
Total	\$6,757	\$1,975	\$487	\$359	\$38	\$249	\$8,056	\$8,241	\$10,918	\$10,405	\$2,136	\$49,619
Percent by Facility Type	13.6%	4.0%	1.0%	0.7%	0.1%	0.5%	16.2%	16.6%	22.0%	21.0%	4.3%	100.0%

River System	1998 Modernization/Rehabilitation Summary (\$000s)											
	General Cargo	Specialized Project Cargo	Dry Bulk	Liquid Bulk	Passenger	Recreational Boating	Infrastructure		Dredging	Industrial Develop.	Other	Total (\$000s)
							On-Terminal	Off-Terminal				
Alabama-Mississippi-Georgia	1,001	--	--	--	--	--	23	--	--	--	--	\$1,024
Columbia-Snake	--	--	--	--	--	90	63	6	67	128	59	\$413
Gulf Intracoastal Waterway	--	--	--	--	--	--	--	--	250	--	--	\$250
Lower Mississippi	72	--	11	--	--	--	175	1,142	--	27	113	\$1,540
Upper Mississippi	--	--	1,100	--	--	--	25	200	--	--	--	\$1,325
Ohio River System	65	--	--	--	--	--	31	--	--	--	--	\$96
Total	\$1,138	\$0	\$1,111	\$0	\$0	\$90	\$317	\$1,348	\$317	\$154	\$172	\$4,647
Percent by Facility Type	24.5%	0.0%	23.9%	0.0%	0.0%	1.9%	6.8%	29.0%	6.8%	3.3%	3.7%	100.0%

* Excludes \$70,000 in expenditures that were not broken down by type of construction.

Totals may not add up due to rounding.

Comparison of Annual Expenditures by Type of Facility Through 1998

Table 5 provides a comparative summary of the relative expenditures by facility type for the period through 1998. The overall expenditure pattern varies somewhat, perhaps due (1) to the nature of

the industry (some very small ports with small staffs), (2) reporting gaps when collecting historical data (see footnote to Table 5), or (3) the number of respondents reporting expenditures each year (48 through 1995, 36 in 1996 and 1997, and 41 in 1998).

Infrastructure investments typically have been the largest expenditure category, averaging around 33 percent of the shallow draft industry's total investments. Except for passenger and recreational boating, the other expenditure categories tend to fluctuate from one year to the next.

General Observations

- As a percentage of total 1998 expenditures, the entire Mississippi River system (comprising both the upper and lower systems) expended \$47.8 million (or 88 percent).
- New construction monies for infrastructure, dredging, and industrial development accounted for 76 percent of monies spent in 1998, while expenditures on cargo facilities accounted for 14 percent.

- Modernization and rehabilitation expenditures showed 48 percent spent on cargo facilities overall [general, specialized, dry, liquid, and passenger] and 36 percent on infrastructure.
- Nearly all dredging (97 percent) in 1998 was for new construction.
- Nearly all infrastructure and industrial development expenditures (91 percent and 99 percent, respectively) were for new construction.
- Eighty-one percent of total cargo facility expenditures in 1998 was for new construction.
- Passenger and recreational boating facilities experienced little development in 1998 – less than 1 percent of total expenditures that year.

Table 5. Comparison of Annual Expenditures by Type of Facility Through 1998

Year	Type of Expenditure **														Total (\$000s)
	General Cargo			Bulk			Pas-senger	Recre. Boating	Infrastructure			Dredging	Indus. Dev.	Other	
	General Cargo	Spec. Project Cargo	Total	Dry Bulk	Liquid Bulk	Total			On-Term.	Off-Term.	Total				
Through 1995*	23.5%	3.4%	26.9%	10.6%	1.2%	11.8%	0.0%	0.4%	N/A	N/A	26.0%	12.4%	3.1%	19.4%	\$325,375
1996	4.4%	0.4%	4.8%	8.5%	2.5%	11.0%	0.5%	0.6%	N/A	N/A	38.0%	1.1%	41.5%	2.4%	\$49,948
1997	47.5%	0.0%	47.5%	6.8%	5.6%	12.4%	0.4%	0.8%	17.9%	15.4%	33.2%	0.3%	3.1%	2.2%	\$20,940
1998	14.7%	3.6%	18.3%	1.1%	2.5%	3.6%	0.1%	0.6%	15.4%	17.6%	33.1%	20.7%	19.4%	4.2%	\$54,336

* Ports reported historical (pre-1996) data over vastly different time periods, ranging from 2 years (1994-1995) to 30 years (1955-1995). The bulk of the data is between 1990-1995.

** Excludes expenditures that were not broken down by type of facility: Through 1995 - \$8,500,000 1996 - \$3,700,000

METHODS OF FINANCING CAPITAL EXPENDITURES

The 1998 expenditure survey also collected data on the methods used by the shallow draft public port industry to finance its capital expenditure programs. The survey used the following six funding categories to classify the financing sources: port revenues, general obligation bonds (G.O. bonds), revenue bonds, loans, grants, and other. "Other" 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. "G.O. bonds" are bonds backed by the full faith and credit of the issuer, usually a state, county, or municipality. "Revenue bonds" pledge revenues accruing from the proposed facility as security for the outstanding bonds.

Table 6. Summary of Financing Methods Used Through 1998 (\$000s) * #

Financing Method	Through 1995**		1996		1997		1998	
	Amount (\$000s)	Percent	Amount (\$000s)	Percent	Amount (\$000s)	Percent	Amount (\$000s)	Percent
Port Revenues	\$76,317	22.9%	\$10,994	20.8%	\$3,322	15.9%	\$5,368	9.9%
G.O. Bonds	57,947	17.4%	17,883	33.8%	3,795	18.2%	19,183	35.4%
Revenue Bonds	31,591	9.5%	715	1.4%	1,179	5.6%	8,278	15.3%
Loans	18,018	5.4%	9,388	17.7%	646	3.1%	1,569	2.9%
Grants	91,659	27.5%	9,909	18.7%	10,738	51.4%	15,500	28.6%
Other	58,345	17.5%	4,059	7.7%	1,209	5.8%	4,341	8.0%
Total	\$333,875	100.0%	\$52,948	100.0%	\$20,890	100.0%	\$54,239	100.0%

* Excludes expenditures for which there was no data on funding source: 1996 – \$700,000 1997 – \$50,000 1998 – \$97,000

** Years covered varied from 1955-1995, with the bulk of the data between 1990-1995.

Totals may not add up due to rounding.

Table 6 provides a basis for comparing the changes in the primary financing methods used by the shallow draft public port industry. The table highlights the shift in financing methods that occurred between 1998 and prior year surveys. There is some fluctuation between financing methods, although some patterns can be seen. For instance, G.O. bonds and grants predominated, and revenue bonds shot up significantly in 1998 over past years.

Funding Sources – 1998

Table 7 summarizes the funding source used by each river system in 1998. It shows that all six river systems use port revenues. "Other" is used by five of the six river systems.

The predominant types of funding sources used in Table 8 by the river systems are: G.O. bonds (35

percent); grants (29 percent); revenue bonds (15 percent); and port revenues (10 percent). Together these four sources comprised 89 percent of all funding for 1998. Loans, at 3 percent, were least used.

Table 7. 1998 Funding Preferences by River System

River Systems	Port Revs.	G.O. Bonds	Rev. Bonds	Loans	Grants	Other
Ala.-Miss.-Georgia	1			3	4	2
Colum.-Snake	1		4	5	2	3
GIWW	1					2
Lower Miss.	5	1		4	2	3
Upper Miss.	3		1		4	2
Ohio	2			1		

Key: 1 = predominant method used

Table 8. FY 1998 Capital Expenditures by Financing Method and River System (\$000s) **

River System	1998 Funding Sources (\$000s)													
	Port Revenues		G.O. Bonds		Revenue Bonds		Loans		Grants		Other		Total	
													Amount (\$000s)	Percent by River System
Alabama-Mississippi-Georgia	2,024	37.7%	--	0.0%	--	0.0%	300	19.1%	275	1.8%	1,000	23.0%	\$3,600	6.6%
Columbia-Snake	762	14.2%	--	0.0%	100	1.2%	65	4.1%	121	0.8%	108	2.5%	\$1,156	2.1%
Gulf Intracoastal Waterway	557	10.4%	--	0.0%	--	0.0%	--	0.0%	--	0.0%	250	5.8%	\$806	1.5%
Lower Mississippi	289	5.4%	19,183	100.0%	--	0.0%	537	34.2%	13,735	88.6%	1,079	24.9%	\$34,825	64.2%
Upper Mississippi	1,430	26.6%	--	0.0%	8,178	98.8%	--	0.0%	1,369	8.8%	1,904	43.9%	\$12,882	23.7%
Ohio River System	306	5.7%	--	0.0%	--	0.0%	667	42.5%	--	0.0%	--	0.0%	\$974	1.8%
Total	\$5,368	100.0%	\$19,183	100.0%	\$8,278	100.0%	\$1,569	100.0%	\$15,500	100.0%	\$4,341	100.0%	\$54,244	100.0%
Percent by Funding Source	9.9%		35.4%		15.3%		2.9%		28.6%		8.0%		100.0%	

* Totals may not add up due to rounding.

Excludes \$97,000 for which there was no data on funding source.

Of the two largest river systems by expenditures (Table 8), the Lower Mississippi relied on G.O. bonds (55 percent) and grants (39 percent) to generate 95 percent of its funding needs in 1998. The second largest river system, the Upper Mississippi, found that revenue bonds (63 percent) and "other" (15 percent) met 78 percent of its funding needs.

General Observations

- As mentioned in the capital expenditure section earlier in this report, the entire Mississippi River system, comprising both the upper and lower segments, accounted for 88 percent of all 1998 funding sources.

- Over time, port revenues have been a consistent and important source of funds for shallow draft ports. In 1998, only one revenue source – port revenues – was used by all six systems.
- The Columbia-Snake and Lower Mississippi had the most diversified funding sources, using five of the six financing methods.
- In 1998 G.O. bonds were exclusively used by the Lower Mississippi River system.

APPENDIX A – Capital Expenditure Survey Respondents

<u>Alabama-Mississippi-Georgia River System</u> <i>(Tennessee-Tombigbee Waterway and Warrior, Tombigbee, Coosa-Alabama, Mobile, and Apalachicola-Chattahoochee-Flint Rivers)</i>	
1	Bridgeport Inland Docks (AL)
2	Columbus State Docks (GA)
3	Bainbridge State Docks (GA)
4	Tuscaloosa/Northport Inland Docks (AL)
5	Demopolis Inland Docks (AL)
6	Columbia Inland Docks (AL)
7	Eufaula Inland Docks (AL)
8	Phenix City Inland Docks (AL)
9	Cordova Inland Docks (AL)
10	Yellow Creek Port Authority (MS)
11	Lowndes County Port (MS)
12	Montgomery Inland Docks (AL)
13	Claiborne Inland Docks (AL)
14	Selma Inland Docks (AL)
<u>Columbia-Snake River System</u> <i>(Columbia, Snake, and Willamette Rivers)</i>	
1	Port of Umatilla (OR)
2	Port of Ilwaco (WA)
3	Port of Hood River (OR)
4	Port of Columbia (WA)
5	Port of St. Helens (OR)
6	Port of Clarkston (WA)
<u>Gulf Intracoastal Waterway</u> <i>(A navigation channel approximately 1,340 miles long, running from Brownsville, TX to St. Marks, FL)</i>	
1	Port of West St. Mary (LA)
2	Port of Harlingen (TX)
<i>(Appendix A continued)</i>	

<u>Lower Mississippi River System</u> <i>(Mississippi River south of Cairo, IL, including the Ouachita, Arkansas, Red, Verdigris, White, and Yazoo Rivers, as well as Lake Pontchartrain)</i>	
1	Port Manchac (LA)
2	Lake Providence Port Commission (LA)
3	Little Rock Port Authority (AR)
4	Hickman-Fulton County Riverport Authority (KY)
5	Port of Rosedale (MS)
6	Port of Greenville (MS)
7	Port of Fort Smith (AR)
8	Port of Crossett (AR)
9	Port of Shreveport – Bossier (LA)
10	New Madrid County Port Authority (MO)
11	Pemiscot County Port Authority (MO)
12	Port of Memphis (TN)
13	Port of Camden (AR)
14	Yazoo County Port (MS)
15	Port of Yellow Bend (AR)
<u>Upper Mississippi River System</u> <i>(Mississippi River north of Cairo, IL, plus Illinois, Missouri, and Kaskaskia Rivers)</i>	
1	Kaskaskia Regional Port District (IL)
2	Tri-City Regional Port (IL)
3	Seneca Regional Port District (IL)
4	Southeast Missouri Regional Port Authority (SEMO) (MO)
<u>Ohio River System</u> <i>(Ohio, Tennessee, Cumberland, Monongahela, Allegheny, Kanawha, and Green Rivers)</i>	
1	Henderson County Riverport Authority (KY)
2	Florence-Lauderdale County Port Authority (AL)
3	Southwind Maritime Center (IN)
4	Lyon County Riverport Authority (KY)
<u>45</u>	Total Number of Responding Ports

APPENDIX B – Profiles of Shallow Draft Ports

TYPE OF OPERATION

Shallow-draft ports can be categorized by their type of operation: operating, non-operating, and limited-operating. Operating ports in the U.S. generally provide all port services except stevedoring with their own employees including, but not limited to, loading and unloading of barges, rail cars, and trucks and the operation of container terminals, grain elevators, and other bulk terminal operations. Non-operating ports are basically landlord ports, and all of the port facilities are generally leased or preferentially assigned with the lessee or assignee responsible for operating the facilities. Limited-operating ports have facilities leased to others, but continue to operate one or more facilities with port employees.

Table 9 shows shallow draft ports by type of operation.

Table 9. Type of Operation – 1998

River Systems	Operating	Non-Operating	Limited Operating	Total Responses
Alabama-Mississippi-Georgia	3	11		14
Columbia-Snake	1	1	4	6
Gulf Intracoastal Waterway		1	1	2
Lower Mississippi	5	8	1	14
Upper Mississippi		4		4
Ohio	1	2	1	4
Total by Type of Operation	10	27	7	44
Percentage	23%	61%	16%	100%

TYPE OF GOVERNANCE

U.S. shallow draft public ports generally fall into the following categories: state department, agency, or authority; county department or authority; municipal agency; or special purpose port/navigation district or authority. The classification of ports into these categories is based on their current ownership and status. For the purpose of this report, special purpose port/navigation districts and authorities are separate local government organizations which are generally granted separate taxing authority with some statutory limitations.

Figure 4 summarizes the responses to this survey question, and Table 10 provides the breakdown by river system.

Figure 4. Type of Governance -- 1998

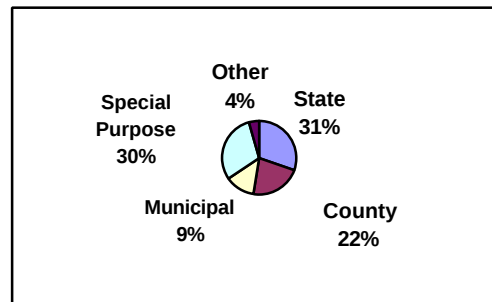


Table 10. Type of Governance – 1998

River Systems	State Department, Authority, or Agency	County Department, Authority, or Agency	Municipal Agency	Special Purpose Port/Navigation District or Authority	Other*
Alabama-Mississippi-Georgia	13	1			
Columbia-Snake		1	1	4	
Gulf Intracoastal Waterway				2	
Lower Mississippi		5	4	5	1
Upper Mississippi		1	1	2	
Ohio	1	2		1	1
Total	14	10	6	14	2

* "Other" is defined as either bi-county or a combination of city/county.