



THE ECONOMIC IMPACTS OF THE CALCASIEU SHIP CHANNEL

Conducted by Martin Associates

www.johnmartinassociates.com

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Overview of the Calcasieu Ship Channel

The Calcasieu Ship Channel is home to public marine terminals which are owned, leased, or operated by LCH&TD Harbor and Terminal District (LCH&TD), as well as privately owned marine terminals and industries dependent upon the movement of cargo along the Ship Channel. The majority of the private industries located along the Ship Channel include petroleum refineries and chemical manufacturing facilities, while LCH&TD public facilities handle coke exports produced as a by-product of the local petroleum refining activity, as well as imported lumber, exported bagged grain and bulk grains, wind energy equipment and project cargo, limestone, rutile, barite, and chemical products. With the opening of the Cameron LNG facility which was developed on property leased from LCH&TD, LNG has become a key export commodity in 2020. While LCH&TD also leases land to two casino/hotel complexes, the impact of these facilities, which employ nearly 5,000 local residents of the Lake Charles MSA, are not included in the economic impact analysis of the Ship Channel, but are included in the economic impact of LCH&TD.

Economic Impact Analysis Methodology

Martin Associates was retained by LCH&TD to estimate the economic impacts generated by marine cargo activity at the public and private marine terminals located along the Calcasieu Ship Channel and to quantify the economic value of the ship channel to the national, state, and local economies. The local economy is defined as the Lake Charles Metropolitan Statistical Area (MSA) which consists of Calcasieu and Cameron parishes. Included in the economic value of the Ship Channel, is also a measurement of the economic benefits of using the ship channel to move cargo over the inland waterways including the Gulf Intracoastal Waterway between Lake Charles and domestic origins and destinations. These benefits measure the environmental, safety and infrastructure degradation that would occur should the Calcasieu Ship Channel not be available for navigation. Finally, the economic value of planned new construction along the Ship Channel in terms of LNG export facilities and methanol facilities within the next five years are quantified at the national, state, and local levels. The economic impacts of the Calcasieu Ship Channel are measured for the marine cargo and vessel activity in year 2020. In 2020, it is estimated that about 58 million tons were either shipped or received at terminals located on the Ship Channel, consisting of 36 million tons of cargo moving domestically on the nation's inland waterways and coastal routes, as well as 22 million tons of international export and import tonnage. The analysis is based on detailed interviews with 156 firms using the Ship Channel and providing maritime services to the vessels and cargo activity along the Ship Channel. The data collected through the interviews was used to develop the direct impacts as well as economic impact models for the public and private marine terminals to reflect the unique operations at each of marine terminals along the Ship Channel.

2020 Economic Impacts of the Calcasieu Ship Channel - Summary of Results

	National Impact	State of Louisiana	Lake Charles MSA
 TOTAL JOBS	Direct Jobs	13,279	13,279
	Induced Jobs	30,756	20,555
	Indirect Jobs	13,624	9,936
	Related	<u>100,825</u>	<u>65,003</u>
	TOTAL	158,485	108,773
 PERSONAL INCOME (\$1,000s)	Direct	\$1,260,118	\$1,260,118
	Re-Spending/Consumption	\$4,992,460	\$2,791,034
	Indirect	\$627,759	\$457,808
	Related	\$7,566,020	\$4,825,237
	TOTAL	\$14,446,356	\$9,334,197
 (\$1,000s)	Economic Value	\$39,064,662	\$29,894,739
	Total State & Local Taxes	\$1,535,255	\$997,990
	Total Federal Taxes	\$2,625,712	\$1,849,207

Totals may not add due to rounding

2020 Calcasieu Ship Channel

In 2020, the cargo moving via the marine terminals located along the Calcasieu Ship Channel supported **158,485 jobs** in the U.S. Of these 158,485 jobs, 108,773 jobs are supported in the state of Louisiana, representing about 6 percent of statewide employment in 2020. 42,075 of those 108,773 jobs are supported in the Lake Charles MSA, which represents 45.4 percent of the 92,554 total non-farm jobs reported in 2020 for the Lake Charles MSA.

Of the 158,485, **13,279 direct jobs** are generated in the Lake Charles MSA. Purchases by these direct jobs supported **30,756 induced jobs** in the U.S., of which 20,555 induced jobs were created in the state of Louisiana, including 12,600 induced jobs in the Lake Charles MSA.



13,624 indirect jobs are supported in the U.S. from the \$1.3 billion of purchases by the firms dependent on the Calcasieu Ship Channel. Of these indirect jobs, 9,936 indirect jobs were supported in the State and 6,007 indirect jobs were supported in the Lake Charles MSA.

The balance of the jobs, **100,825 jobs, are classified as related jobs** and are with shippers and consignees and supporting firms using the marine cargo moving via the Calcasieu Ship Channel. Of these user jobs, 65,003 jobs are in the state of Louisiana, including 10,188 jobs with users

located in the Lake Charles MSA.

In 2020, marine cargo activity along the Calcasieu Ship Channel supported a total of **\$39.1 billion of total economic value** to the U.S. economy, of which \$29.9 billion of total economic value was supported in the state of Louisiana, representing about 13.2 percent of the \$226.8 billion Louisiana Gross Domestic Product in 2020. Of that \$29.9 billion, \$12.1 billion of economic value was supported in the Lake Charles MSA, **representing about 67 percent of the Lake Charles MSA Gross Domestic Product in 2020.**

Marine activity along the Calcasieu Ship Channel supported more than \$14.4 billion of total personal wage and salary income and local consumption expenditures in the national economy. This includes \$6.9 billion of direct, indirect, induced, and local consumption expenditures, while the remaining \$7.6 billion was received by the related port users. The 13,279 direct job holders received \$1.3 billion of direct wage and salary income, for a direct annual salary of \$94,890. This compares to \$46,460, which is the mean annual salary in 2020 for all workers in the state of Louisiana, as reported by the U.S. Bureau of Labor Statistics.



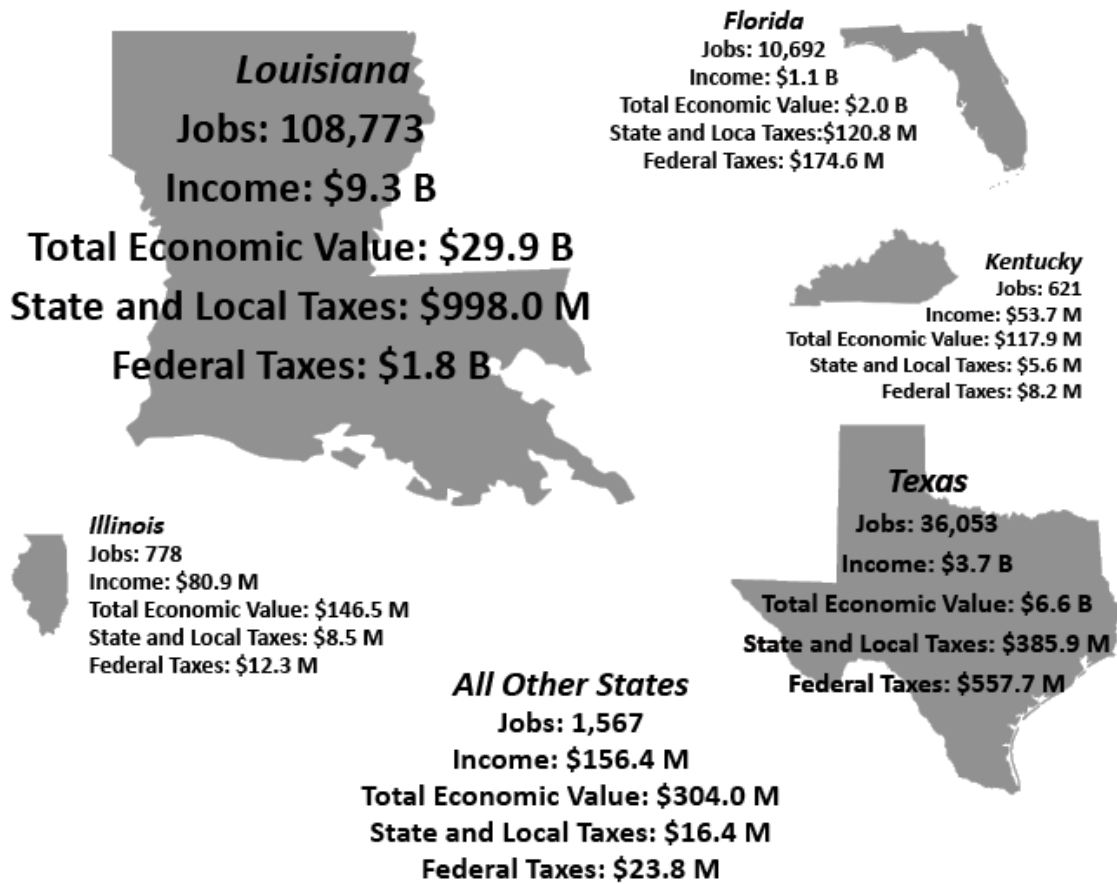
A total of \$1.5 billion of state and local tax impacts was generated throughout the U.S. by the maritime activity. Of the \$1.5 billion of state and local tax impacts, about \$1.0

billion of state and local tax revenue was generated in the state of Louisiana. Of the \$1.0 billion of state and local taxes generated in Louisiana, \$405.8 million of state and local taxes was generated in the Lake Charles MSA. The marine cargo activity supported \$2.6 billion of federal tax revenue at the national level, of which \$1.9 billion of the federal tax revenue was supported by the activity in the state of Louisiana, including \$721.9 million of federal tax revenue that was supported by the marine cargo activity in the Lake Charles MSA.

\$10.3 million of U.S. Customs revenue was collected from the international imported cargo moving along the Calcasieu Ship Channel. An additional **\$7.0 million of Harbor Maintenance Tax revenue** was generated in 2020 from the Harbor Maintenance Tax levied on the receipt of international and domestic waterborne cargo along the Ship Channel.

Distribution by State of the Economic Impacts Generated by the Calcasieu Ship Channel

The national economic impacts supported by the Calcasieu Ship Channel were allocated to each state in the U.S. using a combination of IHS Transearch data that identified truck, rail, and domestic waterborne movements of cargo between the marine terminals and associated manufacturing facilities and refineries in each state. The national economic impacts were estimated by commodity and then allocated to a state level, using the above noted data. The commodity specific impacts were summed to total U.S. impacts by state – jobs, income, revenue, total economic value, and federal/state/local taxes. The following exhibit shows the distribution of the economic impacts by key state.



Totals may not add due to rounding

The Environmental, Safety, and External Infrastructure Benefits Generated by the Calcasieu Ship Channel

In addition to the economic impact of the Calcasieu Ship Channel as measured in terms of jobs, income, economic value, and federal, state, and local taxes, the ability to move cargo on the Calcasieu Ship Channel provides significant savings in terms of reduced environmental emissions, vehicle accidents, and external costs

including noise pollution, highway congestion and infrastructure degradation. Based on this analysis, the Calcasieu Ship Channel further provides about \$1.1 billion benefits to the U.S. Economy due the avoidance of environmental emissions, safety, and external trucking infrastructure degradation costs that would result if the domestic cargo now shipped and received along the Calcasieu Ship Channel could no longer use the Ship Channel and would have to be delivered by truck.

Environmental, Safety, and External Infrastructure Benefits

BENEFIT CATEGORIES	
EMISSIONS	\$754,432,356
SAFETY	\$100,341,677
EXTERNAL TRUCK	\$206,898,823
TOTAL BENEFITS	\$1,061,672,857

Totals may not add due to rounding




In addition to the environmental, safety and external infrastructure benefits provided by the use of the Ship Channel, 4.2 billion gallons of petroleum products are moved from the area refineries by the Colonial Pipeline. The ability to use this pipeline rather than the use of truck distribution throughout the United States removes nearly 500,000 trucks from the nation’s highways.

Projected Economic Impacts of Planned Projects Along the Calcasieu Ship Channel

Over the next five years, there are \$46.0 billion of planned projects that will be utilizing the Calcasieu Ship Channel. At full build-out, these new planned projects will add 90.8 million tons to the Calcasieu Ship Channel. The direct employment, annual tonnage and investment levels at the planned LNG and methanol facilities were developed from interviews with the planned developers, as well as a review of literature describing the planned projects. The impact model developed to measure the baseline impacts of the Ship Channel was then used to estimate the potential additional annual impacts of these projects at full build-out on the three geographical areas – the U.S., state of Louisiana, and Lake Charles MSA. The following Exhibit presents the additional economic impacts that are estimated to be generated by the \$46.0 billion of planned projects along the Calcasieu Ship Channel.



Projected Additional Economic Impacts Generated by the Planned Projects

	Additional National Impact	Additional State of Louisiana Impact	Additional Lake Charles MSA Impact
 TOTAL JOBS	Direct Jobs	1,671	1,671
	Induced Jobs	3,020	2,088
	Indirect Jobs	1,714	1,250
	Related	331,425	222,707
	TOTAL	337,831	227,716
 PERSONAL INCOME (\$1,000s)	Direct	\$135,618	\$135,618
	Re-Spending/Consumption	\$537,305	\$300,380
	Indirect	\$78,991	\$57,606
	Related	\$26,513,994	\$17,816,526
	TOTAL	\$27,265,908	\$18,310,131
 (\$1,000s)	Economic Value	\$74,560,310	\$56,737,242
	Total State & Local Taxes	\$3,008,569	\$2,082,463
	Total Federal Taxes	\$5,247,206	\$3,725,530

Totals may not add due to rounding

At full build-out of all the planned projects, it is estimated that an additional 337,831 jobs in the United States will be supported annually by the cargo estimated to be shipped and received by these planned projects. Of the 337,831 jobs projected at the national level, 227,716 additional jobs are projected to be supported in the state of Louisiana, while 41,148 additional jobs are projected to be supported in the Lake Charles MSA. It is to be emphasized that these impacts are in addition to the baseline impacts of the Ship Channel.

\$74.6 billion of additional total economic value to the U.S. economy is projected to be supported by the 90.8 million tons. Of this \$74.6 billion, \$56.7 billion of total economic value is projected to be supported in the state of Louisiana. Of the \$56.7 billion additional economic value projected for the state of Louisiana, \$20.7 billion of additional economic value is projected to be supported in the Lake Charles MSA.

The 90.8 million tons of cargo projected to move along the Calcasieu Ship Channel is estimated to support an additional \$27.3 billion of total personal wage and salary income and local consumption expenditures in the national economy. This includes \$751.9 million of direct, indirect, induced, and local consumption expenditures, while the remaining \$26.5 billion additional income was received by the related port users. The 1,671 direct job holders are projected to receive \$135.6 million of additional direct wage and salary income.

A total of \$3.0 billion of additional state and local tax impacts are projected to be supported nationally by the




maritime activity at the planned projects along the Calcasieu Ship Channel. Of the \$3.0 billion of state and local tax impacts, about \$2.1 billion of additional state and local tax revenue is projected to be supported in the state of Louisiana, while \$403.9 million of additional state and local taxes are projected to be generated in the Lake Charles MSA at full build-out.

With respect to federal tax revenue, the marine cargo projected to move annually at full build-out of the planned projects is projected to support an additional \$5.2 billion of federal tax revenue at the national level, of which \$3.7 billion of the additional federal tax revenue is generated in the state of Louisiana, while \$986.8 million of additional federal tax revenue is projected to be generated in the Lake Charles MSA.

Economic Impact of Lake Charles Harbor and Terminal District

The Lake Charles Harbor and Terminal District (LCH&TD) public facilities handle coke exports produced as a by-product of the local petroleum refining activity, as well as imported lumber, exported bagged grain and bulk grains, wind energy equipment and project cargo, limestone, rutile, barite, and chemical products. With the opening of the Cameron LNG facility, which was developed on property leased from LCH&TD, LNG has become a key export commodity in 2020. The key facilities owned by LCH&TD include City Docks, BT-1, BT-4, BT-7, as well as the Industrial Canal property and property in the Industrial Park East. In addition to the cargo handling activities at the public facilities, LCH&TD also leases land to two casino/hotel complexes, the impacts of which are included in LCH&TD impacts.

2020 Economic Impacts Generated by the Lake Charles Harbor and Terminal District

	LCH&TD National Impact	LCH&TD State of Louisiana Impact	LCH&TD MSA Impact	
 TOTAL JOBS	Direct Jobs	7,126	7,126	
	Induced Jobs	8,503	6,172	4,056
	Indirect Jobs	7,312	5,332	3,224
	Related	30,782	20,730	3,894
	TOTAL	53,722	39,361	18,301
 PERSONAL INCOME (\$1,000s)	Direct	\$334,415	\$334,415	\$334,415
	Re-Spending/Consumption	\$1,324,919	\$740,696	\$412,166
	Indirect	\$336,895	\$245,688	\$148,532
	Related	\$2,393,849	\$1,595,238	\$283,915
	TOTAL	\$4,390,077	\$2,916,037	\$1,179,029
 (\$1,000s)	Economic Value	\$9,486,601	\$7,217,183	\$3,647,752
	Total State & Local Taxes	\$441,627	\$296,777	\$123,116
	Total Federal Taxes	\$732,149	\$517,975	\$227,940

Totals may not add due to rounding

The same methodology was used to estimate the economic impacts of LCH&TD as was used to estimate the economic impacts of the Calcasieu Ship Channel. The impacts are estimated at the national, state of Louisiana, and Lake Charles MSA levels of detail.

In 2020, 53,722 jobs in the U.S. are supported by the cargo moving via LCH&TD facilities, including the impacts generated by the two casinos/hotels on Port property. Of the 53,722 jobs, 39,361 jobs are supported in the state of Louisiana, including 18,301 jobs which are supported in the Lake Charles MSA.

The marine cargo and casino/hotel activity at the LCH&TD facilities supported a total of \$9.5 billion of total economic value to the United States economy, of which \$7.2 billion of total economic value was supported in the state of Louisiana. Of the \$7.2 billion economic value to the state of Louisiana, \$3.6 billion of economic value was supported in the Lake Charles MSA. This represents about 20.3% of the Lake Charles MSA GDP.



Marine cargo and casino/hotel activity at LCH&TD supported \$4.4 billion of total personal wage and salary income and local consumption expenditures in the national economy. This includes \$2.0 million of direct, indirect, induced, and local consumption expenditures, while the remaining \$2.4 billion of income was received by the related port users. The 7,126 direct job holders received \$334.4 million of direct wage and salary income, for a direct annual salary of \$46,930. This compares to \$46,460, which is the mean annual salary in 2020 for all workers in the state of Louisiana, as reported by the U.S. Bureau of Labor Statistics.

A total of \$441.6 million of state and local tax impacts was generated throughout the United States by maritime and casino/hotel activity at Port of Lake Charles Harbor and Terminal District. Of the \$441.6 million of state and local tax impacts, \$296.8 million of state and local tax revenue was generated in the state of Louisiana, of which \$123.1 million of state and local taxes was generated in the Lake Charles MSA.



With respect to federal taxes, \$732.2 million of federal taxes was supported in the national economy, of which \$518.0 federal taxes was generated within the state of Louisiana, and \$227.9 million in the Lake Charles MSA as the result of the marine cargo and casino/hotel activity at LCH&TD facilities.