



Port Freeport

2022 Economic Impact Analysis

Port Freeport 2022 Economic Impact Analysis

by

Maxwell Steadman, M.P.A.
Assistant Research Scientist

Brianne Glover, J.D.
Research Scientist

Bill Prieto, M.P.A.
Assistant Transportation Researcher

and

Brittan Rhome
Research Assistant

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TEXAS A&M TRANSPORTATION INSTITUTE

College Station, Texas 77843-3135

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EXECUTIVE SUMMARY

In 2019, the Texas A&M Transportation Institute (TTI) conducted an economic impact analysis for Port Freeport. The report used data from 2017 and found that Port Freeport has a substantial impact on the national, state, and local economies in terms of employment, labor income, tax revenues generated, and economic output (1). Since that report three years ago, the port has undergone hundreds of millions of dollars of new investments and has increased the amount of trade moving through the port. This new report estimates the economic impacts attributed to the port in 2022 using data collected from primary and secondary sources at Port Freeport. Based on this analysis, TTI estimates that Port Freeport generates the following economic impacts at the local, state, and national levels:

- **266,300** jobs supported nationally
 - **109,800** jobs supported statewide
 - **37,200** jobs supported within Brazoria County
 - **12,000** direct jobs
- **\$157.3 billion** in total national economic output
 - **\$84.3 billion** in total economic output statewide
 - **\$64.6 billion** in total output within Brazoria County
- **\$22.5 billion** in labor income nationally
 - **\$8.8 billion** in labor income statewide
 - **\$3.4 billion** in labor income within Brazoria County
- **\$5.3 billion** in local and state tax revenues nationally
 - **\$1.8 billion** in tax impact on local and state government entities in Texas
 - **\$1.0 billion** in local and state tax revenues generated within Brazoria County
 - **\$3.5 billion** in tax impact on local and state government entities outside of Texas
- **\$5.4 billion** in federal tax revenues nationally
 - **\$2.2 billion** in federal tax revenues statewide
 - **\$1.0 billion** in federal tax revenues generated within Brazoria County
 - **\$3.3 billion** in federal tax revenues generated from impacts outside of Texas

For this analysis, TTI researchers used the Impact Analysis for Planning (IMPLAN) model. The IMPLAN model is a widely used economic analysis tool that government agencies, universities, and private corporations have used for decades. A series of economic inputs used by the tool were collected from primary and secondary sources located at the port to conduct the analysis. These data were collected primarily through an online survey and phone interviews.

Freeport has experienced many changes since TTI completed the previous study in 2019. Since 2017, the largest increases in exports at Port Freeport have come from liquified natural gas (LNG). At the same time, the estimated number of heavy construction workers at the port has substantially decreased since the 2019 report. Much of the decrease in construction jobs is attributable to the completion of additional LNG facilities. The completion of these facilities resulted in additional LNG exports and additional long-term ongoing jobs, but a reduction in short term construction jobs. Because there were more short-term construction jobs than ongoing LNG related jobs, this resulted in fewer jobs overall and a lower statewide economic impact than the previous report. Because these construction jobs are temporary by nature, this does not give a true representation of the change in impacts year to year at the port. To account for this, the impact of ongoing non-construction jobs at the port was measured separately. When compared to the same types of non-construction jobs in the 2019 report, an increase in both jobs

and economic impacts is depicted. This shows that while there happens to be less construction ongoing at the time of this report, the true impact of Port Freeport has grown.

Through this study, researchers have shown that Port Freeport has a considerable impact not only on the local economy of Brazoria County but also on the state and national economies. These results, coupled with the billions of dollars of planned investments in facilities and infrastructure at the port, show that the area is likely to see continued economic growth.

INTRODUCTION

Background

Port operations are a vital component of international and domestic transportation. According to the United Nations Conference on Trade and Development, global seaborne trade reached 10.6 billion tonsⁱ of goods in 2020 (2). This represented a 3.8 percent decrease from 2019, resulting from the COVID-19 pandemic and the subsequent supply chain issues. The United States accounted for nearly 1.34 billion tons in combined imports and exports in that same year (3). Moreover, Texas makes up a considerable percentage of this throughput, handling more than 464 million tons of those imports and exports and 143 million tons of domestic cargo in 2020 (4). Ports, and the waterborne trade they facilitate, have a critical role in both the global and domestic economies.

The investment in and continued operation of the port infrastructure needed to efficiently move these goods create not only direct economic impacts to the communities in which they are located, but also indirect and induced impacts to the regional, state, and national economies. These impacts come in several forms including jobs, output, labor income, and tax revenues. This economic impact analysis seeks to estimate these impacts in terms of total jobs, dollars, and tax revenues within Brazoria County, across the State of Texas, and across the United States.

Purpose of the Study

The purpose of this study was to estimate the total annual economic impact of operations located at Port Freeport proper and/or operations dependent on or along the Freeport Harbor Channel on the local (Brazoria County), state, and national economies. The impacts estimated in this report are provided as primary (direct) and secondary (indirect and induced) effects of the broader port's annual operations. These impacts are reported in terms of employment, production (output), labor income, and tax revenues at the local, statewide, and national scale.

In this study, researchers identified industries that were dependent on the Freeport Harbor Channel and/or dependent on existing port activities. This includes industries located on property Port Freeport owns and leases to others (e.g., Dole, Tenaris, AMPORTS, etc.) within the inner harbor, privately owned terminal facilities along the Freeport Harbor Channel (e.g., Dow and BASF), industries directly related to the movement of goods in and out of the port (i.e., auxiliary services), port administration and support services (e.g., Port Freeport staff and U.S. Customs and Border Protection), and those industries directly relying on waterborne trade that may be located away from the port.

ⁱ Loaded onto vessels.

TEXAS PORTS OVERVIEW

The Texas port system ranked first as the largest port system in the United States, handling about 607 million tons of imports, exports, and domestic cargo in 2020 (5). Louisiana followed with a total tonnage of 485 million, the majority of which was in domestic trade. California remained as the third largest port system with a movement of 214 million tons. As previously reported in the 2017 waterborne data, Texas continues to have the highest amount of international trade of any state in both shipping and receiving (5) (Table 1).

Table 1. Calendar Year 2020 Waterborne Tonnage by State (Top 10) (in Units of 1,000 Tons)

State	Totals	Shipping: Domestic	Shipping: Foreign	Receiving: Domestic	Receiving: Foreign	Intrastate
Total	2,226,442	492,230	845,511	492,230	637,601	251,100
Texas	607,805	46,801	346,068	26,099	118,158	70,680
Louisiana	485,439	73,648	178,966	125,065	61,139	46,620
California	214,920	3,171	52,943	18,546	131,300	8,960
New Jersey	131,877	27,457	15,876	7,326	72,237	8,981
Washington	109,703	10,778	60,774	10,413	19,318	8,419
Florida	90,297	5,146	13,931	36,036	35,005	180
Kentucky	76,730	39,129	0	22,178	0	15,422
Illinois	75,112	51,599	45	15,531	1,828	6,109
Ohio	68,511	13,425	6,710	36,993	4,235	7,148
Alabama	63,979	5,212	16,552	12,245	17,860	12,110

Source: (6)

The Gulf Coast region of waterborne trade is one of the major trade hubs in North America. The Texas port system is comprised of 11 deep-draft ports and numerous shallow-water ports moving a variety of goods and providing numerous services (Table 2). According to the U.S. Census Bureau, the Texas ports system had six of the top 25 ports in the United States by total tonnage in 2021(7). This included the ports of Beaumont, Corpus Christi, Freeport, Houston, Port Arthur, and Texas City. Port Freeport ranked 5th in Texas and 16th in the nation with 38.2 million tons. Table 2 gives a brief overview of the Texas ports.

Table 2. Overview of Texas Ports (2022)

Port	Characteristics*	Major Assets/Attributes	Top Commodities/Specialties
Port of Orange	Draft class: deep Channel depth: 23 ft (authorized to 40ft) Channel width: 200 ft	Home to barges that service deep-water oil rigs 4 berths and 8 warehouses Used to service, repair, and maintain the military reserve fleet	Lay berthing vessel construction, repair, container-on-barge-shipping capabilities Timber Plastic
Port of Port Arthur	Draft class: deep Channel depth: 40 ft (authorized to 48 ft) Channel width: 450 ft	80 ft roll-on/roll-off dock 25 acres of open storage 5 transit sheds 550,000 sqft of storage	Bulk Cargo Petrochemical Products
Port of Beaumont	Draft class: deep Channel depth: 40 ft (authorized to 48 ft) Channel width: 400 ft	Served by 3 Class 1 rail lines Roll-on/roll-off ramp 11 public docks/wharves Over 105 acres of open storage Over 800 acres open for development Access to crude oil pipeline	Fertilizers and Chemicals Food and Agricultural Products Crude Materials
Port Houston	Draft class: deep Channel depth: 37.5 to 46.5 ft (authorized to 41.5 to 46.5 ft) Channel width: 530 ft	390 acres of liquid tank storage 450 acres of covered storage Access to 3 Class 1 Railroads Use of alternative fuels	Containerized cargo Food and drink Retail goods Plastic resins Chemicals/minerals Steel
Port of Galveston	Draft class: deep Channel depth: 41 to 46 ft Channel width: 1,200 ft	Roll-on/roll-off ramp Port-owned and -operated cruise terminals and facilities Served by 2 Class 1 rail lines Marine repair facility and shipyard Port-related short-line railroad	Bulk fertilizer Bulk liquids Food and agricultural products RORO cargoes Construction Equipment Project cargoes Wind power equipment
Port Freeport	Draft class: deep Channel depth: 46 to 48 ft (to be dredged to 51 to 56 ft) Channel width: 600 ft	18 berths 56-ft-deep channel following Freeport Harbor Channel Improvement Project Two post-Panamax cranes Deepwater ship berths Served by Union Pacific rail line	Liquefied natural gas Liquefied petroleum gas Crude oil Gasoline Petrochemical products Containerized cargo Resins and Plastics Agricultural Products
Port of Palacios	Draft class: shallow Channel depth: 14 ft	6 cargo docks	Seafood Shipbuilding Tourism

Port	Characteristics*	Major Assets/Attributes	Top Commodities/ Specialties
	Channel width: 125 ft	2 shipyards for repair, retrofit, and dry rock 900 acres of developable land	
Calhoun Port Authority	Draft class: deep Channel depth: 38 ft (authorized to 47 ft) Channel width: 200 ft	3 liquid cargo docks A dry bulk dock that can handle carriers up to 750 ft long Served by Point Comfort and Northern Railway	Petro chemicals Crude oil Manufactured equipment, machinery, and products
Port of West Calhoun	Draft class: shallow Channel depth: 12 ft Channel Width: 125 ft	Berths for seafood production, and oil and gas exploration Connections to Union Pacific and BNSF	Petroleum coke Chemicals Recreational boating
Port of Victoria	Draft class: shallow Channel depth: 12 ft Channel width: 125 ft	2 cargo docks and 3 liquid loading docks A center that can be used by chemical, construction, and steel fabrication and agribusiness industries Access to Union Pacific and BNSF	Energy Products Bulk Products Harbor of refuge
Port of Corpus Christi	Draft class: deep Channel depth: 47 ft (to be dredged to 54 ft) Channel width: 530 ft	13 public liquid docks 3 dry bulk docks Over 340,000 sqft of covered storage space Over 140 acres of open storage Access to 3 Class 1 rail lines, Union Pacific, BNSF, and Kansas City Southern de Mexico	Crude oil Fuel oil Gas oil Feedstock Aggregate Fertilizer and Chemicals Primary Manufactured Goods
Port of Harlingen	Draft class: shallow Channel depth: 12 ft Channel width: 120 ft	650-ft dry/liquid cargo wharf 100-ft dry bulk wharf 5 docks	Raw sugar Agricultural Refined petroleum
Port of Port Isabel	Draft class: deep Channel depth: 36 ft Channel width: 200 ft	Roll-on/roll-off 45 acres available for lease	Pipe for offshore oil and gas Shrimp Okra Spinach
Port of Brownsville	Draft class: deep Channel depth: 42 ft (authorized to 52 ft) Channel width: 400 ft	6 liquide cargo docks 12 general cargo docks 1 million sqft covered storage Access to 3 rail lines	Steel products Lubricants Gasoline Diesel

Port Freeport

Port	Characteristics*	Major Assets/Attributes	Top Commodities/ Specialties
			Jet fuel Grain Aluminum Windmill components
Port of Texas City	Draft class: deep Channel depth: 46 ft (authorized to 50 ft) Channel width: 1,200 ft	Privately owned by stakeholders, including Union Pacific and BNSF Railways 35 berths 2 barge fleeting areas	Crude petroleum oil Refined petroleum products Petrochemicals Fertilizers

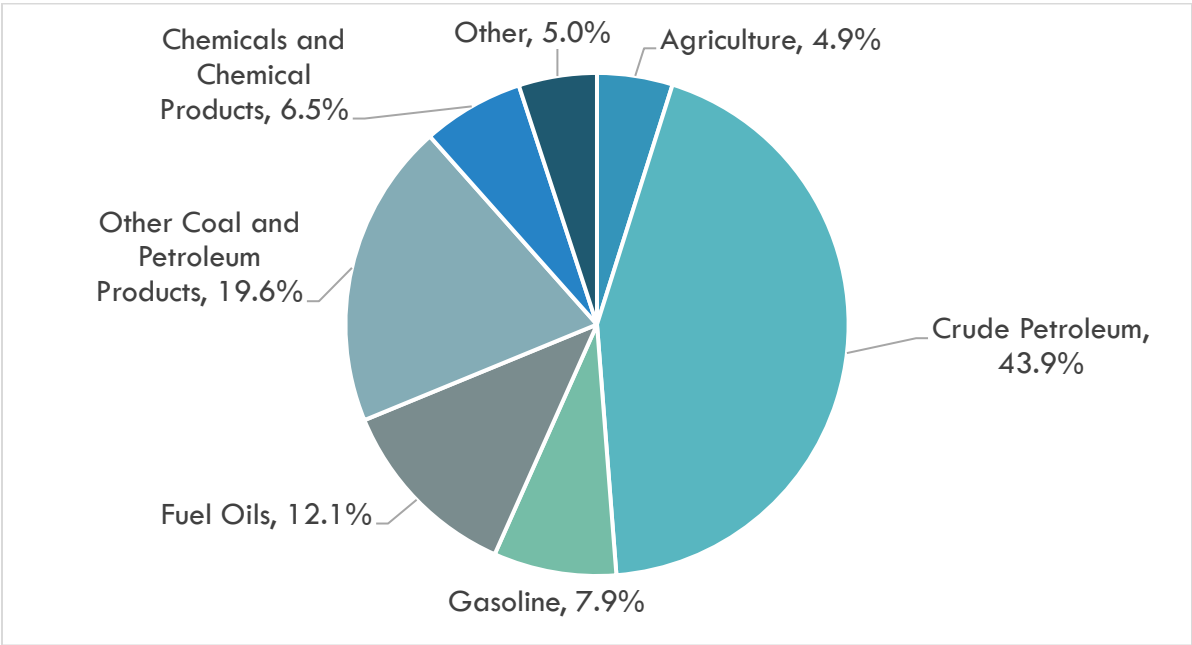
* Depth indicates Mean Lower Low Water (MLLW)

Sources: (8,9,10)

Economic Activity

A 2018 report prepared for the Texas Ports Association estimated that the Texas ports system supported over 128,000 direct jobs in Texas and generated \$8.7 billion in personal income. Additionally, the report estimated that the system supports 1.7 million indirect and induced jobs with an additional \$102 billion in personal income. It also estimated that the port system generated \$7.8 billion in direct federal, state, and local tax revenue in Texas (11). These economic impacts are created through the production and movement of goods that are reliant on waterway facilities.

Texas ports facilitate a substantial amount of foreign trade, with energy-related imports and exports making up an overwhelming majority of total tonnage. Figure 1 shows that crude petroleum alone makes up almost 44 percent of total imports and exports, with refined hydrocarbon products and other coal and petroleum products each making up another 20 percent. Base chemicals and chemical-related products make up the next largest sector at 6.5 percent, with agricultural goods accounting for another 4.9 percent of total imports and exports. Miscellaneous raw goods and products comprise the remaining 4.6 percent. This trade is vital to the Texan, American, and even the global economy.



Source: (12)

Figure 1. Percent of Total Import and Export Tons Handled by All Texas Ports in 2020

PORT FREEPORT OVERVIEW

Port Freeport is a comprehensiveⁱⁱ deep-water port located in Freeport, Texas. Classified as a Navigation District of the State of Texas, its jurisdiction covers about 85 percent of Brazoria County. Port Freeport is approximately 60 miles south of the downtown Houston. As a political subdivision within Texas, Port Freeport is governed by a port commission consisting of six members: five represent a geographic location, and the sixth represents an at-large position. Each commissioner is elected to serve a six-year term.



Figure 2. Port Freeport and Neighboring Ports (13)

The Freeport Harbor Channel is a deep-water channel with a 46-ft depth and is the shortest channel transit on the Texas coast. Figure 2 shows the location of Port Freeport and its neighboring ports on the Texas Coast. The 2014 Water Resources and Reform Development Act authorized by the U.S. Congress approved the deepening of the channel. The \$295 million Freeport Harbor Channel Improvement Project currently under construction will deepen the existing channel to a mean lower low-water level of 51-56 ft, making Port Freeport the deepest port in Texas. On May 5, 2018, voters approved a \$130 million bond referendum to fund the local sponsor portion of the Freeport Harbor Channel Improvement Project (14). The remaining funds required to complete the project are

ⁱⁱ TxDOT classifies a port as *comprehensive* if it can handle a wide variety of cargo generally at a high volume.

being provided through federal funding programs covering 60 percent of the total cost. Project dredging commenced in 2021 with project completion expected in 2025.

History

Port Freeport was first approved by voters as the Brazos River Harbor Navigation District in 1925, then established by the Texas Legislature in 1927. Since that time Port Freeport and its operations have expanded significantly. The port's first two docks were built in the 1950's through the issuance of a series of ad valorem tax and port revenue bonds (15). Construction on various buildings and facilities continued over the next two decades, and in 1980, most of the land that the port owns was acquired through the issuance of additional ad valorem tax bonds (\$20 million¹⁵). In 1988, the port established Foreign-Trade Zone (FTZ) No. 149, which enables businesses operating within the port's jurisdiction to postpone or eliminate customs duties on goods being imported. The FTZ includes Brazoria and Fort Bend counties. With the passage of House Bill 542 in 2007, the Brazos River Harbor Navigation District of Brazoria County, Texas was officially renamed Port Freeport.

Expansion of the port's facilities continued in the 2000s. In 2013, the construction of a new 800-foot berth (Berth 7) was completed, the first of a multi-phase development of the Port's container terminal. In 2014, Port Freeport acquired two post-Panamax gantry cranes which were commissioned at the container terminal, and in 2015, an automobile storage and processing facility was constructed at the port. In 2019, Port Freeport completed Phase 1 of the Parcel 14 Rail Development. Phase 2 of this project will commence in Q1 2023 and is being partially funded by a Consolidated Rail Infrastructure and Safety Improvements ("CRISI") grant from the United States Department of Transportation, Federal Railroad Administration. Several projects have been completed since the 2019 report and are discussed in more detail in the following sections. It is important to note that the COVID-19 pandemic affected project schedules, material availability, and costs nationally.

Economic Profile

The port has a variety of public and private terminals which handle millions of tons of cargo of various types with billions of dollars invested in operations and infrastructure. According to the National Oceanic and Atmospheric Administration (NOAA) in 2022, Port Freeport was the fastest-growing port in Texas (16). In 2021, Port Freeport's imports and exports exceeded 38 million tons, a large increase from 2019. Since 2019 several public and private investments have made this possible, prompting large increases in liquified natural. This is credited to the investments made by both public and private sectors in the area, especially the completion of the Freeport LNG liquefaction trains.

Port Freeport is supported by several modes of land transportation nearby that facilitate the movement of goods to and from the port, including State Highway 36, State Highway 288, and a rail line operated by the Union Pacific Railroad. In addition, Port Freeport has direct access to the Gulf Intracoastal Waterway (GIWW), which facilitates intrastate and interstate barge traffic.

TTI has researched Port Freeport's economic impact throughout the years, most recently in 2017 and 2019. After the completion of the 2017 study, Port Freeport ventured into new investments and has seen continued economic growth, as noted in the 2019 TTI Port Freeport Economic Impact Analysis. At the state and local levels, it was found that in 2019 Port Freeport supported about 16,000 direct jobs, of which about 6,200 were construction related, and 150,000 statewide-related jobs (1). Additionally, the port generated about \$99 million statewide in economic output, \$2.5 billion in local and state tax revenue, and \$3.2 billion in federal tax revenues. In this report, TTI identified over 10,200 jobs associated with the port activity from port tenants, private terminal owners, and other businesses dependent on operations along the Freeport Harbor Channel. This report identified another 1,800 construction jobs, resulting in about 12,000 direct jobs. Overall, jobs associated with business activity at the port increased, while construction jobs decreased, simply because there is less ongoing construction at the time of this report than in the 2019 report.

This section gives a brief overview of the current industries, economic activity, and planned development occurring at the port.

Tenants and Private Terminals

The industries currently located at Port Freeport are primarily those dealing in chemical manufacturing, oil shipments and refinement, produce, and automobiles.

Port tenants are companies that lease land or facilities owned by Port Freeport. These companies are directly related to maritime freight shipping through the Port Freeport ship channel. Tenants present at Port Freeport include:

- Riviana Foods, Inc.
- Chiquita Fresh North America.
- Dole Fresh Fruit Company
- Freeport LNG
- G&H Towing Company
- Ports America, Inc.
- Tenaris
- Vulcan Materials
- Gulf Stream Marine
- Kirby Inland Marine
- US Customs and Border Protection
- AMPORTS
- Freeport LNG
- Enterprise Products (Seaway Marine terminal)

In addition to tenants located on port property, several private terminal owners and various other companies rely on the existence of the port to conduct their business. These companies use the ship channel and GIWW for shipments but do not lease land from Port Freeport. These companies are included in the analysis because not only do they provide economies of densityⁱⁱⁱ in the region, but they would also be directly impacted by positive or negative changes in ship channel availability. The following are the companies with a private terminal at the port:

- BASF Corporation
- Phillips 66
- The Dow Chemical Company
- Vopak

ⁱⁱⁱ *Economies of density* refers to the benefit resulting from spatial proximity of suppliers or providers.

Commodities

Port Freeport handles a large variety of commodities, primarily liquid bulk for the energy industry. Major commodities include hydrocarbon and petroleum products, crude petroleum, other organic and inorganic chemicals, agricultural products including fresh fruit and rice, plastics, steel products, aggregate, construction equipment, high and heavy cargo, and autos. In 2020, Freeport moved approximately 38.2 million total shorts tons, ranking 5th in the State of Texas and 16th of all ports in the United States in terms of tonnage (7). Figure 3 below shows the percentage breakdown of commodities at Port Freeport.

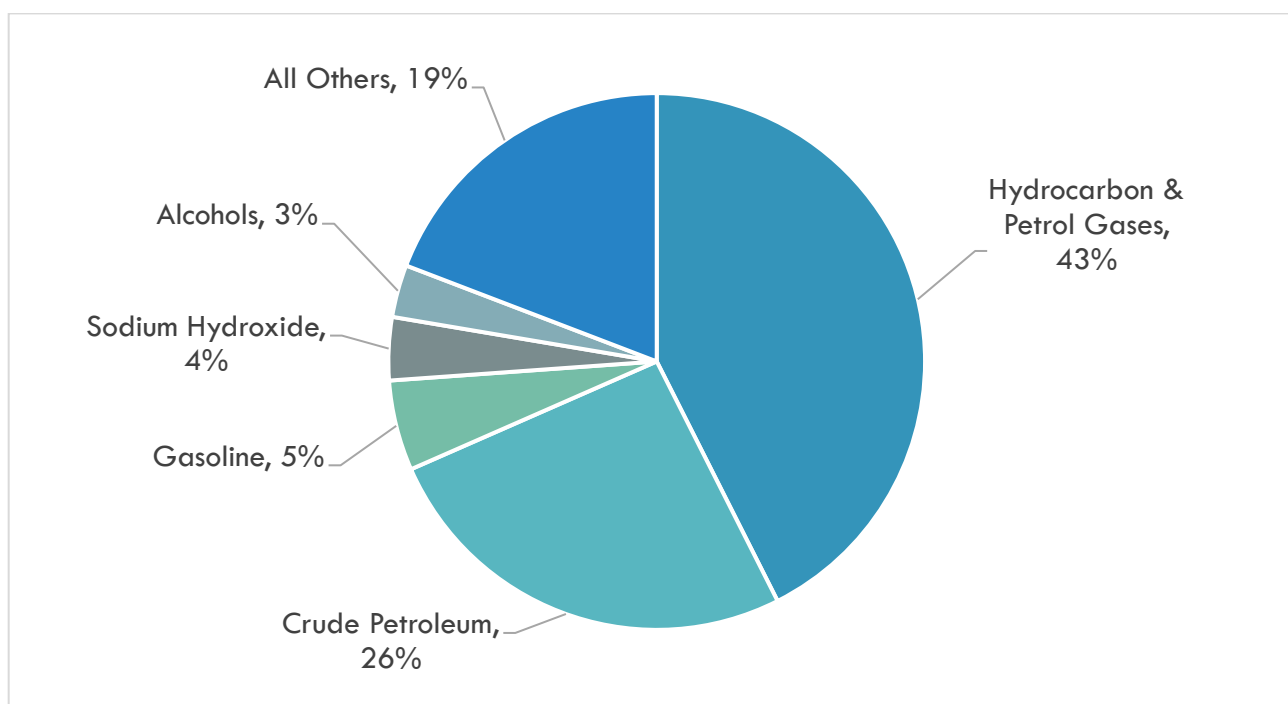


Figure 3. Port Freeport Commodity Breakdown 2020 (17)

Development

Port Freeport and the surrounding region have experienced several billion dollars in public and private investment since the 2019 report, which has expanded the production capabilities and workforce of industries in the region and helped sustain the economic growth and competitiveness of the port. These expansions represent additional economic benefits, in terms of direct, indirect, and induced impacts.

This section highlights recently completed and ongoing^{iv} development projects. These projects do not represent all investments at or near Port Freeport but include substantial investments made with a clear link to port activity.

^{iv} At the time of this report.

Recently Completed Projects

Since the 2019 report, the broader port-dependent area has experienced several billion dollars of infrastructure and operational investments. These investments have come from both Port Freeport and local industry. Since 2019, these projects have brought in over \$16.7 billion in capital investments, created 290 new direct jobs at the port, and support up to 1,129 total jobs in the region.

BASF Corporation – Distribution and Blending Warehouse

In 2020, BASF Corporation completed the construction of a distribution and blending warehouse. The project brought in \$90 million in capital investments and created 45 new jobs at the site. The project is estimated to support up to 74 total jobs in the area (18).

Freeport LNG—Liquefaction Facility (“LQF”): Trains 1–3

In 2019, Freeport LNG completed the construction of three Liquefaction units (“trains”) to support the existing regasification terminal on Quintana Island (19). Freeport LNG Train 1 opened in the second half of 2019, with the second and third trains following in early 2020 (20). The last train, Train 4, received approval from the Federal Energy Regulatory Commission (FERC) and is currently pending construction. When fully operational, these trains will have the combined capacity to liquefy over 2.1 billion cubic feet of natural gas per day. The capital investment from the three LNG trains was \$14 billion plus \$4.5 billion for a Pretreatment Facility (“PTF”) in Oyster Creek, TX. At the peak of construction, approximately 4,000 workers were employed across the various trains. (21). Moreover, Trains 1 through 3 created 163 new direct company jobs and support 603 additional indirect jobs, for a total of 766 jobs supported (1818).



Figure 4. Freeport LNG – 2 of 3 Liquefaction Trains (Source: Freeport LNG Development, L.P.)

Linde—Air Separation Unit

In 2020, Linde PLC (formerly Praxair) announced the completion of the air separation unit in Freeport, which supplies oxygen and nitrogen to MEGlobal’s ethylene glycol plant (22). Additionally, this plant will supply the

company's industrial gas pipeline as well as increase the capacity of argon. The air separation unit contributed \$104 million in capital investment to the Freeport area. The project employed about 70 construction workers at the peak of construction and resulted in 15 new company hires plus 55 additional estimated indirect jobs (1818).

Linde – Hydrogen Plant

In 2021, Linde completed a hydrogen plant at their Old Ocean, TX facility. The project was estimated to bring in \$232 million in capital investments and 300 construction jobs during the construction period. Located along the company's U.S. Gulf Coast Pipeline, this expansion increased Linde's production capacity to up to 1.5 billion cubic feet per day (23). It created 10 new jobs at the facility and 23 jobs total in the area (1818).

MEGlobal Oyster Creek—Mono-ethylene Glycol Plant

MEGlobal completed the construction of a mono-ethylene glycol (MEG) manufacturing plant in Oyster Creek. This project was completed in mid-2019 and provides MEG to Dow Chemical based on a supply agreement, with most of the product slated for export (24). This new facility brought \$1 billion in capital investment to the Oyster Creek area. At the peak of construction, it employed up to 2,000 construction workers (25). The plant is estimated to employ 35 direct company jobs and more than 172 direct and indirect jobs (1818).

Parcel 14 Rail Development – Phase 1

Construction of the first phase of the Parcel 14 rail development project began in 2017 with the awarding of a \$21 million contract to James Construction. The project was completed in June 2019. The second phase of the project includes four additional tracks adjacent to the tracks developed in the first phase. This phase was awarded \$6.3 million from the U.S. Department of Transportation Consolidated Rail Infrastructure and Safety Improvements (CRISI) Grant Program.

Phillips 66 Old Ocean / Sweeny – NGL Fractionators

In 2020, Phillips 66 completed the construction of two natural gas liquids fractionators at their Sweeny, TX facility. This increased capacity at the facility from 100,000 barrels per day to 400,000 barrels per day (26). This project brought in \$1.3 billion in capital investments. The project created 12 new jobs at the Phillips 66 facility and supports up to 22 total jobs in the region (1818).

Shintech/K-Bin Freeport—PVC Compounding Expansion

In 2019, Shintech and K-Bin completed a project to increase their polyvinyl chloride (PVC) compounding capabilities in Freeport. The project brought \$17 million in capital investments to the region. During construction, the project employed 25 construction workers. The project created 10 new jobs at the site and is estimated to support up to 17 total jobs in the community (18).

Ongoing Projects

In addition to the completion of billions of dollars of industry investments in production, terminal, and transportation facilities, Port Freeport and the broader port-dependent area have several infrastructure projects underway that contribute to not only the current economic impact of port operations, but also to facilitate growth, additional personal income, and economic activity for years to come. Once completed, these projects will bring in \$275 million in capital investments, create over 3,100 new direct jobs, and support over 8,900 total jobs in the region.

Chevron Phillips Chemical – 1-Hexene Plant

In 2021, Chevron Phillips Chemical began construction of a 1-Hexene plant at their Old Ocean Facility (27). It is expected to be completed by 2023 and will expand its 1-Hexene production by 266 thousand metric tons per year to 650 thousand metric tons per year while taking advantage of current technological advancements to meet emission standards. The project is expected to bring in \$230 million in capital investment and support up to 500 construction jobs during the two-year construction period. Additionally, the facility will house 15 new jobs at the facility and support up to 48 total new jobs in the community. This project is slated for a completion date of 2023 (18).

Velasco Terminal-Berths 8, 9, and 10 (RORO Ramp)

The Velasco Terminal will be expanded to support the growth in container, Roll-on Roll-off (“RORO”) and other cargo opportunities. Berth 8, an extension of Berth 7, is under construction, and is planned to complete in Q2 2023. Berth 8 will feature a 927-foot dock plus an 85-foot RORO platform. Berth 9 will be constructed in the future, as well as the installation of additional gantry cranes. On completion, Velasco Terminal will provide over 2,400 linear feet of berth with the capability to receive Neo-Panamax containerships. This expansion project is estimated to cost \$140 million but will generate \$424 million in state and local taxes. Additionally, this project can create 3,100 direct jobs, 2,300 induced jobs, and 3,500 indirect jobs as well as increase local business earnings by \$405 million (28).



Figure 5. Existing Velasco Terminal (Source: Port Freeport)

METHODOLOGY

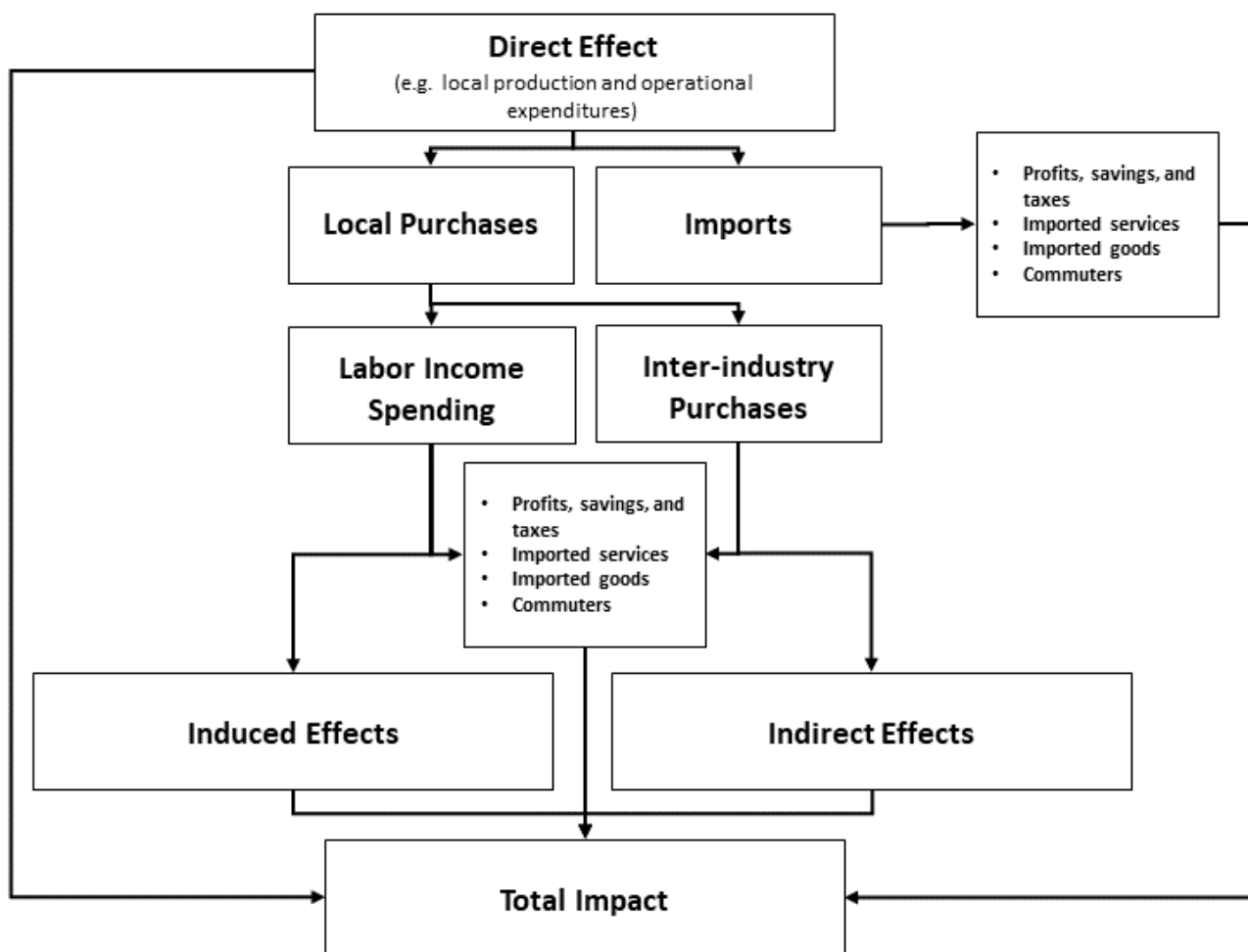
The methodology used in this analysis uses primary and secondary sourced data as input into the Impact Analysis for Planning (IMPLAN) economic impact modeling tool to generate a snapshot of economic activity and impacts. Data were collected using a variety of methods, including an electronically distributed survey; phone/email interviews; published federal, state, and local data sources; and figures from local agencies.

The IMPLAN Model

To estimate the total economic impact of operations at Port Freeport, TTI research staff used the IMPLAN model, an economic impact assessment model that uses the standard input-out (IO) modeling technique with 528 different industry-sector multipliers. This model uses a diverse database of economic factors, established sector multipliers, and area demographics. These data, in combination with user inputs, are used to measure the initial change (**direct impact**) in a local economy.

From these direct impacts, the model also generates estimated indirect and induced impacts. **Indirect impacts** are the effects of purchasing goods and materials used in the production of the direct impacts. These represent money exchanging hands between producers both in the local economy and outside the region. These typically represent the raw materials and goods needed in a specific sector's production. Companies producing goods make purchases that indirectly support another business. **Induced impacts** are the impacts in a local economy from employees spending their wages. This supports local services and stores. For example, an employee at the local shipping company purchases a television for his personal use from the local electronics store. This supports employment and wages at local businesses, which creates additional induced impacts. These impacts reoccur until all the money is leaked^v from the local economy. See Figure 6 for an overview of the modeling process. An IO model tracks economic impacts in two directions: backward linkages and forward linkages. Backward linkages represent the upstream impacts in the supply chain from purchases of goods and materials required for a change in production. This is the impact on the supplying industries. Forward linkages represent the impacts downstream of the supply chain. These are the predicted impacts resulting from a change in production.

^v *Leaked* refers to the money being spent on goods produced outside the study region.



This figure is illustrative and does not fully detail the complexities of the IO modeling process.

Source: Adapted from (29, 30)

Figure 6. Input-Output Modeling Process

Inputs

The IMPLAN model requires a set of inputs to determine the direct, indirect, and induced impacts of a set of economic activities. The most common inputs into the model include employment, revenue, and payroll. These inputs were collected through various forms of communications with port tenants and private terminal owners located at or near Port Freeport. Employment at facilities directly related to port activity, such as chemical production plants and oil refineries, was also included in this study because of the facilities' relationship to the operations located at the port. While the terminal operations themselves are ongoing at the port, the manufacturing and sale of goods at those plants are directly dependent on the import and export process. While not all these private companies rely directly on Port Freeport facilities, the Brazos River, or the harbor, these companies are tied to the economic activity present in the region.

Any business outside the inner harbor area, excluding the petroleum and chemical manufacturing plants previously mentioned, was not included in this study unless the business was dependent on the port for its

business operations. Companies benefiting from proximity to operations using the waterway (e.g., chemical manufacturing using a product or by-product of a company receiving shipments via the waterway) are indirect impacts because they are purchasing a product to be used in their production. These economic sectors are included in the results but not as direct impacts. Additional details on these economic sectors are in the “Results” section of this report.

Data Collection Methods

Researchers primarily used two data collection methods for the analysis: a survey administered at the beginning of the project and phone interviews with company representatives. Both the survey and interviews focused primarily on determining the economic sector of the company and collecting employment estimates.

Survey

The primary data collection method for this analysis was a survey sent to Port Freeport tenants, private terminal owners, and other major industries located at the port. This brief survey was intended to obtain the following:

- The primary economic sector of the business
- Economic characteristics (one or more of the following)
 - Total employment
 - Annual payroll
 - Annual revenue
 - Transportation totals (e.g., annual vessel calls, trucks, and railcars)

Additional space in the survey allowed respondents to provide additional details about their operation at or related to Port Freeport. This was intended to give TTI researchers more insight into the type and scale of each business’s operation. In addition, details on the current economic activity helped researchers determine how businesses relate to each either as primary or supporting operations.

Interviews

TTI researchers called and emailed any company that did not complete the survey before the latter months of the analysis. These interviews were informal and generally lasted less than five minutes. The goal of the calls and emails was to ascertain basic employment data necessary for the analysis. As opposed to the online survey, which contained ample opportunity for respondents to provide detailed descriptions of a company’s operations at the port, calls were designed to be as brief as possible. Researchers found that informal conversations allowed for the collection of the baseline information needed for the analysis while imposing less of a burden on the respondent.

Secondary Sources

TTI researchers used a variety of secondary sources to collect data on employment, business operations, and construction projects occurring at the port. The Economic Development Alliance of Brazoria County and the Port Freeport administration were particularly helpful in providing data. Other resources included press releases and news stories. These sources helped fill in gaps in the analysis and, more importantly, these sources helped researchers gain a clearer picture of the complexity and inner workings of the day-to-day activities in and around Port Freeport.

Multipliers

Multipliers in the IMPLAN model are used to determine the output of the analysis. Multipliers in economic IO models are factors applied to an initial value. These multipliers are used to derive a total output, employment, labor income, and value-added. For each category, the multiplier seeks to identify the multiplier effect based on one unit of the corresponding direct impact. For example, if the employment multiplier in an economic sector within a region is 2.6, then for every 1 direct job in that sector, an additional 1.6 jobs are added within the region.

Multipliers at the single-county level are typically smaller than those at the multi-county or state levels, due to leakage. As previously mentioned, leakage in an economy is when money is spent outside of the study region. An example is a company in the study area of Brazoria County buying a product from a supplier in Harris County. That money is now with a Harris County company, and the money paid is used for the Harris County company's operations and employees. If the study region were increased to the entire state, multipliers would increase in value because now there is less leakage from the model. Only money leaving the state, as opposed to Brazoria County, would be accounted for.

For this analysis, researchers used Type Regional Social Accounting Matrices (SAM) multipliers through the IMPLAN model. SAM "provides information on non-market financial flows. IMPLAN inter-industry models provide information on market transactions between firms and consumers, and they capture payments of taxes by individuals and businesses, transfers of government funds to people and businesses, and transfer of funds from people to people" (31). In short, type SAM multipliers add the effects of household income (induced impacts) into the multiplier calculations. This helps track monetary flows in, out of, and within a region. This provides a more accurate calculation of the indirect and induced impacts stemming from a change in the local economy (direct impacts).

For tax impacts, the IMPLAN model provides an extensive breakdown of each type of tax paid within the analyzed region type. The values estimated are created using the SAM framework. Tax amounts are calculated using publicly available data from government data sources, including the Bureau of Economic Analysis and Census of Government Finances.

Further details on the IMPLAN model, its capabilities, multiplier data, and assumptions can be found through the extensive online knowledge base at <https://support.implan.com/hc/en-us/community/topics>.

Multi-regional Input-Output Analysis

The IMPLAN model can conduct analyses that examine impacts and linkages between multiple regions Multi-Regional Input-Output (MRIO). MRIO allows the user to determine how production within the study region affects production and household spending in any other region within the United States without the loss of individual region details. In the case of Port Freeport, researchers used local multipliers (Brazoria County) to examine the direct impacts of production in Brazoria and to determine the indirect impacts and induced impacts in both the local region and the rest of Texas.

A limitation of the MRIO functionality is the type of geographies that can be joined. Therefore, national impacts are shown using only national multipliers. This methodology disregards local industry details in favor of averaged multipliers. This provides some loss of accuracy in the results but provides an estimate of the overall national impact.

Output Definitions

Using the inputs and the various multipliers, IMPLAN produces a series of results that comprise the total economic impact of a market change. These include both summary impacts and tax impacts.

Summary Impacts

Summary impacts are the typical impacts associated with production in an economic impact analysis. These represent the jobs and dollars that are produced and/or supported in some way by production. The results include direct, indirect, and induced impacts and are reported in terms of the following impact types:

- **Employment** numbers represent the total annual average number of jobs, which is different from a full-time equivalent job. Instead, IMPLAN reports jobs as job-years, which includes self-employed and wage and salary employees. Full-time, part-time, and seasonal job estimates are based on a count of full-time/part-time averages over 12 months (32).
- **Labor income** is the amount paid to workers or take-home pay. This includes both employee and proprietor income. Labor income provides the basis for induced impact calculations, which are the impacts of workers spending their wages inside and outside the local economy.
- **Value added** is the summation of labor income, property income, and indirect business taxes. Value added demonstrates the difference in the value of produced goods over the costs to produce that good. These costs include purchasing services and input materials used during production.
- **The output** represents the total value added, plus the value of the intermediate expenditures, such as purchases that go into production. Because there is a value generated on business-to-business transactions, the IMPLAN model accounts for these in addition to the value of production for a specific industry.

Tax Impacts

In addition to the summary impacts, researchers also used IMPLAN to derive tax impacts based on the data inputs. These taxes are separated into two categories: state and local tax revenues, and federal tax revenues. Listed values are the estimated taxes paid to all local, state, and federal units of government within the analyzed region.

RESULTS

Results from this analysis are presented in four forms: local impacts to Brazoria County, business-only impacts in Brazoria County, statewide impacts (including Brazoria County), and national impacts (including Texas). Business-only impacts are the impacts of ongoing operations at the port, not including temporary construction impacts. Impacts from construction are removed from this final category to show the impacts that can be reasonably expected to continue over time, rather than construction impacts which greatly fluctuate from year to year and only last for a short period. The results are reported in terms of employment, labor income, value-added, and total output. In addition, local, state, and federal tax impacts at the local, state, and national levels are provided.

Brazoria County

The ongoing operations involving water transportation, truck transportation, petrochemical production, petroleum refining, administration, construction, and other economic sectors have an estimated economic output of \$64.6 billion within Brazoria County (Table 3). Activities at the port support about 12,000 direct jobs, \$1.8 billion in direct labor income, and a total direct output of \$52.8 billion. These activities also generate indirect and induced impacts which support another 25,000 jobs, \$1.6 billion in labor income, and an output of \$11.8 billion. Combined, the total impacts of port activities in the county are estimated at \$64.6 billion in output, supporting 37,000 jobs with a total labor income of \$3.4 billion.

Table 3. Brazoria County Estimated Total Impact Summary

Impact Type	Employment	Labor Income (in \$Billions)	Total Value Added (in \$Billions)	Output (in \$Billions)
Direct effect	12,048	\$1.8	\$12.7	\$52.8
Indirect effect	17,275	\$1.3	\$3.5	\$10.7
Induced effect	7,859	\$0.3	\$0.6	\$1.1
Total effect	37,183	\$3.4	\$16.8	\$64.6

The analysis was also conducted with construction-related impacts removed, examining only the regular ongoing business impacts. This was done because construction impacts can vary greatly from year to year and only exist for a short time, while these ongoing business impacts can be reasonably expected to continue in the longer term. These ongoing non-construction activities directly account for more than 10,000 jobs, \$1.7 billion in labor income, and a total economic output of \$52.6 billion in the county (Table 4). Indirect and induced effects support another 24,600 jobs, resulting in 34,800 total jobs, \$3.2 billion in labor income, and \$64.3 billion in total output.

Table 4. Brazoria County Estimated Business Impacts Summary

Impact Type	Employment	Labor Income (in \$Billions)	Total Value Added (in \$Billions)	Output (in \$Billions)
Direct effect	10,211	\$1.7	\$12.6	\$52.6
Indirect effect	17,088	\$1.2	\$3.5	\$10.7
Induced effect	7,481	\$0.3	\$0.6	\$1.0
Total effect	34,780	\$3.2	\$16.7	\$64.3

Direct impacts from port operations are estimated to generate about \$493 million in state and local taxes and \$650 million in federal taxes, within the county (Table 5). When the indirect and induced impacts are included, this increases to a total of \$1.0 billion in state and local taxes and \$1.0 billion in federal taxes generated within the county.

Table 5. Brazoria County Total Estimated Tax Impacts (in 2022 Dollars)

Description	Sub County General Tax (in \$Millions)	Sub County Specialty Districts Tax (in \$Millions)	County Tax (in \$Millions)	State Tax (in \$Millions)	Total State and Local Tax (in \$Millions)	Federal Tax (in \$Millions)
Direct	\$68	\$159	\$52	\$215	\$493	\$650
Indirect	\$60	\$142	\$47	\$191	\$440	\$297
Induced	\$9	\$21	\$7	\$29	\$67	\$63
Total	\$137	\$322	\$105	\$435	\$1,000	\$1,009

Tax impacts were again calculated for ongoing non-construction business impacts. Direct impacts from non-construction port operations are estimated to generate about \$492 million in state and local taxes and \$626 million in federal taxes, within the county (Table 6). When indirect and induced impacts are included, this increases to a total of \$994 million in state and local taxes and \$980 million in federal taxes, within the county.

Table 6. Brazoria County Estimated Tax from Business Impacts (in 2022 Dollars)

Description	Sub County General Tax (in \$Millions)	Sub County Specialty Districts Tax (in \$Millions)	County Tax (in \$Millions)	State Tax (in \$Millions)	Total State and Local Tax (in \$Millions)	Federal Tax (in \$Millions)
Direct	\$67	\$158	\$52	\$214	\$492	\$626
Indirect	\$60	\$141	\$46	\$191	\$438	\$294
Induced	\$9	\$20	\$7	\$28	\$63	\$60
Total	\$136	\$320	\$105	\$432	\$994	\$980

Statewide

The impacts of operations at Port Freeport extend outside Brazoria County and have a considerable impact at the state level. Using the MRIO analysis tools within the IMPLAN software, researchers determined the indirect and induced impacts of Port Freeport throughout Texas. There are no direct impacts outside of Brazoria County because all jobs directly related to the port activity are located within Brazoria County. Therefore, the additional state analysis adds only indirect and induced impacts. In total these impacts support 72,600 jobs in Texas, outside Brazoria County, with a labor income of \$5.4 billion and a total output of \$19.8 billion (Table 7).

Table 7. Statewide (Excluding Brazoria County) Estimated Total Impact Summary (in 2022 Dollars)

Impact Type	Employment	Labor Income (in \$Billions)	Total Value Added (in \$Billions)	Output (in \$Billions)
Indirect effect	33,312	\$3.3	\$5.9	\$13.3
Induced effect	39,329	\$2.1	\$3.6	\$6.4
Total effect	72,641	\$5.4	\$9.5	\$19.8

Again, there are no direct tax impacts outside of Brazoria County because all direct jobs are located within Brazoria County. The additional statewide indirect and induced impacts generate \$814 million in state and local taxes across Texas and \$1.1 billion in federal taxes across the state (Table 8).

Table 8. Statewide (Excluding Brazoria) Total Estimated Tax Impacts (in 2022 Dollars)

Description	Sub County General Tax (in \$Millions)	Sub County Specialty Districts Tax (in \$Millions)	County Tax (in \$Millions)	State Tax (in \$Millions)	Total State and Local Tax (in \$Millions)	Federal Tax (in \$Millions)
Indirect	\$72	\$150	\$50	\$252	\$524	\$690
Induced	\$40	\$83	\$28	\$140	\$290	\$451
Total	\$111	\$233	\$78	\$392	\$814	\$1,141

Table 9 shows the total statewide impacts when Brazoria County is combined with the rest of the state. In total, across the State of Texas, Port Freeport activities support about 110,000 jobs, generate \$8.8 billion in labor income, and have a total output of \$84.3 billion.

Table 9. Statewide Estimated Total Impact Summary (in 2022 Dollars)

Impact Type	Employment	Labor Income (in \$Billions)	Total Value Added (in \$Billions)	Output (in \$Billions)
Direct effect	12,048	\$1.8	\$12.7	\$52.8
Indirect effect	50,588	\$4.6	\$9.4	\$24.0
Induced effect	47,188	\$2.4	\$4.2	\$7.5
Total effect	109,824	\$8.8	\$26.3	\$84.3

Table 10 shows the total tax impacts across the state and Brazoria County. In total, across the State of Texas, Port Freeport activities generate \$1.81 billion in state and local taxes and \$2.15 billion in federal taxes.

Table 10. Statewide Estimated Total Tax Impacts (in 2022 Dollars)

Description	Sub County General Tax (in \$Millions)	Sub County Specialty Districts Tax (in \$Millions)	County Tax (in \$Millions)	State Tax (in \$Millions)	Total State and Local Tax (in \$Millions)	Federal Tax (in \$Millions)
Direct	\$68	\$159	\$52	\$215	\$493	\$650
Indirect	\$132	\$292	\$97	\$444	\$964	\$986
Induced	\$49	\$104	\$35	\$169	\$357	\$514
Total	\$248	\$555	\$183	\$827	\$1,814	\$2,150

National

The impacts of the port were also estimated at the national level. Just as with the statewide impacts, there are no direct impacts outside of Texas, because all direct impacts occur in Brazoria County. The additional national analysis shows that Port Freeport supports an additional 156,500 jobs outside of Texas, accounting for \$13.7 billion in labor income, and a total additional output of \$72.9 billion (Table 11). When added to the statewide impacts, in total, Port Freeport supports 266,300 jobs nationally, generating \$22.5 billion in labor income, with a total national economic impact of \$157.3 billion.

Table 11. National Estimated Total Impact Summary (in 2022 Dollars)

Region	Employment	Labor Income (in \$Billions)	Total Value Added (in \$Billions)	Output (in \$Billions)
National (Excluding Texas)	156,492	\$13.7	\$29.5	\$72.9
Total National	266,316	\$22.5	\$55.9	\$157.3

Table 12 shows the additional tax impacts from the national analysis. Nationally, outside of Texas, Port Freeport generates \$3.5 billion in state and local tax revenues and \$3.3 billion in federal tax revenues. When combined with the tax revenues generated in Texas, this results in Port Freeport generating \$5.3 billion in state and local taxes and \$5.4 billion in federal taxes nationally.

Table 12. National Estimated Total Tax Impacts (in 2022 Dollars)

Region	Sub County General Tax (in \$Millions)	Sub County Specialty Districts Tax (in \$Millions)	County Tax (in \$Millions)	State Tax (in \$Millions)	Total State and Local Tax (in \$Millions)	Federal Tax (in \$Millions)
National (Excluding Texas)	\$704	\$387	\$447	\$1,972	\$3,510	\$3,274
Total National	\$952	\$942	\$631	\$2,799	\$5,323	\$5,424

Discussion of Results

The previous 2019 analysis estimated about 15,800 direct jobs associated with the port, \$61.8 billion in output in Brazoria County, \$98.6 billion in statewide output, and \$149 billion in output nationally. The 2022 analysis estimated 12,048 direct jobs, \$64.6 billion in output in Brazoria County, \$84.3 billion in output statewide, and \$157.3 billion in output nationally. While overall output is higher, there was a reduction in jobs and statewide output. This seeming reduction is entirely related to temporary construction jobs at the port in 2019. In 2019, there were 6,200 construction jobs associated with the port and only 1,800 in 2022. Because these are real jobs that exist at the port and contribute to the economic impact, they should not be discounted; however, they are temporary jobs with temporary impacts and can cause the results to have large swings from year to year.

To get a clearer picture of the ongoing impacts at the port that can reasonably be expected to continue over time, impacts were also calculated for all non-construction jobs. These are jobs that will remain at the port long term and are much more consistent from year to year. Simply looking at the total jobs gives the impression that port activity has decreased since 2019; however, this is not the case. While total jobs decreased from about 15,800 to 12,000, non-construction jobs increased from about 9,400 to 10,200, or by about 8.5 percent. The non-construction impact for Brazoria County in 2019 was \$60.4 billion, compared to \$64.2 billion in 2022. This number gives a more accurate picture of the true impact of port activities.

Aside from construction jobs decreasing in 2022, there were some minor changes in other sectors. As noted previously, overall non-construction jobs increased by about 8.5 percent. Jobs in the water transportation sector increased by about 23 percent, jobs in trucking increased by about 22 percent, jobs in petrochemical manufacturing increased by about 3 percent, and petroleum refining jobs decreased by about 6 percent.

STRATEGIC OPPORTUNITIES

The economic impact analysis shows that Port Freeport has substantial economic impacts on the local, state, and national economies, in terms of jobs supported, labor income, and tax revenues generated. These impacts are generated by businesses that rely on Port Freeport to operate. Without the trade facilitated by the port, these impacts would not exist. In addition to the ongoing development at the port, several other strategic opportunities were identified, including developable land at the port and possible future expansions at the port and at port-dependent businesses which will further enhance trade activity.

Developable Land

Port Freeport maintains several thousand acres of open land. Over 500 acres have been mitigated and are ready for development, with over 1,800 additional acres available for future development (33). Since the 2019 report, Port Freeport has acquired an additional 100 contiguous acres directly adjacent to the Velasco Terminal for future expansion.

In addition to the available Port property, the City of Freeport maintains long-term planning documents that are designed to revitalize the existing housing stock and redevelopment of underdeveloped and vacant lots within the city (34). These land use goals coincide with the increased economic development and workforce needs of the growing operations at Port Freeport. While this land use does not directly impact port operations, it does help support the indirect and induced impacts produced by the port. Figure 7 provides a view of Port Freeport's property.

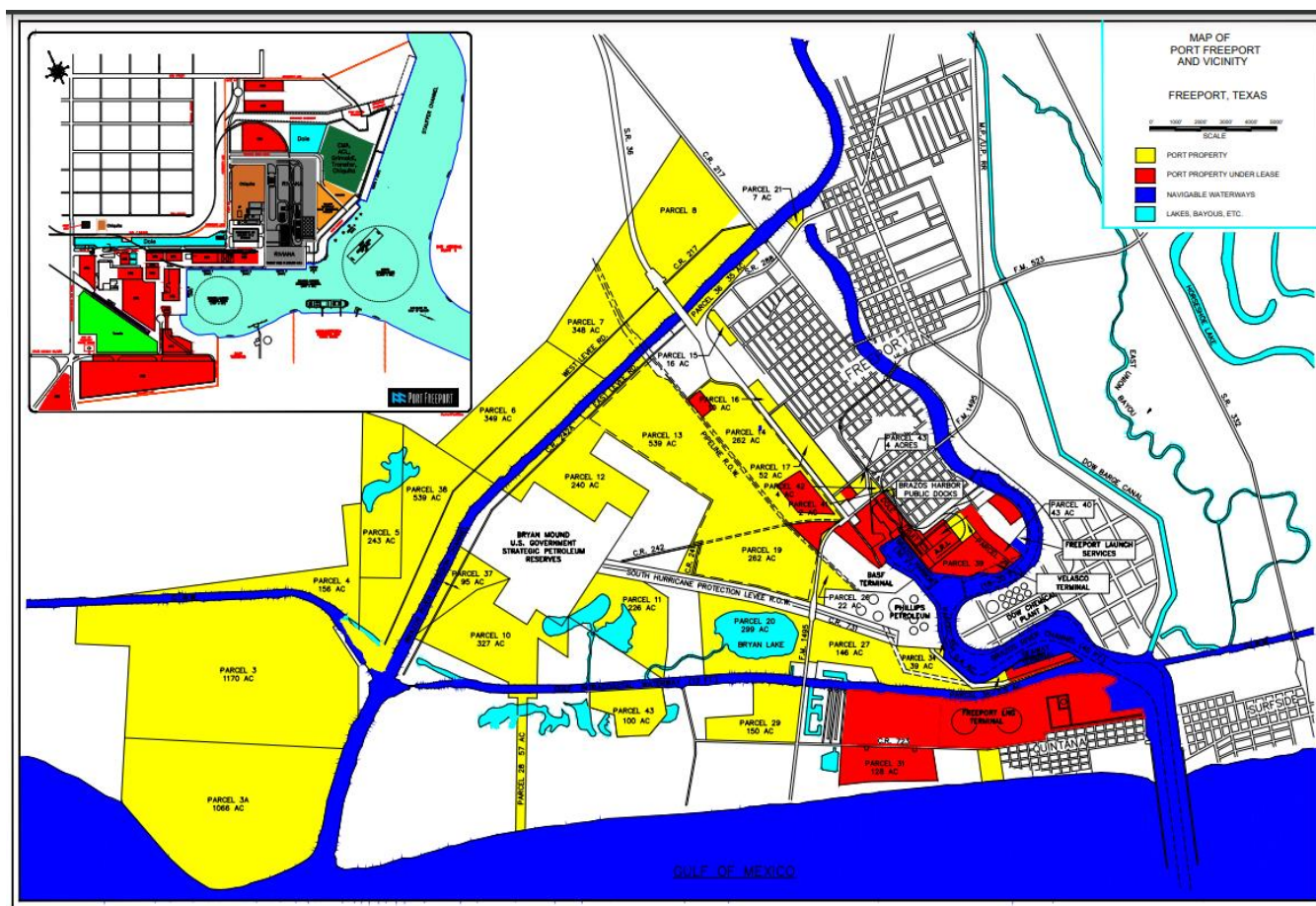


Figure 7. Port Freeport Facility Map (35)

Future Development

The Economic Development Alliance of Brazoria County (EDA) regularly updates a list of investments in the county. In addition to the information on the ongoing and recently completed projects, the group also examines announced projects and serious prospects. Port Freeport also expects to conduct its plan to enhance port facilities. Once completed, these projects will bring in over \$3.5 billion in capital investment, create 101 new direct jobs, and support up to 288 total jobs in the region.

Dow Chemical Co. – MDI Plant

One announced future project is The Dow Chemical Methylene Diphenyl Diisocyanate (MDI) Plant. This plant will be in Freeport and completed in 2023. The plant would replace the existing plant in La Porte and increase MDI capacity by 30 percent (36). Construction of the plant will bring in \$157 million in capital investment and employ 270 construction workers at its peak. Once complete the plant is expected to generate 16 new direct company jobs and support 71 total jobs (37).

Dow Chemical Co. – Polyethylene Plant

Dow Chemical will potentially construct a Polyethylene plant in Freeport, with construction beginning in 2023 and completion in 2025. The project would bring in \$715 million in capital investment and employ 900

construction workers during the peak construction period. If completed, the plant would create 40 new direct company jobs and support up to 130 total jobs (38).

Freeport LNG – Natural Gas Liquefaction Train 4

Originally receiving an extension until 2026, Freeport LNG requested 2022 an additional extension to complete Train 4. A new completion date of 2028 is waiting for the approval of FERC (39). Project construction will bring in \$2.4 billion in capital investments and employ 1,200 construction workers at its peak. When completed it is expected to create 45 new direct company jobs and support 87 total jobs (40).

Freeport Harbor Channel Improvement Project

The Freeport Harbor Channel Improvement Project commenced in 2021 and is planned to complete in 2025, a head of Port Freeport's centennial anniversary. The project will deepen the federal channel from 46 feet to 51-56 feet. The project has also widened the narrowest portion of the channel from 275 feet to 400 feet to provide a greater safety margin for modern vessels arriving to Velasco Terminal. (41). This project will bring in \$295 million in capital investment, of which the federal government will provide \$165 million, and Port Freeport will provide \$130 million (42).

SUMMARY

This report begins with a brief overview of the importance of the Texas Ports System, including the types of volumes of commodities moving through the system. Following this overview, the report identified the types of commodities moving through Port Freeport, the existing operations at the port, as well as an update of project completions at the port since 2019.

The methodology section of the report discusses how data was gathered for the analysis and how the IMPLAN analysis was conducted. Researchers first developed an online survey to send out to Port Freeport tenants, companies with private terminals, and other relevant companies that were identified. Follow-up telephone interviews with these companies were conducted as necessary, with other data being provided by the Brazoria County EDA and Port Freeport staff. Once the data was collected, it was used as inputs to the IMPLAN model, which estimated local, statewide, and national impacts of Port Freeport Operations, in terms of employment, labor income, tax revenues, and total economic output.

The results estimated that nationally, Port Freeport supports about 12,000 direct jobs, 266,300 total jobs, including direct, indirect, and induced, \$22.5 billion in labor income, \$5.3 billion in state and local tax revenue, \$5.4 billion in federal tax revenue and \$157.3 billion in economic output. Within Texas, the Port supports about 12,000 direct jobs, 37,200 total jobs, including indirect and induced, \$8.8 billion in labor income, \$1.8 billion in state and local tax revenue, \$2.2 billion in federal tax revenue, and \$84.3 billion in total economic output.

Since the previous 2019 study, the estimated number of heavy construction workers at the port decreased resulting in a lower statewide economic impact and number of jobs than the previous report. To account for this the impact of ongoing non-construction jobs at the port was measured separately. When compared to the same types of non-construction jobs in the 2019 report, this shows an increase in both jobs and economic impact. This shows that while there happens to be less construction ongoing at the time of this report, the true impact of ongoing operations at the port has grown.

Throughout this study, researchers have shown that Port Freeport has a considerable impact not only on the local economy of Brazoria County but also on the state economy. These results, coupled with the billions of dollars of planned investments in facilities and infrastructure at the port, show that the area is likely to see continued economic growth.

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