

SECTION 2 - EXISTING, HISTORICAL AND PROJECTED TRAFFIC

EXISTING AND HISTORICAL SHALLOW DRAFT TRAFFIC

IHNC LOCK TRAFFIC AND FLOW PATTERNS

Table 2 - 1 displays the distribution of 1989 IHNC Lock traffic by ten major commodity groups and the general direction of the traffic flows. Tables 2 - 2 through 2 - 4 show the distribution of traffic by seven origin and destination regions with each region further broken down by the ten commodity groups. The mapping of this ten commodity group scheme with the 4-digit Waterborne Commerce Statistics Center (WCSC) commodity codes and the Lock Performance Monitoring System (LPMS) commodity codes is shown in table 2 - 5.

As table 2 - 1 shows, approximately 67 percent of the total traffic that moved through the IHNC lock in 1989 consisted of movements with an origin/destination north (the Mississippi River at New Orleans and all waterway system points above) and east of the lock, dominated by coal, and to a lesser extent, petroleum products. The remaining 33 percent of the traffic had an origin/ destination east and west of the lock, comprised mostly of petroleum products, crude petroleum, industrial chemicals and non-metallic minerals. The two largest origin regions, as displayed in table 2 - 2, the GIWW East (West of Mobile) and Ohio River & Tribs, represent 36 and 29 percent of total traffic, respectively. As table 2 - 3 indicates, the commodities that make up the bulk of the traffic volume for the GIWW East region are petroleum products and crude petroleum, while coal dominates the commodities that make up the Ohio River and Tribs origin region.

From the destination perspective, the two GIWW East regions, GIWW East (West of Mobile) and GIWW East (Mobile & East of Mobile) are the two largest regions, representing 33 and 29 percent, respectively, of total traffic. As table 2 - 4 indicates, crude petroleum, coal and petroleum products represent the bulk of GIWW East (West of Mobile) destinations, while coal, and to a lesser extent, petroleum products, dominate the commodities destined for the GIWW East (Mobile & East of Mobile) region.

Table 2 - 6 summarizes IHNC shallow-draft activity for the years 1984 through 1992. Displayed are traffic volumes and average delay per tow estimates.

Table 2 - 1

Commodity Distribution and Flow Pattern for 1989 IHNC Lock Traffic

Commodity Group	Total IHNC Traffic (Tons)	% Of Total Traffic	North/East Traffic (Tons)	% of North/East Traffic	West/East Traffic (Tons)	% of West/East Traffic
Farm Products	498,998	1.9%	480,667	2.8%	18,331	0.2%
Metallic Ores	1,383,955	5.4%	1,237,311	7.2%	146,644	1.7%
Coal	7,438,121	29.0%	7,438,121	43.2%	0	0.0%
Crude Petroleum	3,460,396	13.5%	976,610	5.7%	-2,483,787	29.4%
Non-Metallic Minerals	1,443,020	5.6%	869,682	5.1%	573,338	6.8%
Forest Products	160,901	0.6%	159,883	0.9%	1,018	0.0%
Industrial Chemicals	1,598,829	6.2%	1,040,767	6.1%	558,063	6.6%
Agricultural Chemicals	542,787	2.1%	501,034	2.9%	41,753	0.5%
Petroleum Products	7,500,241	29.2%	3,359,578	19.5%	4,140,663	49.0%
All Others	1,619,197	6.3%	1,134,456	6.6%	484,741	5.7%
Total	25,646,445	100%	17,198,109	100%	8,448,338	100%

Source: Waterborne Commerce Of The United States

Table 2 - 2

1989 IHNC Lock Tonnage
By Origin And Destination Regions

Origin Region	Tons	% Of Total
Upper Mississippi & Missouri	502,395	2.0%
Lower Mississippi	2,733,893	10.7%
Ohio River & Tribs	7,508,291	29.3%
GIWW West (Louisiana Section)	3,733,228	14.6%
GIWW West (Texas Section)	1,462,799	5.7%
GIWW East (West of Mobile)	9,158,369	35.7%
GIWW East (Mobile & East of Mobile)	547,470	2.1%
Total	25,646,445	100%

Destination Region	Tons	% Of Total
Upper Mississippi & Missouri	626,788	2.4%
Lower Mississippi	4,621,126	18.0%
Ohio River & Tribs	1,333,857	5.2%
GIWW West (Louisiana Section)	1,720,377	6.7%
GIWW West (Texas Section)	1,403,729	5.5%
GIWW East (West of Mobile)	8,535,936	33.3%
GIWW East (Mobile & East of Mobile)	7,404,632	28.9%
Total	25,646,445	100%

Table 2 - 3

1989 IHNC Lock Tonnage
By Commodity Group And Origin Region

Origin Region	Commodity Group	Tons	% Of Total
Upper Mississippi & Missouri	Farm Products	129,650	26%
	Metallic Ores	94,155	19%
	Coal	114,568	23%
	Crude Petroleum	0	0%
	Non-Metallic Minerals	28,277	6%
	Forest Products	0	0%
	Industrial Chemicals	65,353	13%
	Agricultural Chemicals	3,209	1%
	Petroleum Products	62,181	12%
	All Others	5,002	1%
	Total	502,395	100%
Lower Mississippi & Missouri	Farm Products	79,120	3%
	Metallic Ores	256,563	9%
	Coal	2,896	0%
	Crude Petroleum	90,200	3%
	Non-Metallic Minerals	53,329	2%
	Forest Products	8,561	0%
	Industrial Chemicals	670,383	
	Agricultural Chemicals	123,079	
	Petroleum Products	1,415,840	52%
	All Others	33,922	1%
	Total	2,733,893	100%
Ohio River & Tribes	Farm Products	50,816	1%
	Metallic Ores	9,853	0%
	Coal	7,034,672	94%
	Crude Petroleum	0	0%
	Non-Metallic Minerals	237,878	3%
	Forest Products	0	0%
	Industrial Chemicals	39,487	1%
	Agricultural Chemicals	0	0%
	Petroleum Products	135,585	2%
	All Others	0	0%
	Total	7,508,291	100%

Table 2 - 3

1989 IHNC Lock Tonnage
By Commodity Group And Origin Region

Origin Region	Commodity Group	Tons	% Of Total
GIWW West (Louisiana Section)	Farm Products	7,931	0%
	Metallic Ores	16,331	0%
	Coal	0	0%
	Crude Petroleum	2,239,236	60%
	Non-Metallic Minerals	234,351	6%
	Forest Products	587	0%
	Industrial Chemicals	173,301	5%
	Agricultural Chemicals	5,964	0%
	Petroleum Products	846,506	23%
	All Others	209,021	6%
	Total	3,733,228	100%
GIWW West (Texas Section)	Farm Products	6,892	0%
	Metallic Ores	9,562	1%
	Coal	0	0%
	Crude Petroleum	4,762	0%
	Non-Metallic Minerals	56,463	4%
	Forest Products	0	0%
	Industrial Chemicals	258,609	18%
	Agricultural Chemicals	3,906	0%
	Petroleum Products	1,108,374	76%
	All Others	14,231	1%
	Total	1,462,799	100%
GIWW East (West of Mobile)	Farm Products	161,403	2%
	Metallic Ores	875,294	10%
	Coal	151,443	2%
	Crude Petroleum	1,822,844	20%
	Non-Metallic Minerals	543,189	6%
	Forest Products	138,322	2%
	Industrial Chemicals	490,417	5%
	Agricultural Chemicals	400,362	4%
	Petroleum Products	3,227,578	35%
	All Others	1,347,517	15%
	Total	9,158,369	100%

Table 2 - 3

1989 IHNC Lock Tonnage
By Commodity Group And Origin Region

Origin Region	Commodity Group	Tons	% Of Total
GIWW East (Mobile & East of Mobile)	Farm Products	58,120	11%
	Metallic Ores	155,060	28%
	Coal	0	0%
	Crude Petroleum	0	0%
	Non-Metallic Minerals	289,282	53%
	Forest Products	13,434	2%
	Industrial Chemicals	7,363	1%
	Agricultural Chemicals	7,296	1%
	Petroleum Products	16,355	3%
	All Others	560	0%
	Total	547,470	100%

Table 2 - 4
 1989 IHNC Lock Tonnage
 By Commodity Group And Destination Region

Destination Region	Commodity Group	Tons	% Of Total
Upper Mississippi & Missouri	Farm Products	5,701	1%
	Metallic Ores	165,376	26%
	Coal	0	0%
	Crude Petroleum	0	0%
	Non-Metallic Minerals	5,612	1%
	Forest Products	9,416	2%
	Industrial Chemicals	29,283	5%
	Agricultural Chemicals	185,377	30%
	Petroleum Products	201,292	32%
	All Others	24,731	4%
	Total	626,788	100%
Lower Mississippi & Missouri	Farm Products	201,675	4%
	Metallic Ores	325,820	7%
	Coal	151,443	3%
	Crude Petroleum	870,720	19%
	Non-Metallic Minerals	517,575	11%
	Forest Products	108,218	2%
	Industrial Chemicals	295,681	6%
	Agricultural Chemicals	136,004	3%
	Petroleum Products	927,845	20%
	All Others	1,086,145	24%
	Total	4,621,126	100%
Ohio River & Tribs	Farm Products	9,252	1%
	Metallic Ores	409,036	31%
	Coal	0	0%
	Crude Petroleum	0	0%
	Non-Metallic Minerals	29,715	2%
	Forest Products	32,901	2%
	Industrial Chemicals	45,772	3%
	Agricultural Chemicals	54,285	4%
	Petroleum Products	746,110	56%
	All Others	6,786	1%
	Total	1,333,857	100%

Table 2 - 4
 1989 IHNC Lock Tonnage
 By Commodity Group And Destination Region

Destination Region	Commodity Group	Tons	% Of Total
GIWW West (Louisiana Section)	Farm Products	0	0%
	Metallic Ores	51,040	3%
	Coal	0	0%
	Crude Petroleum	660,491	38%
	Non-Metallic Minerals	262,826	15%
	Forest Products	0	0%
	Industrial Chemicals	17,980	1%
	Agricultural Chemicals	11,917	1%
	Petroleum Products	497,494	29%
	All Others	218,629	13%
	Total	1,720,377	100%
GIWW West (Texas Section)	Farm Products	2,895	0%
	Metallic Ores	79,082	6%
	Coal	0	0%
	Crude Petroleum	291,633	21%
	Non-Metallic Minerals	16,743	1%
	Forest Products	1,221	0%
	Industrial Chemicals	109,064	
	Agricultural Chemicals	20,075	
	Petroleum Products	871,230	62%
	All Others	11,786	1%
	Total	1,403,729	100%
GIWW East (West of Mobile)	Farm Products	259,461	3%
	Metallic Ores	322,286	4%
	Coal	2,013,562	24%
	Crude Petroleum	2,331,287	27%
	Non-Metallic Minerals	552,488	6%
	Forest Products	9,148	0%
	Industrial Chemicals	911,620	11%
	Agricultural Chemicals	49,526	1%
	Petroleum Products	1,908,650	22%
	All Others	177,908	2%
	Total	8,535,936	100%

Table 2 - 4
 1999 IHNC Lock Tonnage
 By Commodity Group And Destination Region

Destination Region	Commodity Group	Tons	% Of Total
GIWW East (Mobile & East of Mobile)	Farm Products	14,948	0%
	Metallic Ores	64,178	1%
	Coal	5,138,574	69%
	Crude Petroleum	2,911	0%
	Non-Metallic Minerals	57,810	1%
	Forest Products	0	0%
	Industrial Chemicals	295,513	4%
	Agricultural Chemicals	86,632	1%
	Petroleum Products	1,659,798	22%
	All Others	84,268	1%
	Total	7,404,632	100%

Table 2 - 5
Commodity Group Definitions
By Waterborne Commerce Statistics Center
And Lock Performance Monitoring System Classifications

	1990 WCSC	1989 WCSC	LPMS
1. FARM PRODUCTS			
Corn.....	6344.....	0103.....	81
Sorghum Grains.....	6447.....	0106.....	80
Wheat.....	6241.....	0107.....	82
Soybeans.....	6522.....	0111.....	83
Grains & Oilseeds NEC..	6442, 6443, 6445, 6521, 6534, 6590	0102, 0104, 0105, 0112, 0119	84-87
Other Agri Products....	6654, 6781, 6839, 6856, 6857, 6871, 6872, 6891, 6893, 6899	0101, 0121-0191	89
Grain Mill Products....	6746, 6747.....	2014, 2049.....	88
Animal Feeds.....	6782.....	2042.....	80
Other Food/Tobacco....	6653, 6654, 6811, 6817, 6822, 6835, 6838, 6839, 6858, 6861, 6865, 6885, 6887-6889, 6891	2011-2039, 2061-2099, 2111	94
2. METALLIC ORES & PROD			
Iron Ores & Conc.....	4410.....	1011.....	42
Other Metallic Ores....	4630, 4650, 4670, 4690	1021-1091	40, 4
Iron & Steel Shapes....	5320, 5330, 5360, 5370	3314-3317	43
Other Iron & Steel Prod....	2990, 4420, 4860, 5312, 5315, 5390	3311-3313, 3318, 3319, 4011	44, 46
Nonferrous Metal Prod..	4680, 5421, 5422, 5429	3321-3324, 4012	44
Fabricated Metal Prod....	5480.....	3411.....	45
3. COAL			
Coal.....	1100.....	1121.....	10, 11
4. CRUDE PETRO			
Crude Petroleum.....	2100.....	1311.....	21
5. NONMETALLIC MINERALS			
Limestone.....	4322.....	1411.....	51
Stone, Sand, & Gravel....	4310, 4331.....	1412, 1442.....	52
Other Nonmetallic Minerals..	3271, 4323, 4338, 4741, 4782, 4783, 4900	1451, 1491-1499	50
Building Cement.....	5220.....	3241.....	61
Lime.....	5210.....	3271.....	62
Stone, Clay, & Glass.....	5240, 5290.....	3211, 3251, 3281	60
Waterway Improvemnt Matr..	4335.....	4118.....	51
Misc Nonmetallic Minrnl Prod	5290.....	3291.....	50

Table 2 - 5
Commodity Group Definitions
By Waterborne Commerce Statistics Center
And Lock Performance Monitoring System Classifications

	1990 WCSC	1989 WCSC	LPMS
6. FOREST PRODUCTS & PULP			
Logs.....	4170.....	2411.....	92
Rafted Logs.....	4170.....	2412.....	92
Pulpwood Logs.....	4170.....	2415.....	92
Wood Chips & Staves.....	4161.....	2416.....	92
Forest & Other Timber Prod..	4110, 4150, 4170,	0841, 0861, 2413, ...	91
	4190	2414	
Lumber Prod & Furniture.....	4189, 5540, 7400,	2421-2491, 2511.....	92
	7900		
Pulp.....	4225.....	2611.....	93
Standard Newsprint Paper....	5110.....	2621.....	93
Paper & Paperboard.....	5120.....	2631.....	93
Paper Scrap.....	4225.....	4024.....	93
Paper & Paperboard, NEC.....	5190.....	2691.....	93
7. INDUSTRIAL CHEMICALS			
Industrial Chemicals..	3211, 3212, 3219, 3220,	2810-2861, 2891.....	30-34
	3230, 3240, 3250, 3260, 3272- 3276, 3279, 3281-3286, 3292, 3297-3299, 7500, 7600		
8. AGRICULTURAL CHEMICALS			
Agricultural Minerals.....	3190, 4327.....	1471, 1479.....	53
Agricultural Chemical.....	3110, 3120, 3130,	2871-2879.....	35-39
	3190, 3291		
9. PETROLEUM PRODUCTS			
Gasoline.....	2211.....	2911.....	22
Jet Fuel & Kerosene.....	2211, 2221.....	2912, 2913.....	23
Distillate Fuel Oil.....	2330.....	2914.....	24
Residual Fuel Oil.....	2340.....	2915.....	25
Lubricating Oil & Grease...	2350.....	2916.....	20
Naptha & Petroluem Solv....	2429.....	2917.....	26
Asphalt, Tars, & Pitches...	2430, 5290.....	2918, 2931.....	26
Coke & Petroleum Coke.....	1200, 2540.....	2920.....	26
Liquefied Gases.....	2640.....	2921.....	20
Other Petro & Coal Prod....	2410, 2990.....	2991.....	26

Table 2 - 5
 Commodity Group Definitions
 By Waterborne Commerce Statistics Center
 And Lock Performance Monitoring System Classifications

	1990 WCSC	1989 WCSC	LPMS
10. ALL OTHERS			
Fish & Shellfish.....	6134, 6136.....	0911-0913.....	70
Unmanufactured Shells.....	4515.....	0931.....	71
Basic Textile Prod.....	6894, 7500.....	2211, 2212, 4022.....	90
Apparel.....	7500.....	2311.....	90
Rubber, Plastics & Leather..	7600, 7900.....	3011, 3111.....	99
Machinery.....	7110, 7120.....	3511, 3611.....	95
Transportation Equipment..	7210, 7220, 7230, 7900....	3711-3791.....	95
Miscellaneous, NEC.....	3293, 4333, 6888, 7300....	1911, 2711, 3811, ...	99
	7800, 7900, 8900, 9900	3911, 4029, 4111- -4113, 4119, 9999	

Table 2 - 6

Shallow-Draft Activity Summary - IHNC Lock
(1984 - 1993)

Year	Total Traffic (1,000 Tons)	Total Number Of Tows	Average Delay Per Tow (Hours)
1993	23,337	9,196	14.6
1992	23,530	10,601	6.3
1991	23,926	9,658	12.3
1990	23,412	9,891	16.2
1989	25,856	10,850	11.6
1988	27,128	11,123	11.9
1987	26,325	11,724	9.2
1986	26,608	11,733	15.8
1985	24,007	12,799	8.5
1984	22,193	12,381	8.3

Source: Lock Performance Monitoring System. (LPMS)

SYSTEM TRAFFIC AND FLOW PATTERNS

Table 2 - 7 displays the distribution of commodity types, aggregated by major groups, for 1989 by the three GIWW segments that include the primary locks. These segments are, 1) the GIWW Mississippi River to Sabine River (GIWW West miles 0 - 240), 2) the GIWW Morgan City - Port Allen Alternate Route, and 3) the GIWW Mobile to New Orleans (GIWW East miles 0 - 134). The importance of the GIWW system to the petrochemical industries of Louisiana and Texas is evident in the commodity mix. For each of the three GIWW segments shown in table 2 - 7, refined petroleum products represents nearly a third or more of total segment traffic. This significance is further illustrated by the fact that the combination of petroleum products, industrial chemicals and crude petroleum account for 79 and 70 percent, respectively, of total traffic for the first two segments. For the third segment, these same three commodity groups represent 55 percent of total segment traffic. Some difference in commodity emphasis does exist between the eastern and western portions of the GIWW. The primary difference between the segments is the prominence of coal and the lesser significance of industrial chemicals on the eastern portion. Virtually nonexistent on the western portion of the GIWW, coal represents 29 percent of the eastern portion traffic.

Table 2 - 8 breaks down the previously displayed commodity group percentages by GIWW segment to the level of the individual lock. Commodity group percentages for individual locks generally reflect the percentages of their respective segments with a few exceptions. First, refined petroleum products represent an even higher percentage of total lock traffic than they do of segment traffic for the locks on the western mainstem. The second exception to similar segment vs individual commodity emphasis is the greater percentage emphasis of crude petroleum and lesser emphasis of industrial chemicals at Algiers and Bayou Boeuf, and the reverse of this condition at Calcasieu and Leland Bowman.

In order to illustrate traffic flow patterns between the primary system locks, table 2 - 9 displays a matrix of traffic flows between locks expressed as a percent of each lock's total traffic volume.

Historical traffic on the three previously described GIWW segments is displayed in table 2 - 10. Traffic volume on these segments has fluctuated significantly over the last 20 years. Traffic for the system, which fell to a 20-year low in 1982, rebounded by the 1988 - 1990 period to new record high levels. Historical average lock delays for the

Table 2 - 7

GIWW Selected Segments
1989 Tonnage by Commodity Group
(Internal Traffic)

Commodities	Mississippi River to Sabine River 1/	% of Total	Morgan City - Port Allen Route	% of Total	Mobile Bay - New Orleans 2/	% of Total
Forest Products	1,578,430	2.4	421,601	1.5	541,129	2.2
Metallic Ores	2,493,862	3.8	1,725,048	6.3	929,733	3.7
Coal	20,415	0.03	19,087	0.1	7,352,313	29.4
Crude Petroleum	14,492,804	21.9	1,593,165	5.8	3,109,001	12.5
Non-Metallic Minerals	6,173,547	9.3	5,089,349	18.7	1,349,286	5.4
Forest Products	30,864	0.05	22,533	0.1	338,136	1.4
Industrial Chemicals	12,262,336	18.5	8,678,216	31.8	2,009,032	8.0
Agricultural Chemicals	877,287	1.3	728,637	2.7	233,828	0.9
Petroleum Products	25,622,554	38.6	8,821,370	32.4	8,699,275	34.8
All Others	2,764,978	4.2	161,288	0.6	407,309	1.6
Total	66,317,077	100	27,260,294	100	24,969,042	100

Source: Waterborne Commerce of the United States, 1989.

1/ Mississippi River to GIWW West mile 266.

2/ Inner Harbor Navigation Canal to GIWW East mile 134.

Table 2 - 8

Commodity Group Percentages by Lock - 1989

Group	Port Allen	Bayou Sorrel	IHNC	Algiers	Harvey	Bayou Boeuf	Calcasieu	Leland Bowman
Farm Prod	1.6	1.6	1.9	2.0	9.2	3.9	2.1	2.5
Metalic Ores	6.6	6.1	5.5	0.8	7.5	3.4	4.7	4.7
Coal	0.1	0.0	28.5	0.0	0.0	0.0	0.0	0.0
Crude Petroleum	3.3	3.6	13.3	28.0	12.7	19.3	10.4	6.7
Non-metalic Minerals	19.4	18.0	5.6	9.4	9.3	3.8	3.0	3.1
Forest Products	0.1	0.1	0.6	0.0	0.2	0.1	0.1	0.1
Industrial Chemicals	33.0	33.7	6.6	6.3	9.8	9.5	25.2	25.6
Agricultural Chemicals	2.7	2.8	2.1	2.4	0.8	2.1	1.8	2.9
Petroleum Products	32.6	33.4	29.5	46.5	48.4	50.2	51.5	53.0
All Other	0.6	0.6	6.3	2.6	2.2	7.9	1.2	1.2
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	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Waterborne Commerce Of The United States

Table 2 - 9

Common Traffic Flows Between Locks - 1989

Lock (traffic from)	Percent of Traffic that Uses:							
	Port Allen	Bayou Sorrel	IHNC	Algiers	Harvey	Bayou Boeuf	Calcasieu	Leland Bowman
Port Allen	100.0	97.1	0.3	0.0	0.0	1.5	78.1	78.6
Bayou Sorrel	99.2	100.0	0.4	0.2	0.1	1.8	80.1	80.6
IHNC	0.4	0.4	100.0	24.3	8.1	27.1	23.3	24.6
Algiers	0.0	0.2	28.5	100.0	0.0	74.2	58.8	63.5
Harvey	0.0	0.3	31.4	0.0	100.0	90.7	74.3	79.3
Bayou Boeuf	1.5	1.7	26.0	60.1	22.3	100.0	69.3	74.5
Calcasieu	46.9	47.0	13.6	29.1	11.2	42.4	100.0	100
Leland Bowman	44.8	45	13.6	29.9	11.3	43.3	96.7	100
Total System	32.2	31.5	31.3	26.6	8.1	32.8	54.6	56.4

Table 2 - 10

GIWW Tonnage
Selected Years, Selected Segments, Total Tonnage

Year	Mississippi River to Sabine 1/	Morgan City - Port Allen Alternate Route 2/	Mobile Bay - New Orleans 4/
1992	66,460,000	23,727,000	23,742,000
1991	65,328,000	24,342,000	23,449,000
1990	67,679,000	29,632,000	25,782,000
1989	66,415,798	27,264,185	25,972,550
1988	69,292,154	27,072,639	27,267,590
1987	63,967,724	19,682,861	24,069,572
1986	64,471,662	25,180,797	23,589,414
1985	63,092,992	23,150,132	21,577,873
1984	55,840,086	21,324,578	20,413,239
1983	51,545,852	19,253,008	16,524,665
1982	50,372,504	17,833,864	15,184,211
1981	52,591,854	18,083,914	17,342,703
1980	54,916,394	19,066,976	19,124,329
1979	55,947,248	20,254,735	21,238,833
1978	61,753,493	18,066,503	22,610,406
1977	63,277,175	18,456,491	24,795,828
1976	59,108,942	18,961,414	23,201,285
1975	56,750,361	17,083,459	21,726,203
1974	60,839,703	15,895,856	21,307,231
1973	62,265,498	14,269,832	19,323,261
1972	68,904,972	19,173,890	21,613,217
1971	70,563,298	14,368,939	18,660,228
1970	65,129,464	16,637,934	16,075,626
1960	36,263,828	2,773,826 3/	7,606,145
1950	21,707,241	1,818,760 3/	4,065,913

Source: Waterborne Commerce of the United States

1/Mississippi river to GIWW west mile 266.

2/ Not included in Mississippi River to Sabine traffic.

3/ Via Plaquemine Lock, Bayou Plaquemine, Bayou Sorrel Lock,
and the borrow pit of East Atchafalaya Protection Levee.

4/ Inner Harbor Navigation Canal to GIWW East, mile 134.

ten-year period 1993 - 1984 for three GTWW segments are presented in table 2 - 10a.

EXISTING AND HISTORICAL DEEP-DRAFT TRAFFIC

SYSTEM TRAFFIC

The navigation system with respect to deep-draft activity is composed of the two deep-draft channels that exist on either side of the IHNC lock, the Mississippi River and the MR-GO. The Mississippi River, a 45-foot channel, represents the primary route to New Orleans and points upstream to Baton Rouge, La, the upstream end of deep-draft navigation. While the MR-GO provides a second, 36-foot access route to New Orleans. The port facilities served by each channel, while not completely isolated from each other, represent geographically distinct areas. The areas remain distinct because of limited deep-draft traffic interchange. The sole route connecting the two areas requires use of the IHNC Lock which is too restrictive for the vast majority of the calling fleet. Therefore, for most deep-draft vessels, the selection of one of these two channels determine which port facilities can be accessed.

Historically, this system has represented the highest concentration of deep-draft traffic in the U.S. Throughout the 1980's, the Port of New Orleans has ranked as the number one U.S. port in terms of total foreign tonnage, while the Port of Baton Rouge has consistently placed in the top ten by this measure. With the 1990 redefinition of Lower Mississippi River port limits for ranking purposes, the Port of New Orleans has dropped to number six in foreign tonnage (1991). However, the newly defined ports of South Louisiana and Plaquemine have achieved the rankings of one and eight, respectively. With Baton Rouge retaining its top ten status at number five, the Mississippi River/MR-GO system has retained its status as the heaviest U.S. concentration of foreign traffic into the 1990's.

Table 2 - 11 displays a deep-draft commodity breakdown for the Mississippi River in 1991. The most prominent features of this traffic breakdown are the farm products (mostly grain) exports and crude petroleum imports. These two commodity groups represent approximately 72 percent and 62 percent respectively, of the export and import totals. The significance of grain exports is further highlighted by the fact that historically the Mississippi River has handled an average of approximately 45 percent of total U.S. grain exports.

Table 2 - 10a

Average Delay by Lock
1984 - 1993
(Hours)

Lock	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
Port Allen	2.0	1.5	2.1	2.2	1.2	1.0	1.2	1.2	1.1	1.5
Bayou Sorrel	3.8	2.1	4.9	3.9	3.2	3.7	0.9	1.3	0.9	1.1
IHNC	14.6	6.3	12.3	16.2	11.6	11.9	9.2	15.8	8.5	8.3
Algiers	8.8	4.4	4.9	4.6	4.6	3.2	3.6	3.4	3.1	3.2
Harvey	9.0	2.3	3.2	4.2	2.4	0.8	0.9	0.7	0.5	0.6
Bayou Boeuf	1.6	0.5	0.7	0.4	0.7	0.3	0.2	0.4	0.5	0.5
Calcasieu	1.6	0.8	0.8	1.2	2.7	1.1	1.1	1.7	1.3	1.6
Leland Bowman	1.1	0.5	0.4	1.0	0.8	0.9	0.9	0.6	0.6	NA

Source: Lock Performance Monitoring System (LPMS)

Table 2 - 11

Mississippi River 1991 Deep-Draft Tonnage
By Commodity Group

	Foreign			Coastwise			Total Tonnage
	Imports	Exports	Total	Receipts	Shipments	Total	
Farm Products	1,767,000	78,825,000	80,592,000	181,000	855,000	1,036,000	81,628,000
Metallic Ores & Products	9,863,000	1,476,000	11,339,000	1,000	25,000	26,000	11,365,000
Coal	24,000	15,487,000	15,511,000	0	7,375,000	7,375,000	22,886,000
Crude Petroleum	37,052,000	0	37,052,000	803,000	21,000	824,000	37,876,000
Nonmetallic Minerals	1,827,000	128,000	1,955,000	0	388,000	388,000	2,343,000
Forest Products & Pulp	376,000	1,077,000	1,453,000	2,000	0	2,000	1,455,000
Industrial Chemicals	573,000	2,654,000	3,227,000	50,000	1,074,000	1,124,000	4,351,000
Agricultural Chemicals	1,455,000	2,023,000	3,478,000	7,404,000	62,000	7,466,000	10,944,000
Petroleum Products	7,113,000	8,098,000	15,211,000	1,357,000	11,459,000	12,816,000	28,027,000
All Others	85,000	166,000	251,000	0	0	0	251,000
Total	60,135,000	109,934,000	170,069,000	9,798,000	21,259,000	31,057,000	201,126,000

Source: Waterborne Commerce of the United States

Table 2 - 12 provides the same information for the MR-GO. For the MR-GO, the commodity concentrations are not as pronounced as for the Mississippi River. Metallic ores and nonmetallic minerals each represent approximately 35 percent of import tonnage, while industrial chemicals and farm products represent approximately 27 percent and 23 percent respectively, of export tonnage. In terms of total deep-draft volume, the MR-GO handled less than three percent of the Mississippi River total in 1991.

Table 2 - 13 displays the 1992 distribution of vessel types for the Mississippi River and MR-GO. Reflecting the significance of grain and crude oil, table 2 - 12 shows that dry bulk carriers (56.8 percent) and tankers (29.4 percent) are the dominant vessel types on the Mississippi River. The emphasis on the MR-GO, however, is quite different. The dominant vessel type on the MR-GO is the container vessel, accounting for 54.5 percent of total vessels.

While the MRGO does not represent the primary access route to the Port of New Orleans in terms of draft provided or tonnage handled, it is a critical component of the port in that it provides access to the port's primary container facilities. In fact, the MRGO handles in excess of 90 percent of all container traffic moving through the port. The volume of container traffic through New Orleans has increased in recent years to the extent that for 1990, New Orleans, traditionally a bulk and breakbulk oriented port, ranked as the 14th largest U.S. port, and second largest on the gulf coast (behind Houston, Tx.) in foreign container box volume.

Table 2 - 14 displays historic deep-draft tonnage on the Mississippi River for the period 1974-1992. Traffic has steadily increased since the most recent cyclical low in 1985 to approach the record levels of 1981. Table 2 - 15 displays historic deep-draft tonnage on the MR-GO since its first year of partial operation in 1960 to 1992. Total deep-draft traffic steadily increased from the waterway's 1960 opening through 1980. Traffic on the MR-GO declined in the early 80's, as it did for the Mississippi River and for many of the major waterways across the country. Following this downturn, traffic levels recovered until near record levels were recorded in 1987. Since 1987 traffic has shown a decline to slightly under five million tons in 1991, followed by a modest upturn in 1992.

Tables 2 - 16 and 2 - 17 display fleet distributions by year for the ten year period 1983-1992 for the Mississippi River and MR-GO, respectively. Both distributions show a shift over time reflecting a larger vessel emphasis. For

Table 2 - 12

MRGO 1991 Deep-Draft Tonnage
by Commodity Group

	Foreign			Coastwise			Total Tonnage
	Imports	Exports	Total	Receipts	Shipments	Total	
Farm Products	229,000	431,000	660,000	61,000	315,000	376,000	1,036,000
Metallic Ores & Products	696,000	278,000	974,000	10,000	15,000	25,000	999,000
Coal	0	12,000	12,000	0	0	0	12,000
Crude Petroleum	0	0	0	0	0	0	0
Nonmetallic Minerals	662,000	60,000	722,000	111,000	18,000	129,000	851,000
Forest Products & Pulp	42,000	206,000	248,000	52,000	86,000	138,000	386,000
Industrial Chemicals	124,000	494,000	618,000	18,000	66,000	84,000	702,000
Agricultural Chemicals	152,000	169,000	321,000	0	1,000	1,000	322,000
Petroleum Products	33,000	130,000	163,000	0	11,000	11,000	174,000
All Others	37,000	61,000	98,000	49,000	220,000	269,000	367,000
Total	1,975,000	1,841,000	3,816,000	301,000	732,000	1,033,000	4,849,000

Source: Waterborne Commerce of the United States

Table 2 - 13

1992 Vessel Type Distribution
(in Percent)

Vessel Type	Mississippi River	MR-GO
Container	1.0	54.5
Tanker	29.4	1.5
General Cargo	12.8	23.7
Dry Bulk	56.8	20.3
Total	100.0	100.0

Table 2 - 14

Mississippi River Deep-Draft Tonnage
(1974 - 1992)

Year	Foreign			Coastwise			Total Deep-Draft
	Imports	Exports	Total	Receipts	Shipments	Total	
1992	63,036,000	112,249,000	175,285,000	11,581,000	20,764,000	32,345,000	207,630,000
1991	60,139,000	109,936,000	170,075,000	9,797,000	21,259,000	31,056,000	201,131,000
1990	63,160,000	106,042,000	169,202,000	10,465,000	22,032,000	32,497,000	201,699,000
1989	59,889,679	103,972,049	163,861,728	10,384,467	20,666,767	31,051,234	194,912,962
1988	45,325,616	97,464,079	142,789,695	13,971,968	21,826,430	35,798,398	178,588,093
1987	38,087,066	93,688,556	131,775,622	17,853,348	19,549,195	37,402,543	169,178,165
1986	35,138,022	81,084,796	116,222,818	19,039,077	18,211,912	37,250,989	153,473,807
1985	27,040,313	81,009,372	108,049,685	21,737,400	19,215,546	40,952,946	149,002,631
1984	34,167,226	85,894,311	120,061,537	19,921,173	16,828,915	36,750,088	156,811,625
1983	32,320,125	95,763,623	128,083,748	18,256,055	20,844,285	39,100,340	167,184,088
1982	56,708,090	100,756,368	157,464,458	14,629,231	20,034,834	34,664,065	192,128,523
1981	80,094,423	98,269,761	178,364,184	21,553,015	23,189,745	44,742,760	223,106,944
1980	90,772,105	86,290,660	177,062,765	17,768,198	23,811,964	41,580,162	218,642,927
1979	105,858,988	73,255,062	179,114,050	12,780,791	20,274,910	33,055,701	212,169,751
1978	98,510,840	67,286,151	165,827,000	14,332,003	17,404,538	31,736,541	197,563,541
1977	96,028,423	59,628,562	155,656,985	9,789,919	19,836,015	29,625,934	185,282,919
1976	67,027,258	59,869,890	126,897,148	8,588,222	17,370,125	25,958,347	152,855,495
1975	45,934,905	47,615,390	93,550,295	8,670,706	21,104,606	29,775,312	123,325,607
1974	37,329,279	47,089,746	84,419,025	7,624,355	20,711,578	28,335,933	112,754,958

Source: Waterborne Commerce of the United States

Table 2 - 15

MRGO Deep-Draft Tonnage
(1960 - 1992)

Year	Foreign			Coastwise			Total Deep-Draft
	Imports	Exports	Total	Receipts	Shipments	Total	
1992	2,165,000	1,716,000	3,881,000	364,000	861,000	1,225,000	5,106,000
1991	1,977,000	1,847,000	3,824,000	302,000	734,000	1,036,000	4,860,000
1990	2,795,000	1,790,000	4,585,000	273,000	753,000	1,026,000	5,611,000
1989	2,503,131	2,042,301	4,545,432	299,465	856,757	1,156,222	5,701,654
1988	3,233,962	1,799,982	5,033,944	210,172	633,652	843,824	5,877,768
1987	2,939,344	2,147,160	5,086,504	308,717	651,460	960,177	6,046,681
1986	2,961,669	2,292,251	5,253,920	140,267	618,815	759,082	6,013,002
1985	3,219,223	1,542,749	4,761,972	121,876	591,950	713,826	5,475,798
1984	3,446,207	1,935,075	5,381,282	99,554	461,212	560,766	5,942,048
1983	2,263,788	1,221,212	3,485,000	91,473	487,647	579,120	4,064,120
1982	2,444,099	1,433,762	3,877,861	102,906	339,861	442,767	4,320,628
1981	2,711,084	1,632,862	4,343,946	68,599	328,847	397,446	4,741,392
1980	2,548,379	1,819,406	4,367,785	125,084	311,594	436,678	4,804,463
1979	3,910,761	2,361,658	6,272,419	124,952	393,705	518,657	6,791,076
1978	3,222,259	1,913,680	5,135,939	566,259	823,990	1,390,249	6,526,188
1977	2,320,344	1,887,493	4,207,837	568,372	1,107,358	1,675,730	5,883,567
1976	1,710,152	2,441,668	4,151,820	341,375	560,524	901,899	5,053,719
1975	1,384,065	1,828,622	3,212,687	367,497	569,105	936,602	4,149,289
1974	1,705,093	1,680,734	3,385,827	274,086	286,338	560,424	3,946,251
1973	1,653,084	1,537,021	3,190,105	132,669	146,607	279,276	3,469,381
1972	1,288,854	1,114,819	2,403,673	65,652	179,639	245,291	2,648,964
1971	1,256,729	859,640	2,116,369	94,195	107,164	201,359	2,317,728
1970	1,334,302	1,187,356	2,521,658	85,530	51,985	137,515	2,659,173
1969	936,921	905,911	1,842,832	59,245	37,787	97,032	1,939,864
1968	1,168,685	687,739	1,856,424	92,169	78,221	170,390	2,026,814
1967	793,942	568,545	1,362,487	321,826	105,527	427,353	1,789,840
1966	965,363	177,135	1,142,498	441,048	147,324	588,372	1,730,870
1965	543,656	213,723	757,379	320,210	63,123	383,333	1,140,712
1964	767,548	182,670	950,218	36,006	4,220	40,226	990,444
1963	389,997	44,850	434,847	62,232	2,917	65,149	499,996
1962	300,574	0	300,574	10,431	0	10,431	311,005
1961	42,030	0	42,030	0	0	0	42,030
1960	14,316	0	14,316	0	0	0	14,316

Source: Waterborne Commerce of the United States

Table 2 - 16

Mississippi River Fleet Distribution
Outbound Vessels
(1983 - 1992)

Deadweight Tonnage	1992		1991		1990		1989		1988		1987		1986		1985		1984		1983	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Under 20,000	1,365	29.0	1,538	28.0	1,507	27.5	1,592	28.8	1,693	32.5	1,842	35.2	1,747	34.5	1,951	38.1	2,064	37.5	2,069	36.5
20,000 - 29,999	727	15.4	882	16.1	1,064	19.4	1,065	19.3	955	18.3	957	18.3	900	17.8	909	17.8	1,009	18.3	1,020	18.0
30,000 - 39,999	613	13.0	766	14.0	741	13.5	726	13.1	716	13.7	753	14.4	762	15.1	746	14.6	889	16.2	890	15.7
40,000 - 49,999	347	7.4	414	7.5	355	6.5	342	6.2	300	5.8	263	5.0	324	6.4	308	6.0	304	5.5	288	5.1
50,000 - 59,999	212	4.5	294	5.4	270	4.9	356	6.4	286	5.5	294	5.6	301	6.0	286	5.6	260	4.7	273	4.8
60,000 - 69,999	596	12.7	677	12.3	635	11.6	582	10.5	574	11.0	523	10.0	479	9.5	462	9.0	392	7.1	409	7.2
70,000 - 79,999	235	5.0	269	4.9	281	5.1	256	4.6	215	4.1	244	4.7	255	5.0	226	4.4	257	4.7	290	5.1
80,000 - 89,999	274	5.8	383	7.0	388	7.1	336	6.1	218	4.2	139	2.7	121	2.4	89	1.7	129	2.3	156	2.8
90,000 - 99,999	163	3.5	136	2.5	118	2.2	66	1.2	64	1.2	40	0.8	31	0.6	23	0.4	66	1.2	55	1.0
100,000 - 119,999	55	1.2	49	0.9	49	0.9	71	1.3	61	1.2	75	1.4	62	1.2	49	1.0	65	1.2	101	1.8
120,000 - 139,999	84	1.8	54	1.0	57	1.0	103	1.9	92	1.8	89	1.7	53	1.0	46	0.9	48	0.9	102	1.8
Over 140,000	36	0.8	24	0.4	20	0.4	29	0.5	41	0.8	17	0.3	23	0.5	24	0.5	20	0.4	11	0.2
Total	4,707	100.0	5,486	100.0	5,485	100.0	5,524	100.0	5,215	100.0	5,236	100.0	5,058	100.0	5,119	100.0	5,503	100.0	5,664	100.0

Source: Associated Branch Pilots.

Table 2 - 17

MR-GO Fleet Distribution
Outbound Vessels
(1983 - 1992)

Deadweight Tonnage	1992		1991		1990		1989		1988		1987		1986		1985		1984		1983	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Under 20,000	267	54.2	330	52.1	343	51.7	284	48.8	400	59.1	517	64.5	614	68.4	452	60.8	571	64.7	514	65.9
20,000 - 29,999	112	22.7	168	26.5	215	32.4	216	37.1	209	30.9	205	25.6	188	20.9	215	28.9	231	26.2	210	26.9
30,000 - 39,999	56	11.4	80	12.6	74	11.1	60	10.3	33	4.9	52	6.5	58	6.5	45	6.0	32	3.6	33	4.2
40,000 - 49,999	47	9.5	47	7.4	25	3.8	20	3.4	30	4.4	26	3.2	33	3.7	28	3.8	38	4.3	20	2.6
50,000 - 59,999	1	0.2	2	0.3	6	0.9	2	0.3	4	0.6	0	0.0	5	0.6	1	0.1	5	0.6	2	0.3
60,000 - 69,999	10	2.0	6	0.9	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3	4	0.5	1	0.1
70,000 - 79,999	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	1	0.1	1	0.1	0	0.0
80,000 - 89,999	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
Total	493	100.0	634	100.0	664	100.0	582	100.0	677	100.0	801	100.0	898	100.0	744	100.0	883	100.0	780	100.0

Source: Associated Branch Pilots.

the Mississippi River, vessels greater than 80,000 dwt increased steadily from 1985 (4.5 percent) to 1992 (13.1 percent), while vessels less than 30,000 dwt decreased by approximately the same number of percentage points over the same period (55.9 percent to 44.4 percent). For the MR-GO the same general pattern of change exists, however the break points in the distribution are significantly different, reflecting the overall smaller nature of the MR-GO fleet. Over the 1983 to 1992 period, vessels greater than 30,000 increased from 7.2 percent to 23.1 percent, while vessels less than 30,000 dwt decreased from 92.8 percent to 76.9 percent. Reflecting similar results, tables 2 - 18 and 2 - 19 display vessel trips by draft for the period 1984 - 1989 for the Mississippi River and MR-GO, respectively. As was shown in previous tables, a shift to larger vessels becomes more apparent over time.

IHNC LOCK TRAFFIC

Deep-draft IHNC Lock usage for 1991 is summarized in table 2 - 20. For the year, the lock handled 138 vessels carrying a total of 134,000 tons, an average of less than 1,000 tons per vessel. The table reveals two significant observations. First, the composition of vessel types is overwhelmingly represented by the general cargo classification (96 percent). Dry bulk carriers (4 percent) make up the balance. Container vessels and tankers are completely absent from current usage. Second, deep-draft vessels transiting the lock are concentrated in the extreme low end of the overall vessel size distribution for both the Mississippi River and the MR-GO.

There are economic reasons for the limited number and sizes of deep-draft vessels using IHNC Lock which will be discussed in detail in subsequent sections of this appendix. Generally these reasons include a limited basic need for access to both the Mississippi River and the MR-GO during a single port call, the magnitude of savings associated with lock usage, and vessel itinerary scheduling requirements. However, in addition to these economic reasons, there are absolute physical restrictions that limit the size of vessels using the lock. Given the 75-foot width, the largest dry bulk carrier that can navigate the lock is estimated to be approximately 20,000 deadweight tons (dwt), while the largest general cargo vessel is estimated at approximately 18,000 dwt.

Historically, deep-draft usage at IHNC Lock has been similar to the 1991 profile. Table 2 - 21 summarizes the 1983-1991 deep-draft activity at IHNC lock. Over this period, deep-draft vessels have averaged 171 lockages and 137,000 tons per year.

Table 2 - 18

Vessel Trips By Draft
Miss River (N.O. to Mouth of passes) 1984-1989
(Drafts Greater Than 18 Ft)

Draft (ft)	Upbound Trips						Downbound Trips					
	1989	1988	1987	1986	1985	1984	1989	1988	1987	1986	1985	1984
45	31	10	0	0	0	0	165	134	0	0	0	0
44	13	22	0	0	0	0	106	104	0	0	0	0
43	15	24	0	0	0	0	121	66	0	0	0	0
42	41	47	0	0	0	0	148	78	0	0	0	0
41	75	106	0	0	0	0	123	117	0	0	0	0
40	256	156	375	367	337	192	710	633	982	881	730	566
39	219	141	165	170	159	192	200	216	285	205	256	222
38	164	76	83	100	131	280	200	133	155	90	209	353
37	128	102	75	116	161	188	174	114	161	233	231	215
36	157	115	92	91	89	155	224	214	189	164	209	303
35	170	111	74	86	152	132	280	191	521	186	211	264
34	206	165	174	158	146	174	342	338	255	216	256	268
33	150	141	153	160	187	167	282	230	612	304	265	232
32	193	189	178	167	197	173	362	291	1,753	193	250	329
31	153	130	145	148	257	300	247	166	196	266	278	199
30	274	284	184	236	258	204	526	430	357	226	344	432
29	194	172	184	192	242	229	258	234	236	342	325	287
28	279	253	227	191	255	262	361	276	201	204	267	252
27	282	274	253	293	370	323	296	346	324	400	364	301
26	318	265	293	308	448	392	286	333	303	350	481	536
25	396	326	322	340	409	418	281	320	306	381	440	393
24	521	428	400	435	514	516	273	286	323	304	409	452
23	507	401	387	425	500	576	211	221	220	283	358	357
22	514	448	418	445	513	532	351	372	331	280	378	372
21	456	414	363	409	381	426	230	237	214	267	222	272
20	401	295	317	615	741	498	199	211	199	464	677	519
19	403	348	327	304	349	330	162	211	181	193	288	301
Sub Total	6,516	5,443	5,189	5,756	6,796	6,659	7,118	6,502	8,304	6,432	7,448	7,425

Source: Waterborne Commerce of the United States

Table 2 - 19

Vessel Trips By Draft
 MRGO 1984-1989
 (Drafts Greater Than 18 Ft)

Draft (ft)	Upbound Trips						Downbound Trips					
	1989	1988	1987	1986	1985	1984	1989	1988	1987	1986	1985	1984
38	4	5	4	0	1	4	11	6	5	0	3	2
37	6	2	1	0	0	1	1	0	4	5	1	9
36	7	9	9	3	8	7	16	9	11	1	3	4
35	11	10	3	5	7	7	8	3	2	7	2	4
34	13	10	11	7	13	29	7	5	4	5	5	4
33	17	13	19	22	21	40	28	9	8	23	22	14
32	17	13	32	34	25	45	22	16	27	41	44	21
31	20	23	45	45	45	35	39	27	36	50	34	58
30	30	28	55	57	47	43	50	77	47	48	76	54
29	32	49	48	47	60	40	65	74	54	58	97	68
28	30	51	40	32	39	32	76	61	49	74	65	83
27	40	55	50	35	49	53	62	73	70	53	35	64
26	59	78	57	56	62	86	32	43	41	67	52	48
25	46	74	47	51	52	57	40	42	43	69	48	61
24	61	56	54	63	61	72	14	46	32	39	35	55
23	57	34	51	67	49	55	19	37	29	51	55	22
22	44	38	33	77	43	57	21	38	48	50	25	44
21	21	27	37	44	46	61	14	22	45	42	36	46
20	22	45	41	34	37	28	23	26	34	20	22	27
19	18	25	26	31	37	26	17	15	18	26	29	32
Sub Total	555	645	663	710	702	778	565	629	607	729	689	720

Source: Waterborne Commerce of the United States.

Table 2 - 20

Deep-Draft Vessel Lockages
IHNC 1991

Deadweight Tonnage	Dry Bulk	General Cargo	Total
3,000	0	110	110
3,000 - 10,000	1	3	4
10,000 - 20,000	4	20	24
Total	5	133	138

Table 2 - 21

Deep-Draft Traffic Summary - IHNC Lock
(1983 - 1991)

Year	Deep-Draft Tonnage (1,000)	Number of Ships
1991	134	138
1990	105	163
1989	76	131
1988	175	168
1987	259	192
1986	152	195
1985	157	192
1984	101	163
1983	75	195

Source: Lockmaster Logs, New Orleans District, U.S. Army
Corps of Engineers.