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GIWW

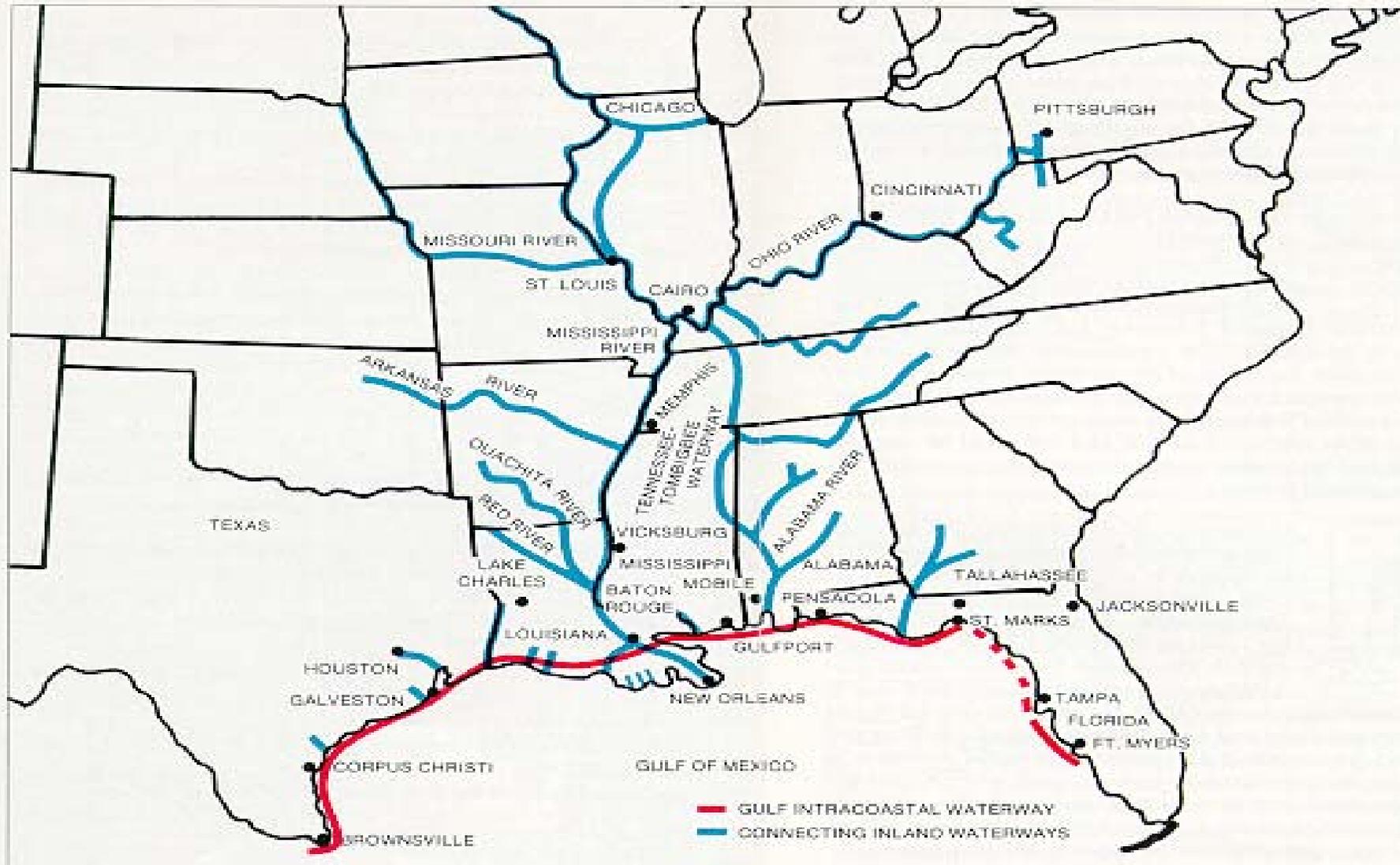
Gloria Appell, SWG





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St. Marks, FL to Brownsville, TX





GIWW Tonnage

Year	GIWW Total Tonnage	Sabine River to Galveston	Galveston to Corpus
1970	100,149,485	42,807,988	20,208,590
1975	96,950,849	37,638,364	19,467,870
1980	94,512,197	41,976,730	21,142,516
1985	102,476,665	42,529,396	22,957,190
1990	115,386,000	54,202,000	26,240,000
1995	117,963,000	49,519,000	26,727,000
1998	113,556,000	45,122,000	28,351,000
1999	109,641,000	68,670,000	27,374,000
2000	113,764,000	48,695,000	28,095,000

Source: USACE, Waterborne Commerce



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GIWW Tow Trips Trends

Year	GIWW Total Trips	Sabine River to Galveston	Galveston to Corpus Chrisit
1971-75	79,928	20,690	14,470
1976-80	70,532	21,499	12,348
1981-85	59,919	20,202	11,420
1986-90	64,763	23,198	12,343
1991-95	80,153	25,418	15,980
1996-00	73,006	23,356	13,131
average annual growth rate (26 year-period)			
~1973-98	-0.3%	0.5%	-0.4%



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Tonnage Per Tow Trip

		Sabine to Galveston	Galveston to Corpus
	GIWW		
1970	2,502	3820	2829
1975	2,612	3,949	2,950
1980	2,913	4,078	3,370
1985	3,102	4,094	3,875
1990	3,219	4,124	3,495
1995	2,871	3,886	3,578
1998	3,365	4,260	4,366
1999	3,193	4,198	4,090
2000			
2001			



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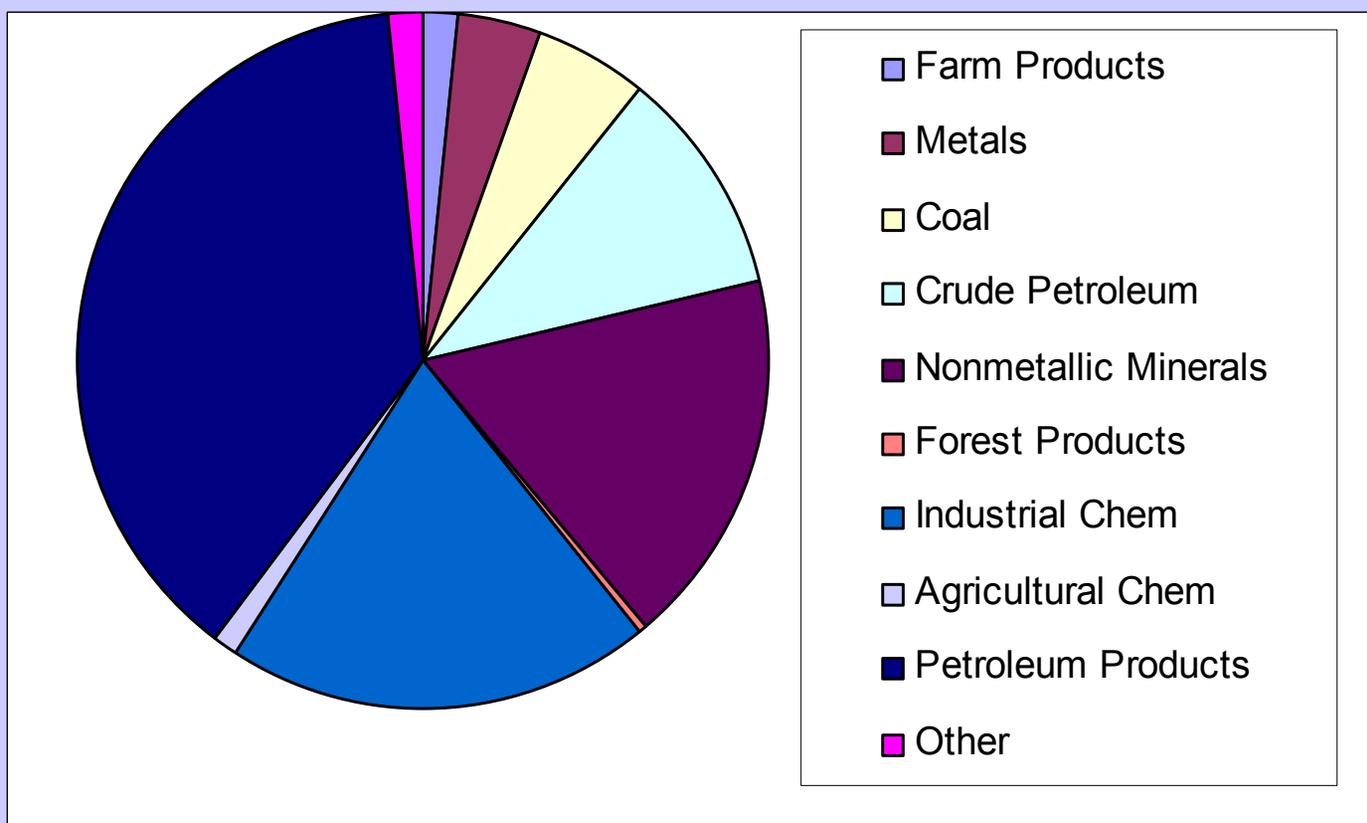
GIWW Tonnage Trends

Year	GIWW Total Tonnage	Sabine River to Galveston	Galveston to Corpus Chrisit
1971-75	103,153,742	41,602,662	20,856,369
1976-80	99,627,275	43,191,165	20,193,717
1981-85	91,113,293	41,678,838	20,991,491
1986-90	111,966,045	51,114,861	25,073,079
1991-95	114,769,200	49,402,000	25,217,000
1996-00	114,620,000	46,845,000	27,739,200
average annual growth rate (26 year-period)			
~1973-98	0.4%	0.5%	1.1%



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**GIWW
CY 2000
1000's of
short tons**



42.4	Petroleum Products	38.0%
23.6	Chemical Products	21.2%
19.6	Non-Metallic Minerals	17.6%
11.6	Crude Petroleum	10.4%
5.8	Coal	5.2%
8.5	other	7.6%
111.5	Total	100.0%



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% GIWW Tonnage by Commodity

GIWW (Total)	1975	1976-80	1981-85	1986-90	1991-95	1996-00
Farm Products	3.0%	2.1%	1.7%	2.0%	2.0%	1.6%
Metals	2.7%	3.3%	3.6%	3.4%	4.7%	5.2%
Coal	4.5%	4.7%	5.9%	7.5%	7.3%	6.4%
Crude Petroleum	25.5%	22.1%	18.4%	18.2%	16.5%	12.5%
Nonmetallic Minerals	10.3%	10.1%	9.5%	8.9%	12.2%	15.9%
Forest Products	0.4%	0.4%	0.3%	0.3%	0.6%	0.6%
Industrial Chem	12.1%	14.0%	15.7%	18.6%	19.4%	20.9%
Agricultural Chem	1.2%	1.5%	1.5%	1.1%	1.3%	1.1%
Petroleum Products	28.1%	32.4%	36.5%	36.4%	34.4%	33.4%
Other	12.2%	9.5%	6.9%	3.5%	1.8%	2.4%
Total	100%	100%	100%	100%	100%	100%



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GIWW million of short tons

						1978-98
GIWW (Total)	1976-80	1981-85	1986-90	1991-95	1996-00	AAG ^{1/}
Farm Products	2.1	1.5	2.2	2.2	1.8	-0.6%
Metals	3.3	3.2	3.8	5.3	5.9	3.0%
Coal	4.6	5.3	8.3	8.3	7.2	2.3%
Crude Petroleum	21.9	16.5	20.1	18.7	14.1	-2.2%
Nonmetallic Minerals	10.0	8.5	9.9	13.8	18.0	3.0%
Forest Products	0.4	0.2	0.3	0.7	0.7	3.2%
Industrial Chem	13.8	14.1	20.5	22.0	23.7	2.7%
Agricultural Chem	1.4	1.4	1.2	1.5	1.3	-0.7%
Petroleum Products	32.1	32.8	40.2	38.9	37.8	0.8%
Other	9.4	6.2	3.8	2.0	2.7	-6.1%
Total	99.0	89.8	110.4	113.3	113.2	0.7%

1/ based on midpoint averages (1978 to 1983; 1993-1998...)



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GIWW Tonnage

average annual growth rates ^{1/}

	1976-80	1981-85	1986-90	1991-95
	to	to	to	to
Commodity	1981-85	1986-90	1991-95	1996-00
Farm Products	-5.6%	7.3%	0.1%	-3.9%
Metals	-0.3%	3.3%	6.8%	2.2%
Coal	2.9%	9.4%	-0.1%	-2.6%
Crude Petroleum	-5.5%	4.0%	-1.5%	-5.4%
Nonmetallic Minerals	-3.2%	3.0%	6.9%	5.5%
Forest Products	-8.6%	7.4%	15.7%	-0.1%
Industrial Chem	0.3%	7.8%	1.4%	1.5%
Agricultural Chem	-1.2%	-2.1%	3.5%	-2.9%
Petroleum Products	0.5%	4.2%	-0.6%	-0.6%
Other	-8.0%	-9.2%	-12.4%	6.2%
Total	-2.4%	5.3%	0.6%	0.0%

1/ based on midpoint averages (1978 to 1983; 1993-1998...)



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1997-2001 GIWW Average

Short Tons (million)

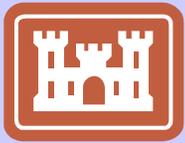
	GIWW	Mobile to	New Orleans
	Total	New Orleans	to Texas
Farm Products	1.8	0.2	1.6
Metals	5.5	1.5	4.0
Coal	6.8	5.2	0.2
Crude Petroleum	13.0	1.3	10.4
Nonmetallic Minerals	18.5	3.8	12.6
Forest Products	0.6	0.6	0.1
Industrial Chem	23.4	3.2	11.8
Agricultural Chem	1.3	0.5	0.8
Petroleum Products	39.0	6.1	19.1
Other	2.3	0.1	2.2
Total	112.1	22.4	62.7



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1997-2001 GIWW % by Commodity Group

	GIWW	Mobile to	New Orleans
	Total	New Orleans	to Texas
Farm Products	1.6%	0.8%	2.6%
Metals	4.9%	6.6%	6.4%
Coal	6.0%	23.3%	0.4%
Crude Petroleum	11.6%	5.6%	16.5%
Nonmetallic Minerals	16.5%	17.0%	20.1%
Forest Products	0.6%	2.5%	0.1%
Industrial Chem	20.9%	14.3%	18.8%
Agricultural Chem	1.1%	2.1%	1.2%
Petroleum Products	34.7%	27.3%	30.5%
Other	2.1%	0.5%	3.5%
Total	100.0%	100.0%	100.0%



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GIWW Total

million short tons

	1994-97				1994-97 to
	Weighted Avg.	2005	2010	2020	2020 AAG
Farm Products	2.0	2.1	2.2	2.5	1.0%
Metals	6.7	7.5	8.3	9.7	1.6%
Coal	8.2	7.9	8.4	9.5	0.6%
Crude Petroleum	15.5	16.9	17.7	19.6	1.0%
Nonmetallic Minerals	18.8	21.0	22.6	25.1	1.3%
Forest Products	0.9	0.9	0.9	1.0	0.6%
Industrial Chemicals	23.1	27.5	31.0	38.6	2.3%
Agricultural Chemicals	1.1	1.3	1.3	1.4	1.0%
Petroleum Products	36.1	40.5	42.6	47.1	1.2%
Other	3.7	2.9	3.0	3.1	-0.8%
Total	116.1	128.3	138.0	157.5	1.3%

1/ medium growth rate. Low growth is .7% and high growth is 1.9%.



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Mobile to New Orleans GIWW, million short tons

	1994-97				1994-97 to
	Weighted Avg	2005	2010	2020	2020 AAG
Farm Products	0.2	0.2	0.3	0.3	1.2%
Metals	1.6	1.9	2.1	2.5	1.8%
Coal	5.9	6.0	6.4	7.2	0.8%
Crude Petroleum	1.3	1.4	1.5	1.7	1.0%
Nonmetallic Minerals	3.6	4.5	4.8	5.3	1.7%
Forest Products	0.8	0.8	0.9	1.0	1.1%
Industrial Chemicals	2.8	3.3	3.8	4.7	2.2%
Agricultural Chemicals	0.4	0.4	0.4	0.5	0.9%
Petroleum Products	6.6	7.0	7.4	8.1	0.9%
Other	0.1	0.1	0.1	0.1	0.5%
Total	23.4	25.7	27.5	31.3	1.3%
1/ medium growth rate. Low growth is .7% and high growth is 1.9%.					



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New Orleans to Texas

GIWW, million short tons ^{1/}

	1994-97				1994-97 to
	Weighted Avg.	2005	2010	2020	2020 AAG
Farm Products	1.5	1.7	1.9	2.1	1.4%
Metals	4.7	5.7	6.3	7.4	2.0%
Coal	0.2	0.2	0.3	0.3	1.0%
Crude Petroleum	12.7	12.9	13.6	15.0	0.7%
Nonmetallic Minerals	12.0	14.7	15.8	17.6	1.7%
Forest Products	0.1	0.1	0.1	0.1	0.4%
Industrial Chemicals	12.4	14.1	15.9	19.8	2.0%
Agricultural Chemicals	0.7	0.8	0.8	0.9	0.7%
Petroleum Products	20.2	21.4	22.5	24.8	0.9%
Other	3.2	2.8	2.8	3.0	-0.2%
Total	67.7	74.4	79.9	90.9	1.3%

^{1/} medium growth rate. Low growth is .6% and high growth is 1.9%.



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- Blinding lights
- Bridges
- Aids to navigation (ATON)
- Hardened sites
- Wrecks, sunken or abandoned vessels
- Moorings
- Realigning channels
- Widening of buoys and beacons
- Morganza to the Gulf and Atchafalaya Basin



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Barge Elasticity Study Issues (limited list... need team input)

- Barge Transportation is advertised as being the most efficient means of commodity transport... However, tonnage is relatively constant. Average Annual growth between 1978-98 for total tonnage was .7% per year.
- Tonnage for several major commodity groups is down from the late 1970 avg. to late 1990 avg.
- Decreases for petroleum products; agricultural chemicals.
- Review comparative growth rates for barge transportation vs. other modes.



Limited List of Current Galveston District Studies

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- **Brazos River Floodgates:** Initiated Section 216 Study to examine possible modifications to existing structure. Reconnaissance phase study has been completed. The feasibility phase study is on hold pending funding. Possibility of removing gates will be addressed in feasibility phase. Study effects of San Bernard River Gulf opening.
- **Colorado River Bypass Channel:** A comprehensive study by WES is underway to address currents at the GIWW and mouth of the bypass channel. WES will look at the effect of opening Southwest Cut and/or Parkers Cut using existing Construction General authority, of the mouth of the Colorado River project. The WES study is scheduled for completion in December 2002.
- **High Island to Brazos River Section 216 Study**
- **Brazos River to Pt. O'Connor Section 216 Study**
- **Pt. O'Connor to Corpus Christi Section 216 Study**
- **Corpus Christi Bay GIWW Reroute Study**
- **Laguna Madre GIWW Reach Dredge Disposal Mgmt Study**
- **Chocolate Bayou Dredge Disposal Mgmt Study**