

Louisiana Economic Forecast^{TM SM}

State and MSAs: 2024 and 2025

Prepared by: Dr. Loren C. Scott, President, Loren C. Scott & Associates, Inc.



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Louisiana Economic Forecast: State and MSAs 2024 and 2025

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October 2023

Copies of the Louisiana Economic Forecast: State & MSAs are available for purchase by contacting Dr. Scott at LScottecon@gmail.com.

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Acknowledgements

“...in an abundance of counselors there is safety. “

Proverbs 11:14

It is a steaming afternoon in mid-August and the first draft of the Louisiana Economic Forecast is complete. The first emotion is one of relief. The second is gratitude: (1) Gratitude for no major hiccups during the writing, and (2) awareness of, and gratitude towards, all of you who make this document possible.

We are especially grateful to our 13 sponsors. Without their financial support, the first step could not have been taken. Four of them---**Blue Cross Blue Shield of Louisiana, Cleco, J.P. Morgan Chase, and Roy O. Martin**---are very generous Platinum Sponsors and the remaining vital nine are our Gold Sponsors--- **Acadian Companies, BRF, the Cyber Innovation Center, Entergy, HomeBank, ISC, the Port of Baton Rouge, Syrah Resources, and Turner Industries.** Many thanks to you all for saying “yes.”

The quote from Proverbs came immediately to mind when I reflected on all the phone calls answered and the tedious data gathering at individual firms, by economic developers, staff at ports, and so many others. The staff at Secretary **Don Pierson’s** Louisiana Department of Economic Development figured critically in this work, and we give a special shout-out to **Larry Collins**, the Executive Director of the Office of International Commerce for a lengthy review of announcements across the State. A non-exhaustive list of persons who gathered data for us includes **Michael Hecht, Harrison Crabtree, Mary Lachapelle, Craig Spohn, Kevin Nolten, David Doss, Adam Knapp, Kate MacArthur, Andrew Fitzgerald, Russell Richardson, David Broussard, Scott Gammel, George Swift, Jim Rock, Kevin Melton, Amanda Deblanc, Rich Self, Courtney Bryan, Eric England, Bob Fudickar, Vic Lafont, Mike Tarantino, Chett Chassion, Larry Deroussell, Dale Logan, Jason French, Dawn Cole, Connie Fabre, Lynn Hohensee, Sue Nickels, Katy LeBlanc, Rocky Rockett, Paul Sawyer, Lane Callaway, Liz McCain, David Bennett, Craig Romero, Brandy Christian, Ronald Wendell, Debra Randolph, Zazell Dudley, Julia Fisher, Gloria Pigner, Michelle Hall, John Paul Domiano, Creed Romano, Buck Vandersteen, Zach Nagar, Stacey Zawaki, Ginger Cangelosi, Roy Heatherly, Sue Nicholson, Mike Edwards, and Stephen Price.**

Note that this huge list does not include those of you at private firms, who took our calls at busy times and answered our questions patiently and with trust. Your information added untold value to the forecast. We really appreciate your time and effort.

The appearance of the final product can be traced to the very professional editorial work done by **Stacy Gaskin** and **Mary Jo Neathery**. We can always depend on a great visual layout of the front and back covers by master graphic designer **Steve Rankin**.

We learn early on that first impressions are of first importance. We get to start out the forecasting year on a perfect note at the prestigious Business Report Top 100 Luncheon. Owner **Julio Melara** only does things top notch, and in this case we are the happy beneficiary. Thanks, my friend.

Finally, those of you who know us, know that my wife, **Peggy**, and I work very much as a team---especially on the LEF. She is a ready source of relevant articles I may have missed. She does no small amount of the technical, tax, and copyright work. Her vast business knowledge base makes her the perfect person for bouncing off ideas and suggesting improvements. I know I repeat myself, but she is the smartest business person I know. And a great wife.

Among these counselors, I find safety.

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EXECUTIVE SUMMARY

"The goal of forecasting is not to predict the future, but to tell you what you need to know to take meaningful action in the present." –Paul Saffo

This interesting quote from a Silicon Valley forecasting guru has more than a gram of merit in it. You may disagree with the forecast made in different areas of the State, but we hope within the 100+ pages of this document are tons of data and information to help you make better decisions for the future.

Our forecasts are based on a very short and shallow recession at the national level in early 2024 and modest growth in RGDP into 2025. Because (1) of the State's small durable goods-dependency, (2) the several MSAs that are still recovering from the COVID shutdown and five natural disasters, and (3) an unusually large number of major capital projects coming to FID, we believe the Louisiana economy will hardly be touched by the national recession.

Regarding point #3, we document a remarkable \$154.4 billion in industrial projects either under construction or awaiting an FID in just three MSAs. Accommodating carbon capture and sequestration (CCS) and sourcing electricity from renewables will play an outsized role in getting many announced plants to FID. Our forecasts are also based on oil prices stabilizing in the \$80 a barrel range, and natural gas prices slowly increasing to \$3.90 per MMBtu in 2025. Our employment forecasts for each of Louisiana's nine MSAs and rural Louisiana are summarized in the Executive Summary Table.

Our forecasts by MSA and Rural Louisiana can be summarized as follows:

- **The New Orleans MSA** has still not fully recovered from the COVID shutdown and is being held back by a lagging convention business and still weak exploration activity in the Gulf. We are projecting 9,500 jobs in 2024 (+1.7%) and 11,300 new jobs in 2025 (+2%). This projection is based on several announced industrial projects breaking ground, \$2 billion in CPRA spending coming to the area, and the movement of the Treasure Chest Casino on land.
- We are projecting 11,500 jobs in 2024 (+2.7%) and 13,000 new jobs in 2025 (+3%) for the **Baton Rouge MSA**, where our optimism is based on \$19 billion in announced projects having a high probability of breaking ground in 2024. Major contractor Turner Industries is hiring 3,000 new construction

workers in anticipation of the boom. Multi-millions in federal flood control spending are on the horizon, along with the movement of two downtown riverboat casinos on land.

- We are projecting 3,800 jobs in 2024 (+1.9%) and 3,300 new jobs in 2025 (+1.7%) for the **Lafayette MSA**. The region is still feeling the drag of weak drilling activity in the Gulf, but maintenance and repair work on production platforms is robust. SafeSource Direct, First Solar, and Turner Industries will combine for 1,800 new jobs in this MSA over the next two years.
- We are projecting a very healthy two years ahead for **the Shreveport-Bossier MSA**, with the job-count up 3,000 jobs (+1.7%) in 2024 and 3,900 jobs (+2.2%) in 2025. Opening of the Amazon fulfillment Center and SLB at the old GM plant will generate 1,600 new jobs here, and \$250 million is scheduled for a new, on-land casino to replace the closed Diamond Jack. A major new \$1 billion capital project at the Port of Caddo-Bossier is looking good, as is the future for the Haynesville Shale.
- Because of arrested recovery from four significant natural disasters, the **Lake Charles MSA** has had the poorest recovery from the COVID shutdown in the State. We are projecting 3,500 jobs (+3.6%) for 2024 and 3,700 new jobs for 2025 (+3.9%). These optimistic projections depend heavily on at least three proposed LNG projects breaking ground. Lake Charles was the big winner in State road lettings, primarily because of \$1.5 billion allocated for a new I-10 bridge over the Calcasieu River.
- The second worst performance in recovering from the COVID shutdown is the **Houma MSA**, which is still suffering from the devastating effects of Hurricane Ida. We are projecting 1,300 new jobs (+1.6%) in 2024 and another 1,500 jobs (+1.8%) in 2025 for this MSA. The drag of the poor rig count in the Gulf is holding the region back some, but maintenance/repair/painting work on the growing number of platforms in the Gulf is generating significant new business in the MSA. Ship builders are hiring again, there are exciting things happening at Port Fourchon, and the CPRA will pump over one-half billion dollars into the region over 2024-25.

- We are concerned about the future of two large employers in the **Monroe MSA**---Lumen Technologies and Vantage Health/Affinity. We are projecting the MSA will add 800 jobs in 2024 (+1%) and 500 jobs in 2025 (+0.6%).
- We are unusually optimistic about the next two years for the **Alexandria MSA** because of three major projects: (1) a \$1.8m billion Beaver Lake Renewable Energy plant, (2) the \$1.1 billion Diamond Vault project by Cleco, and (3) the \$75 million Ucore rare earths processing plant. We are projecting a strong 1,600-job addition in 2024 and a historically strong 2025 of +2,600 jobs (+4%).
- Significant capital projects by Niagara Bottling (\$165 million) and North Oaks Healthcare (\$46 million), and steady employment growth in the MSA's distribution/warehousing sector should create two good growth years for the **Hammond MSA**. We are projecting robust growth for the smallest MSA in the State, with 2,000 new jobs in 2024 (+4.1%) and 1,000 new jobs in 2025 (+2%).
- The 29 **rural parishes** in the State should continue to recover as the wood industry, Syrah Resource's half billion-dollar phase 3, and potentially a \$2.8 billion Louisiana Green plant start construction. At least \$320 million in solar farms are scheduled for these parishes. We are forecasting 1,200 jobs a year over 2024-25, a 0.6% annual growth rate.
- Summing the projections across all nine MSAs and the rural area, we are projecting that the **State** will add 38,700 jobs in 2024 (+2.0%) and 42,200 jobs in 2025 (+2.1%). These are perhaps the most optimistic forecasts we have ever produced for the State. If these forecasts are near the mark, then in 2024, Louisiana will break through that 2,000,000 annual employment level for the first time in its history.

Executive Summary Table

Item	2023	2024	2025
BASIC ASSUMPTIONS:			
Real Gross Domestic Product: Growth	1.6%	0.5%	2.0%
Inflation Rate	4.1%	2.8%	2.6%
30-Year Fixed Interest Rate	6.6%	5.8%	5.6%
Oil Price: barrel	\$72.50	\$80.00	\$82.00
Natural Gas Price: MMBtu	\$2.70	\$3.10	\$3.90
STATE PROJECTIONS:			
Non-Farm Employment (000s):	1,963.3	2,002.0	2,044.2
Absolute Growth Rate	43.1	38.7	42.2
Percent Growth Rate: Employment	2.2%	2.0%	2.1%
MSA PROJECTIONS: EMPLOYMENT (000s)			
Alexandria	63.8	65.4	68.0
Absolute Change	1.6	1.6	2.6
Percent Growth Rate	2.6%	2.5%	4.0%
Baton Rouge	426.3	437.8	450.8
Absolute Change	15.3	11.5	13.0
Percent Growth Rate	3.7%	2.7%	3.0%
Hammond	48.5	50.5	51.5
Absolute Change	1.1	2.0	1.0
Percent Growth Rate	2.3%	4.1%	2.0%
Houma	82.1	83.4	84.9
Absolute Change	0.9	1.3	1.5
Percent Growth Rate	1.1%	1.6%	1.8%
Lafayette	204.4	208.7	212.2
Absolute Change	3.5	3.8	3.5
Percent Growth Rate	1.7%	1.9%	1.7%
Lake Charles	97.9	101.4	105.1
Absolute Change	2.5	3.5	3.7
Percent Growth Rate	2.6%	3.6%	3.9%
Monroe	78.5	79.3	79.8
Absolute Change	1.1	0.8	0.5
Percent Growth Rate	1.4%	1.0%	0.6%
New Orleans	568.6	578.1	589.4
Absolute Change	12.4	9.5	11.3
Percent Growth Rate	2.2%	1.7%	2.0%
Shreveport-Bossier	178.7	181.7	185.6
Absolute Change	3.3	3.0	3.9
Percent Growth Rate	1.9%	1.7%	2.2%
RURAL EMPLOYMENT	214.5	215.7	216.9
Absolute Change	1.4	1.2	1.2
Percent Growth Rate	0.7%	0.6%	0.6%

Source: Loren C. Scott. *Around a wide range of \$30 to \$140 a barrel. **Around a range of \$1.50 to \$6.00 per MMBtu.

UNDERLYING ASSUMPTIONS: 2024-25 FORECAST

"Some people claim that they predicted a downturn, but they forecast a downturn every day, and finally, one day, they are right. Even a broken clock is right twice a day."

— **Naved Abdali**

Our long-time readers will acknowledge that pessimism about the future is not part of our DNA. If anything, we have been accused of being too optimistic about Louisiana's future.

Our forecast this year mixes optimism and pessimism. We are optimistic about Louisiana over the next two years, but we take the side of those economists who are predicting a shallow recession in the immediate future at the national level.

Outlook for the National Economy

What is with the "take the side" comment in the last paragraph? We have rarely experienced a period in the last four decades when economists were more divided on whether or not there is a recession in the nation's immediate future.

Why is the possibility of a recession even on the table? In June 2022 the Bureau of Labor Statistics (BLS) reported the consumer price index (CPI) was rising at a rate of 9.1%---a rate not seen in the U.S. since the early 80s.

The Federal Reserve (Fed) could not ignore this news. One of the Fed's mandates is to keep inflation in the 2% range. One tool the Fed has used to battle inflation is the lifting of interest rates. In the last 14 months, the Fed has raised interest rates nine times by a total of 425 basis points. The Fed has also used a tool called open market operations to take about \$95 billion a month out of the economy by selling bonds in the market. While this may seem like a large number, it represents a rather small part of the Fed's balance sheet.

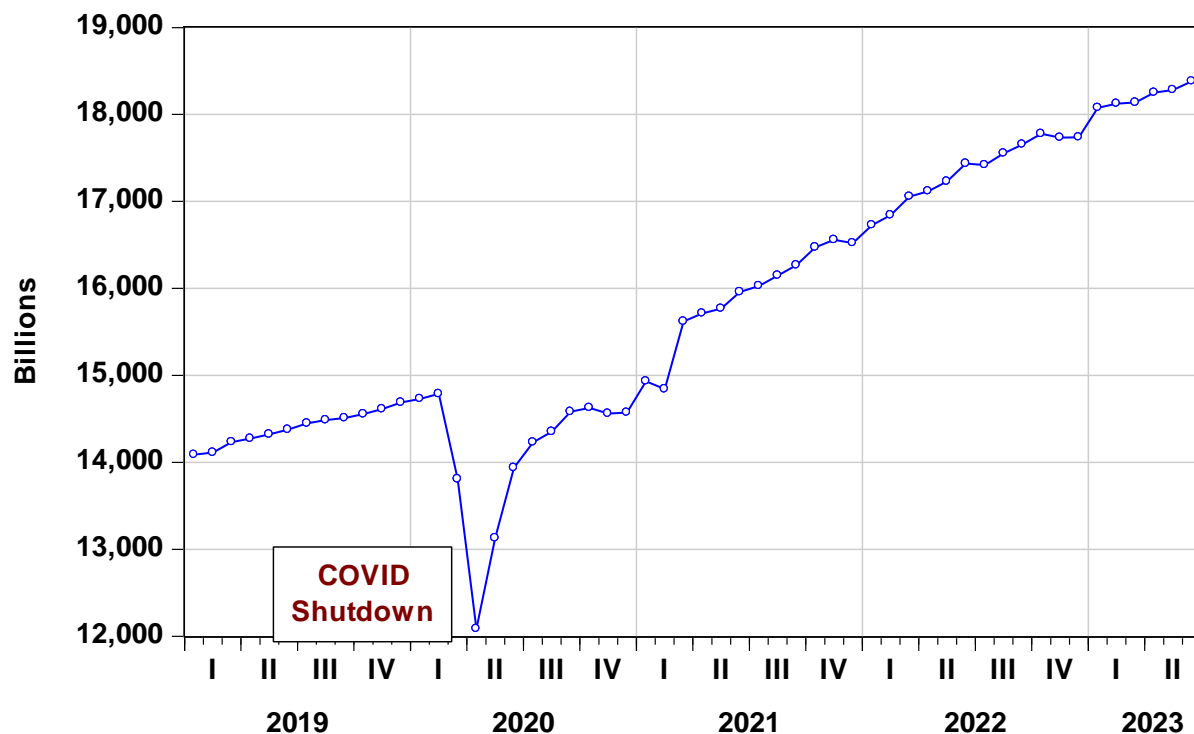
Both of these measures are designed to cool off the economy, to slow it down so that inflation will moderate. The question is, will the Fed achieve a "soft landing" (i.e., no recession) or will these higher rates hammer sales in those interest-rate-sensitive sectors like housing, furniture, automobiles, and business investments enough to drive the economy into a recession?

Soft Landing Argument

Soft landing proponents base their projections largely on the tenacious growth of **personal consumption expenditures** (PCE) despite the Fed's restrictive policies. PCE is the largest component by far (two-thirds) of real gross domestic

product (RGDP), and as seen in Figure 1, PCE looks to be on a steady track upward since the COVID shutdown despite the large bump in interest rates.

Figure 1
Real Personal Consumption Expenditures:
January 2019-June 2023

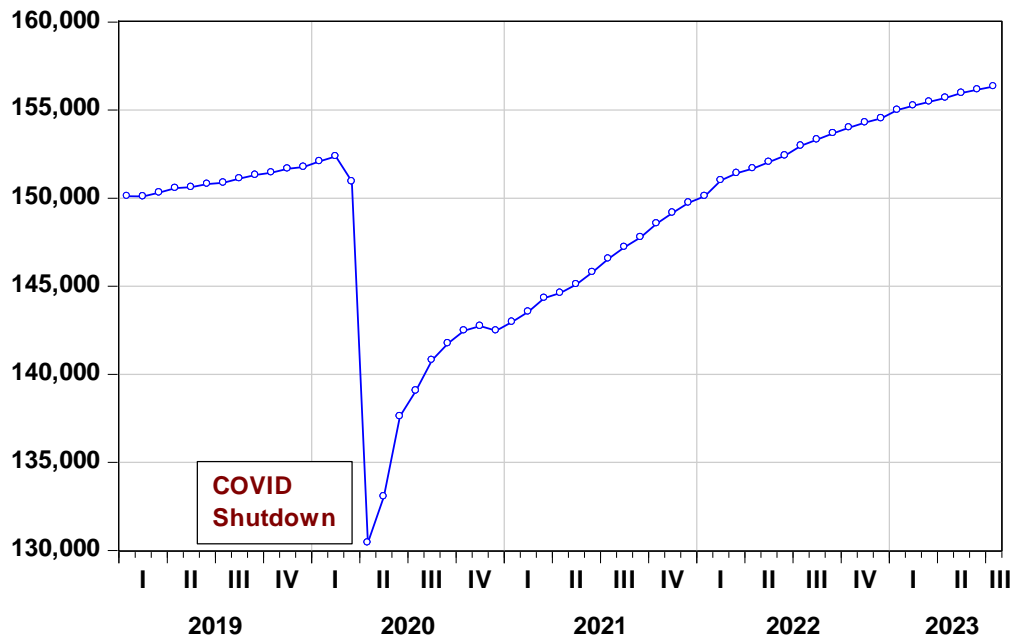


Source: Federal Reserve Bank of St. Louis, FRED

These same economists' opinions are motivated by **employment trends** in the U.S. as well. Note that the trend line in U.S. nonfarm employment in Figure 2 virtually mimics the PCE trend in Figure 1. How is it possible to expect a recession on the near horizon with such strength in the labor market?

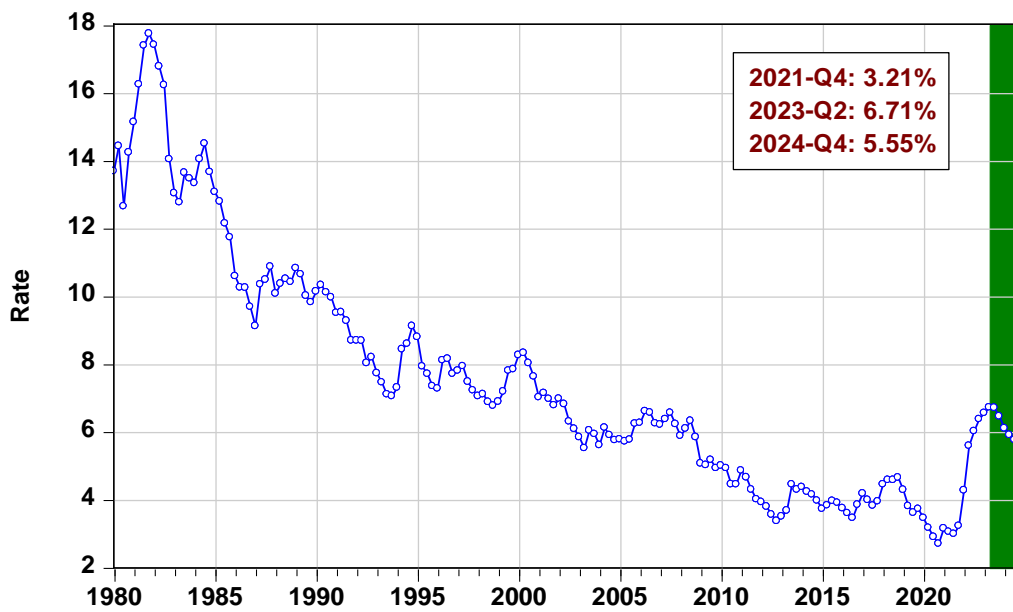
Soft landing proponents also make the cogent argument that while interest rates have risen significantly, they are still quite low by historical standards as illustrated in Figure 3. Conventional mortgage rates are projected to have peaked this year at 6.71% in 2023-II. This rate is not that different from those in 2006 when housing starts reached a peak of 2.12 million.

Figure 2
U.S. Nonfarm Employment:
January 1919 - July 2023



Source: Federal Reserve Bank of St. Louis, FRED

Figure 3
Conventional Mortgage Rate



Forecast: Wells Fargo Economics, July 2023

Recession Argument

Our projections for 2024-25 for the Louisiana economy are based on the U.S. experiencing a mild recession starting in late 2023 or early 2024 and lasting about two quarters. There are several reasons behind our vote for the "recession crowd." First, **we do not believe the Fed's tightening job is over**. The CPI in June had dropped all the way down from the high of 9.1% to 3%. However, the devil is in the details, and the Fed pays attention to the details. The big drop is largely attributable to a 16.7% decline in the very volatile energy prices. The core CPI (CPI less food and energy) has remained stubbornly sticky at 4.8%. Food prices were still running 5.7% ahead of a year ago. These numbers are inconsistent with the Fed's mandate of 2%. More tightening is ahead.

Second, there are some typically reliable signals of a recession on the horizon. The **Index of Leading Economic Indicators** has now declined for 15 straight months. A decline of three straight months in this metric usually signals a recession. The Institute for Supply Management's **Manufacturing Composite Index** has now declined for nine straight months. The **yield curve** has been inverted for several months, another harbinger of a recession.

Third, there are **two forecasting groups** we follow for whom we have a lot of respect. One is the fine economics department at Wells Fargo. The middle column of Table 1 contains their forecast, which calls for a mild recession starting in 2024-I and lasting two quarters. Actually, Wells Fargo's projection for the last quarter of this year is for a near recession quarter. For those who do not want to rely on the forecast of just one group, there is Consensus Forecast USA. This is an average of nearly 30 different forecasting firms, including Wells Fargo. The consensus forecast is for an even shallower recession starting in 2024-I and lasting two quarters. The fact that the consensus forecast is for a recession gives us even more confidence in our position that there will be one.

Table 1
RGDP Forecasts

Quarter	Wells Fargo*	Consensus**
2023-I	2.0%	2.0%
2023-II	2.4%	2.4%
2023-III	2.0%	1.4%
2023-IV	0.6%	-0.1%
2024-I	-0.9%	-0.4%
2024-II	-1.2%	0.4%
2024-III	1.8%	1.4%
2024-IV	2.6%	1.9%

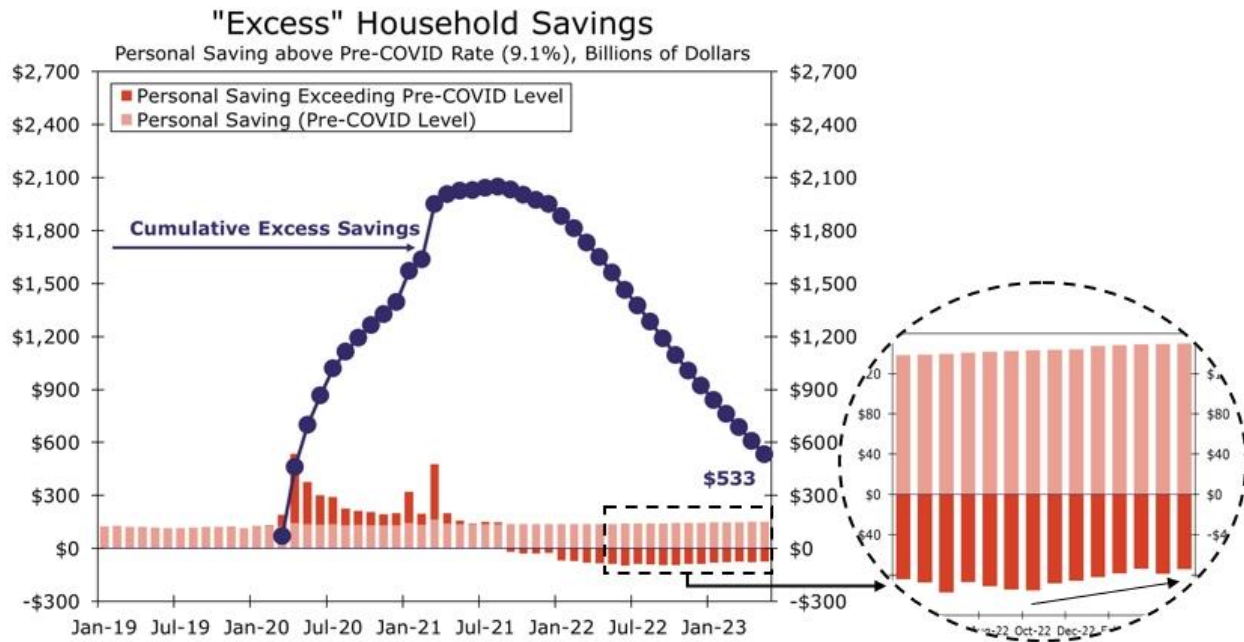
***U.S. Economic Outlook, August 2023. **Consensus Forecast-USA, August 7, 2023.**

3-Legged Stool Supporting PCE

A fourth foundation for our recession forecast concerns the expected future growth of PCE. The impressive upward growth of PCE back in Figure 1, according to the Wells Fargo group, is supported by a 3-legged stool that is about to collapse. The first leg is an **unusual pile of excess savings** that resulted from the two stimulus checks sent out during the COVID shutdown. The magnitude of this extra savings is vividly illustrated in Figure 4. Note that these savings built to a remarkable peak of over \$2 trillion. Like any peak, this one also has a downside. Excess savings have declined to the neighborhood of \$500 billion. At its present trajectory, this serious stimulus to PCE growth will vanish by the end of 2023.

A second leg supporting this stool has been the **easy availability of credit** prior to the Fed tightening program. One metric to measure this is credit standards for small firms which are tracked in Figure 5. Every time these standards are raised, the economy hits a blue bar, which is the indicator of a recession. Note that the standards line has increased sharply recently, suggesting another blue bar is just ahead.

Figure 4

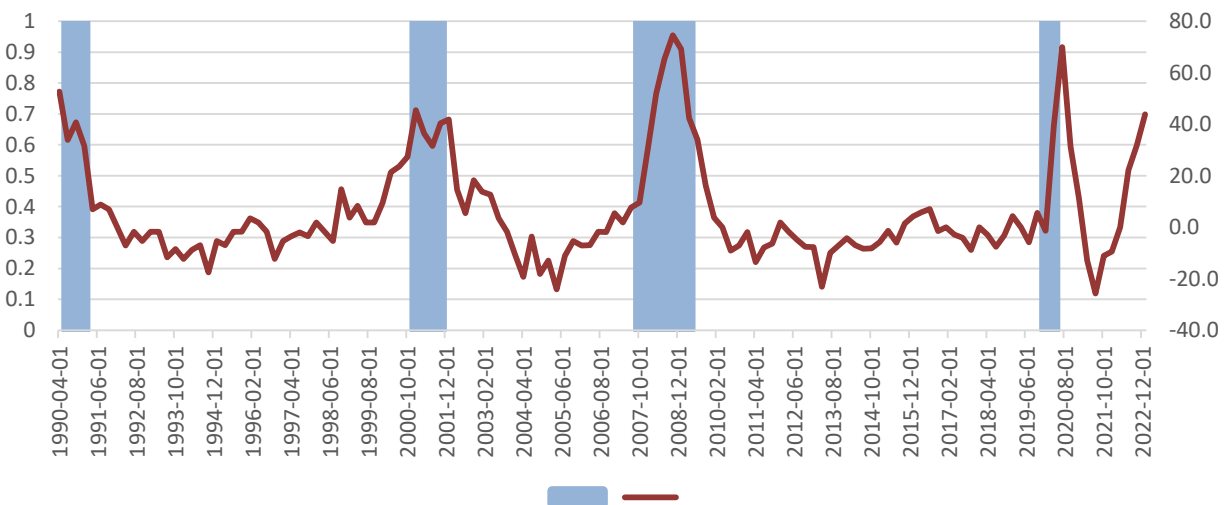


Source: Wells Fargo Economics Group

Figure 5

Credit Standards for Small Firms

Tighter Standards, Less Credit, Slower Growth



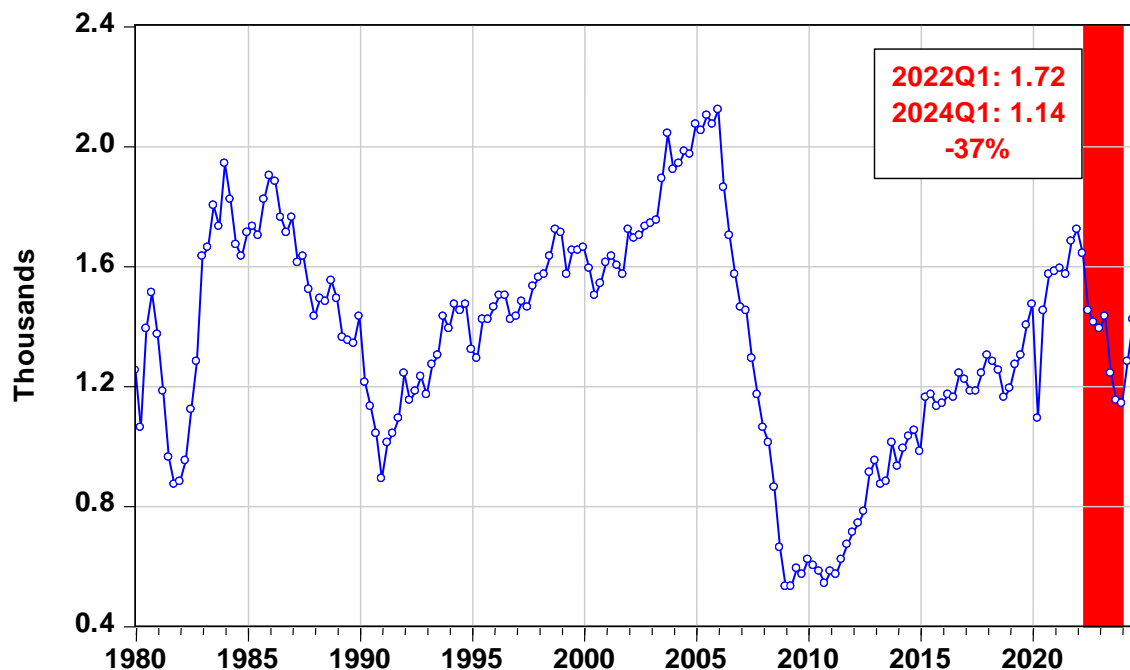
Source: Wells Fargo Economics Group

The third leg is **real disposable personal income**, which has been growing steadily. However, the growth rate in this metric is starting to slow. We believe these three supporting legs will no longer be able to buttress PCE by the end of the year, resulting in a recession.

Impacts on Interest-Sensitive Sectors

A fifth foundation for our recession argument is what is happening in the interest-sensitive sectors already---especially housing. Figure 6 tracks quarterly housing starts in the U.S. along with Wells Fargo's forecast through 2024-IV.

Figure 6
Housing Starts in U.S.



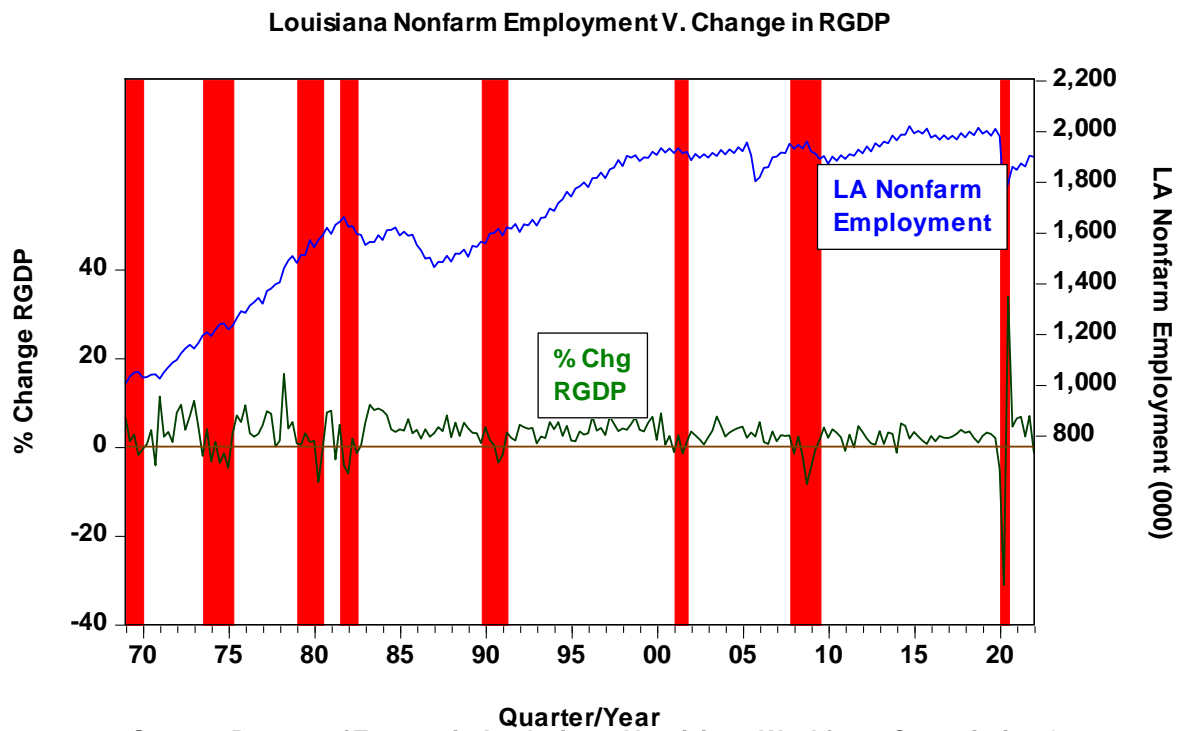
Source: FRED & Wells Fargo, July 2023

This forecasting group anticipates **housing starts will decline by 580,000 units** between 2022-I and 2024-I---a significant drop of 37%. The Bureau of Economic Analysis is already reporting a 20% decline (-369,000 starts) from the recent peak. This decline is certain to impact the furniture and appliance sectors. It would be difficult for the overall economy to sustain such a blow without incurring a recession. The good news in Figure 6 is Wells Fargo is projecting this housing blow to be short-lived with a robust recovery starting in late 2024.

Recession Impact on Louisiana

If we are correct that a short, shallow recession is on the near term horizon, what does this mean for Louisiana? Most likely the Louisiana economy will hardly feel the brunt of it. There are several reasons for this position. One is simply history, a fact charted out in Figure 7.

Figure 7



Source: Bureau of Economic Analysis and Louisiana Workforce Commission & Loren C. Scott & Associates, Inc.

The blue line in Figure 7 tracks Louisiana seasonally adjusted nonfarm employment by quarter, while RGDP is shown in the green line. The red bars represent the eight recessions the national economy has experienced since 1970. A careful examination of Figure 7 reveals that Louisiana's economy grew right through four of these eight recessions.

A dominate reason for this partial resilience is that Louisiana has a very modest durable goods manufacturing sector, as documented in Table 2. Louisiana's durable goods manufacturing dependency at only 3.3% is almost two full percentage points lower than the national average. Why is this important? If you thought you were losing your jobs, or if you did lose your job, what is the last

thing you would think about buying? The answer is a car, a house, furniture, appliances, etc. You postpone buying durable goods. You will still keep purchasing nondurable goods like food, electricity, and gasoline.

Table 2
Percent of Durable Goods Manufacturing by State & Nation

Region	% Durable Goods Manufacturing
U.S.	5.2%
Louisiana	3.3%
Alabama	8.8%
Mississippi	8.4%
Tennessee	7.2%

Source: www.bea.gov.

States with the greater dependency on durable goods manufacturing will really feel the heat from the recession. Alabama, Tennessee, and Mississippi have car assembly and first tier auto parts manufacturers within their boundaries, so these three states will feel the impact of the recession much more than Louisiana.

There are three other reasons behind Louisiana's expected resilience. First, two of its MSAs---Lake Charles and Houma---are still rebuilding from the devastating impact of hurricanes. Those rebuilding monies will help offset the impact of the national recession. Second, five of the State's nine MSAs have still not fully recovered all the job losses from the COVID shutdown. Rebuilding those jobs will also bolster Louisiana's economy over the next two years.

Finally, as we will document below, Louisiana has a remarkable industrial boom underway in the southern part of the State. Industrial contracting firms are gearing up for a massive hiring program associated with these industrial projects.

Oil Prices: Will the Saudis Set the Market?

Thirty years of teaching forecasting techniques to MBAs and Executive MBAs left the author with the conclusion that oil prices are the second most difficult item in the country to forecast.¹ So many factors, that are themselves unpredictable, strongly influence this market. Who could have predicted the Russian invasion

¹ The weather and/or climate holds the #1 spot.

of Ukraine and the world's response to Russian oil? How predictable are the Saudis regarding that country's output? Who could have forecast the radical change in the U.S. market created by the fracking phenomenon?

Last year at this time many countries reacted to the Russian invasion of Ukraine by embargoing imports of Russian's Ural oil. Several insurance companies vowed they would not insure crude carriers that transported Urals oil. Russia produces about 10% of the global oil output. As a result, by June 2022, the price of oil was over \$120 a barrel.

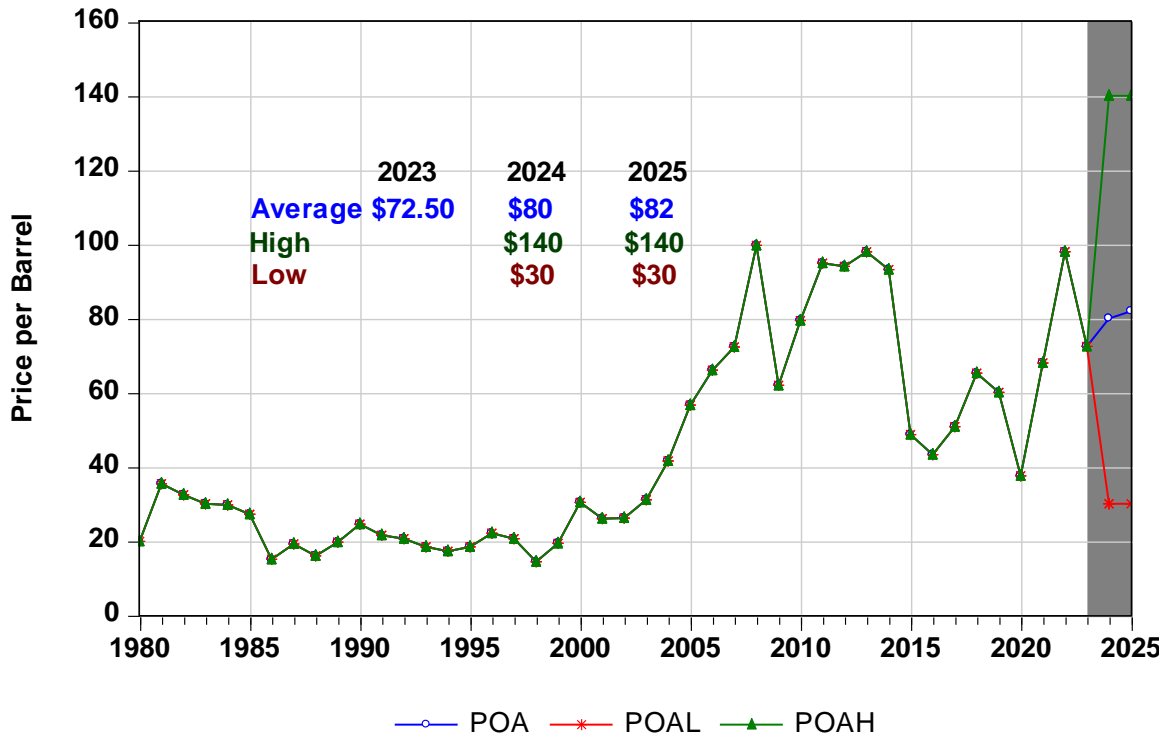
A year later oil prices are around \$80 a barrel. What happened? Many countries---specifically China and India---did not feel the moral imperative to embargo Urals oil, especially when Russia was selling their oil at a \$40 discount to the global price. Many insurance companies had no quarrel with insuring ships carrying Urals oil. In effect, the shipping lanes just shifted around so that Urals still largely entered the global market.

When oil prices dropped into the low \$70s in late spring this year, another relatively unpredictable intrusion was made in the market. OPEC+ began reducing their quotas, and the Saudis piled on by reducing their production even further. A total of over 5 mmb/d of oil was removed from the global supply. These cuts have been partially offset by supply increases in the U.S., Brazil, Guyana, Canada, and Norway.

The main point is the supply reductions were sufficient to get the global price just over \$80 a barrel. This is important because the Saudi's budget is based on at least \$81 a barrel. Indeed, it will be noted in Figure 8 that our oil price projections for 2024 and 2025 are at \$80-\$82 a barrel. We believe that the Saudi's will do whatever is necessary to keep the price of oil in that range.

The confidence range around our point forecast of \$80-\$81 a barrel is laughingly wide: \$30-\$140 a barrel. That is just the nature of oil prices. The greater the variability of prices and the more unpredictable its drivers, the wider the confidence range.

Figure 8
Oil Price Forecasts



Natural Gas Prices: Driving the Industrial Boom

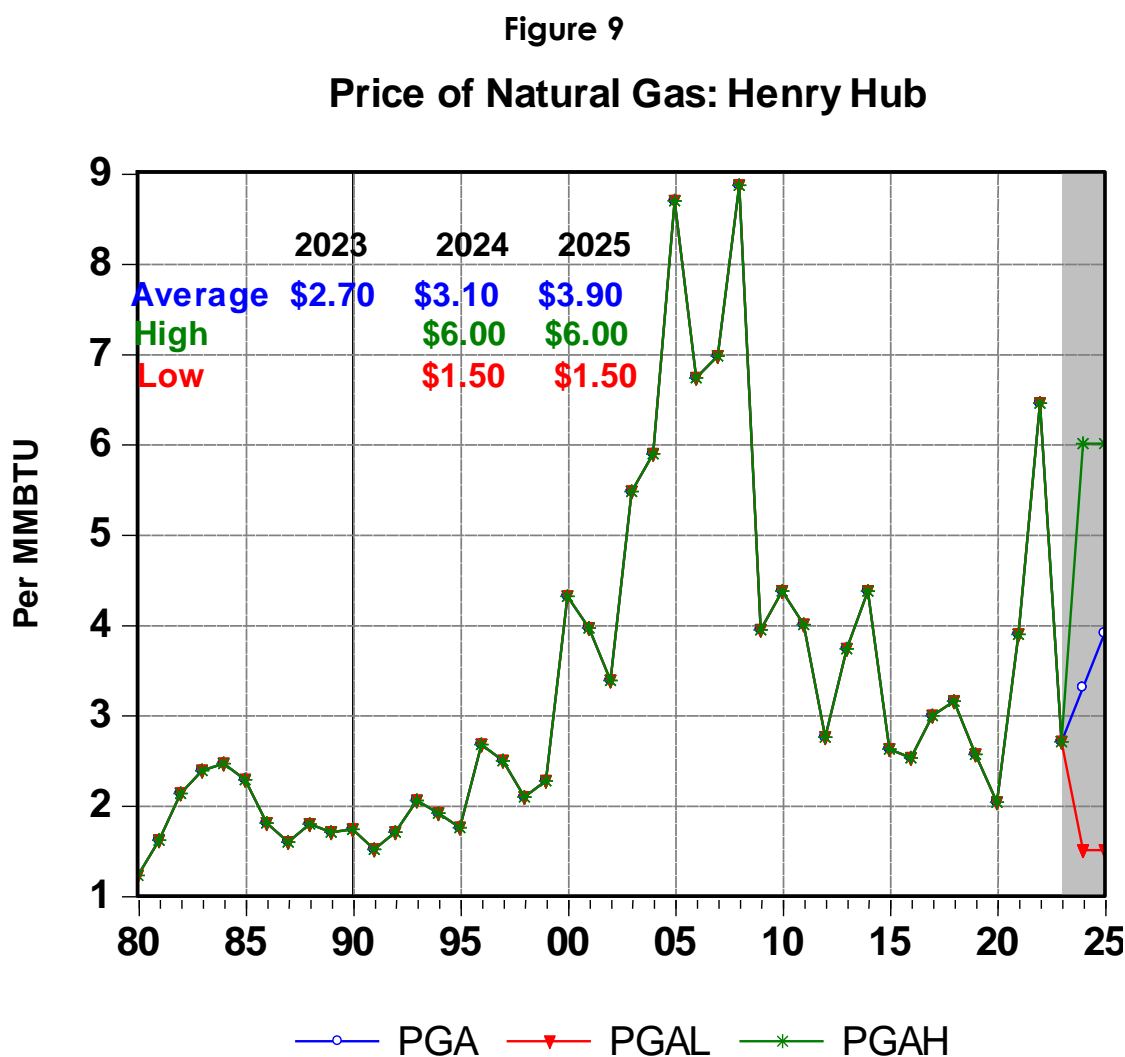
Earlier in this basic assumptions section a reference was made to an industrial boom underway in the Southern part of the State. The magnitude of this boom is revealed in Table 3, where we have documented the industrial announcements in three MSAs in Louisiana: (1) New Orleans, (2) Baton Rouge, and (3) Lake Charles. By our calculations **there are \$33.8 billion in projects under construction and \$120.6 billion in projects that have been announced, but for which no final investment decision (FID) has been made.**

Table 3

Area	Under Construction	Announced: No FID
New Orleans	\$21.4 Billion	\$39.8 Billion
Baton Rouge	\$11.6 Billion	\$19 Billion
Lake Charles	\$0.8 Billion	\$61.8 Billion
Totals	\$33.8 Billion	\$120.6 Billion

Source: Loren C. Scott & Associates, Inc.

This extraordinary boom started in about 2012, when the U.S. suddenly found itself awash in natural gas due to the adoption of hydraulic fracking in the oil and gas extraction industry. As seen in Figure 9, this new supply of natural gas caused natural gas prices to fall from the \$7-\$9 per million British Thermal Units (MMBtu) to the \$2-\$3 range.



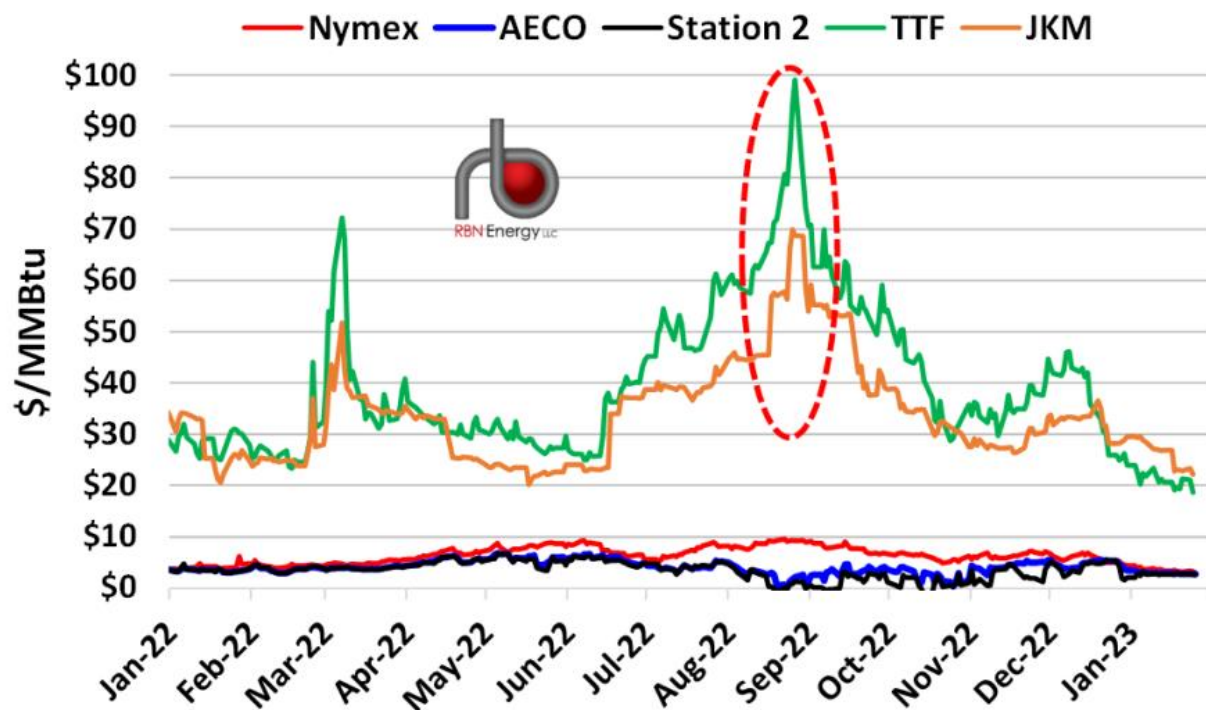
Natural gas is the primary feedstock---the raw material---for many chemical plants. A huge number of consumer products like, plastics, PVC pipe, fertilizers, etc., are made from natural gas. The cost of the main input in these chemical manufacturing facilities dropped significantly, spurring expansions.

Equally important, is that the price of natural gas in Asia and Europe actually went up, creating a significant competitive advantage to chemical manufacturers in the U.S. (see Figure 10 produced by RBN Energy). Costs are much higher in Asia and Europe because these countries have little to no natural gas within their borders, so they must import it. Sellers of natural gas have priced the product to these countries off the price of oil---about 15% of the oil price. Note the huge spike in natural gas prices in Asia and Europe in August-September of 2022. Because of the war and Europe's support of Ukraine, Prime Minister Putin was cutting off natural gas supplies to Europe. There was a scramble for natural gas, leading to the spike in Figure 10.

Figure 10

Price of Natural Gas: U.S. v. Japan & Europe

Nymex, AECO, Dutch TTF, and JKM Cash Prices



Why is the boom primarily manifesting itself in these three MSAs? All three MSAs lie along a major waterway accessible by deep-draft, ocean-going ships. Baton Rouge and New Orleans are on the Mississippi River, and Lake Charles is on the Calcasieu Ship Channel. These large ships are the cheapest way to move bulk

chemicals to the world markets. Second, this region contains a mass of natural gas pipelines, making the product easily accessible to the companies. Third, the region contains a vast supply of salt domes, making another major input for many of these companies---brine---easily available.

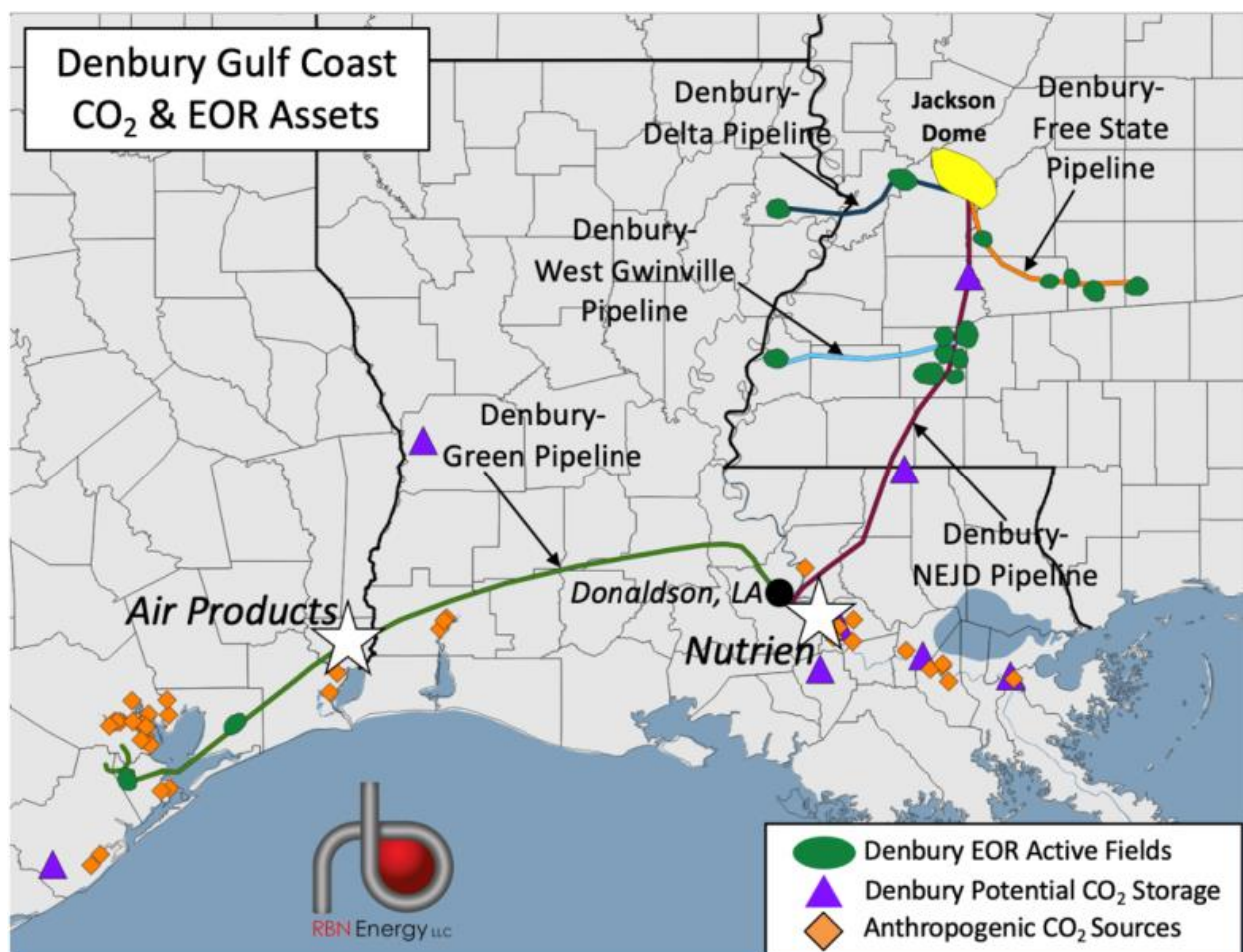
Our discussion of the Europe/Asia/U.S. natural gas price gap has focused primarily on the benefits to chemical manufacturing firms. There is another group that has benefitted wildly from this gap, and that is LNG exporting firms. The hunger for natural gas in Europe and Asia can largely be met by taking U.S. natural gas production, cooling it to a level that reduces its volume by 1/600th, and putting it on an LNG tanker to be shipped abroad. Three of these LNG exporters are located in the Lake Charles MSA, and another is under construction in the New Orleans MSA. Several are in the last column of Table 3 awaiting an FID.

CCS: Vital to Convert Announced to FID

Readers should be alert to the importance of the **carbon-capture-sequestration** (CCS) phenomenon active now in Louisiana. This phenomenon is critical to moving many of the \$117.7 billion in announced projects to FID. The profitability of many of these projects revolves around their ability to get huge tax credits under the inflation Adjustment Act. To get these credits, the firms must be “clean” or “blue”, meaning the firms are radically reducing their carbon footprint as compared to more typically manufacturing processes.

Two factors play a major role in achieving this “blue” or “clean” designation. One is CCS. This involves capturing the carbon at the manufacturing site and moving it by pipeline to a deep, underground storage facility where it can be sequestered. RBN Energy recently produced a nifty map showing the system used by Denbury Corporation to capture carbon at sites and move it through their pipeline to be sequestered below ground (purple triangles in Figure 11). This company actually lifts this CO₂ to the surface and uses it for Enhanced Oil Recovery (EOR) techniques in Denbury’s oil wells (green ovals in Figure 11). The orange diamonds in Figure 11 represent potential customers for Denbury’s CCS offerings. Note how closely these customers align with the three MSAs discussed in the previous section. Denbury was recently purchased by ExxonMobil.

Figure 11



Source: RNB Energy

In the Baton Rouge MSA list of \$11.3 billion in projects underway in Table 3 is the \$4.5 billion Air Products project. Critical to this project is the ability to transport its CO₂ to one-mile deep wells drilled under Lake Maurepas.

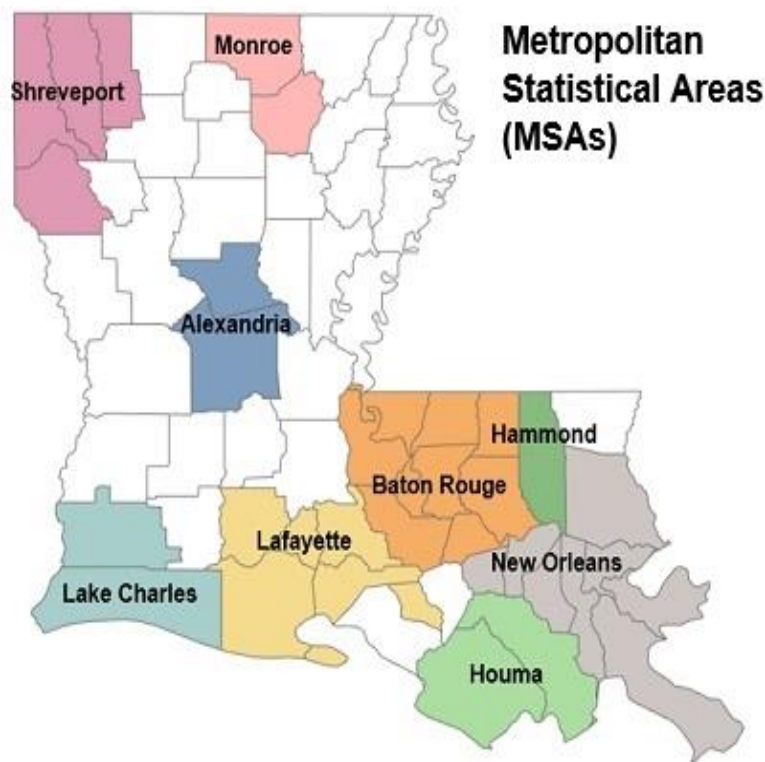
A second factor critical to achieving the "blue" or "clean" designation is the **source of one's electricity**. Chemical plants are huge consumers of electricity. Blue plants want that electricity to come from a renewable source. This is causing utility companies to scramble for new solar farms in the State, and for more and more utilities to look to possible wind farms off the Gulf of Mexico coast.

Readers should be watching the CCS and solar issues closely. Resolving them will go a long way towards moving firms from "announced" to construction.

THE LOUISIANA METROPOLITAN STATISTICAL AREAS

Below we will analyze separately the prospects for Louisiana's **metropolitan statistical areas** (MSAs). The U.S. Bureau of Economic Analysis has taken 35 of Louisiana's 64 parishes and combined them into nine separate MSAs. These MSAs are delineated in Figure 12 (source: LAWorks.net). The parishes without color---those outside the MSAs---are designated as "rural" parishes, of which there are 29. These rural parishes generally have a large agricultural economic base. Exceptions include the energy-dominated St. Mary Parish, the heavily military Vernon Parish, and Lincoln and Natchitoches Parishes which contain significant universities.

Figure 12
Louisiana Metropolitan Statistical Areas



Map from Laworks.net

For those unfamiliar with Louisiana's MSAs, readers can refer back to this figure as we review the economic prospects for each area below.

THE NEW ORLEANS MSA

Will Tourists & FIDs Provide Full Recovery?

As seen back in Figure 12, the New Orleans MSA is located in the southeast corner of the state and is the largest in the state population-wise. It is composed of eight parishes---Orleans, Plaquemines, Jefferson, St. Charles, St. John the Baptist, St. Tammany, St. James, and St. Bernard. A short history of this MSA can be found in Appendix A. Because of its geographic location near the mouth of the Mississippi River, this MSA is a major port region, including the nation's largest in terms of tonnage moved (the Port of South Louisiana), the huge Port of New Orleans, and the Port of Plaquemines.

Because the river provides access to deep draft ships, numerous refineries (including the nation's second largest) and chemical plants line its banks. Numerous exploration companies such as Chevron and Shell have significant locations in the area in order to direct exploration activity in the Gulf of Mexico.

As mentioned in the "National Economy" section above, its unique culture and cuisine---plus the French Quarter---make the city proper a major tourism/convention site. Its Morial Convention Center is the 6th largest in the country. Tourists are also attracted by the region's gaming industry. New Orleans is home to three casinos and the Fairgrounds racetrack. In addition to several community colleges, the University of New Orleans, Tulane University, Loyola University, and Dillard University are located within its boundaries.

As of 2023, there are about 568,600 people employed in the region. The New Orleans MSA is firmly established in this first-place position, being about 33% larger than the Baton Rouge MSA.

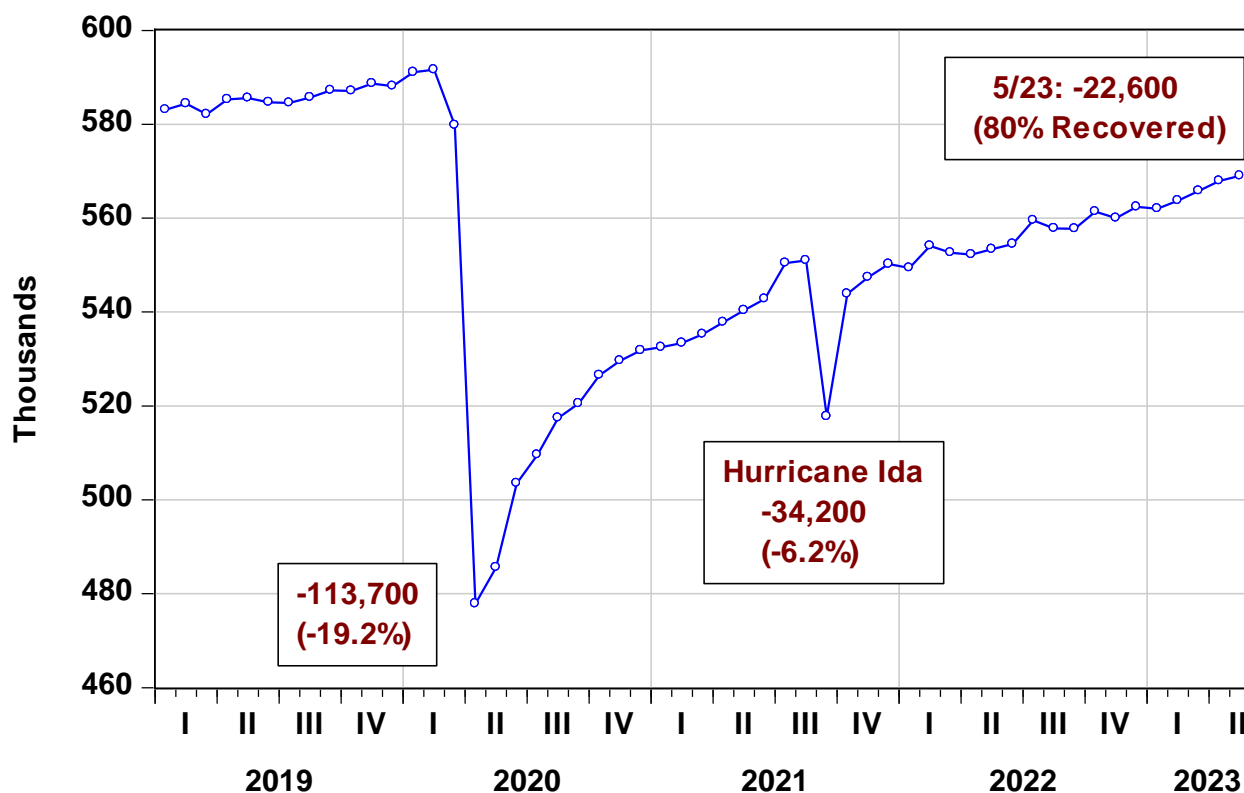
Still Not Back from COVID

The New Orleans MSA is one of five MSAs in Louisiana that have not fully recovered from the COVID shutdown back in March of 2020. Seasonally adjusted nonfarm employment data in Figure 13 shows that the MSA lost a remarkable 113,700 jobs virtually overnight, a loss of almost one-fifth of its employment.

With the exception of a serious ding by Hurricane Ida (-34,200 jobs) in 2021, the MSA has demonstrated a steady climb upward since the shutdown. Still, the MSA remains 22,600 jobs short of full recovery.

Figure 13

New Orleans MSA Nonfarm Employment (SA)



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Non-trivial to this poor performance is the data in Table 4. Its huge convention center and unique characteristics and charm have made New Orleans a major convention center. Scheduled conventions are now two-thirds of pre-COVID shutdown. The trend in scheduled conventions in the past two years is worrisome and will act as a drag on the MSA's overall growth.

Table 4

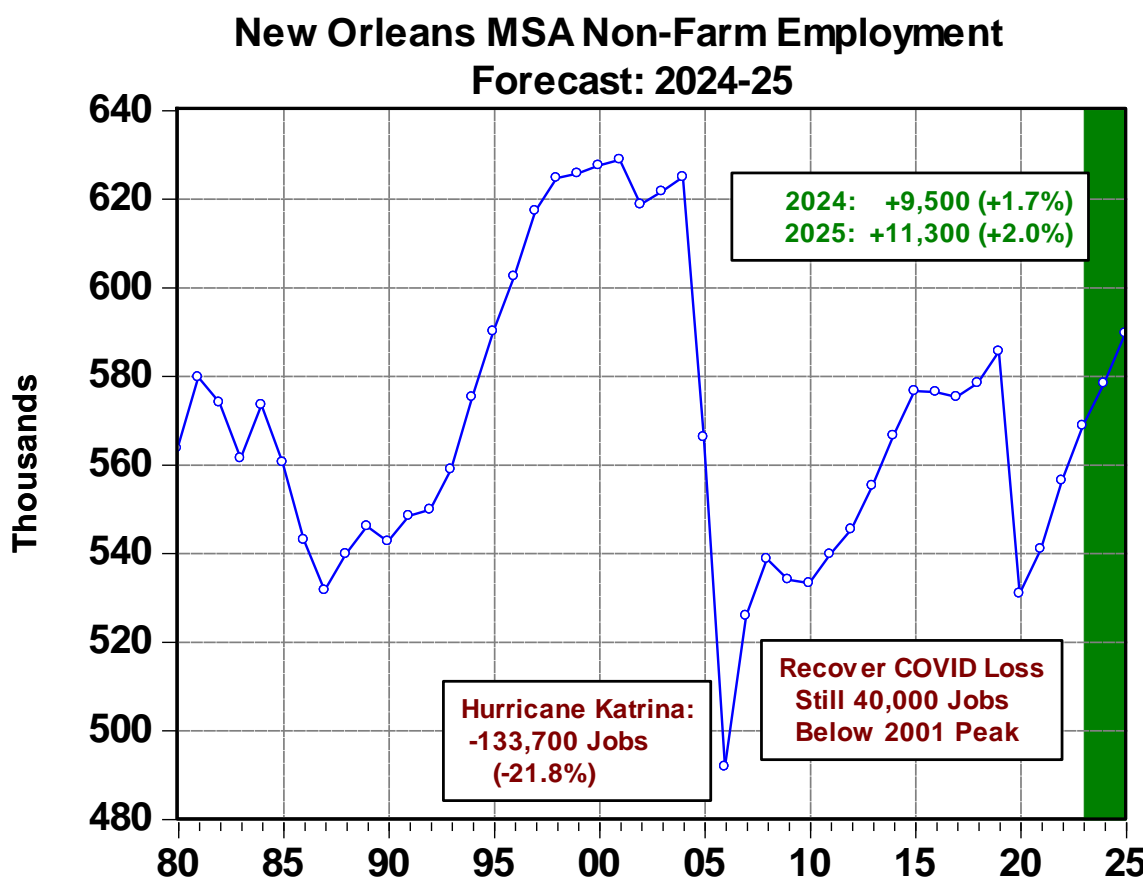
Conventions	2019	2020	2021	2022	2023
Scheduled	138	155	124	100	97
Canceled	0	66	48	0	0
Virtual	0	46	42	1	0

Source: <https://eventsinamerica.com/events/Louisiana/New-Orleans/2023>. Loren C Scott & Associates Inc.

Forecast for 2024-25: New Orleans MSA

Figure 14 tracks nonfarm employment in the New Orleans MSA over 1980-2023, along with our forecast for this MSA over 2024-25. **We are projecting 9,500 new jobs in 2024 (+1.7%) and 11,300 jobs in 2025 (+2%).** We are expecting by mid-2025 the MSA will have recovered all jobs lost due to the COVID shutdown, despite the drag of the convention business. These are very good growth estimates for the New Orleans MSA, but the region will still be some 40,000 jobs below its previous peak reached pre-Katrina---an indication of just how devastating that storm was.

Figure 14



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

How Much of a “Boom” from Industrial Boom?

Back in Table 3, we documented \$21.4 billion in projects underway in this MSA, and another \$39.8 billion awaiting a FID. For New Orleans' economic future, the

big question is how much of the \$39.8 billion in announced projects will actually get built.

The \$21.4 billion in projects is alone an impressive figure, but it is heavily dominated by one project. In May 2022, **Venture Global** issued an FID on a \$13.2 billion phase 1 of its LNG export facility in Plaquemines Parish. In March 2023, the company issued an FID on phase 2 of the project, bringing its total investment to \$21 billion. **Enbridge** committed to spending \$400 million on the Gator Express and Venice Extension Pipelines to service the Venture Global project. **Delta Terminal Services** is spending \$88.6 million to repurpose its existing assets with 42 tanks to support feedstock aggregation into renewable diesel production.

Venture Global will be working on its massive project through 2025, sustaining hundreds of construction jobs through our forecast period. This leads to the question of how many of the \$39.8 billion in announced projects will go to FID.

- Perhaps the biggest question mark concerns the \$9.4 billion, 1,200-job **Formosa Plastics** complex proposed for St. James Parish. The company has already spent over \$300 million on the site and had air permits in place. For the first time in history (that we are aware), the Biden Administration withdrew the company's air permits. Activists in the parish have been rigorously fighting the project and have so far been successful in delaying its construction. One has to wonder if the company will start searching for other sites or if some other firm will build a competing plant to snatch the market share from Formosa and tank the project.
- The second largest project on this list is Venture Global's (VG's) second LNG facility---**Delta LNG**. We place a high probability of an FID on this \$8.5 billion project, though it will probably not occur until late 2025. VG will likely schedule construction of this facility after beginning work on its second plant in the Lake Charles MSA, called the CP2 LNG plant. This project may require the laying of a 280-mile pipeline from the site to the Perryville Hub in northeast Louisiana.
- The **St. Charles Clean Fuels** project is a 2-phase, \$7.5 billion project planned in St. Rose. Company officials expect an FID in time to start construction on this clean ammonia facility in 2024, with a total of a 5-year buildout for both phases. The Denbury carbon capture and sequestration

(CCS) system described back in the Assumptions Section will be used to lower the carbon footprint of the plant. By the time the second phase is completed, the facility will employ 350 at an average wage of just over \$116,000.

- We have reported for the past few years on the proposed \$3.2 billion **Pointe LNG** facility that would employ 200 workers once operational. Our latest information is the company was still at the pre-filing stage with FERC. We do not anticipate an FID within our forecast period.
- **DG Fuels** has an option on a 3,000-acre site in St. James Parish to build a \$3.1 billion sustainable aviation fuel plant that uses wood and agricultural waste as its feedstock. Front-end engineering and design work (FEED) is underway, with an FID expected by the end of 2023. This would be a major win job-wise for the MSA and Parish, as the company expects a workforce of 1,055.
- Still on our list of projects with a reasonable possibility of an FID is **IGP Methanol**. Major revisions have taken place for this 2-plant, \$2.6 billion project. It is being re-engineered to be the lowest emissions methanol plant in the world, relying on the CCS system. An FID is expected mid-2024.
- **ElementsUS** is examining a rare earths extraction plant at the old Noranda Alumina site in Gramercy. There would be two plants for extraction and one for storage. We have not seen an FID schedule for this project.
- **Shell** is very near an FID on a renewable diesel and a sustainable aviation fuels (SAF) facility at its previously closed refinery site in Convent. The \$1.3 billion plant would make these fuels from crop oil and animal feedstocks. An FID is expected about mid-2024 and will create 42 permanent jobs once operational.
- The grain elevator company **Bunge** is planning a \$1 billion increase in its footprint in Destrehan. A seed oil production facility will be added. The company has applied for and received its industrial tax exemption. An FID is expected soon.

- On the subject of grain elevators, **Greenfield Louisiana** wants to build a \$500 million, 36-silo grain elevator in St. John the Baptist Parish. This would be the first new grain elevator within the Port of South Louisiana in 40 years. The Port has applied for a \$20 million grant for a new dock for the facility and must obtain permits from the Corps for the dock. There has been some pushback from activists in the Parish about the project. We assign about a 75% probability of this project going forward.
- We are told that the **Syngas Energy Holdings** project to build a \$350 million methanol plant in St. James Parish is still alive. We are not very optimistic about the project.
- **American Plant Food** is exploring a \$295 million fertilizer plant on the Cornerstone site in Waggaman. This 100-job (average annual salary of \$100,000) facility is projecting a late 2023 FID.
- **Louisiana Sugar Refining** owns a 136-acre site in Gramercy and is planning a \$57.9 million expansion. Another five jobs will be added to the present employment of 186 at the plant.
- **ADM** will spend \$25 million on a marine dock expansion---largely financed via the Port Priority Fund---that should increase capacity and efficiency at the plant.
- The **Port of South Louisiana** will be spending \$15 million on an additional dock access bridge and a building renovation for Holcim Lafarge for concrete construction material storage.
- At Avondale Global Gateway in Avondale, **Shell** is partnering with **Gulf Wind Technology** to spend \$10 million on a new hub for offshore wind energy development. The 30 new jobs will focus on research, training, and technology demonstrations for this evolving industry.

There are two more, smaller projects on the Northshore that will be discussed below. There are also two other projects that have been announced but for which there is little information. Both are proposed LNG projects. **Gulf Island**

LNG wants to construct a deepwater LNG port that would be platform-based and modular in design. It would be located in 70 feet of water in the Gulf. **Gulfstream LNG** is examining a possible new LNG export facility in Plaquemines Parish on a 500-acre site near the Port of Plaquemines. The company has applied to the DOE for permission to export to non-free trade countries (DOE has already approved exports to free trade countries) and to FERC for pre-filing. Plans are to use electric liquefaction drives to achieve low carbon emissions. No data have been released on the dollar size of these two LNG facilities.

GDIT, Two New HQs & Avoiding BRAC

In addition to the industrial possibilities listed above, this MSA received good news from at least four other sources. A year ago, **General Dynamics IT** announced the company's fifth location in Louisiana. The new site is on the UNO campus and started with 50 people but will grow to 200 over the next three years. GDIT provides IT services to the Navy. The company is also spending \$136 million to modernize existing IT help desks.

Two new headquarters were announced for the MSA in the past few months. **United Utility Services**---a portfolio company of Bernard Capital---is placing its new headquarters in New Orleans and will hire 141 people (at an average annual pay of \$95,000) over the next five years. **360Insights** is relocating its Delaware headquarters to New Orleans and will add 50 new jobs over two years.

The **Naval Air Station Joint Reserve Base** at Belle Chase received great news in April. Eighteen of the newest jet fighters---F-15X Eagle II---are being sent to the base. This plane is the world's fastest fighter jet, able to go 2 ½ times the speed of sound, with a range of 2,762 miles. The base is now at 2,000 civilians and 5,000-6,000 military personnel. The planes will replace the aged F-15C and F-15D, both of which will be relegated to the boneyard in Phoenix. This will not change the size of the base, but is a signal it is not in jeopardy in the next round of Base Relocation and Closure (BRAC).

Solid Footing at Michoud

Economic activity at the **Michoud Assembly Center** remains very solid, because NASA has authorized five more **Artemis** launches after the successful flight of Artemis 1 last November. This was NASA's first heavy launch since Apollo. Michoud was chosen as the site to manufacture the core stage and Orion capsule for Artemis. Presently, 990 people are working on the core stage and

another 192 are constructing the Orion capsule. **Syncom Space Services** employs another 364 at the site. All of these employment numbers are expected to remain stable.

There are nearly 1,000 people working at the **USDA Finance Center** at Michoud, which is the largest payroll services provider in the federal government. The **Coast Guard** presence at Michoud has grown slightly from 187 to 195, a number also expected to remain stable. If one adds in all NASA personnel, contractors and security, there are now 3,142 people employed at Michoud.

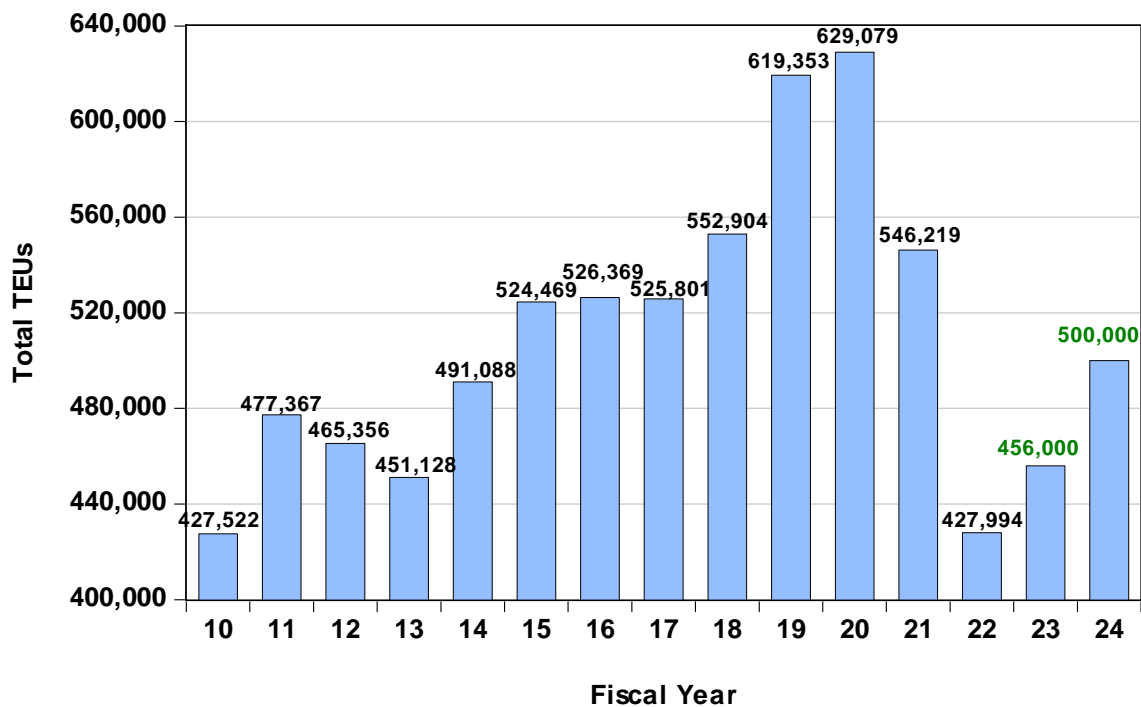
A possibility for new expansion may come through the development of **Propel Park**. This is a new, \$35 million development of one million square feet of industrial space. The new building should be completed in December of this year.

LIT at Port of New Orleans

Activity at the Port of New Orleans remains robust. Cruise ship activity is better than ever, with one million people expected to cruise out of the Port next year. As is clear from perusing Figure 15, container traffic at the Port is still about 175,000 TEUs below its pre-COVID peak.

Major plans are underway to regain the Port's status as #1 in TEU traffic in the Gulf---a position lost to Mobile. The Port has purchased 89 acres of waterfront at the Violet Port in St. Bernard Parish to build the \$1.8 billion **Louisiana International Terminal**. Some \$96 million in capital outlays will be necessary (1) to upgrade the roadway from LIT to I510 and (2) for rehabilitation of the Almonaster Bridge over the Inner Harbor Navigation Canal. The private sector will play a major role in this project, providing about \$800 million of the \$1.8 million total cost. Construction start is scheduled for 2025, and the LIT is expected to attract 180,000-280,000 TEUs in the first year of operation. In addition to expenditures on LIT, the Port is projected to spend \$102 million in 2024 and \$115 million in 2025 on other capital projects at the Port. LIT will enable the Port to regain the #1 spot in TEU traffic.

Figure 15
Port of New Orleans TEU Traffic



Source: Port of New Orleans & Loren C. Scott & Associates, Inc.

Northshore: Underlying Strength

St. Tammany boasts some very significant employers that are presently doing quite well. **Pool Corp** is one of Louisiana's Fortune 500 firms with \$6 billion in sales last year. There are 400 people employed at the company's headquarters in Covington, a number that is expected to rise by 5% a year over 2024-25. **Chevron** located its offshore operations headquarters in Covington as well, where approximately 507 are employed. Chevron has another 470 employees scattered around the rest of this MSA. This company set the bar in drilling in waters where the pressures are 20,000 psi or greater. As a result, the company's Anchor Field (the first high-pressure development in the Gulf) received an FID, drilling has taken place, and a production platform has been ordered. As a result of this breakthrough a whole new wave of drillships are coming to the Gulf.

Hornbeck emerged from bankruptcy after COVID and is now doing very well, with 200 people at the headquarters in Covington and 1,204 mariners working their supply/repair boats. Supply boat business in the Gulf is very strong since

demand is growing but there have basically been no new supply boats built in several years---meaning rates are up smartly. Hornbeck has boats servicing offshore wind, aerospace, the military, etc., that has kept business busy. The company would like to add about 800 more mariners and 50 people at the headquarters. While the rig count in the Gulf has stayed in the 15-16 range, the non-drill bit business (servicing production platforms) is growing exponentially. Also, many boats are needed for inspection, repair, and maintenance of existing platforms.

While we have no direct data from the company, it is our understanding that the **Textron Group** has been adding workers at its three sites: (1) the Michoud Assembly Center, (2) the East New Orleans Shipyard, and (3) the Land System facility in Slidell. An estimated 800 people work at the three sites, with the land system in Slidell employing 450. This site manufactures (1) the COMMANDO family of armored security vehicles, (2) the RIPSAN EV3-F4 extreme, dual--tracked vehicles, (3) the Cottonmouth 6X6 amphibious vehicle for the Marines, and (4) unmanned vehicles for the military.

The **Globalstar** satellite company now employs 338 in the Covington office. The company recently signed an agreement with Apple to be the satellite provider for the iPhone 14 and future iterations. The benefits provider Gilsbar recently broke into two separate companies. **Zen-Noh**, which owns a grain elevator on the Mississippi River near Convent has a 60-person headquarters in Covington. Its affiliate, **Consolidated Grain and Barge**, is also located at this office. CGB has 190 people employed in Covington and manages more than 100 elevators and terminals, mostly throughout the Midwest along the nation's inland waterways.

Gilsbar now employs 110 people, a number that is expected to grow. The split off company---**HealthComp**---is the larger of the two. HealthComp employs about 250 people. C-Innovations is a division of the Edison Chouest Group and conducts underwater work using ROVs and AUVs. Ninety percent of its work is for the oilfield and the remainder for the government. Approximately 300 people work at its Covington site.

The Northshore should receive a nice shot in the arm later this year when **Amazon** opens its "last-mile" distribution center. This 140,000 square foot facility will add about 200 new jobs. **St. Tammany Health System** broke ground in November 2022 on a new \$75 million surgery center. It should open in late summer 2024.

Two capital projects were announced in the past few months, which though rather small in investments are significant in terms of job creation. **Healthy School Foods Collaborative** is undergoing a \$4.6 million expansion to add a new commercial kitchen, cold storage, food manufacturing facilities, a culinary lab, and food co-packaging space. The firm will add 77 jobs over 10 years. **BEC Co-Packers** is spending \$2.5 million to renovate a 60,000 square foot building into a production/distribution center. The move will enable the firm to add 100-125 jobs to its existing 65-person facility. The firm makes high-end sports drinks.

The Parish has rezoned 1,000 acres at the interchange of I12 and LA288 for the **Gulf South Commerce Park** for advanced manufacturing and distribution. Within this acreage, 92 acres are cleared and shovel ready. Economic developers are in final negotiations with two firms to come to the site. **Project Link** is a \$122 million advanced manufacturing /distribution firm that would add 70 jobs. **Project Frozen Tiger** is a \$52 million cold storage firm that would employ 55-65 people.

St. Tammany remains a big winner in the “road lettings from state government” race. Over 2024-25, the Parish has **\$152 million in road projects** let by the Department of Transportation and Development. This represents 25% of total road letting in the entire 8-parish New Orleans MSA. The two largest projects are (1) \$79.8 million for an I12/LA434 interchange and (2) \$12.5 million for LA16, LA1074, and LA1075 bridges. The Parish will also garner over \$27.8 million over the next two years in **Coastal Restoration and Protection Authority** (CPRA) funds. These monies will largely go toward Bayou Cane marsh creation (\$21.13 million).

Billions for Roads and Coastal Protection

It would be hard to overstate the amount of dollars coming to the New Orleans MSA for coastal protection, flood control, and roads. The **CPRA is designating almost \$2 billion for coastal projects** over the next two years (\$1.1 billion in 2024 and \$920 million in 2025). The largest project by far is the \$1,121 billion Mid-Barataria Sediment Diversion Project.

Figure 16 shows the location of the **St. Charles/St. John Levee Project**. This is a massive levee system running from Hope Canal near Garyville to the Bonnet Carre Spillway east of LaPlace. Like several Corps projects in the State, this project has almost tripled in cost. Originally priced at \$760 million, the latest cost figure is \$3.7 billion. Of this amount, \$1.96 billion is the cost of constructing the levee. \$1.7 billion is for “environmental mitigation.” This is somewhat of a fake

number. Of this \$1.7 billion, \$1 billion will be spent by the Corps over 30 years to “lift” the levee, as the dirt tends to settle over time. \$700 million is a cost to the State for wetlands mitigation. However, the Corps is allowing the State to use money it is already spending to divert fresh water from the Mississippi into Lake Maurepas (the blue green line in Figure 16) which is a \$700 million dollar project. In essence no money is going to really change hands. Five contracts are scheduled to be let this year, with an eye to completing the project in 2026.

Figure 16
Planned West Shore Levee



The New Orleans MSA will receive nearly **two-thirds of a billion dollars (\$606.9 million) in road lettings** over 2024-25. The largest project will be the \$79.8 million interchange at I12 and LA434, and the second largest will be \$51.1 million for the Gramercy Bridge rehab. The Louisiana **Superdome** is in the middle of a \$450 million facelift in preparation for hosting the 2025 Super Bowl. The Saints are

covering \$150 million of the costs, with the State and the Louisiana Stadium and Exposition District picking up the balance.

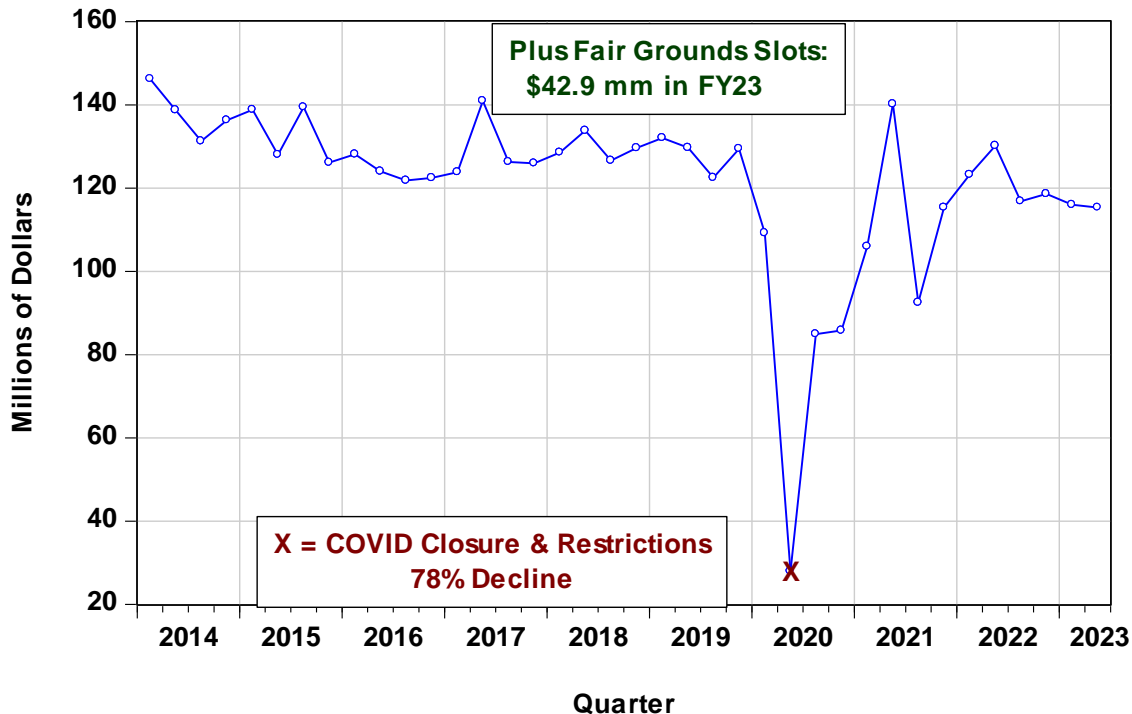
There are some very significant private commercial projects underway in the MSA. Some \$260 million is being spent to renovate the old Charity Hospital into 300 residential units, a charter high school, and 90,000 square feet of retail space. The project is by **1532 Tulane Partners**. \$155 million is being spent to redevelop the **Clearview Center**, including construction of a 270-unit apartment complex. **Ochsner Health Systems** has a \$28 million elder care clinic under construction, and construction will start soon on the \$110 million, 132,000 square foot Debra H. & Robert J. Patrick Neuroscience Center.

Soon Two Land-Based Casinos

New Orleans is home to the third largest gaming market in the State. There are three casinos and the Fairgrounds horse racetrack in the MSA. The latter is a “racino,” since it has slot machines in addition to horse racing. Figure 17 tracks casino gross revenues at the three casinos by quarter from 2014-I through 2023-II.

Figure 17

Casino Gross Revenues: New Orleans



Source: Louisiana Gaming Control Board Reports & Loren C. Scott & Associates, Inc.

The three casinos generated about \$130 million a quarter until the COVID shutdown. Caesar's Casino, which to now has been the only land-based casino in the State, is the most successful of the three. Caesar's gross revenues are more than the other two riverboat casinos revenues combined.

The slots at the Fairgrounds generate about \$42 million a year in gross revenues. Of the four horse racetracks in the State, the Fairgrounds ranks third in revenues.

Closure of the casinos, and then restricted attendance for a few more months, led to a stunning 78% decline in revenues in 2020-II. Recently, gross revenues have averaged about \$10 million a quarter less than pre-COVID, largely due to the convention attendance ding the MSA has suffered.

Two significant events are underway that will impact this market. The Legislature passed laws allowing riverboat casinos to move on land if they meet certain convention facilities/hotel requirements. In October 2022, **Treasure Chest Casino** began a \$100 million project to move on land (see Figure 18). The new facility will have 47,000 square feet of gaming space and a 10,000 square foot convention facility. It is scheduled to open in early 2024.

Figure 18

Land-Based Treasure Chest Casino



Source: Boyd Gaming

Caesar's Casino, at the foot of Canal Street in downtown New Orleans, is in the middle of a \$325 million renovation, including a 340-room hotel tower above the

casino valet entrance and many design enhancements. Projections are that 500 new jobs will be created when work is completed in 2024.

THE BATON ROUGE MSA

Lighting the Fuse on Another Industrial Boom Stage

The Baton Rouge MSA is the second largest in the state behind the New Orleans MSA. A brief history of this MSA can be found in Appendix B. In 2015, this MSA's employment rose above the 400,000 level for the first time in its history. However, COVID drove that number down to 384,600 jobs in 2020. By 2023, the MSA was back above the 400,000 mark, at 426,300.

This MSA contains the largest number of parishes (9) of all the MSAs: East Baton Rouge, West Baton Rouge, Livingston, Ascension, Iberville, St. Helena, Pointe Coupee, East Feliciana, and West Feliciana (see Figure 12). According to the Bureau of Economic Analysis, in 2020, East Baton Rouge Parish had the highest population in the state at 456,781. Interestingly, three of the top eight fastest growing parishes in the state, in terms of population, over 2010-2020 were in this MSA---Ascension (+18%), West Baton Rouge (+14.4%) and Livingston (+11.4%).

A combination of (1) access to the Mississippi by deep draft ships, (2) access to plentiful natural gas, and (3) access to salt domes for brine makes this region a haven for the petrochemical industry. Louisiana is the 6th largest producer of chemicals---especially first-stage bulk chemicals that can be moved via ocean-going ships---and the Baton Rouge MSA is their largest home in Louisiana. Huge national and international firms like BASF, Dow, ExxonMobil, Eastman, Westlake, and others have very large facilities.

Louisiana also has an enormous pipeline network in the state, enough miles of pipelines to circle the globe four times plus. Access to those pipelines and access to the river to move their products helped Baton Rouge land the nation's fourth largest refinery, ExxonMobil, and across the river a smaller lube plant (ExxonMobil) and another smaller refinery (Placid).

The combination of the chemical plants and refineries is typically referred to as the petrochemical industry. These are very capital-intensive facilities located largely outdoors. A vast industrial construction industry---the largest in the state---resides within these plants daily to maintain them. In some cases, the number of contractors working at a plant equals the number of people wearing the petrochemical company's shirt. Huge contracting firms such as Turner Industries, Performance Contractors, ISC, MMR, and Cajun Contractors make their headquarters in Baton Rouge.

Baton Rouge is as far up the Mississippi River as deep-draft ships can go, stymied by the Old River Bridge in north Baton Rouge. Inside this region is the nation's 8th largest port, the Port of Greater Baton Rouge. Louis Dreyfus has a large grain elevator at the port, and Drax Biomass runs its wood pellets through the port heading for power plants in Europe.

Government plays an outsized role in this MSA since Baton Rouge is the home of the State Capitol and its vast office complexes. Two state-supported universities are in Baton Rouge, LSU and the historically black college---Southern University. Started up only a few years ago, Baton Rouge Community College is among the more successful of the community colleges in the state. East Feliciana Parish is the home to the large East Louisiana Mental Health System and the Villa Feliciana Medical Complex, which between them employ 1,505 people with a payroll of \$205 million.

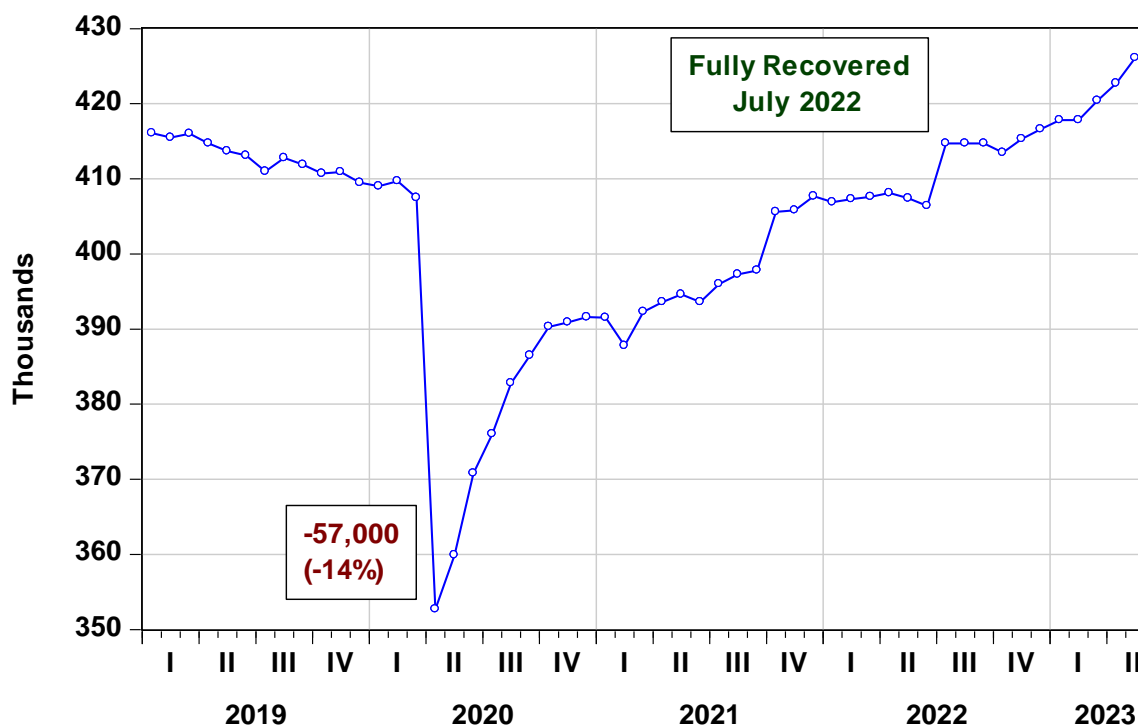
Data Revisions Destroy the COVID Shortfall

Readers of last year's Louisiana Economic Forecast may be stunned to see the graph in Figure 19. Exactly one year ago we were lamenting that this MSA was only 73% recovered from the 57,000 jobs lost because of the COVID shutdown. Now we learn that by July 2022 the MSA was fully recovered and has grown smartly since then.

What in the world happened? The short answer is data revisions---the absolute plague of all forecasters. Every year in March, staff in the U.S. Bureau of Labor Statistics revises the monthly employment data in the previous year. This March, **the BLS added a remarkable 12,000 jobs to the Baton Rouge MSA. With the stroke of a pen, a full year of growth was added to the economy.** The good news is the Baton Rouge MSA did not experience the revisions in the Lake Charles employment numbers---minus 6,000 jobs. Again, with a stroke of the pen the BLS took a year's worth of growth **away** from Lake Charles.

Figure 19

Baton Rouge MSA Nonfarm Employment (SA)



Source: Louisiana Workforce Commission & Loren C. Scott & Associates, Inc.

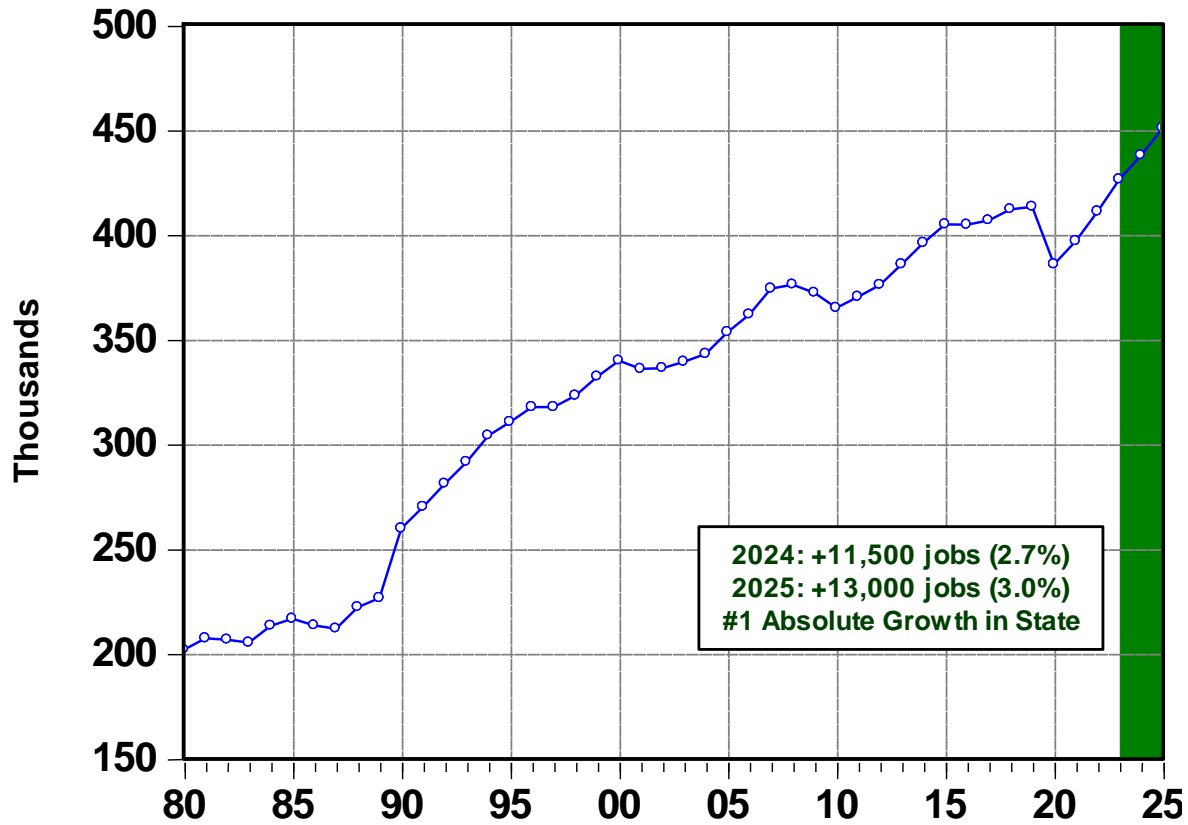
Forecast for 2024-25: Baton Rouge MSA

Figure 20 tracks nonfarm employment in the Baton Rouge MSA from 1980 through 2023, along with our forecasts for 2024 and 2025. The enviable growth trend the area has enjoyed for the past two years is expected to continue for the next two years.

Recall that when a rocket blasts off into space, there is a second-stage blast that kicks the rocket even further along? This is our expectation for the Baton Rouge MSA. **We are projecting 11,500 new jobs in 2024 (+2.7%) and another 13,000 jobs in 2025 (+3%).** These are unusually strong growth numbers, but we believe the underlying data support this optimistic outlook.

Figure 20

Baton Rouge MSA Non-Farm Employment Forecast: 2024-25



Source: Louisiana Workforce Commission & Loren C. Scott & Associates, Inc.

Engine #1: Amazon Finally Opens – Burrell in Wings

Supply chain issues have delayed the opening of the huge **Amazon Fulfillment Center** at the old Cortana Mall site. This 3.5 million square foot facility, which can handle 1 million packages a day, is now expected to open mid-2024. Hiring of at least 1,000 workers is supposed to start about 30 days before the opening. Amazon will obviously be a big boost to the MSA's employment growth.

Another mega-job project is in Baton Rouge's future. **Burrell Aviation** has announced that the Baton Rouge Airport will be a new hub for Burrell's air cargo business. The Airport will be spending \$113 million over the next several months

to get Burrell's site ready with utilities, etc., so the firm can go vertical with its construction in 2025. Hiring at the site will not start until 2026---outside our forecast range---but the projected employment numbers of 893-1,487 jobs will be a bright light in Baton Rouge's future.

Engine #2: Another Bump in Industrial Construction

A second engine that will ignite over 2024-25 in this MSA is a full-thrust industrial construction expansion. A year ago, engineering firms in the region were absolutely slammed with front-end engineering and design (FEED) work on proposed plants. Now the shift is to the industrial construction firms like Turner Industries, Performance Contractors, Cajun Industries, ISC, and others.

Back in Table 3 it was stated that there was **\$11.6 billion in projects underway in the Baton Rouge MSA and another \$19 billion in projects that have been announced but are awaiting an FID**. Importantly, a significant number of the projects underway have only just gotten started: meaning construction employment at the site is just beginning to ramp up. These include:

- The largest project in this list is **Air Product's** \$4.5 billion blue hydrogen complex in Burnside. As indicated by the adjective "blue" this project involves a carbon capture and sequestration (CCS) mechanism. CO2 generated at the facility will be captured and moved by pipeline where it will be injected one-mile deep into a formation under Lake Maurepas. At this writing, only surveying work is being done and a test well is being drilled at Lake Maurepas. Major construction activity is just ahead. When completed, the plant will employ 170 workers paid an average of \$93,000 annually.
- Work will likely finish this year on **Methanex Corporation's** third methanol plant in Geismar. This \$1.6 billion facility should be completed by the end of 2023.
- **Shintech** is filling another chunk of its vacant space with another \$1.3 billion PVC pipe manufacturing facility. Once completed, Shintech will add another 30 jobs to its existing 500-person workforce. The company is also spending \$50 million on a logistics project. The fact that Shintech has a lot of land available, and the company is in the plastics business, makes one wonder if Shintech might be the firm to move into the void created

by the failure of the Formosa Plastics complex in St. James Parish to fail to reach FID. Stay tuned.

- Construction should be virtually completed by the end of 2023 on **REG's** \$1.2 billion expansion of its renewable energy plant in Ascension Parish. REG makes diesel out of animal fats and will hire 50 new people once the expansion is completed.
- **BASF** has just begun construction on its \$780 million Phase 3 MDI plant in Ascension Parish. This expansion---to be completed in 2025---will add 22 jobs at the massive site that already employs 1,100 BASF employees and another 500 contractors.
- An FID has been issued on **Origin Materials** new biomass facility in Ascension Parish that will use wood residue to produce polyethylene terephthalate to be used in textiles, apparel, and packaging. Construction start is scheduled for 2024-I and open in late 2025 or early 2026. Origin will hire 200 people at a \$90,000 annual salary to run the plant.
- In Plaquemine, Louisiana, **Kindle Entergy** has begun construction on a \$740 million advanced-class, combined-cycle power plant that will use 50% hydrogen for fuel. Startup is projected for 2025 and will create 20-25 new jobs.
- **Westlake Chemicals** in Geismar has begun construction of a \$519 million expansion of its vinyl chlorine monomer facility. The addition will result in seven new jobs when completed in 2024. Westlake is another plant that has a great deal of spare land at its site, which might enable the firm to jump into the battle for the market share left by the void if the Formosa project in St. James parish fails.
- **CF Industries** is expected to complete a \$198.5 million green ammonia plant which will involve CCS technology. Ten new jobs will be added when construction is completed.

- **Georgia Pacific** is spending \$50 million to boost paper towel production at its plant in Zachary by revitalizing existing equipment. This is part of a \$108 million total expansion that will enable the plant to retain 300 workers.
- The **I,4Group** is building a \$35 million plant in Ascension Parish that will make insect repellent and a preservative for potatoes in storage. The company will employ 35 people earning an average of \$68,619 annually.
- **Community Coffee** is planning a \$4 million expansion that will create 15 new jobs.
- Finally, in Ascension Parish, **Blue Runner Foods** is projected to spend \$3.7 million on an expansion of its facilities that would create eight new jobs.

This is an impressive list of projects all by itself. However, as indicated back in Table 3, there is another list of **\$19 billion in projects that have announced plans to build but have not issued an FID** as of late summer 2023. Unlike the comparable list for New Orleans and Lake Charles, most of these projects are expected to earn an FID.

- **Clean Hydrogen Works** (or Ascension Clean Energy) is proposing to spend \$7.5 billion in three phases over the next 5 years on a clean ammonia complex. Ascension Parish has developed a new TIF on 17,000 acres on the west bank of the Mississippi River (RiverPlex MegaPark), and Clean Hydro plans to use 1,700 of those acres. The plant will also use CCS technology to earn the “clean” adjective in its name. A total of 350 people will work at the plant at an average annual salary of \$116,000. Mitsui O.S.K Lines recently became a shareholder in the project. We believe there is a high probability this project will reach FID in 2024.
- Denbury Solutions (see assumptions section) will handle the CCS component of **Nutrien’s** new \$2 billion clean ammonia plant in Geismar. Nutrien expects this to be the largest clean ammonia plant in the world. An FID on this announcement is expected (high probability) before yearend 2023, with an opening date in 2027. The company already has a letter of intent from Mitsubishi Corporation to offtake 40% of the production to the Asian fuel market.

- **CF Industries** is also planning to build a \$2 billion clean ammonia facility in the RiverPlex MegaPark on the west bank in Ascension Parish. This facility is also expected to be export-oriented. An estimated 102 new jobs would be created at the plant, which is expected to announce an FID by yearend 2023. We assign a high probability to this project.
- **Mitsubishi Chemicals** has announced plans for a \$1.9 billion methyl methacrylate complex in Geismar. The firm is still at the FEED stage. A high probability is also attached to this project, with an FID expected by 2024-I. The completed complex would employ 125 people with an average annual wage of \$97,000.
- Also in Geismar, **Shell Chemical** has announced a \$1.4 billion expansion of its olefins facility to move it to world-scale. Again, a high probability is placed on an FID for this project, likely occurring in 2024-I. Twelve new permanent jobs would be created at an average annual salary of \$85,000.
- Progress continues to be made on the proposed **Gron Fuels** plant on 141 acres at the Port of Baton Rouge. Minor source air permits have been secured, several components of the FEED have been completed, and an offtake agreement has been signed with Jet Blue. Gron Fuels would make renewable Sustainable Aviation Fuel (SAF) out of soybeans, canola oil and animal fats. The first phase of the project would cost \$1.2 billion, but the total planned complex would come in at \$9.4 billion. Phase 1 would result in 340 jobs, and if the entire complex materializes, 1,025 jobs would result. An epc (engineering, procurement, construction) contract has been signed with Fidelis New Energy for the FEED on the primary fuel processing system. All the signals for this project look very good.
- Also in the Port Allen area is the proposed **Arbor Renewables** \$800 million gasoline and green hydrogen plant. This would be phase 1 of a 2-phase plant. If both are built the capital expenditure would jump to \$1.5 billion. These renewable fuels would be produced from chopped southern yellow pine thinnings into a syngas that is a drop-in fuel (it would not have to be mixed with regular gasoline). Arbor has a similar plant under construction

in the Beaumont area. We do not have enough information to establish a probability on this project.

- **Shell Chemical** has received an industrial tax exemption (ITEP) for a \$512 million lubricant plant in Geismar. This facility would hire 12 new people with an average annual payroll of \$924,000. An FID is expected in 2024-I and carries a high probability of going forward.
- An Australian firm entitled **Element25** is proposing to construct a \$480 million plant in Ascension Parish to manufacture high-purity Manganese sulfate for use in EV batteries. Phase 1 would cost \$289.9 million and create 65 new jobs at a \$90,000 average wage. The firm has already signed a \$85 million loan from GM to supply 32,500 tons of product for 1 million GM vehicles. An FID is expected by 2024-I. We place a good probability on this project.
- **Monarch Energy** has announced plans for a \$426 million green hydrogen production facility in Ascension Parish. An FID and planned construction start is scheduled for 2025. The plant will employ 44 people earning an average annual wage of \$63,000.
- In Burnside, **Freepoint Ecosystems** is planning a \$350 million facility to recycle hard-to-recycle waste plastics and make from it pyrolysis oil and syngas. The firm would hire 35 people at an average annual wage of \$70,000. An ITEP has been achieved, and the firm projects an FID by year-end 2023.
- We are expecting **ExxonMobil** to spend \$264 million on three projects in the area. One project is a facility to make high-grade isopropyl alcohol for microprocessors, and a second is for a new resin facility in West Baton Rouge. An ITEP application is expected soon for an advanced plastics recycling facility. Baton Rouge is competing with Joliet, Illinois for this 50-job project. Landing the recycling facility would be a real boon, because along with it is likely to come **TenCate Turf Recycling Solutions** to spend \$1.6 billion on a plant to take turf from artificial football fields and recycle into plastic bottles.

- A third significant **Shell** project has been announced---a \$121.7 million project to boost output at the firm's catalyst plant in Port Allen. This 17-job addition should see an FID by year-end 2023. Average annual salary for these 17 jobs would be \$94,000.
- **BP Lightsource** expects to start construction this year on Prairie Ronde Solar Farm in Pointe Coupee Parish. This will be a \$170 million, 180-megawatt facility. Construction is expected to start in late 2024.
- **Placid Refinery** is spending \$66 million to move its headquarters from Dallas to Baton Rouge. The firm will be located in the old BRAC building and will bring 20 new jobs to the capitol city.
- An ITEP has been granted to **Syngenta Crop Protection** for a \$52 million expansion project in Iberville Parish that would create three jobs.
- **Capitol City Produce** is expected to spend \$22 million to expand its distribution center with a new refrigerated warehouse, a dock, and office space. Forty-five new jobs will come with the expansion.

All this construction activity is ginning up the industrial construction industry. For example, **Turner Industries**---already at 10,000 employees--- is expected to add 3,000 more construction workers to handle the new business. Turner's fabrication facility in Port Allen is now at 500 employees and is expected to add 400 more over the next two years. **Performance Contractors** has added 2,000 construction workers in the past year, is now at record employment levels, and is looking for more employees. The company's yard in Plaquemine, for fabricating small modular units, is at full capacity with 400 employees. **Primoris Energy**---a specialty contracting firm---is expanding its 100-person workforce to 700 employees over the next two years. We expect similar employment expansions at ISC, Performance Contractors, MMR, Cajun Industries, and others. The next two years will be bountiful for these firms.

This industrial construction boom is also confirmed by recent worker-need surveys done by the **Greater Baton Rouge industrial Alliance**. GBRIA surveyed contractor needs within 50 miles of the 70806 zip code. From the charts GBRIA published we made the estimates in Table 5 of needs by craft between January

2023 and January 2025 when the needs peak. These surveys indicate a remarkable 5,400 new construction jobs needed by January 2025 in just these five skill sets.

Table 5

GBRIA Estimates of Labor Needs within 50-Mile Radius of 70806:

January 2023 – January 2025

Skill	Job Growth
Electricians	+2,000
Instrument Technicians	+500
Millwrights	+700
Pipefitters & Contract Welders	+2,200
Total	+5,400

Source: Greater Baton Rouge Industrial Alliance. Growth number estimates from graphs.

We have focused largely on private industrial construction to this point because of its imposing size. However, the healthcare sector is making significant investments in Baton Rouge proper. The planned \$109 million **Our Lady of the Lake – LSU Interdisciplinary Sciences Building** will be the hub for a 3-phase new campus district focused on scientific discovery. This facility is expected to be the first NCI-designated cancer center in Louisiana. The three phases will be: (1) imaging therapeutics, (2) a consolidated clinic, and (3) a parking garage. **Ochsner Health** has a \$10 million expansion/renovation of its cancer center underway.

Speaking of hospitals, few probably realize how important state-run hospitals are to the northern portion of this MSA. **There are 1,505 people working in the two state-run hospitals in East Feliciana Parish.** The largest---East Louisiana Mental Health System---employs 1,287 people and has an annual budget of \$185 million. Villa Feliciana Medical Complex has 218 staff positions with an annual budget of \$25 million. These numbers are not expected to change significantly over our forecast period. Of course the largest employer in the Felicianas is **Angola Penitentiary**, the largest maximum security prison in the U.S. Angola holds about 6,300 inmates and employs about 1,800 people.

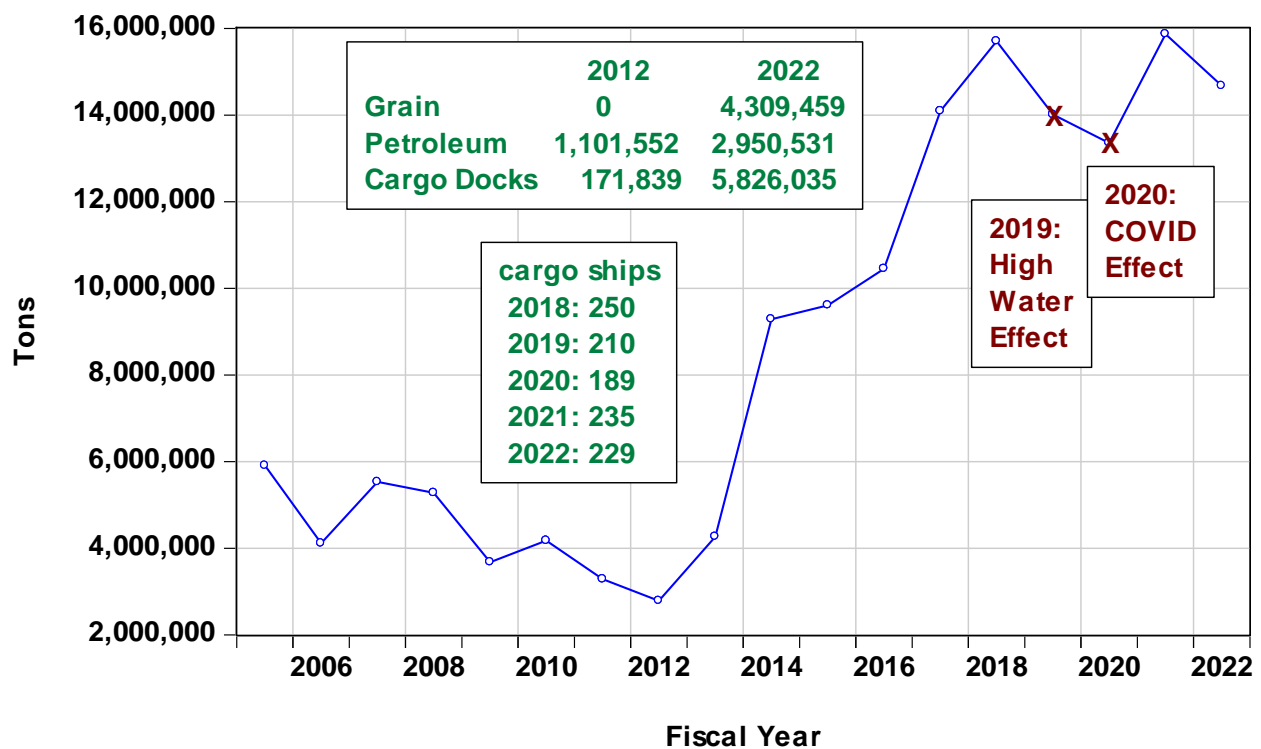
The Port Awaits Gron

Baton Rouge is home to the 8th largest port in the U.S. The “Old Bridge” in north Baton Rouge is as far north as deep draft ships can navigate on the Mississippi River. As mentioned in one of the bullet points under “announced projects” above, the Port is eagerly awaiting an FID by Gron Fuels to begin what will ultimately be a \$9.4 billion renewable fuels project. The great hope is that that will occur in 2024.

Figure 21 tracks tonnage handled at the Port over 2004-22. A major jump occurred between 2012 and 2018 when tonnage leapt from 2 million tons to about 16 million tons. Three events produced this remarkable growth. **Louis Dreyfus** opened a new grain elevator at the Port, adding about 4.3 million tons and 78 ships to the total.

Figure 21

Tonnage Handled at Port Of Baton Rouge: 2005-22



Source: Port of Baton Rouge & Loren C. Scott & Associates, Inc.

Drax Biomass added two dome-shaped containers at the plant to hold wood pellets produced at its plants in North Louisiana and Mississippi from ultimate

shipment to England to burn for electricity there. Drax was responsible for 40 ships coming to the Port. Houma-based **SECOR AMH** added the Inland Rivers Marine Terminal and now handles some 14,338 containers through there. Genesis Energy brought about 57 ships to the Port to handle Genesis' petroleum products.

High waters on the Mississippi River and the COVID shutdown created real issues for the Port in 2020 and 2021. In 2023-III, the Port will advertise for a **\$20 million expansion of the Northern Petroleum Berth**, which will allow for a fourth ship to be berthed at the Port.

Public Construction: Flood Monies Still Loom Large

Hundreds of millions of dollars in public spending is on the horizon for the Baton Rouge MSA. Many millions of **flood protection/reduction** monies still remain to be spent. For example:

- Work continues on the **Comite Diversion Canal** after almost a 2-year delay associated with relocating the important Florida Gas Pipeline. In the meantime, costs of the project have tripled since it was "fully funded" in 2018. Representative Graves secured another \$476 million to complete the Canal hopefully by year-end 2025. We understand the Darlington Dam on the Amite River, first mentioned 30-40 years ago, is back in discussion.
- HUD allocated \$1.2 billion in **flood mitigation monies** to be spent across the State after the devastating flood of 2016. Remarkably, the bulk of these monies have still not been spent. We expect Governor Edwards to allocate these funds before leaving office, and we also expect the capitol region to be the happy recipient of the majority of these funds.
- The feds have allocated about a quarter of a billion dollars for **clearing, widening, and dredging five bayous** in the Baton Rouge area to allow more capacity to drain the Amite River. Work is almost completed on the three bayous---Jones Creek, Wards Creek, and Bayou Fountain---in the southern part of the MSA. Focus will now shift to the Central area and to Beaver Bayou and Blackwater Bayou. These two bayous will have to be widened and deepened more than the three in the southern part of East Baton Rouge Parish. Also there are more environmental

hoops to jump through and more property acquisition involved. The Corps is valuating cost estimates. We suspect the number will be north of \$200 million.

At \$653.2 million (up from \$529.6 million last year) **state road lettings** in the Baton Rouge MSA actually exceeded that of the New Orleans MSA. The three top projects are associated with connecting LA1 to I-10:

- \$165.5 million on the LA1 to LA415 connector
- \$85.7 million on the LA1 Port Allen bridge replacement
- \$47.8 million on the US190/LA415 railroad bridge replacement

Work continues on the \$45 million **I-10 to College Drive flyover ramp**, which will hopefully be completed in 2024. A team of Kiewit/Boh construction companies has been selected for the **widening of I-10 from LA415 to the I-10/I-12 split**. The \$716 million first phase is from the Washington Street exit to Essen Lane (see Figure 22.) Utility relocation work is underway, and lane restrictions to two lanes each way are anticipated to begin in 2025 and last 12-14 months. The entire Segment 1 project is projected to take 5 years to complete.

Figure 22



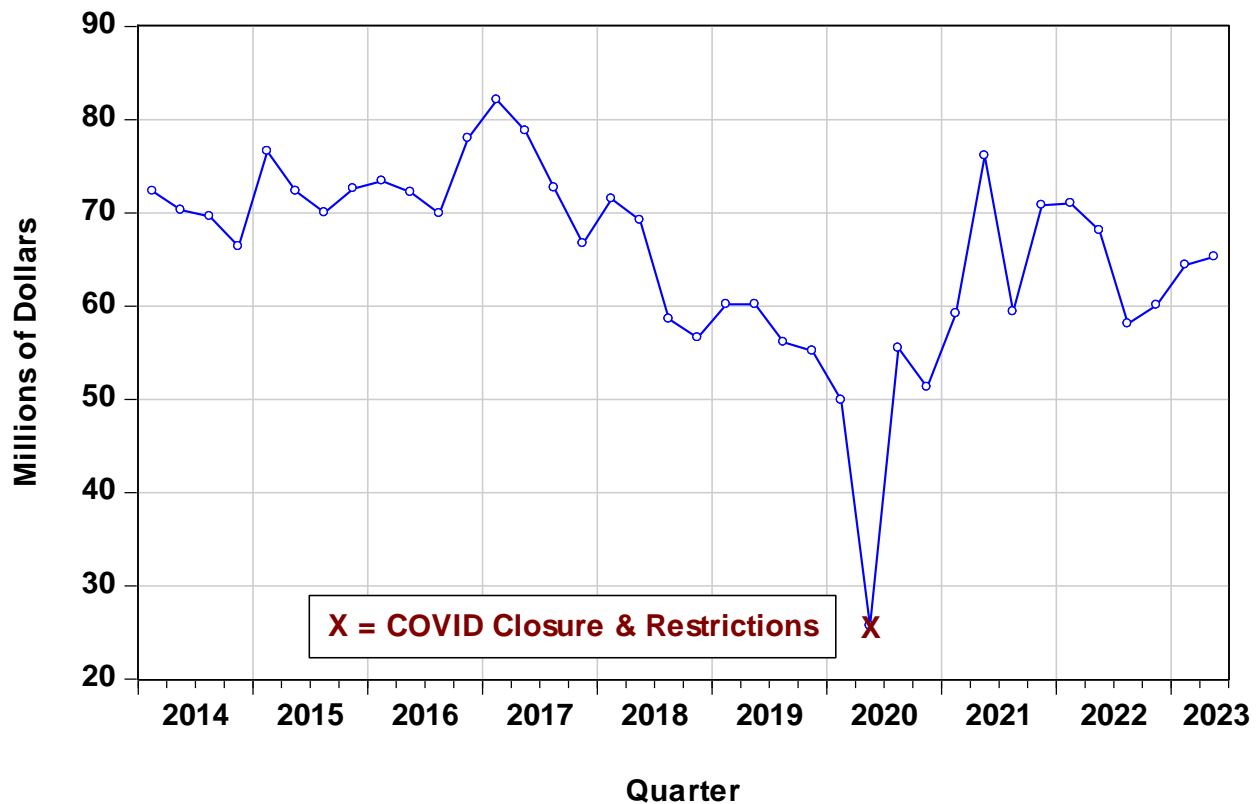
Source: Louisiana Department of Transportation and Development

More public spending will be injected into the MSA over the next two years by funds from the **Coastal Protection and Restoration Authority**. The CPRA will be spending \$122.2 million in Ascension Parish, the bulk being spent on a project to reintroduce the Mississippi River into Maurepas Swamp.

Baton Rouge Casinos: All Land-based Now

This MSA has the smallest gaming market in the State, with gross gaming revenues about three and a half times smaller than the Lake Charles market. The latter also has three casinos, but Lake Charles also has the most successful horse racetrack in the State as well. The Baton Rouge gaming market is largely local, while the Lake Charles market is able to draw heavily on the Texas market, especially Houston.

Figure 23
Casino Gross Revenues: Baton Rouge



Source: Louisiana Gaming Control Board Reports & Loren C. Scott & Associates, Inc.

Figure 23 tracks gross casino revenues by quarter for the region's three casinos from 2014-I through 2023-II. Like all casinos in the State, those in Baton Rouge took a huge hit from the COVID shutdown. By 2021, quarterly revenues were pretty much back to pre-COVID levels. However, revenues for the most recent last four quarters have been a bit below trend.

The primary reason for this slight drop has been a major structural shift in this market. In response to rule changes by the Legislature, both of the downtown riverboat casinos are moving on land. The Hollywood Casino---now rebranded as **Queen Baton Rouge Casino**---has completed its \$85 million move and opened in August 2023. The transition to land is projected to create 100 additional jobs.

The same company that purchased the Hollywood Casino also purchased the **Belle of Baton Rouge Casino**. This has historically been the weakest performing casino in the State, with gross revenues about one-fourth of Hollywood and one-

fifteenth of L'Auberge. About \$100 million will be spent starting this October to move this casino on land, rebrand it with a new name, and create a “boutique” casino. The casino will be moved into about one-third of the Atrium, some 250 rooms of the adjoining hotel will be renovated, and slots will be increased from 350 to 650. A tentative opening date is October 2024.

Not All the News Is Great

As one reads the past several pages devoted to this MSA's economy it should become clear why we have such a positive job outlook for the region. That said, the Baton Rouge MSA has not been without its negatives. Employees attempted to unionize the **Electronic Arts** site on the LSU campus and the firm responded by moving 207 jobs to another testing site. The 120-person **Orion Instruments** facility, which manufactures majestic-based instrumentation, will be terminating 73 workers by the end of 2023.

Area natives are even more restless because of the potential sale of two large employers in the region. The for-profit firm Elevance is seeking approval from the Commissioner of Insurance to purchase the not-for-profit **Blue Cross Blue Shield of Louisiana**. BCBS employs a couple of thousand workers in the Baton Rouge area and over 1,400 in the Monroe MSA. BBS officials have said publicly that no change in employment is projected over the next two years. UnitedHealth is spending \$3.26 billion to purchase **Amedisys** home health care company, which employs numerous people in the Baton Rouge MSA.

THE LAFAYETTE MSA

Turner, SafeSource Direct, & First Solar Provide a Positive Jolt

The second most oil-dominant MSA in the state is the 5-parish Lafayette MSA. It is also the third largest MSA in the State by employment. A brief history of this MSA can be found in Appendix C. Located in the south-central part of Louisiana along and below I-10, it is composed of Lafayette, St. Martin, Vermillion, Acadia, and Iberia Parishes (see Figure 12). In 2023, there were about 204,400 people employed in this region, and of that amount 5.2% were directly employed in oil and gas extraction and support activities for the industry. That is more than three times the state average and is closely connected to the oil and gas exploration that goes on in South Louisiana and the Gulf of Mexico.

Not surprisingly, there are many fabricators (e.g., Frank's Casing) and service firms (e.g., Halliburton and Schlumberger) that came to the area because of their close ties to the exploration sector. Because of their special skills, business for these firms extends to the Permian Basin and all the way to North Dakota. Many firms handle both U.S and international service and exploration work. Several large companies serving the offshore industry utilize the very productive **Port of Iberia** located in this MSA.

A distinct advantage Lafayette has over Houma (another oil-dominated MSA) is that Lafayette is far more diversified. Consider the following non-energy firms:

- **Acadian Ambulance:** 1,450 employees and a subsidiary that monitors over 200,000 alarms in 40 states and monitors businesses and houses via videos
- **Stuller Inc.:** 1,540 employees and the nation's largest jewelry settings manufacturer
- **LHC:** 926 employees just in Lafayette and the nation's second largest home-health company
- **CGI:** 700+ employees and a growing high-tech firm
- **Safe Source:** 900 employees and working toward 1,200+ to make personal protective equipment in the healthcare arena

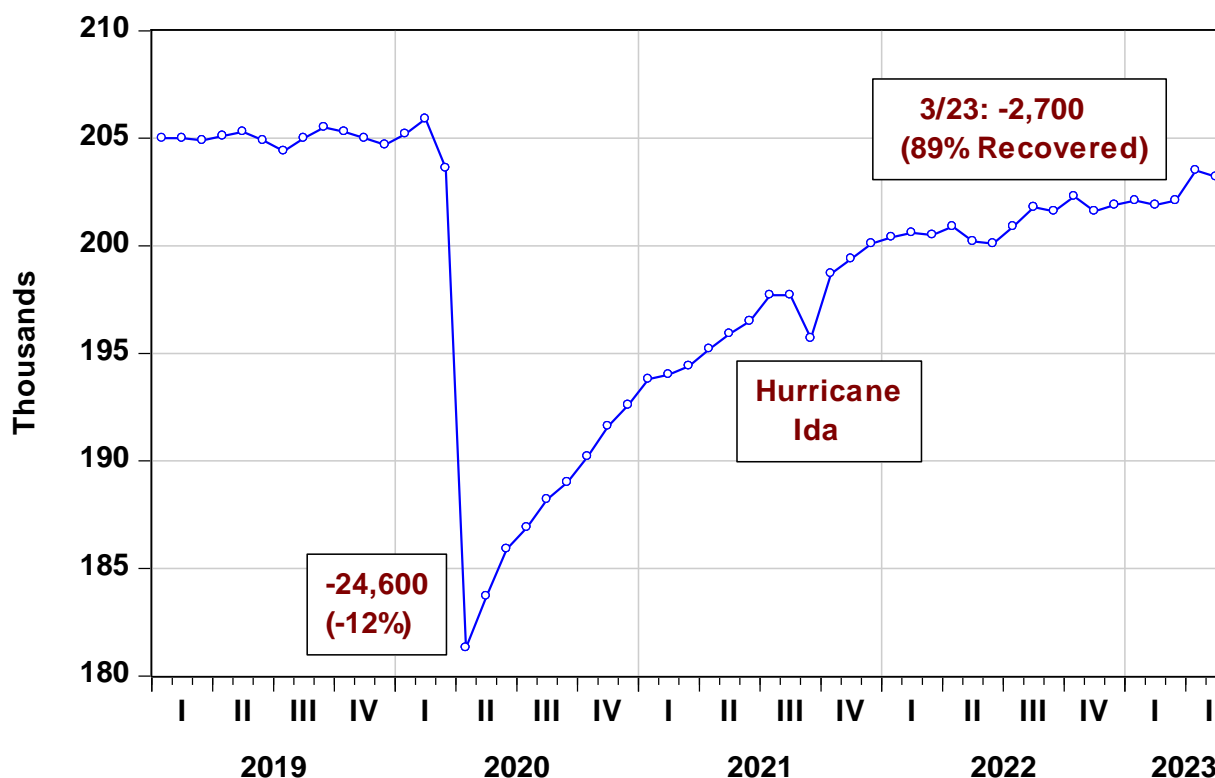
Lafayette is also the home of one of the state's larger public universities---the **University of Louisiana at Lafayette**---making it a significant university town.

Recovery From COVID: Still A Ways to Go

Figure 24 tracks seasonally adjusted nonfarm employment in the Lafayette MSA by month from January 2019 through July 2023. This graph gives a good picture of the impact of the COVID shutdown (-24,600 jobs) on the MSA's employment. The small ding the region incurred because of Hurricane Ida is apparent, an event from which the region fully recovered after one month.

Figure 24

Lafayette MSA Nonfarm Employment (SA)



Source: Louisiana Workforce Commission & Loren C. Scott & Associates, Inc.

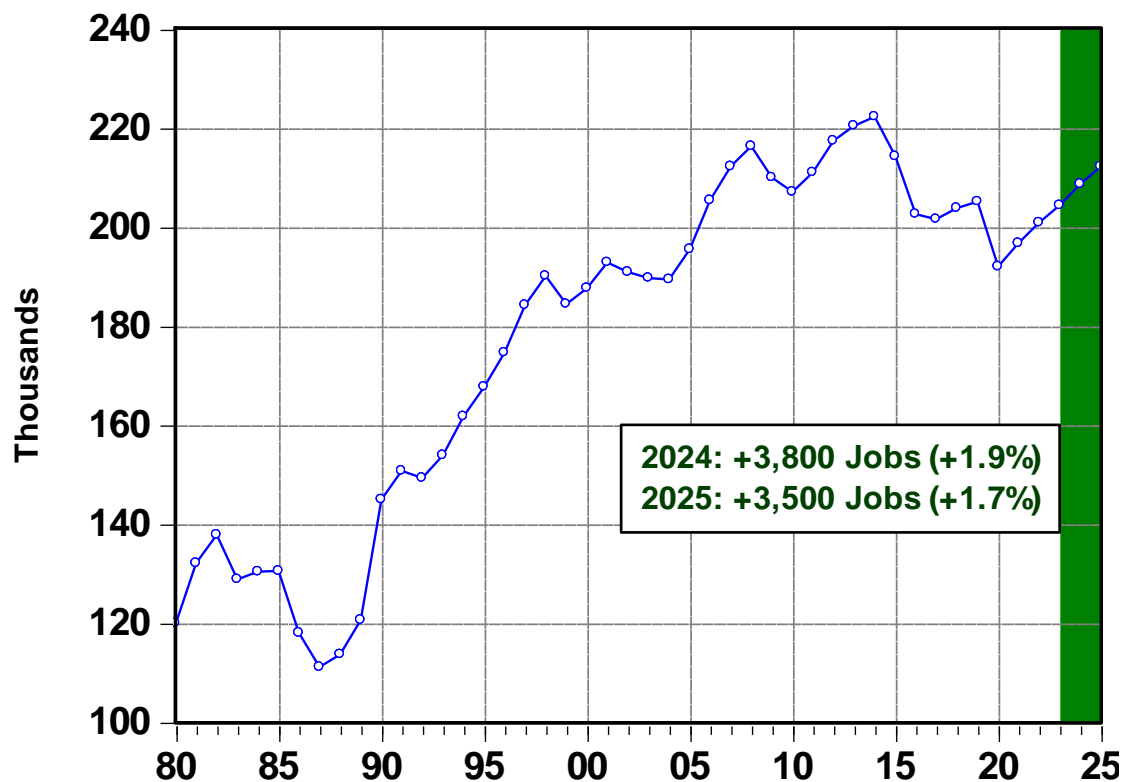
By July 2023 Lafayette had recovered all but 2,700 of the COVID job losses---an 89% recovery rate. It has been a bit discouraging that the growth rate in the recovery line has slowed as compared to the 2020-21 period. As will be shown below, a full recovery is expected by early 2024 if not the latter part of 2023.

Forecast for 2024-25: Lafayette MSA

Figure 25 contains historical data on nonfarm employment in the Lafayette MSA from 1980 through 2023, along with our forecast for 2024-25. **We are projecting**

3,800 new jobs (+1.9%) for the MSA in 2024 and another 3,500 jobs (+1.7%) in 2025. In absolute terms, 7,300 new jobs are the third best jobs growth in the state. In percentage growth rate terms, Lafayette ranks seventh among the nine MSAs in Louisiana. While many good economic development moves are afoot in this region, oil and gas extraction levels in the Gulf of Mexico remain a drag on this economy.

Figure 25
Lafayette MSA Non-Farm Employment
Forecast: 2024-2025



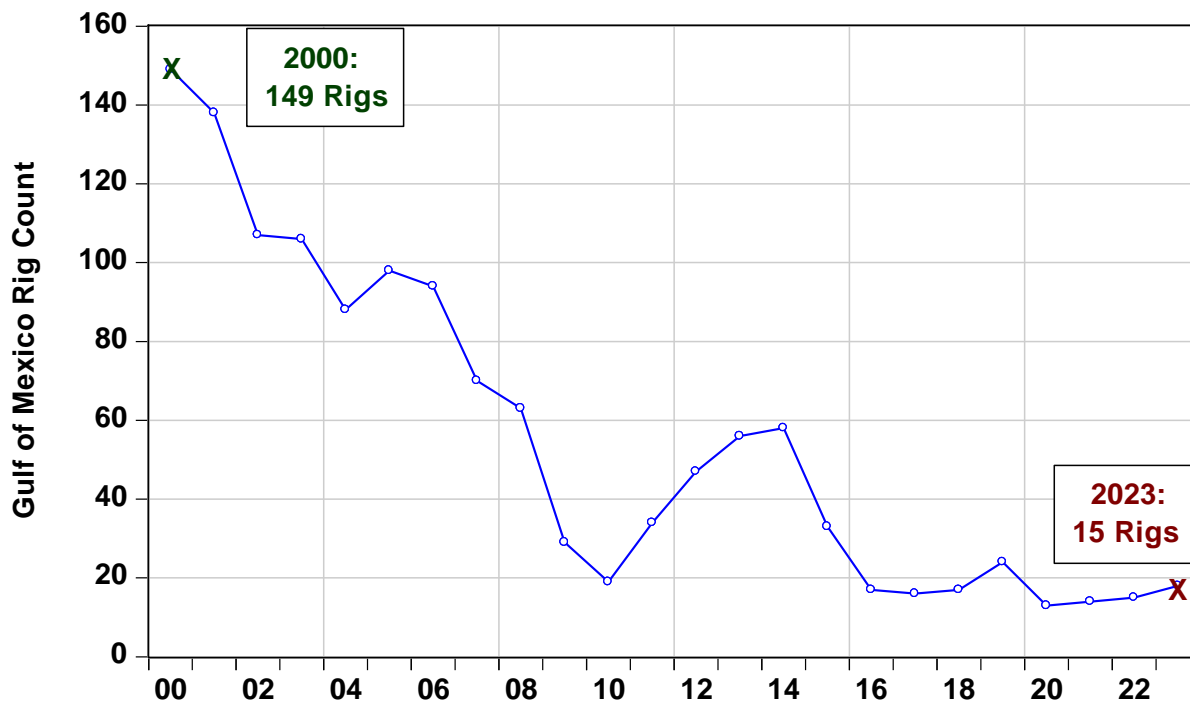
Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

The GOM: Is the Anchor Starting to Lift?

Why isn't Lafayette's growth rate as robust as other MSAs in the State? The answer is seen in Figure 26 which graphs the rig count in the Gulf of Mexico (GOM) from 2000 to 2023. It was only 23 years ago that the rig count was a hefty 145, and only about 10 years ago when it was near 60. The rig count has now been under 20 for seven of the last eight years. There are a lot of

businesses in the Lafayette Region whose backbone was built on drilling activity in the GOM. Lately, it has been a dragging anchor for the MSA.

Figure 26
Gulf of Mexico Rig Count:
Month of August



Source: Baker Hughes & Loren C. Scott & Associates, Inc. Data are for Louisiana & Texas

There are, however, compelling reasons for modest optimism about business in the GOM. First, Figure 26 tracks drill bit activity only. Look backwards from 2023 on the graph, and one realizes that previous drilling created a large number of production platforms in the GOM. Those production platforms require maintenance, upgrades, etc. There is also a booming business in removing old production platforms, especially those in shallow waters.

For the future, there has been a major new technological break-through. About two years ago the code was broken on how to drill in **20,000 psi water depths**. Called HP/HT (high pressure/high temperature) fields, this advancement is opening up reservoirs that were previously inaccessible. Transocean now has 8th generation drillships---Deepwater Atlas and Deepwater Titan---that have,

among other things, the 3.4-million-pound hoisting equipment necessary for the heavier, large-diameter casing strings.

Between 2016 and 2020, there were five new platforms added in the Gulf. Over the next 5 years---2021-2025---seven more will be added. Hart Energy reports that final investment decisions (FIDs) will be issued on five more platforms in the Gulf: Shell's Sparta and Leopold, BP's Kaskida, Equinor's Monument, and LLOG's Blacktip.²

There has been a regulatory tsunami coming from the Biden Administration for offshore drilling, but these companies have 7-10 year planning horizons. Plus, the pricing environment remains favorable. If our forecast of \$80 a barrel is near the mark, there is a lot of money still to be made in the Gulf. The breakeven price for tiebacks is estimated to be \$39 and for standalones it is \$40-\$50.

Those following action in the Gulf should pay keen attention to the next lease sale 261 scheduled for September 27th (after we go to press). No schedule has been released for sales after this one, and, for the first time in history, no 5-year lease plan has been released by the Department of the Interior. Will companies gobble up extra leases because of this uncertainty? Stay tuned.

Huge Wins for Lafayette: First Solar & SafeSource Direct

Economic developers in this MSA have scored two major job-creating wins in the past 18 months. Ochsner partnered with **SafeSource Direct** to build the first phase (two plants) of facilities to manufacture surgical masks, hair covers, shoe covers, rubber gloves and other items for the healthcare industry. Employment at the firm is already up to 900 new jobs. Ground is expected to be broken in 2024 on a capital expansion to add 12 more production lines and 697 new jobs. This was a spectacular win for the region.

The news got even better this summer when **First Solar** announced it would build a \$1.1 billion solar panel manufacturing plant (the largest capital project in the region's history) at the Acadiana Regional Airport. This would be First Solar's 5th plant and makes the company the largest solar panel manufacturer in the Western Hemisphere. When opened, the plant will employ 700+ workers.

On the subject of Acadiana Regional Airport, **Aviation Exteriors** has enjoyed a nice spurt of business with employment more than doubling in the past year from 88 to 210. Under a new owner, the firm is projecting to triple its size by

² "Deepwater GoM Construction Ramps Up," Hart Energy, August 4, 2023.

adding maintenance, heavy checks, and passenger-to-cargo conversions on 757s. The firm is working to get a new 3-bay hangar over the next three years to handle the new business. To attract more workers, average wage rates and benefit packages have increased markedly.

Even More Significant Capital Projects

Lafayette's economic wins do not stop with these two mega-labor projects. **Delta Biofuels** recently began construction of its \$100 million plant in Jeanerette to manufacture renewable fuel pellets out of bagasse. Once opened, 126 people will be employed at the plant at an average annual wage of \$62,500. In the same capital expansion league, **Ochsner Health Systems** purchased Lafayette General Hospital and is spending \$100 million to add a 6-floor patient tower. Construction will take about 18 months.

Three other capital projects will bring new employment to the Lafayette region. **Schlumberger** will be spending \$11.5 million to centralize its North Gulf Coast Divisions at a renovated operations hub. The company employs 1,376 and will add 44 new jobs to this total. **Aquaspersions** is building a \$3.5 million facility at the Spanish Trails Industrial Park in St. Martin Parish. The company will manufacture waste-based additives for latex, paints, and adhesives and will employ 25 people. **Tides Medical** is spending \$1.5 million on a corporate headquarters and a new plant to manufacture amniotic tissue grafts for treating chronic or difficult to treat wounds. Between 10 and 15 new jobs will be created.

Big 7 Remain Solid, But ASAP?

As mentioned in the introduction to this MSA, Lafayette has a distinct advantage over its sister city to the Southeast---Houma---in that over time Lafayette has enjoyed some major wins to diversify away from oil and gas extraction dependency. Six large firms form the basis of this diversification foundation.

- People are often surprised to learn that the largest jewelry settings manufacturer in the U.S. is located in Lafayette. **Stuller Settings** has now grown to 1,540 employees and expects this number to expand by 75 jobs annually over the next two years. This year was a consolidation year for the firm with very healthy revenue growth. Stuller is projecting revenues to expand by 8% in 2024 and 7.5% in 2025.

- Another stalwart in Lafayette is **Acadian Companies**, providing ambulance services across Louisiana and in several other states. At 1,425 employees in Lafayette (up nearly 5% over last year) and 5,011 system-wide, Acadian remains a solid, dependable jobs provider in this community. The company is constantly seeking---and helping to train--- EMTs and paramedics. The firm is paying for training in these skill sets in exchange for a 2-year work commitment. We expect employment to continue to rise at this company.
- Some worry was created recently when **LHC** was purchased by United Health. LHC employs 926 people in Lafayette and 27,727 system-wide. Fortunately for Lafayette, it appears United is treating LHC as an addition to its portfolio where the company was missing a home healthcare arm. We are hopeful LHC's employment will stay at its present level.
- Information technology company **CGI** continues its nice employment path upwards. Now at 700 employees, CGI has a diverse portfolio of work with the federal government, state governments, and commercial clients that creates an inviting climate for attracting employees. The company expects to add 30 jobs a year over the next two years. The state gave UL \$4.5 million to help the university develop talent for the company.
- **Viemed** provides nation-wide, in-home medical equipment and post-acute respiratory healthcare services. The company employs 353 people in Lafayette and another 743 across the U.S. Employment is projected to be relatively stable over 2024-25 in Lafayette.
- The Jeanerette location of **Metal Shark Boats** manufactures smaller boats that can be trailered out (200 foot long limit). The company's 240 employees make boats out of aluminum, and many are for the military, and are unmanned, autonomous vessels. No change in employment is expected at this site.
- It was concerning when **SCP Health** moved its headquarters from Lafayette to Atlanta. The concern was that the entire administrative staff

would follow along. Fortunately the CIO and about 200 tech staff remain in Lafayette.

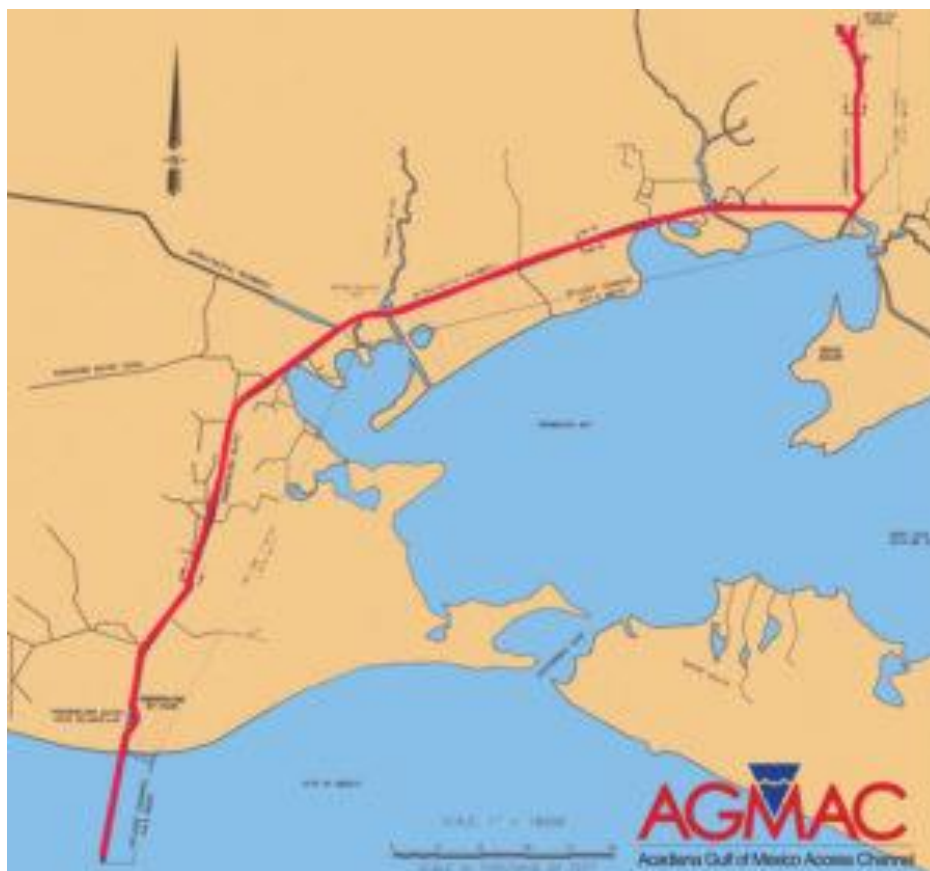
While these seven companies provide a solid, diverse base to the Lafayette economy, there is another company that used to be in this list that is more problematic. **ASAP**, formerly Waitr, has seen its employment in Lafayette decline from 583 in 2020-II to about 60 now.

Port of Iberia: Turner Booming

A bright light in the economy of the Lafayette MSA is the **Port of Iberia**. A major public investment is underway that is pushing the Port to a new level of growth. Figure 27 pictures the **Acadia Gulf of Mexico Access Channel**. Work is underway to deepen the Channel to 16 feet. About \$38 million has been spent to lower pipelines and begin dredging on the first 8½ mile leg of the project. The Legislature has approved \$58 million for lowering seven pipelines and dredging the last segment. All pipelines should be lowered by the end of 2023, when dredging can start.

Deepening the Channel allows the Port to attract industries that manufacture heavy modules that can be transferred out to the Port to the Intercoastal Canal to sites where the modules are to be installed. Last year a new tenant---**Turner Industries**---leased the old Dynamics East Yard and began manufacturing windfarm blade rack carriers to be used offshore at Martha's Vineyard. Turner is already at 400 employees and expects to add 600 people to that total by the end of 2024.

Figure 27



Source: Port of Iberia

Chart Industries has spent about \$5 million on expansions and has doubled its yard space at the Port. Chart is at 300+ employees and growing. The company uses special alloy welding to manufacture cold boxes that are used by LNG exporters. **Bayou Coatings** is a steady, dependable employer at the Port, employing between 180-220 people. The company---as the name implies---coats pipes to preserve them from corrosion and Bayou coats pipe with concrete for LNG exporters to keep them from floating. Now at 120 employees (and stable over 2024-25), **Louisiana Cat Machinery** has just installed a \$1.2 million dyno meter test facility at its site, which allows the company to run some of its huge engines for 24 hours to check their endurance. **Custom Compression** manufactures devices for the fracking industry. At 160 employees, the company expects to add 25-50 people more soon.

The Port has welcomed two new tenants this year. The Port Commission purchased 117 acres and all facilities from Frank's International in order to

attract **Global Risers**. This Canadian firm maintains risers for deepwater drillships and has signed a 10-year lease with the Port. This site will be Global Riser's base for GOM operations. The firm is starting with 40-50 jobs but expects that number to increase over 2024-25. An existing company at the Port---**Seadrill**--- has also signed a 10-year lease to be near Global Risers. Seadrill maintains a stable workforce of 60-80 people. **E-Crane** is another new company to the Port. The company assembles e-crane devices that were manufactured in Belgium and has brought 60 new jobs to the Port.

Public Construction: Roads, CPRA & Atchafalaya

This MSA received some good news this year for future public construction projects, beginning with **state road lettings**. Lafayette MSA's road lettings for 2024-25 more than doubled from \$332 million last year to \$716.4 million this year. The top three projects on the list are:

- \$322.2 million for the US167 interchange at Willow Street
- \$56.8 million slab repair on I-10 from Jeff Davis to I-49
- \$50 million on US90 rail overpass

There was \$162.6 million included in the **Infrastructure Bill** for projects in the Atchafalaya. The **Coastal Protection and Restoration Authority** will scatter \$106.9 million across St. Martin, Iberia, and Vermillion Parishes over the next two years. Most of this money will be spent on the CPRA's Southwest Coastal Louisiana project.

THE SHREVEPORT-BOSSIER MSA

Amazon, SLB, Bia, GDIT, & Live!

Louisiana's fourth largest MSA is located in the northwest corner of the state. A brief history of the MSA is in Appendix D. Four parishes---Caddo, Bossier, Webster, and DeSoto---make up the Shreveport-Bossier MSA (see Figure 12). There are an estimated 178,700 non-farm jobs in these four parishes in 2023.

Unlike the other eight MSAs, a key metric for this MSA is its relatively high dependency on durable goods manufacturing employment, which makes the area much more susceptible to national recessions---an important consideration for 2024. Some of the larger durable goods manufacturers are:

- **Sabre Industries** – (formerly, CellXion) a manufacturer of cellular towers
- **Frymaster** – a manufacturer of deep fryers and similar products for McDonalds and KFC
- **Ternium** – a steel components manufacturer
- **Benteler Steel** – a large steel plant at the Port of Caddo Bossier
- **Fibrebond** – in Minden, which manufactures modular electric buildings for data

Three major players in this market are:

- The **Caddo-Bossier Port** which is home to several firms including Ronpak, Sports South, the Ternium steel firm, the Pratt recycling company, Morris-Dickson, OMNI, Calumet Packaging, and Benteler Steel. Altogether, tenants at the Port employ about 1,620 people.
- The **Cyber Research Center** which is a major new and growing player in the region with 1,810 employees at its three centers.
- **BRF** employs 614 people at its various facilities, including its incubator support for new firms. It is home to the new Center for Molecular Imaging & Therapy.

Shreveport-Bossier is also home of the **Haynesville Shale**---a very large deposit of natural gas. One of the first plays to use the fracking technology, exploration companies invested \$4.5 billion in new dollars (including about \$3.2 billion in mineral lease payments) into the northwest section of the state in 2008. The following year, that figure rose to \$7 billion (including about \$1 billion in mineral lease payments). The Haynesville is poised to be a significant factor in this region's economy over the next two years.

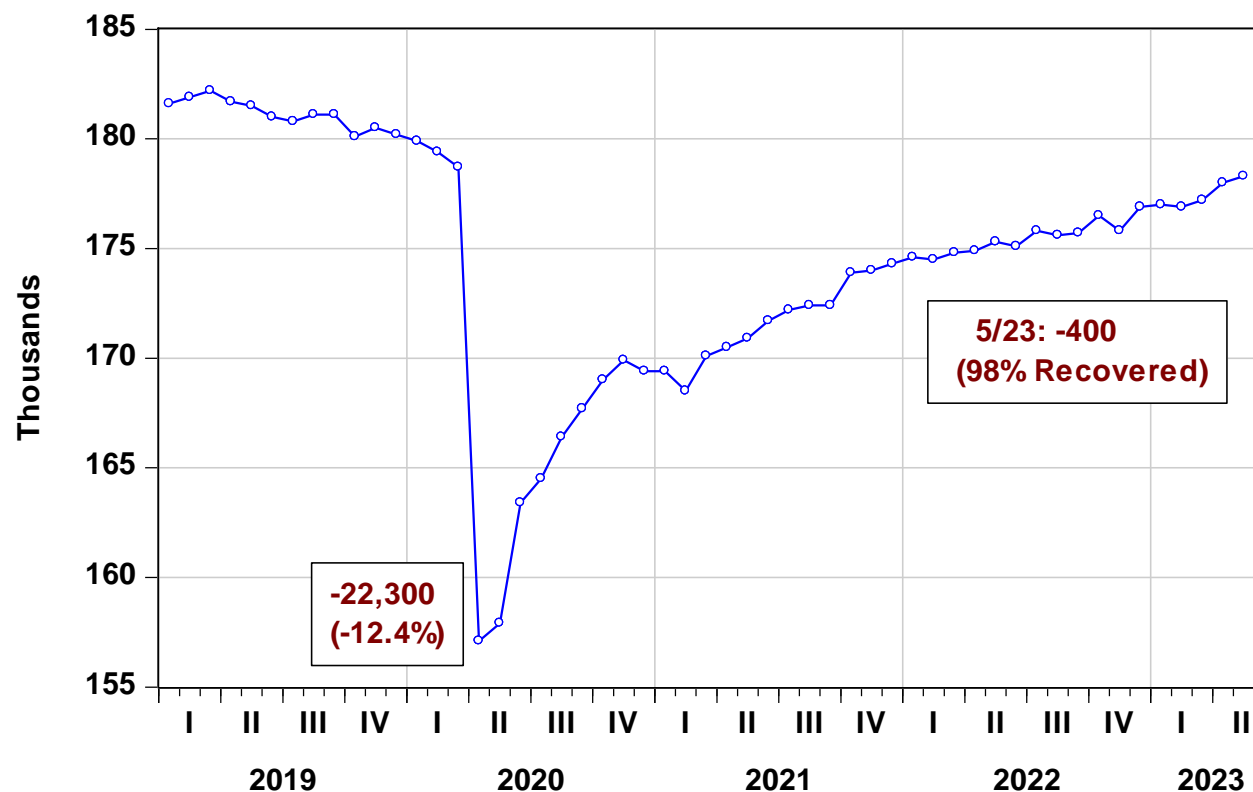
The military plays an important role in this MSA, because Bossier City is home to **Barksdale Air Force Base**, an employer of 8,463 military/civilian workers. Shreveport-Bossier is also the state's second largest casino market. This MSA now has five **large river boat casinos** plus the **Harrah's Racetrack**, which together employed 2,950 people in 2022-QIV. One casino---Diamond Jack---remains closed, but more on this below.

Recovery from COVID: Almost There

As is obvious from the track of seasonally adjusted nonfarm monthly employment data in Figure 28, the Shreveport MSA has almost recovered every one of the 22,300 jobs lost due to the COVID shutdown. Indeed, we expect full recovery will occur in late Fall 2023 at the latest. Since early 2021, this metric has progressed steadily upward in this MSA.

Figure 28

Shreveport-Bossier MSA Nonfarm Employment (SA)



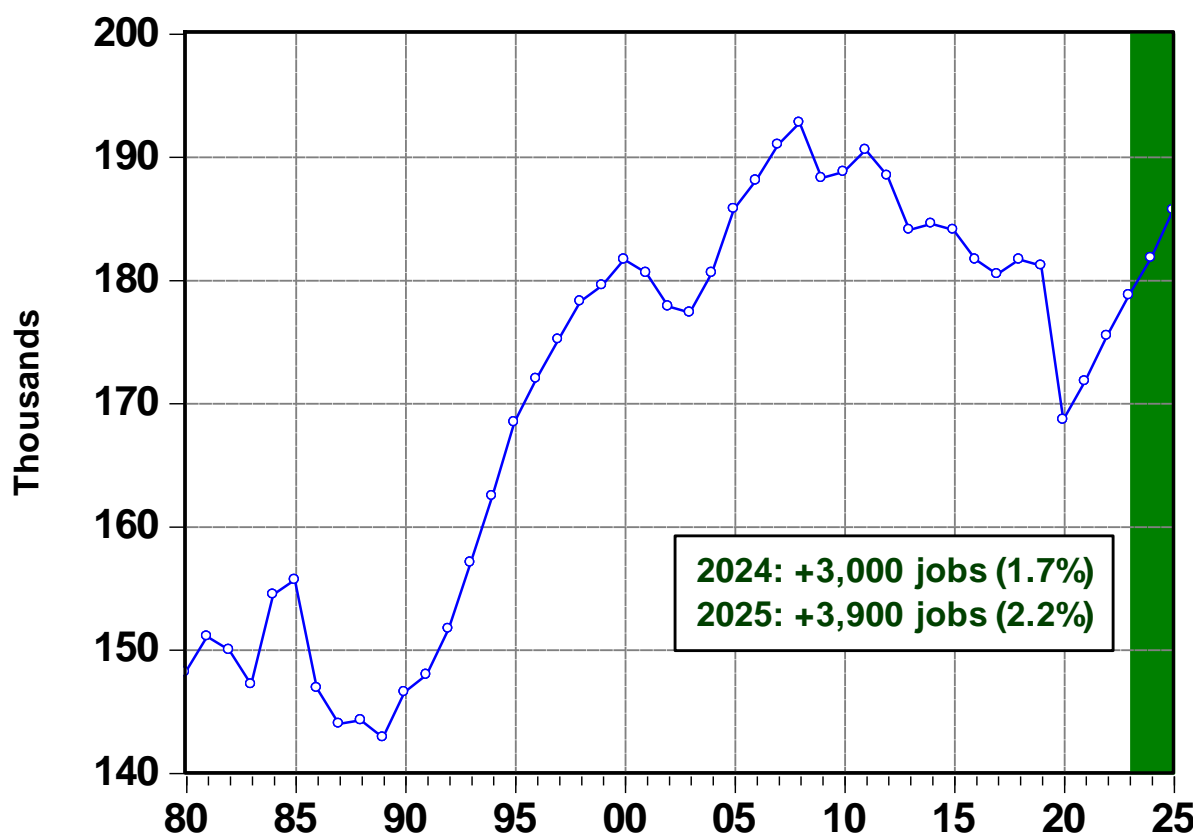
Source: Louisiana Workforce Commission & Loren C. Scott & Associates, Inc.

Forecast for 2024-25: Major Projects Ahead

Figure 29 tracks nonfarm employment in the Shreveport-Bossier MSA over 1980-2023, along with our forecast for 2024-25. **We are projecting a very healthy two years ahead for this MSA, with the job-count up 3,000 jobs (+1.7%) in 2024 and 3,900 jobs (+2.2%) in 2025.** Interestingly, these new jobs should be coming from a wide spectrum of sources, bringing even more diversity to this economy. If everything falls in place, our forecast will turn out to be too conservative by far.

Figure 29

Shreveport-Bossier MSA Non-Farm Employment Forecast: 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Two Big Dogs: Amazon & SLB

Serious job bumps are scheduled to come from two firms. The \$200 million **Amazon** fulfillment center is expected to open by mid-2024. Located at Hunter Industrial Park, this site is expected to employ over 1,000 people---a major win for this community. After years of sitting idle, the old GM plant---now the Shreveport Business Park---has a new tenant. **SLB**, which most of us know by its previous name (Schlumberger), is making an \$18.5 million investment at the site. Over the next three years, SLB will bring in 600 new employees earning an average annual income of \$60,000. The firm will be making and testing components for customers that support digital infrastructure.

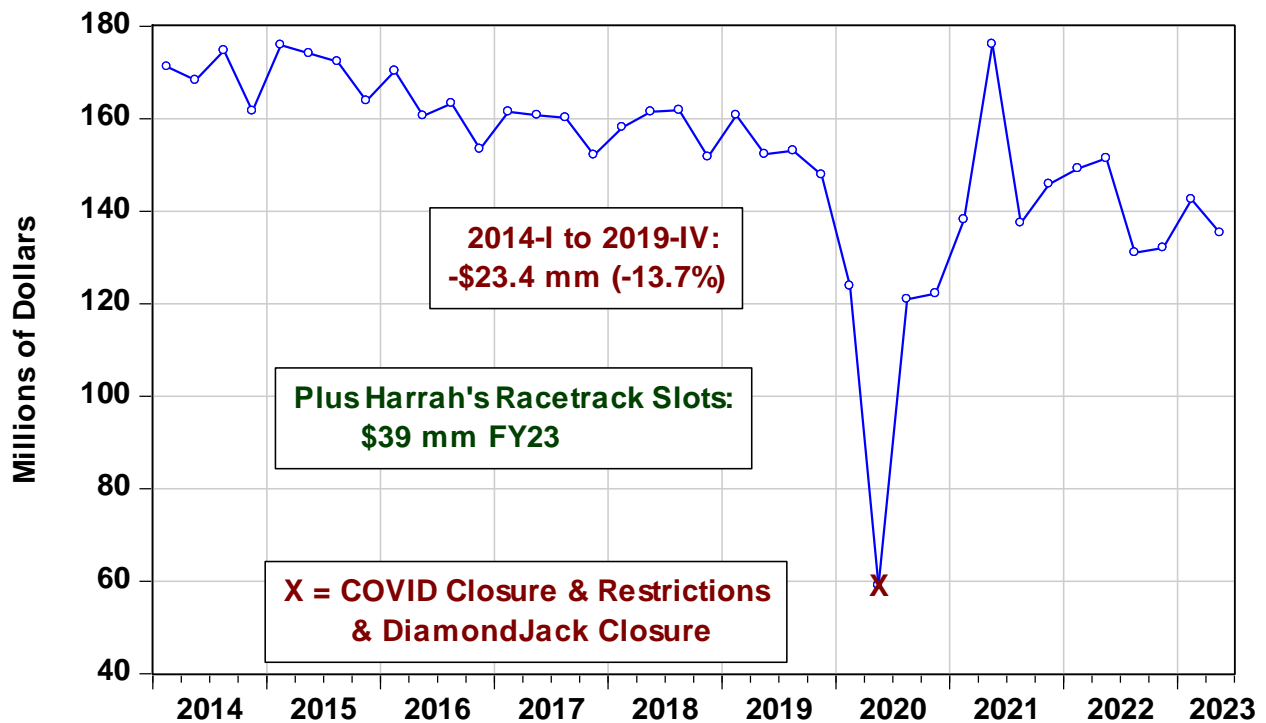
Two other manufactures in the region will be making significant expansions. **Prolec GE** is spending \$28.5 million on an expansion of its plant that manufactures transformers used in wind farms, solar parks, and other renewable applications. Construction is scheduled for June 2023 through March 2024, and will enable the firm to add 153 people to its present workforce of 282. In Minden, **Fibrebond** has expanded its footprint by 250 acres and is constructing a new building. Fibrebond manufactures large industrial modular buildings to house electrical equipment for data. Now at 500 employees, the firm expects that number to jump 10-15% a year over 2024-25.

Gaming Market: Live! Comes to Town

This MSA is home to the second largest gaming market in the State. There are five operating riverboat casinos in the MSA and the Louisiana Downs Racetrack, all of which derive much of their business from the huge Dallas-Fort Worth market.

A quick examination of the trend in quarterly gross revenues in the casino market (see Figure 30) will reveal that this has not been a growth market for the Shreveport-Bossier casinos. Between 2014-I and 2019-IV, gross revenues experienced a steady slide, dropping by 13.7%. The culprit behind this decline was the development of competing Indian casinos in Oklahoma, which drained Texans away from the Louisiana market. The COVID shutdown created a precipitous decline in revenues as all the casinos had to close for a period, and when they opened there were attendance limits initially. In addition, Diamond Jack Casino closed its doors completely. Note that with the exception of the positive spike in 2021-II associated with the federal stimulus checks, gross revenues have continued their decline rate into 2023.

Figure 30
Casino Gross Revenues: Shreveport-Bossier



Source: Louisiana Gaming Control Board & Loren C. Scott & Associates, Inc.

Despite this history of declines, the market is poised for a major new entrant. In early April of this year the Cordish Companies (a Baltimore gaming company) reached a deal to acquire the Diamond Jack property and rebrand it as **Live!Resort**. Cordish plans to spend **\$250 million** to renovate the casino and move it on land---the latter move now permitted by legislation passed back in 2018. Plans are for 47,000 square feet of gaming space (up from the 30,000 limitation on riverboats), a 400+-room upscale hotel, a 25,000 square foot multi-purpose events center, and 30,000 square feet devoted to back-in-class dining and entertainment. Cordish's construction plans still have to be approved by the Louisiana Gaming Control Board, and will involve about an 18-24 month build out. Once opened, 600 new jobs are projected for the resort.

As an aside, there was another interesting change in this gaming market in June. The Shreveport Parish Council voted to reverse its previous smoking ban in Shreveport casinos. Now, smoking is allowed in up to 75% of the gaming space at a Shreveport casino. The industry would argue this also may help reverse the

negative trend in gross revenues. Bossier Parish never instituted a smoking ban on casinos,

NCRP: The Reliable Job Producer

Since its beginning in 2009, the **National Cyber Research Park** (NCRP) has been a consistent job creator in this MSA. The largest tenant at the NCRP is the **General Dynamics Integrated Technology Center** (GIT) which has steadily grown to 1,500 employees with the anticipation of adding another 1,000 jobs over the next five years. GIT has another 250 people working at other sites in the MSA outside of the Park. This fall will see the opening of the new **Louisiana Tech Research Institute** which will house 400 faculty and staff working on classified research in the cyber field.

Figure 31
Cyber Innovation Center



Picture used with permission

About 260 people work in the **Cyber Innovation Center** (CIC) shown in Figure 31. Two hundred are various tenants working on cyber projects. Thirty people

support the Air Force Global Strike Command's Partnership Intermediary Agreement, and another 30 work on a grant through the Department of Homeland Security and the Cybersecurity and Infrastructure Security Agency.

For the future, the CIC is asking a federal agency for 2,000 more jobs in cybersecurity that would be filled at a rate of 200-300 a year through the Louisiana Tech and Gambling programs. The Governor has pledged a building to support this effort. The CIC is also working to land Project X which will deliver 500 new jobs over a 3-4 year period. The future is optimistic indeed for the NCRP.

Port of Caddo-Bossier: Will Bia Issue FID?

A significant driver of economic growth in this MSA has been the **Port of Caddo-Bossier**, and it looks like it will continue to be so. One of the largest employers at the Port is **Benteler Steel**, shown in the foreground in Figure 32. The expected sale of Benteler to Tenaris, reported in last year's LEF, fell through, but the company has been enjoying good activity in the steel pipe manufacturing business as the U.S. rig count rose from the depths of the COVID shutdown. Lower oil and natural gas prices recently have put a damper on sales, but if our price forecasts for these two fuels hold up, Benteler's sales will rejuvenate. Now at 350 employees, Benteler expects this number to grow to 430 over 2024-25. Benteler has \$6 million in planned capital projects ahead. We believe further good news might come soon on the capital spending front from Benteler.

By the end of 2024, **Sports South** will have added 130,000 square feet to its footprint at the Port (+\$13 million). The company's employment has risen to 350 from 280 last year. Employment is projected to stabilize at this level over 2024-25. **Morris Dickson** is spending \$2 million to replace and add to its distribution center at the Port. This will involve more automation for order fulfillment. The firm's employment is projected to rise from 267 to 307 over the next two years.

Ternium presently employs 182 people at its steel facility at the Port. There has been a delay in the company's \$98 million expansion due to installation costs coming in over budget. Groundbreaking on the new project is expected this fall and will result in Ternium bumping its employment up to 217. **Ronpak** is a leading manufacturer of paper bags, packaging, and food wraps. The company employs 243 people at its Port site and has an additional 130,000 square feet under construction. Once completed at the end of 2024, Ronpak's employment will grow to 350. **OMNI** manufactures, markets, and distributes

lubricants and chemicals to the automotive and industrial markets. The company employs 168 people at the Port (plus another 45 at a nearby warehouse) and has a \$1 million capital investment underway for machine additions and modernization. OMNI plans to add 20 jobs over 2024-25.

Figure 32
The Port of Caddo-Bossier



Picture used with permission

The 115-person **Pratt Industries** plant at the Port recycles cardboard and manufactures boxes. Pratt has \$19.4 million in capital expenditures ahead for infrastructure expansions and equipment upgrades. Depending on how the national economy performs over the next two years (see our assumptions section) the infrastructure projects may be put on hold. **Calumet Packaging** provides various oil-based products for engines of all sorts. The emergence of battery-operated lawn equipment is eating into the company's market a bit.

Calumet employs 75 people at the Port and has no plans to change that number or make any significant capital expenditures over 2024-25.

Sunny Point Aggregates was bought out by **Alpine Silica** and is projected to almost double its employment over the next two years from 88 to 148. Alpine is a frac-sand proppant processing facility that has leased 43 acres at the Port. Operations will create a 700-acre lake which can ultimately be used for recreational purposes. The company recently spent about \$50 million on a new drying unit at the site. **Odyssey Logistics** (20 employees) is planning to add six people over the next two years.

If one sums the numbers over these tenants, the Port is now at about **1,620 jobs** and growing. **Planned capital expenditures by the tenants over 2024-25 sum to an impressive \$126.9 million.** The Port also has significant capital projects in the near future. A notice to proceed has just been issued on a \$9.5 million, 40,000 square foot warehouse, and a water and sewer line (\$35 million) for 2,000 acres (that has just been purchased by the Port) is out for bids. A new \$25 million railroad is in the design stage, the DOTD is advertising for bids for a \$60 million I-69 service road that would provide direct connectivity of the port to I-49.

All eyes at the Port are on the proposed **Bia Energy** project, hoping an FID will be issued soon. Dr. John George of BRF has done a yeoman's job in keeping this project alive. This \$1 billion blue methanol plant would be making this fuel for the global shipping market. Under mandates from the UN's International Maritime Organization, ocean-going ships must reduce the sulfur content of their fuel markedly. One way to do that is to shift to dual-fueled engines (methanol or low sulfur diesel) or just methanol. RBN Energy has documented at least 105 ships on order that must be "methanol ready." The Australian company Macquarie (which also owns Cleco Power) is examining working with Bia to obtain offtake agreements. The FEED work, permitting, and gas contracts are in place. Prospects for this huge investment are looking very good.

BRF: Research Dollars & Chasing Aces

BRF (formerly Biomedical Research Foundation) employs about 614 people in its various entities. The organization has cooperated with the Louisiana Congressional Delegation some \$59 million from the U.S. Department of Defense appropriations over the past five years to support the Air Force Global Strike Command at Barksdale. These monies have helped over three dozen

companies to integrate technologies into the AF. BRF has asked for \$58 million in FY24 to be matched with other sources.

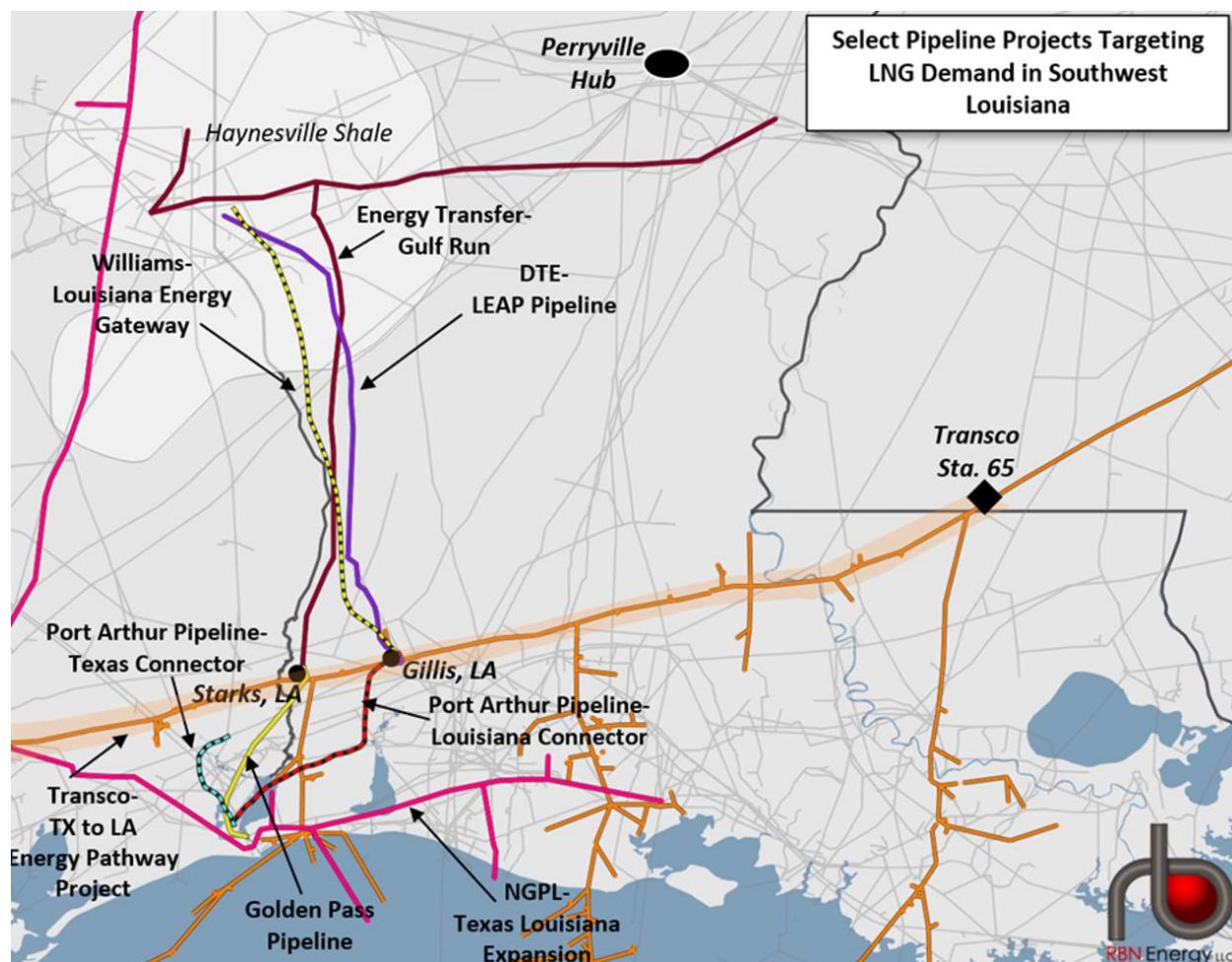
BRF has an Entrepreneurial Accelerator Program to aid budding new firms in their startup years. The **Chasing Aces Golf Course** is one such entity. This is a \$22.5 million golf course/entertainment development planned for late 2024 or early 2025 that will create 100 new jobs. BRF projects that through its activities, 203 new jobs will be created in northwest Louisiana.

Rebounding Natural Gas Prices, Rebounding Haynesville

A keen eye should be kept on the Haynesville Shale in this part of Louisiana. The Haynesville is a “dry” play, meaning when a company drills in it, only natural gas is harvested (no oil). Back in the assumption section we documented natural gas prices and provided a forecast for 2024-25. Readers will recall there was a spike in natural gas prices in the fall of 2022. The rig count in the Haynesville jumped from the mid-teens to 48 active rigs. When natural gas prices fell back below \$3 per MMBtu, so did the Haynesville rig count. By early August it had declined to 27 rigs. If our natural gas price forecast shown back in Figure 9 materializes (\$3.10 in 2024 and \$3.90 in 2025) a recovery in the Haynesville rig count should follow. We would expect the rig count to be in the 40s or as high as the low 50s by 2025.

More LNG export facilities coming to the Louisiana Gulf coast is always good for the Haynesville since it is the closest natural gas play to their locations. One indicator that this play has a bright future is the money **pipeline companies** continue to put into moving natural gas from the Haynesville to the coast (see Figure 33). This map highlights only those pipelines moving Haynesville gas to the southwestern part of Louisiana. Notice the light blue pipelines that are moving the Play’s natural gas all over the State.

Figure 33



Source: RNB Energy

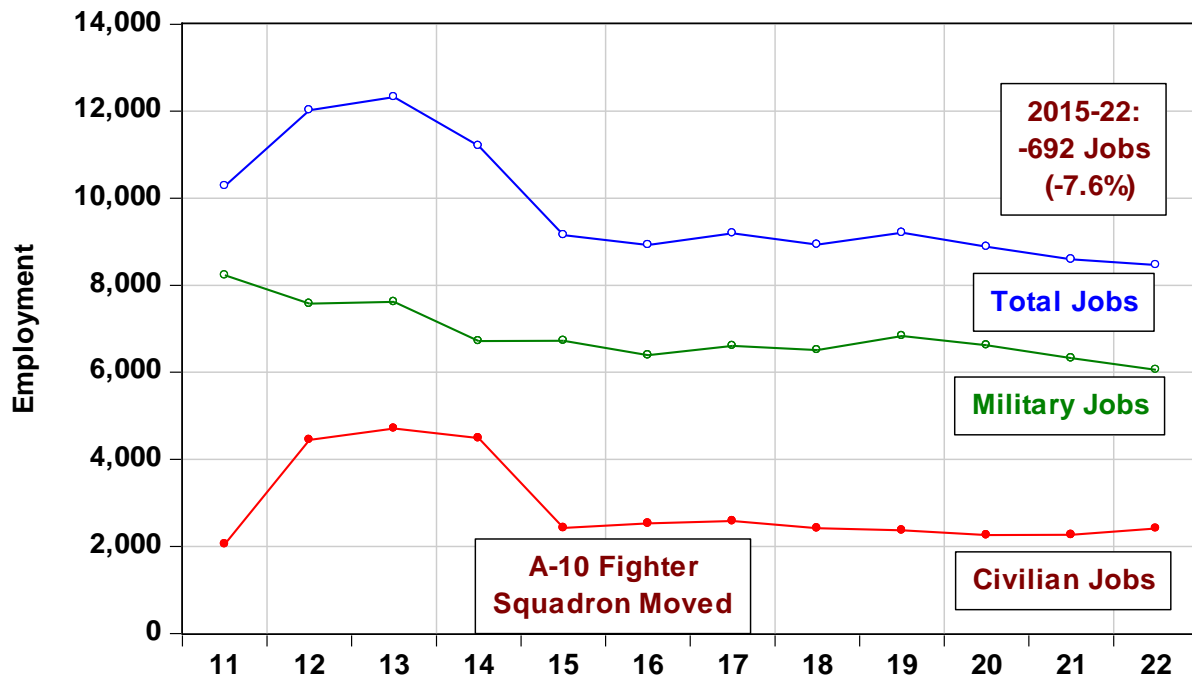
Barksdale: Capital Projects, But Jobs?

The largest single employer by far in this MSA is **Barksdale Air Force Base**. As of 2022 there were 8,463 people employed at the base, including 2,408 civilians and 6,055 military personnel. Figure 34 tracks employment at the base from 2014-2022.

While large in employment, Barksdale has not figured into the MSA's job growth in the last decade. In fact, it has been more of a drag on growth. Note there was a big decline in employment (-3,173 jobs) at the base between 2013 and 2015 when the A-10 Fighter Squadron left the base. The brunt of the job losses fell on civilian employment. Since 2015, employment at Barksdale has shown a steady, modest decline, dropping 692 jobs (-7.6%) over this 7-year period.

Figure 34

Barksdale Military, Civilian and Total Employment



Source: Barksdale AFB Economic Impact Analyses by Fiscal year

Ground was broken recently on three major capital projects that will hopefully reverse this trend. In November, 2022 construction was started on the \$170-\$225 million weapons generation facility. When completed, this project should bring 100 new jobs to the base. Ground was broken last year on the 3-year, \$70-\$90 million I-20/I-220 interchange project. Finally, groundbreaking took place this year on the \$46.5 million gate into the base to accommodate the new area where the weapons generation facility will be located. In addition to these three large projects, the 2023 Defense Authorization Act funded \$16 million in projects at the base for a new dormitory, a new child development center, and an expansion of the 307th Bomb Wing medical facility. This same Act provided for 5.3% pay raises for enlisted personnel at the base.

Jimmy Davis Bridge Boosts Road Funding

An unusual amount of transportation monies are heading towards The Shreveport-Bossier MSA over 2024-25. The biggest single item is a \$361 million project to replace the **Jimmy Davis Bridge** over the Red River. As seen in Figure 35, the bridge is presently only two lanes with no shoulders. It will be replaced with a bridge with four lanes and shoulders. The Louisiana DOTD now says it has

\$208 million from the federal government and \$18 million in state funds to begin the construction work. The Legislature will have to come up with about \$139 million to finish the project.

Figure 35

Jimmy Davis Bridge over the Red River



Source: Louisiana Department of Transportation & Development

This region was also a big winner when it came to general **road lettings** for 2024-25. Lettings jumped from \$120.4 million last year to \$363.6 million. The three largest projects in the list are:

- \$165 million to overlay I-20 from Monkhouse Road to I-45
- \$19.2 million for the Bayou Docheat Bridge
- \$13.6 million for the KCRR overpass on US371

THE LAKE CHARLES MSA

Desperately Needed: New FIDs from LNGs

Parlor question: What was the fastest growing MSA in Louisiana between 2012 and 2018? Related question #1: What was the fastest growing MSA in the country in 2018? Related question #2: What was the poorest growing MSA in the country over 2020-21? The answer to all three questions is...(drum roll here): Lake Charles. Oh my, how fortunes have turned. Lake Charles has gone from being one of the fastest growing MSAs in the country to probably the only MSA of its size in the nation whose employment was lower in 2022 than it was in 2020 the year of the COVID complete shutdown.

There are two parishes in this MSA that are very different from each other. Calcasieu Parish is a very industrialized and thriving parish with the fifth fastest growing population in the state between 2010 and 2020. Cameron Parish is the largest in geographic size in the state but the second least populated parish in the state. Of the 64 parishes in the state, Cameron's population change over 2010-2020 was the second worst in the state (-18.2%). A brief history of this MSA can be found in Appendix E.

Both parishes are located in the far southwestern corner of Louisiana (see Figure 12). The petrochemical industry is a dominating force in this MSA. Large firms in the region produce chemicals and refinery products. It is also now home to a new type of tenant: LNG exporters, three of which are operating in the MSA. A huge employer, the petrochemical/LNG industry employs over 8,000 direct employees and about 4,000 contractors at its 16 different chemical plants, two refineries, three LNG export facilities, and three industrial gas processing plants. Because these are very capital-intensive firms, there is an associated huge industrial construction sector for maintenance, repair, and construction work for these firms.

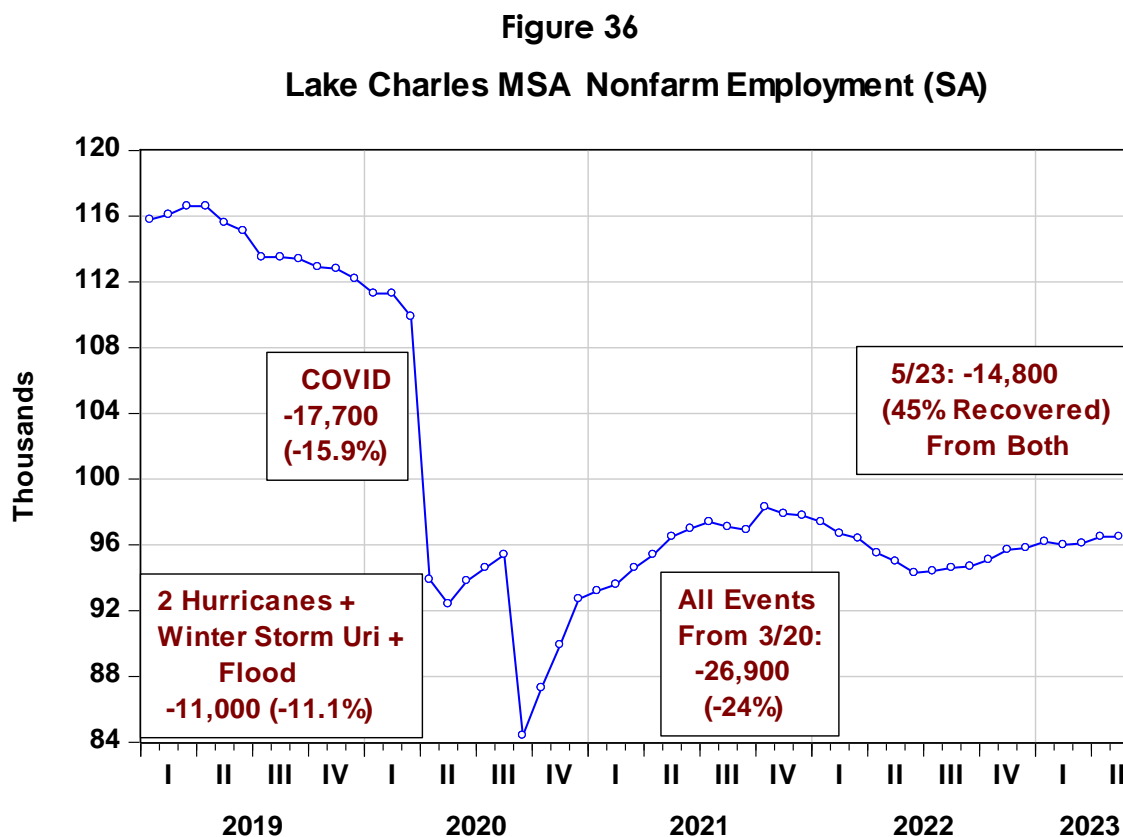
A second key industry is aircraft repair. A major source of jobs in the region is the tenants at Chennault International Airport. Among the larger employers there are Northrop Grumman, Landlock Aviation, and Citadel Completions. Historically, there have been some very significant changes at the Airport that caused meaningful swings in this MSA's employment.

The gaming industry is particularly large in this MSA. In fact, Lake Charles has the largest casino market in the state, drawing as it does from the nearby Texas market. Three casinos operate in the MSA, plus the Delta Downs Racetrack. The

two largest casinos are the riverboats L'Auberge du Lac and the Golden Nugget. The Horseshoe Casino (formerly the Isle of Capri) is the smallest of the three casinos but is the only one that has moved its operations onshore. The three casinos employed 4,313 people in 2022-IV. When **Delta Downs** added slot machines it became a “racino,” and presently employs 509 people---making it the largest of the State’s four horserace tracks.

Recovering from COVID: An Unfortunately Sad Story

Figure 36 is perhaps the saddest picture in our forecast book this year. It is a graph of seasonally adjusted nonfarm employment by month in the Lake Charles MSA from January 2019 through July 2023.



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Unfortunately, Lake Charles has the distinction of having the worst COVID recovery record of the nine MSAs in the State. As of July, **the MSA had recovered only 45% of the post-2019 losses**. Four comments are critical to

understanding this shortfall. First, Lake Charles' situation was made doubly worse than other area because of four major natural disasters visited on the region post-shutdown---two major hurricanes, a major flood, and Winter Storm Uri. Second, federal disaster assistance to the region has been pathetically poor. Not only has it been long to arrive, but it has also been inadequate. Third, damage from the hurricanes and flood have been so huge that many homeowners insurance companies went belly up or were able to cover only a small percentage of needed repairs. Again, federal and state remedies have been short in arriving.

Fourth, there was the inexplicable revision to the 2022 employment data. Throughout 2022 the U.S. Bureau of Labor Statistics was estimating monthly employment in the region. Then in March of this year, the BLS released their revisions to the 2022 data. With the stroke of a pen, the BLS took 6,000 jobs---essentially two years' worth of growth---away from the MSA.

What is really unnerving is that there is other evidence confirming these revisions were appropriate. Lake Charles' 14,800-job recovery shortfall is about 15% short of where the MSA's employment was in July 2019 (113,500). As it turns out, public school enrollment is also about 15% off its 2019 peak. Nuts.

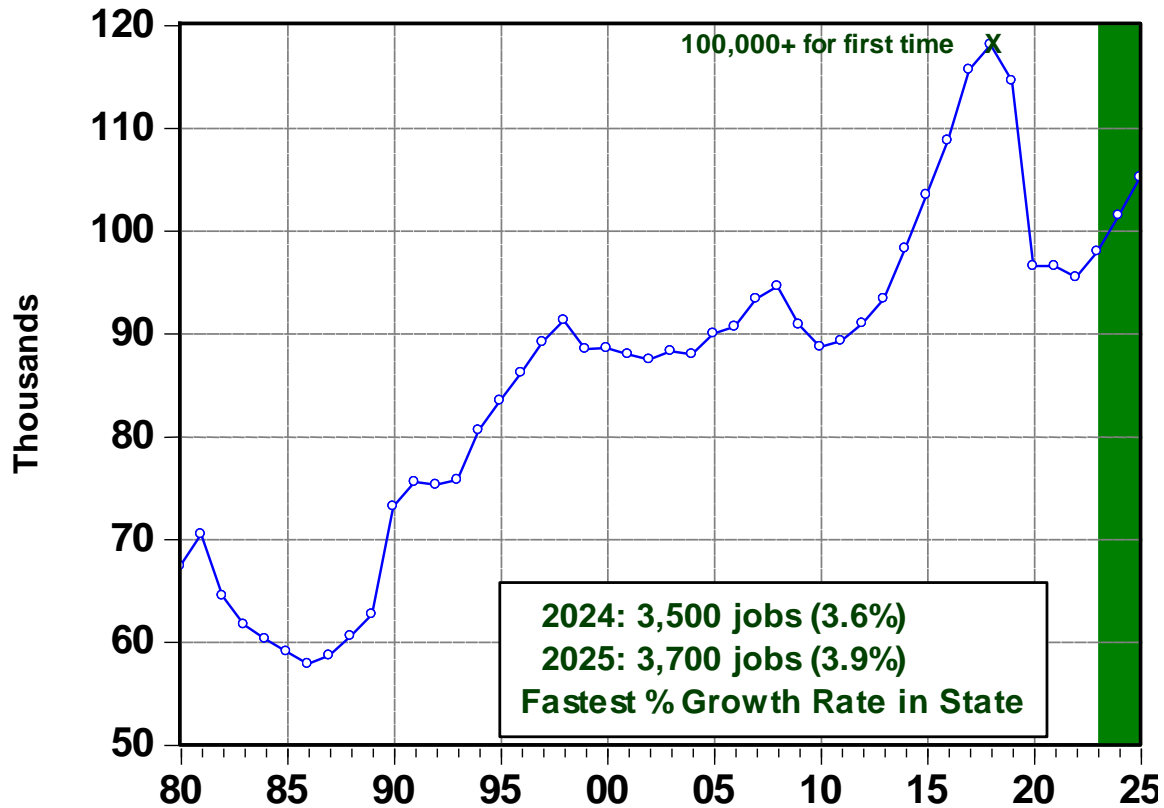
Forecast for 2024-25: LNG FIDs - the Way Out of this Hole

Figure 37 contains data on nonfarm employment in the Lake Charles MSA from 1980 through 2023, along with our forecast for 2024-25. **We are projecting 3,500 jobs (+3.6%) for 2024 and 3,700 new jobs for 2025 (+3.9%).** In percentage terms this would make this MSA the fastest growing MSA in the State. Such rapid growth will be generated by (1) continued recovery efforts from the previously mentioned natural disasters and (2) an expectation that 2-4 announced LNG plants will issue FIDs soon.

Regarding point #1, it would be pretty abnormal for a region not to experience a recovery back to, or near to, where it was before the disasters occurred. Admittedly, the insurance crisis has made the recovery far more difficult for Lake Charles residents. However, the economic base of this region has fully recovered from all the setbacks since 2019, so we expect that the feeder sectors---retail, services, healthcare, etc.---will not be far behind.

Figure 37

Lake Charles MSA Non-Farm Employment Forecast: 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Who Will Be First to FID, or Will Anyone?

Back in the assumptions section, Table 3 listed projects underway and announced in three major MSAs in Louisiana. Strikingly, the Lake Charles MSA had by far the highest value of announced projects that have yet to pull the trigger with an FID. The total for the Lake Charles MSA was **\$61.8 billion**, more than twice the total for Baton Rouge and New Orleans combined. Notably, all but one of the Lake Charles projects is a proposed LNG export terminal. Just how robust Lake Charles' economic future will be turns heavily on how many, if any, of these LNG projects will declare an FID. They are listed below in rank order of our judgment of issuing an FID.

- **#1: Cheniere Energy** has signed an epc with Bechtel for its stage 5 expansion which will add 3 large trains (the 7th, 8th, and 9th at the site), 6.5 mmt/a of capacity, a boil-off-gas liquefaction unit, and two storage tanks to the facility (see Figure 38). Recently the Chinese firm ENN LNG signed a sales and purchase agreement (SPA) for 1.8 mmt/a of the project capacity, and Norway's Equinor signed on for 1.75 mmt/a, with one-half of that subject to an FID on the expansion. We are unaware of a publicly-released cost estimate on the expansion, but we believe it will be about \$4 billion. High probability.

Figure 38

Cheniere Energy Expansion Project



- **#2: Cameron LNG** has received federal regulators' approval of a 4th train (+6.75 mmt/a) at its facility. This particular train will be located in Calcasieu Parish. TotalEnergies, along with Sempra Infrastructure, Mitsui & Company, Mitsubishi Corporation, and Japan LNG Investment have signed a Heads of Agreement (HOA) for the expansion. Cost conditions and labor supply issues have delayed this FID or it would have already

been issued. We estimate this expansion's cost at \$4 billion. This train would also allow for carbon capturing. High probability.

- **#3: Venture Global's CP2** received its final environmental impact review from FERC this August for its 20 mmt/a, \$13.5 billion project. FERC's final approval of all aspects of the site is expected this October. One-half of the capacity of CP2 has been secured through SPAs, and an epc contract has been awarded to Worley for Phase 1 of the two-phase project. Phase 1 (+10 mmt/a) will have 18 liquefaction trains and 4 full containment storage tanks. Phase 2 construction is planned for about a year after construction starts on phase 1. High probability.
- **#4: Commonwealth LNG** is a \$4 billion export project to be located in Cameron Parish. Farhad Ahrabi, former CEO of Camron LNG, is the new CEO of Commonwealth. FERC approvals were received in November 2022. With the signing of an offtake agreement and adding investment capital with Kimmeridge Energy, now more than 25% of the project's capacity has a spa. An FID is projected for 2024-I, with a 36 month buildout. It is our understanding that Paul Varello, founder and Executive Chairman is heavily funding this project. Good probability.
- **#5: Energy Transfer LNG's** \$10 billion project would normally be near the top of the list, since their project involves a refit of an old LNG import terminal. The company has all the FERC requirements covered and has renewed its option with the Port of Lake Charles. However, this year ETP asked DOE for an extension of its ability to export to non-free trade countries. The request was denied, and DOE said it would not rehear a request for a second extension. \$350 million has already been spent on the project. ETL said delay was due to having to redesign the project for CCS. After the second DOE denial ETL was able to garner three non-binding HOAs for 3.6 mmt/a and another offtake with EQT for 1 mmt/a. We will see if this extra action is enough to get the DOE to reverse its decision. ETP has requested a new, expedited export license from DOE.
- **#6: Driftwood LNG** has now invested over \$1 billion in site preparation for its \$16.8 billion LNG export terminal. Driftwood has driven more than 9000 piles (45% of those required for phase one) and poured more than 10,000

cubic feet of concrete including for the storage tanks. In April the company sold its 800-acre tract for \$1 billion with a lease-back agreement subject to Driftwood securing the rest of financing for phase 1. Unfortunately, in the past few months the company has lost all of its offtake agreements.

- **#7: Magnolia LNG** must be very concerned by the DOE not extending ETP's authorization to export to non-free trade countries, because time-wise, Magnolia is about six months behind ETP. Magnolia's DOE agreement will terminate around November 2023. The HOAs that ETP has garnered since their termination may help that firm, but Magnolia has no such support. Low probability.

The one non-LNG project in the \$61 billion list is the \$4.6 billion **Lake Charles Methanol** plant that has been on our list for several years but has managed to still stay alive. The Port of Lake Charles recently extended the company's lease through December 2024. The company recently received a cash infusion and is in talks with Turner Industries (contractor) and Technit (epc). The growing demand for methanol as a fuel for ocean-going ships may ultimately push this project to FID.

One new industrial project that is virtually certain to start soon is **Project Cypress**. This is a \$603 million carbon capture hub, which is the single largest award from the Infrastructure & Jobs Act. Battelle will own the project and Gulf Coast Sequestration (owned by Stream Companies) will transport CO2 to the site and store it under its land. The facility is to be capable of pulling 1 million tons of CO2 directly out of the air via chemical reactions. Construction will take about five years and will create 100 permanent new jobs.

For an MSA its size, the Lake Charles MSA enjoys an unusually high number of high-paying industrial jobs. Table 6 documents direct employment at the 23 members of the Lake Area Industrial Alliance (LAIA). There are now almost 8,000 workers at these plants, a number expected to increase by 150 jobs next year. This figure does not include about 4,000 contractors that work at these facilities each day.

Table 6
Members of LAIA employment & Projections

Year	2021	2022	2023	2024 Change
Employment	7,115	7,816	7,987	+150

Source: LAIA

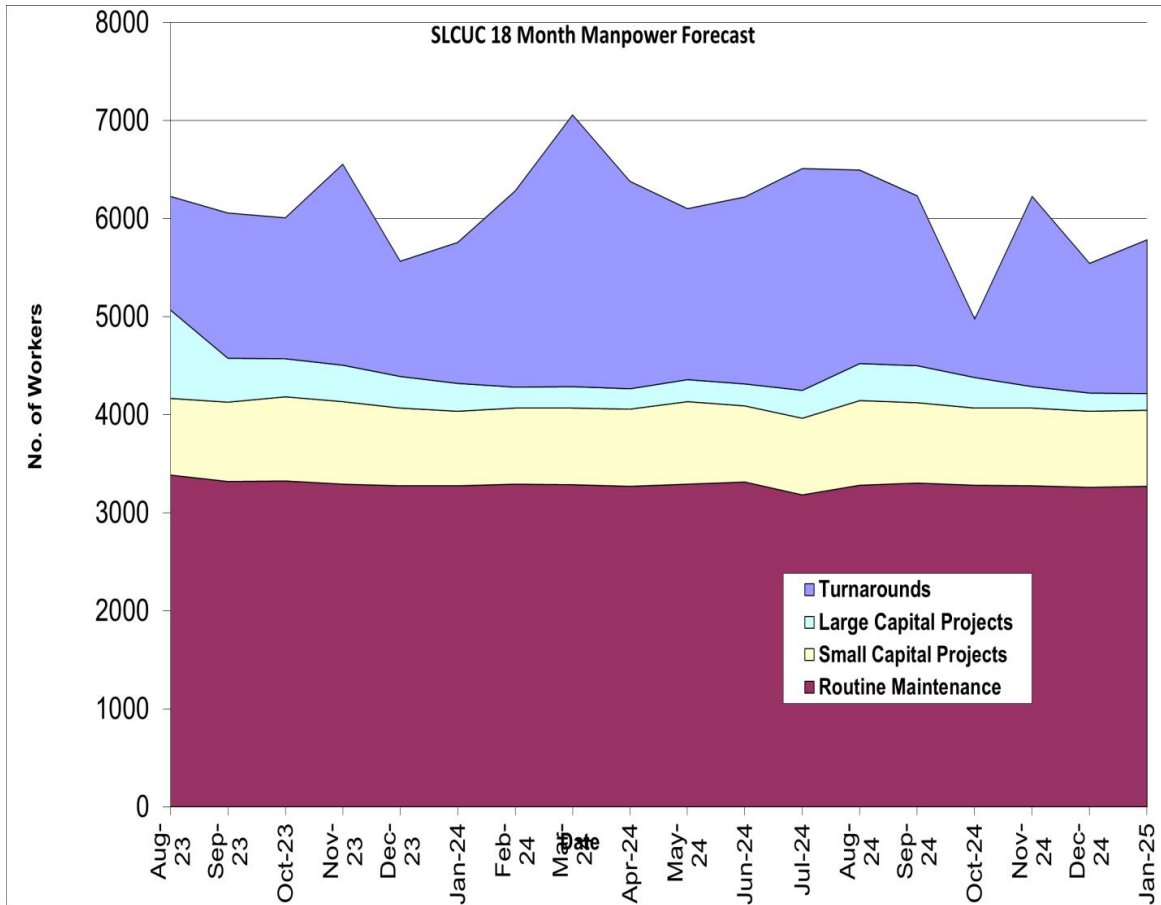
Bump in Construction Jobs Even without FIDs

Even if no FID's are issued over the next year, there will still be a significant jump in industrial construction employment in this MSA. The results of a construction worker needs survey conducted by the South Louisiana Construction Users Council (SLCUC) are shown in Figure 39. Note that **scheduled turnarounds will be bumping industrial construction jobs in the area next year by 500-1,000**. We are aware for example that **CITGO** (employment 2,720), whose annual capital budget is \$100-\$150 million a year, expects to double that figure over 2024-25 due to scheduled turnarounds, maintenance, and environmental requirements.

It is important to note the teal section of Figure 38 which refers to workers associated with large capital projects. If any of the large projects we described in the bullet points above issue an FID, that section of the graph will widen markedly.

Figure 39

South Louisiana Construction User's Council Survey of Construction Worker Needs: August 2023-January 2025



Source: SLCUC

Chennault: A Return to Growth

There are over 1,000 people employed at the 2,000-acre **Chennault International Airport**. Once an Air Force base, Chennault actually has the longest civilian runway in Louisiana, which makes it a prime location for MRO work on large aircraft. Because of the ups and downs in military and civilian aircraft activity, Chennault has seen its ups and downs in employment within its tenants. Fortunately, the next two years look to be “up” ones.

Chennault is the location of **Northrop Grumman's** Center of Excellence for maintenance, repair, and overhaul (MRO) work on large aircraft. The

completion of the large contract for MRO work on the JSTARS aircraft lead to NG laying off 125 people last year. Now at 500 people, NG's workforce is set to increase by about 125 jobs next year. Last year NG won a 5-year contract to do MRO work on the Navy's E6B aircraft. The Navy has an E6B in the air 24/7 in the Atlantic and Pacific. The company is also doing work on P-3 aircraft under a 10-year contract started back in 2020. NG anticipates finalizing a contract to work on 300 KC135 cockpit and communications refit, which will lead to 125 new jobs in 2025.

Citadel Completions is a privately owned company with 176 employees at the Airport. The company uses two hangars at Chennault to retrofit interiors of aircraft for VVIP/VIP customers. Citadel has delivered 177 maintenance and refurbishment projects to clients to date and would like to boost its employment to 225 by the end of 2024. **Landlocked Aviation** is an aircraft painting company with 112 employees and is actively trying to hire to a level of 300 by 2025. Landlock will paint about 75 Delta planes a year, and also does paint work for aircraft handled by Northrop Grumman and Citadel. United Airlines will be sending 40 wide-bodied aircraft to Landlock in 2024 for painting. **Louisiana Millwork**, a subsidiary of Masonite International, is Louisiana's largest supplier of residential interior and exterior doors. The company's workforce has grown from 60 to 70 in the last year.

As for the Airport proper, some \$7.8 million is being spent on capital projects this year, a number that will increase to \$9.2 million in 2024. Preliminary planning has begun on a 5-year plan for development of the old Mallard Golf Course (see Figure 40).

Figure 40
Site 1 Preliminary Layout



Source: Chennault International Airport

Casino Market: Horseshoe 1st Riverboat to Open on Land

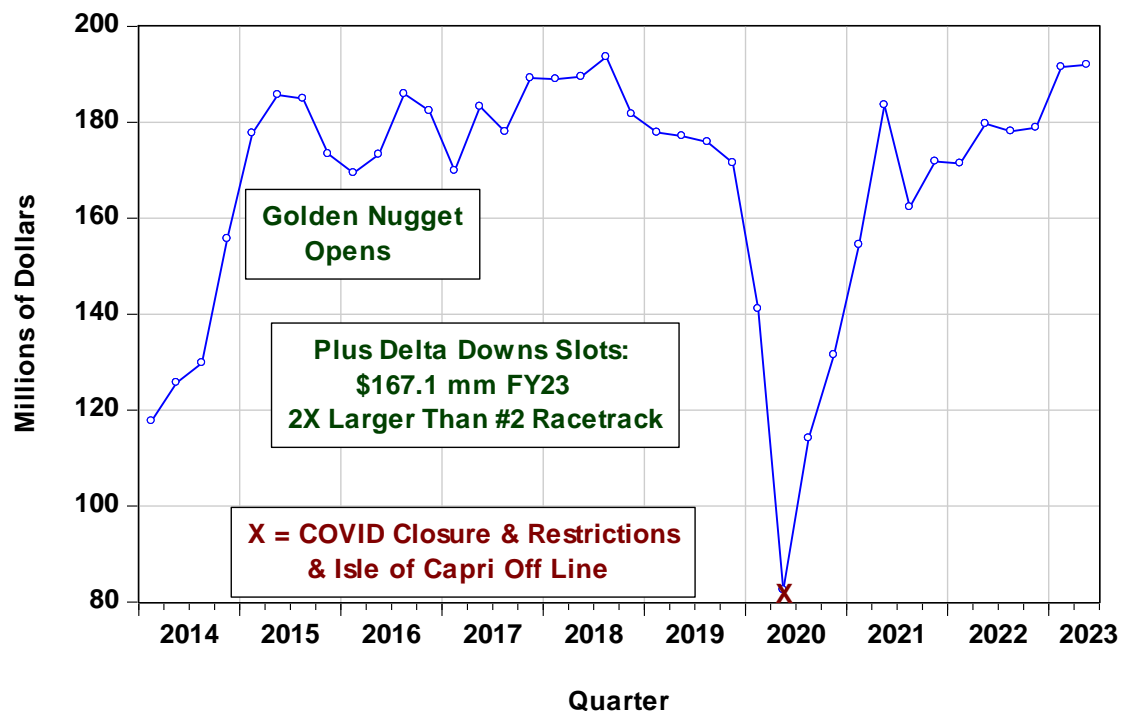
Lake Charles boasts of the largest gaming market in the State, able to pull from the huge Houston market, largely without competition from Indian casinos as is the case in the Shreveport-Bossier market. This market does have to compete with the very large, and successful, Grand Casino Coushatta in nearby Kinder, Louisiana in Allen Parish.

In 2022-IV, there were 4,313 people employed in Lake Charles' three casinos. There were another 509 people employed at the Delta Downs "racino" in Vinton. This racetrack has almost double the number of employees of the second largest track in the State (289 people at Evangeline Downs).

Another unique feature of this gaming market is it contains the first riverboat casino in Louisiana to take advantage of the new law allowing riverboats to move on land. The Isle of Capri Casino was so damaged after the recent hurricanes that it totally shut down for about 2 ½ years to spend \$12.7 million to rebuild onshore and reopen in December 2022 as **Horseshoe Casino**. Back in 2019-IV the old Isle of Capri Casino had 664 employees. The new onshore Horseshoe Casino has 843 employees.

Figure 41

Casino Gross Revenues: Lake Charles



Source: Louisiana Gaming Control Board & Loren C. Scott & Associates, Inc.

Figure 41 plots casino gross revenues by quarter in the Lake Charles market from 2014-I through 2023-II. The opening of the Golden Nugget Casino actually caused a significant growth in the market, instead of cannibalizing from the two existing casinos as some expected. A severe drop in revenues occurred during the COVID shutdown, but now with the opening of the Horseshoe Casino revenues have returned to their pre-COVID levels.

Public Construction: Largest Road Letting Project in the State

Even though this is the fifth largest MSA in the State, the Lake Charles MSA was awarded the largest road lettings value (\$1.8 billion) of all. The largest project in the area and in the State is \$1.5 billion for the new **I-10 bridge over the Calcasieu River** (see Figure 42). Total estimated cost of the bridge is estimated to be \$2.1 billion. It will be constructed via a public-private partnership with Calcasieu Bridge Partners. Optimistically, construction could start on the bridge in 2024 with a 7-year buildout. Funding for the bridge would partially be covered via tolls in the following amounts (in 2023 dollars):

- Local cars (5-parish area): \$0.25
- Non-Local Autos: \$2.50
- Medium truck: \$2.55
- Large truck: \$12.50

Figure 42

Artist Rendition of New I-10 Bridge over Calcasieu River



Source: Louisiana DOTD

The MSA will also be the recipient of over \$142.4 million in funds over 2024-25 from the **Coastal Protection and Restoration Authority**. These funds will largely be used on two projects: (1) the broadly titled Southwest Coastal Louisiana project, and (2) the No Name Bayou Marsh Creation and Nourishment project.

There will also be a bump in the amount of funds coming to the **Port of Lake Charles** via U.S. Army Corps of Engineers work. Corps spending---primarily on the Calcasieu Ship Channel--- is expected to increase from about \$62 million a year in 2023 to \$75 million a year over 2024-25. In June, the Port signed a contract with Cajun Industries on the largest capital project in the Port's History---a \$135 million project to restore and update berth and transit sheds 4, 5, and 6.

THE HOUMA MSA

Will the Gulf of Mexico Hold Up?

This very energy dependent MSA is located in Southcentral Louisiana on the coast (see Figure 12). A brief history of the MSA is in Appendix F. Comprised of two parishes---Lafourche and Terrebonne---Houma is more energy-dependent (6.5% of its employment versus 1.6% at the state level) than any other MSA in the state. Not only are there a large number of direct jobs in the exploration industry, but there are many other support companies---machinery, fabrication, shipbuilding, water-borne transportation---that feed off of extraction activities.

The fabrication industry is quite large in this region, largely founded on building components for offshore oil and gas exploration/production. Now many are busy trying to diversify into non-oil and gas related work. They also have shifted towards more maintenance and repair work on offshore facilities, led by companies such as **Grande Isle Shipyards**, **Danos**, **Gulf Island Fabricators** and **Chett Morrison**.

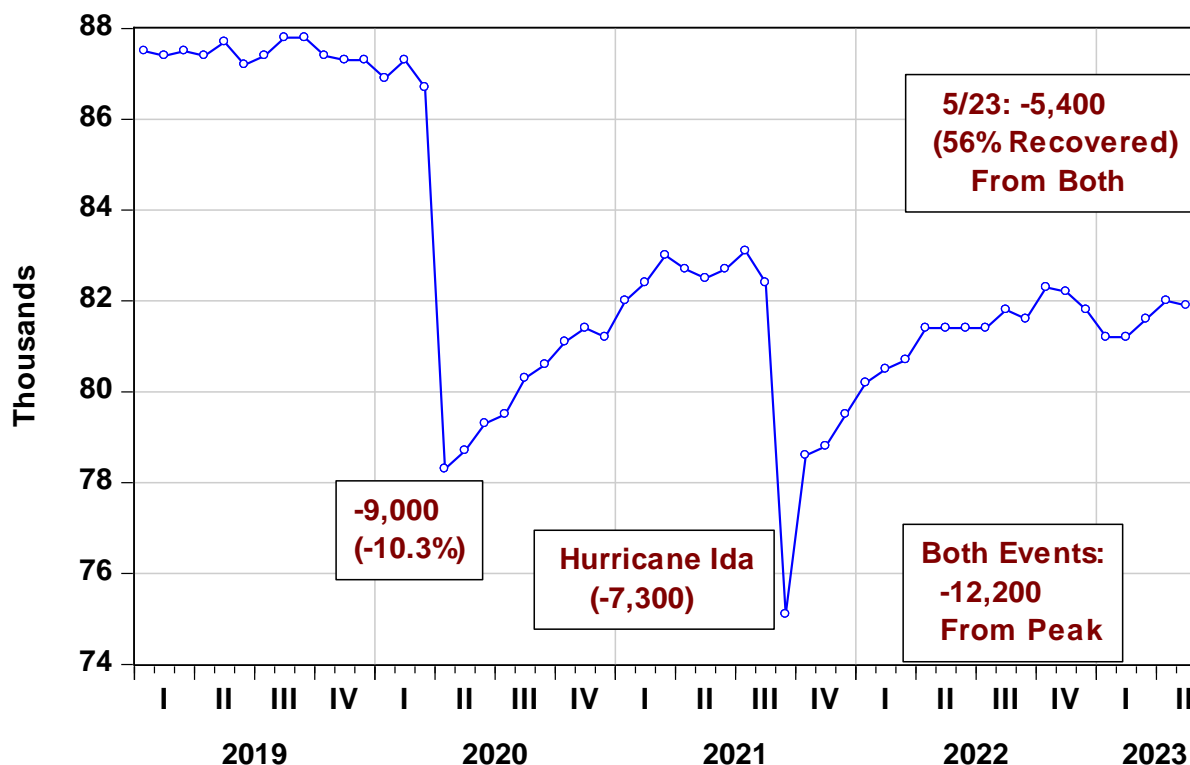
Shipbuilding is a major employer in the region---an industry that used to be totally focused on offshore energy work but has now diversified into other areas. Perhaps the largest of these support companies is **Edison Chouest** a firm that owns and operates some 300 supply boats servicing the offshore industry but is now also building boats to service the offshore wind industry and other vessels. Many of these ships operate out of Port Fourchon, a small city on the Gulf, which services about 90 percent of the offshore platforms and drill ships in the Gulf of Mexico. The 650-workforce **Bollinger Shipyards** is another huge shipbuilding player in the region. Originally building ships for offshore work, this company now has a long-term contract with the Coast Guard to build several Fast Response Cutters. **Thomas-Sea** is a 400-person shipyard that has made the shift into non-oil and gas vessels such as research vessels and brown-water barges.

COVID plus IDA: Long Road Ahead

Figure 43 illustrates the Houma MSA's seasonally adjusted monthly nonfarm employment from January 2019 through May 2023. To say things have been tough in this MSA would be a gross understatement. After losing 9,000 jobs (-10.3%) due to the COVID shutdown, this region almost immediately began a robust recovery that extended well into 2021.

Then came the terrible destruction visited on the region by Hurricane Ida. The 7,300 job-loss created by this storm sent the region's employment below even the COVID shutdown level. The combination of the storm and the COVID shutdown cost the MSA 12,200 jobs. Even more disheartening, is that the recovery rate post-Ida has been slower than just after the COVID shutdown---especially so in the last year. By May 2023, the Houma MSA had recovered only 56% of the jobs lost from both events and still remained 5,400 jobs short of its pre-COVID peak.

Figure 43
Houma MSA Nonfarm Employment (SA)



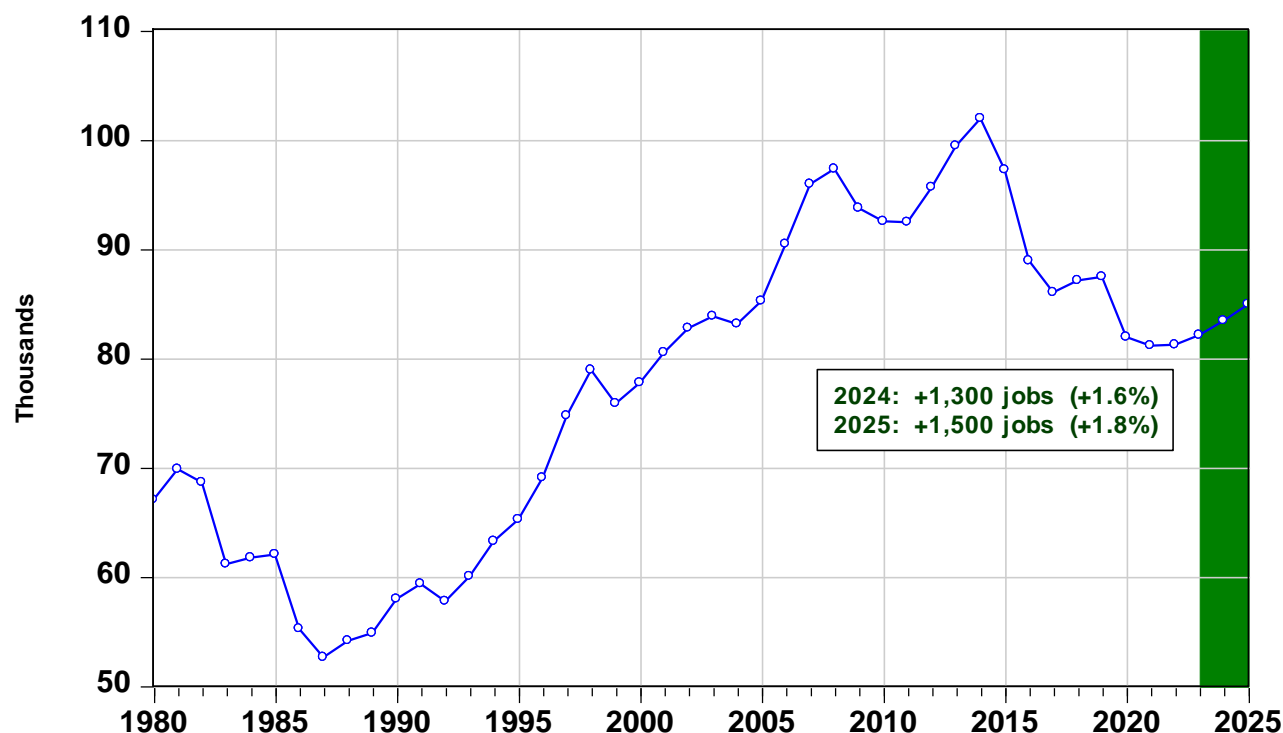
Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Forecast for 2024-25: Storm Recovery + Improvements in the Gulf

Figure 44 tracks historical nonfarm employment in the Houma MSA from 1980 through 2023, along with our forecast for 2024-25. **We are projecting 1,300 new jobs (+1.6%) in 2024 and another 1,500 jobs (+1.8%) in 2025 for this MSA.** A

modest resurgence in activity in the Gulf plus on-going recovery efforts from Hurricane Ida will drive this growth.

Figure 44
Houma MSA Employment Forecast 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

The GOM: Is the Anchor Starting to Lift?

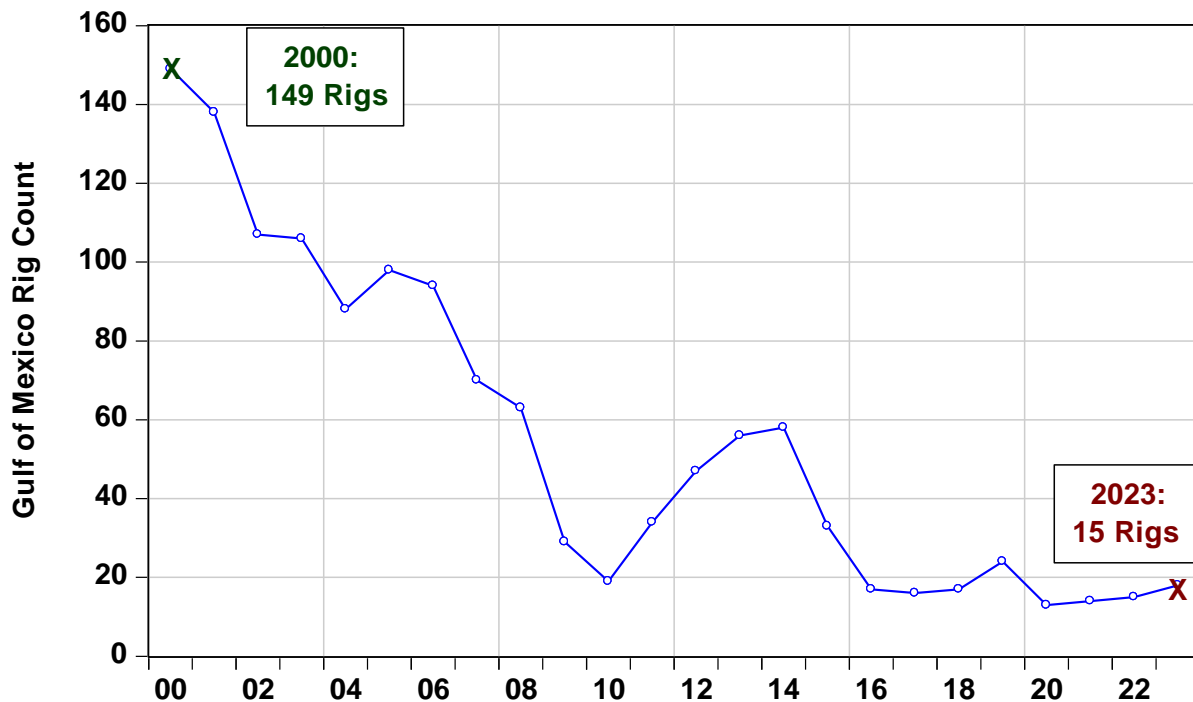
(For convenience to the reader, this section has been repeated from the Lafayette MSA section.)

Is there another compelling reason why Houma's growth rate has not been as robust as other MSAs in the State? The answer is seen in Figure 45 which graphs the rig count in the Gulf of Mexico (GOM) from 2000 to 2023. It was only 23 years ago that the rig count was a hefty 145, and only about 10 years ago when it was near 60. The rig count has now been under 20 for seven of the last eight years. There are a lot of businesses in the Houma Region whose backbone was built on drilling activity in the GOM. Lately, it has been a dragging anchor for the MSA.

There are, however, compelling reason for modest optimism about business in the GOM. First, Figure 45 tracks drill bit activity only. Look backwards from 2023 on the graph, and one realizes that all that previous drilling created a large number of production platforms in the GOM. Those production platforms require maintenance, upgrades, etc. There is also a booming business in removing old production platforms, especially those in shallow waters.

Figure 45

**Gulf of Mexico Rig Count:
Month of August**



Source: Baker Hughes & Loren C. Scott & Associates, Inc. Data are for Louisiana & Texas

For the future, there has been a major new technological break-through in the Gulf. About two years ago the code was broken on how to drill in **20,000 psi water depths**. Called HP/HT (high pressure/high temperature) fields, this advancement is opening up reservoirs that were previously inaccessible. Transocean now has 8th generation drillships---Deepwater Atlas and Deepwater Titan---that have, among other things, the 3.4-million-pound hoisting equipment necessary for the heavier, large-diameter casing strings.

Between 2016 and 2020, there were five new platforms added in the Gulf. Over the next 5 years---2021-2025---seven more will be added. Hart Energy reports that final investment decisions (FIDs) will be issued on five more platforms in the Gulf: Shell's Sparta and Leopold, BP's Kaskida, Equinor's Monument, and LLOG's Blacktip.³ **Chevron** now has about 560 workers in this MSA that work the offshore market and **Halliburton** employs over 300 at its four sites in the region.

There has been an offsetting regulatory tsunami coming from the Biden Administration for offshore drilling, but these companies have 7-10 year planning horizons. Plus, the pricing environment remains favorable. If our forecast of \$80 a barrel is near the mark, there is a lot of money still to be made in the Gulf. The breakeven price for tiebacks is estimated to be \$39 and for standalones it is \$40-\$50.

Those following action in the Gulf should pay keen attention to the next lease sale scheduled for September (after we go to press.) No schedule has been released for sales after this one, and, for the first time in history, no 5-year lease plan has been released by the Department of the Interior. Will companies gobble up extra leases because of this uncertainty? Stay tuned.

Offshore Maintenance, Painting, Repairs: Solid Track Upwards

All those platforms supporting the wells drilled in the past (see Figure 44) are constantly in need of painting, maintenance work, and other repairs. Salt water is corrosive and technology is ever changing. Large companies in the Houma MSA are active in this milieu. **Danos** has about 1,700 employees (600 in Texas) engaged in three areas of business: (1) platform operators (2/3rds), (2) maintenance work (welders, pipefitters, instrumentation, etc.) and (3) logistics---longshoreman work in GOM. This includes about 210 people in the company's headquarters office in Houma. In July 2023, Danos was awarded a 3-year contract to perform work across BP's five assets in the Gulf. Its employment in the Houma area is expected to grow about 5-7%, though finding labor remains a significant challenge.

Gulf Island Shipyards employs about 1,700 across seven states, with some 600-700 in the Houma MSA (150-200 at a new office in Houma). The company maintains a bunkhouse for 300 people in Lafourche Parish. GIS sees excellent growth ahead in the near term. Revenues are expected to be \$500 million this year, \$575 million in 2024, and \$625 million in 2025. The company projects its

³ "Deepwater GoM Construction Ramps Up", Hart Energy, August 4, 2023.

employment in the Houma area will increase by 8-10% annually. As with other firms, finding qualified labor remains a challenge.

The 900-employee **Gulf Island Fabricators** used to be solidly focused on the fabrication business, especially building offshore platforms. Fabrication has now shifted to the subsea market---manufacturing plates, plements (pipeline end manifolds), jumper spools manifolds, etc.---and larger modules for the petrochemical industry. However, fabrication is now only 25% of the company's business, with the other 75% performing service work for the offshore industry. This expanding sector is projected to add 150 employees over 2024-25.

Shipyards: Operating on Solid Ground

Shipyards are an integral part of the Houma MSA economy, employing in excess of 2,000 people. These yards used to focus on building ships to service the offshore oil and gas extraction/production industry. Since the oil price decline in late 2014, emphasis at these shops has diverted to other shipping markets. **Edison Chouest** has at least 2,100 employees in the region, largely at its three main shipyards: (1) LaShip (600-700 employees), (2) North American Shipyard at Port Fourchon (800+ workers), and (3) North American Shipyard (+250 workers). An estimated 230 more employees are needed in these yards. The company employs about 450-500 at its main headquarters. Chouest typically crews its own ships, so the company employs hundreds of mariners and is always in need of more. The company has diversified into building LNG tugs, vessels to service offshore windfarms, and cruise ships. For example, Chouest just finished one cruise ship with options for up to 8 (normality needed before 2 & 3 are done). This contract will provide 10-15 years of work. The company is building two ships to service offshore windfarms and is in negotiations for a 3rd and 4th. The company is also in charge of all the docking for the Navy across the U.S.

Bollinger Shipyards builds vessels for the Coast Guard and Navy at its 650-person site in Lockport. Recently, the company was awarded a contract to build four more Fast Response Cutters for the Coast Guard which will ensure employment in Lockport through 2025. The company has about 150 employees at a repair yard in Port Fourchon.

In Houma, the **Thomas-Sea Shipyard** employs 400 people and would like to add 100 jobs to that total. The company is constructing another four NOAA research vessels (\$624.6 million) that will last 5 years. Thomas-Sea is also building two diesel/electric hybrid ferries for the Louisiana Department of Transportation and

Development for use in Cameron Parish. The company also does repair work for (1) tugs and barges working brown waters, and (2) repair work for the Coast Guard and Army Corps. Thomas-Sea has also teamed with Austal Shipyards to build seven T-AGOS subhunters for the Defense Department (see Figure 46). This is a \$3.2 billion contract.

Figure 46
T-AGOS Sub Hunter



Source: Austal Shipyards

Port Fourchon: The Fourchon Island Development

Action never seems to stop at Port Fourchon, the port on the Gulf Coast from which 90%+ of the offshore industry is serviced. Two significant projects are afoot to upgrade the Port and there are two other economic development projects of note.

- The Corps is nearing completion of the feasibility study to **dredge Belle Pass and Bayou Lafourche to -33 feet**. The project is to begin early 2024 as part of CWPPRA Marsh Creation Project using the Port channel as borrow source. The total expenditure will be \$30 million in 2024 on this project.
- About \$20 million will be bid this August on **2,600 linear feet of Slip D bulkhead**. Work would start this November and last one year.

Two significant economic development projects at the Port include:

- Permits are expected in early 2024 after a FEED study is completed on the **Fourchon Island Development**, with initial work on a bridge and dredging to begin in late 2024. A total of \$200 million is projected for the entire development which will focus on offshore wind and offshore rig repair/refurbishment and decommissioning. Cooperative Endeavor Agreements have been signed with C-Logistics, Bollinger, and GIS, working toward leases.
- The Port Commission is purchasing **Caillouet Island** (850 acres) for \$36.7 million. Unrestricted access to Port Fourchon Island will be created and there will be a new Fourchon Bridge built. Additionally, Caillouet is donating 165 acres to the State of Louisiana to create the Caillouet Port Fourchon State Park on the Southeastern edge of Port Fourchon. Called the Coastal Wetlands Park, it will be a \$700,000 project to begin late 2023. A parking area and an elevated viewing tower will be constructed overlooking the newly created wetlands, tidal creek, and Port.

In last year's LEF, we mentioned the **\$35 million airport corridor project** for road work connecting the South Lafourche Leonard Miller Junior Airport to LA3235. Work is underway on the project and it should be completed in late 2024 or early 2025.

Public Construction: LA1 Moving Along + Big CPRA Monies

Serious public construction monies are heading to the Houma MSA over the next two years. We have calculated \$633 million in **state road lettings** over 2024-25, a figure that is markedly up from \$552.9 million last year. The biggest project by far is continuing work on **elevating LA1**. Phase 2 of the project, covering 9 miles of

the 19.3 mile bridge, started this May. The project finishing date is forecasted to be late 2027. Three other significant projects are: (1) \$44 million for the Boudreaux Bridge replacement, (2) \$20 million for the CO Canal Bridge, and (3) \$20 million to replace the Lafourche Bridge at LA182.

The **Coastal Protection and Restoration Authority** continues to pump sizeable sums into these two parishes. The CPRA will spend a total of \$548.7 million in this area over 2024-25. All but about \$153 million will be spent in Terrebonne Parish. These monies will be spread across several projects instead of just one or two big ones.

Two Smaller Wins

When things are as tough as they are in this MSA, any win counts no matter its size. The MSA enjoyed two such victories recently. In Thibodaux, **John Deere** is spending \$29.8 million for a new production line and new equipment to produce medium-chassis cotton harvesting models that were being made in China. The firm will add 70 jobs paying an average of \$47,472 annually, with full-capacity start up in 2025. **K&B Machine Works** has acquired a 118,000 square foot building in Terrebonne Parish and will spend \$12 million and create 70 new jobs.

THE MONROE MSA

Where's the Beef?

The third smallest MSA in Louisiana is the 2-parish (Ouachita and Union Parishes) Monroe MSA located in the Northeast corner of the state (see Figure 12). A brief history of the MSA is in Appendix G. The largest private employer in this MSA is **Vantage Health Plan/Affinity Health** which now employs 1,390 people. **Graphic Packaging**---a paper/carton plant---employs about 1,100 people at its three sites. **Lumen Technologies** (the former CenturyLink) used to be a 2,300-person workforce but has now dropped to well under 1,000 as many of its operations have been moved to Denver. **IBM** has a 100-person operation near Lumen that provides support to Lumen among others.

Monroe is also a university town, hosting the **University of Louisiana Monroe** with its 300 faculty members. A new medical school---**Edwards Via College of Osteopathic Medicine**---opened in fall 2020 with 150 freshmen and is now up to a full 4-year program of students.

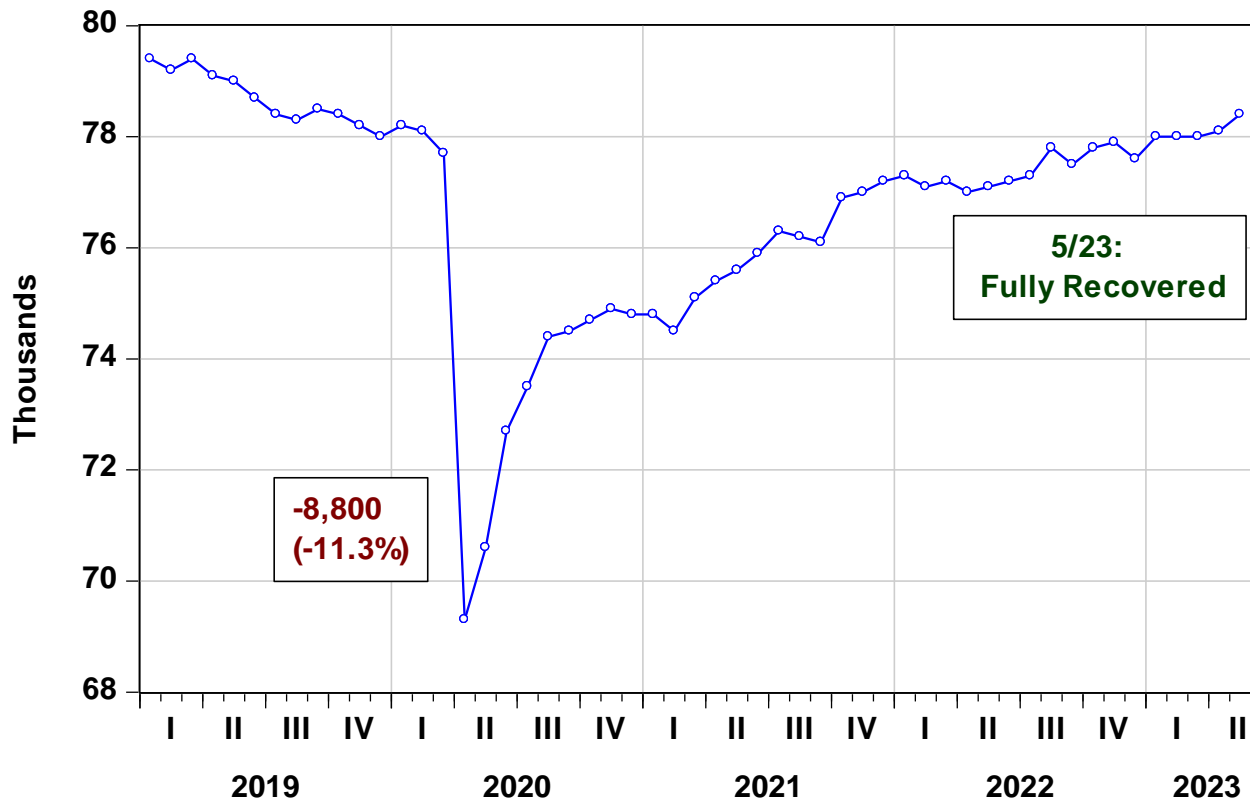
JPMorgan Chase Mortgage operates an 1,100- person center in Monroe. **Foster Farms** has a huge chicken processing facility in Union Parish with about 800 employees, not counting the growers and transporters. The **Ochsner/LSU Health Sciences Center Partnership** has renovated the old E.A. Conway Charity Hospital and added clinics, raising its employment to 840 in the region. **Gardner Denver** is a 250-person facility that manufactures pumps for medical equipment.

Fully Recovered from COVID Shutdown

A key positive for this region is that it has now **fully recovered (as of April 2023) the 8,800 jobs lost due to the COVID shutdown**. Figure 47 tracks seasonally adjusted monthly nonfarm employment in the MSA from January 2019 through May 2023.

A careful examination of Figure 47 will reveal that this recovery can be broken into two stages. The first stage was the most rapid, from the second half of 2020 through 2021 (increasing 171 jobs per month). The Monroe MSA has continued to grow through mid-2023, but the line in Figure 46 is rising at a noticeably slower rate (69 jobs per month).

Figure 47
Monroe MSA Nonfarm Employment (SA)

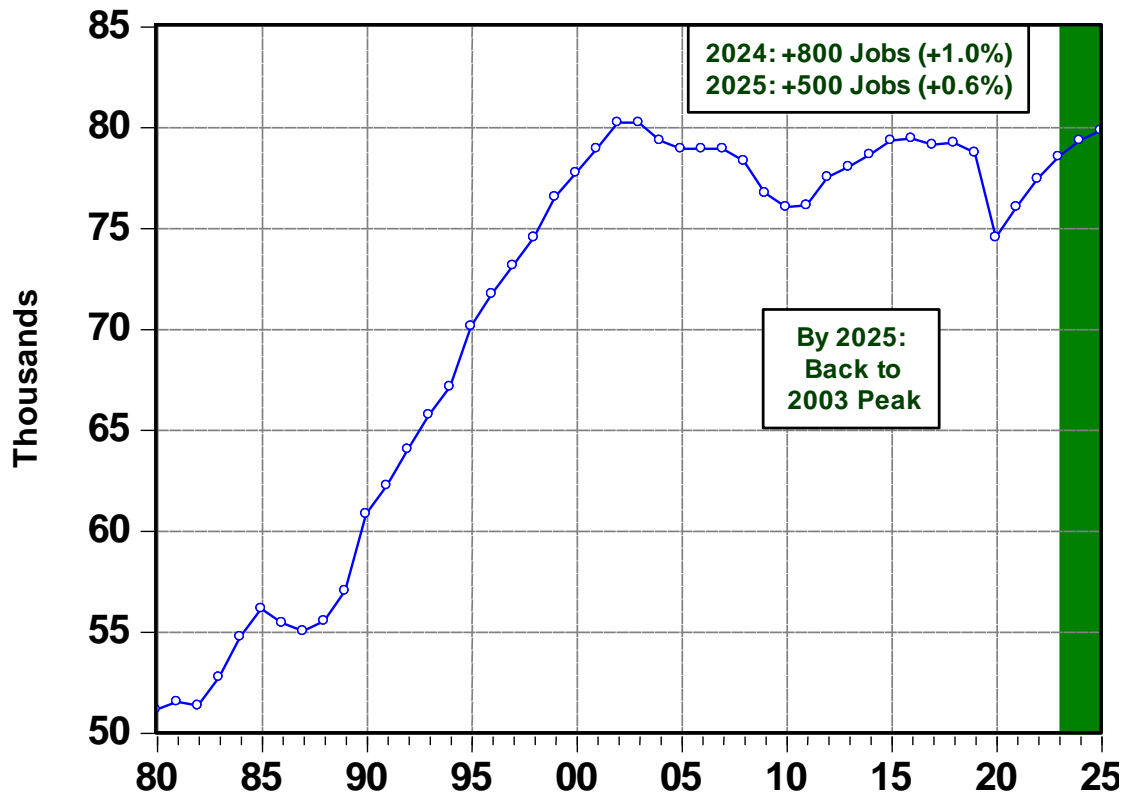


Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Forecast for 2024-25: Searching for a Power Source

Figure 48 shows historical nonfarm employment in the Monroe MSA from 1980 through 2023, along with our forecast for 2024-25. **We are projecting the MSA will add 800 jobs in 2024 (+1%) and 500 jobs in 2025 (+0.6%).** This is expected to be the weakest performing MSA in the State over the next two years. There are two issues for Monroe on the immediate horizon. One is the absence of any significant new firms, or major expansions of existing firms, on the horizon. Second, there is uneasiness about the future of some of the existing large employers in the region.

Figure 48
Monroe MSA Wage & Salary Employment
Forecast: 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

New Employers: Apply Inside

As indicated in the section above, the outlook for this region is clouded by (1) the absence of a potential new growth source and (2) concerning issues about existing, large employers. Regarding point #1, Monroe is the only MSA of the nine in the State where we find no announcements of new firms for the area or any announcements of expansions by existing firms.

On top of this, red flags have been raised about two large employers in the Monroe MSA. **Lumen Technologies** (formerly, CenturyLink) has experienced declining employment ever since the merger of CenturyTel and Link. Once employing near 2,500 people, the best guess is that number is now 900 or lower.

The company's agreement with the State ends in 2025, so we are concerned this downward trend will continue through our forecast period.

Hopefully, concerns about the future of **Vantage Health Plan** and its affiliate **Affinity** are overblown. About 1,312 people are employed by these two companies, and the two have been a critical source of many new jobs in the community in the past few years. These two companies are now owned by Blue Cross Blue Shield of Louisiana (BCBS). At this writing, discussions are underway for BCBS---a not-for-profit company---to be purchased by Elevance---a for-profit company.

Two other large employers remain solidly entrenched in the Monroe economy. **Graphics Packaging** employs 700 people at its paper mill and another 400 at its carton plant. The firm spends about \$40 million annually on maintenance and upgrades, a sign this facility is here for the long run. An especially large investment last year was expected to be labor-saving, resulting in worker layoffs. However, a combination of a strong demand for the company's product and a desire to keep workers in this tight labor market kept employment stable.

Chase Home Lending is celebrating 30 years in Monroe, and is Chase's lowest cost customer center in the U.S., which bodes well for its long run future in the community. At 1,100 employees, this is Chase's largest employee base in the State. Chase recently gave \$3.6 million in new market tax credits to support the Morehouse Medical Community Center in Bastrop.

As mentioned in the introductory paragraphs to the Monroe MSA, a relatively new entrant to the region has been the **Via College of Osteopathic Medicine**, which now has four full years of students attending. It is our understanding that about 600 students now attend VCOM. Of course, the biggest college in the MSA is the **University of Louisiana Monroe** (ULM). Like most universities in the University of Louisiana System, ULM has been experiencing enrollment declines recently. For example, Enrollment in the 2017 fall semester was 9,181. By fall semester 2022 enrollment had declined steadily to 8,215, a 10.5% drop. That decline was dominated by a decrease in full-time enrollments, which is not good news for the restaurant, retail, and housing sectors of this economy.

Large employer **Foster Farms** in Union Parish was acquired by a venture capital firm and has experienced job declines to now about 800 employees. **Gardner-Denver**---which makes pumps for medical equipment---is holding at 250 jobs,

and **Angus Chemical**---which makes hand sanitizers and test kits---is also holding steady at about 195 workers.

On a more positive note, **state road lettings** for the MSA were up from \$120.4 million last year to now \$195 million. The three top projects on the list include:

- \$65 million to widen and overlay I-20 from Vancil Road to LA34
- \$48.7 million for the Kansas Lane/Garrett Road connector
- \$18 million for widening and overlay of I-20 from US165 to east of Garrett Road

THE ALEXANDRIA MSA

Wow! SunGas, Diamond Vault & Ucore

Louisiana's second smallest MSA is located in the dead center of the state (see Figure 12) and is comprised of Rapides and Grant Parishes. A brief history of the MSA is in Appendix H. There were 63,800 non-farm employees in the MSA in 2023. While there are some notably large manufacturing firms in this MSA, the manufacturing and mining sectors are small compared to other MSAs in Louisiana.

Some large firms add an important private sector base to this MSA. The 1,200-person **Procter & Gamble** is the largest manufacturer in the region, and nearby **PlastiPak** (nearly 300 jobs) makes the containers to hold P&G's products. Equivalent in employment size to P&G, utility company **Cleco** is headquartered in Pineville and is an important economic driver for the community. **Crest Industries** is a 700-800-person conglomerate that is engineering-focused but also has a major subsidiary manufacturing equipment for the utility industry. England Airpark is host to **Union Tank Car** (about 350-400 employees), which manufactures railroad tank cars to primarily transport chemical products.

Alexandria has a very significant government base (23% of its employment), second only to Hammond in its dependency on this sector. **Pinecrest Support and Services Center**, which provides care for the mentally disabled, **Central Louisiana Support and Services Center** and **Central State Hospital**---a facility for the mentally ill---are all located in the MSA and between them employ about 1,800 people.

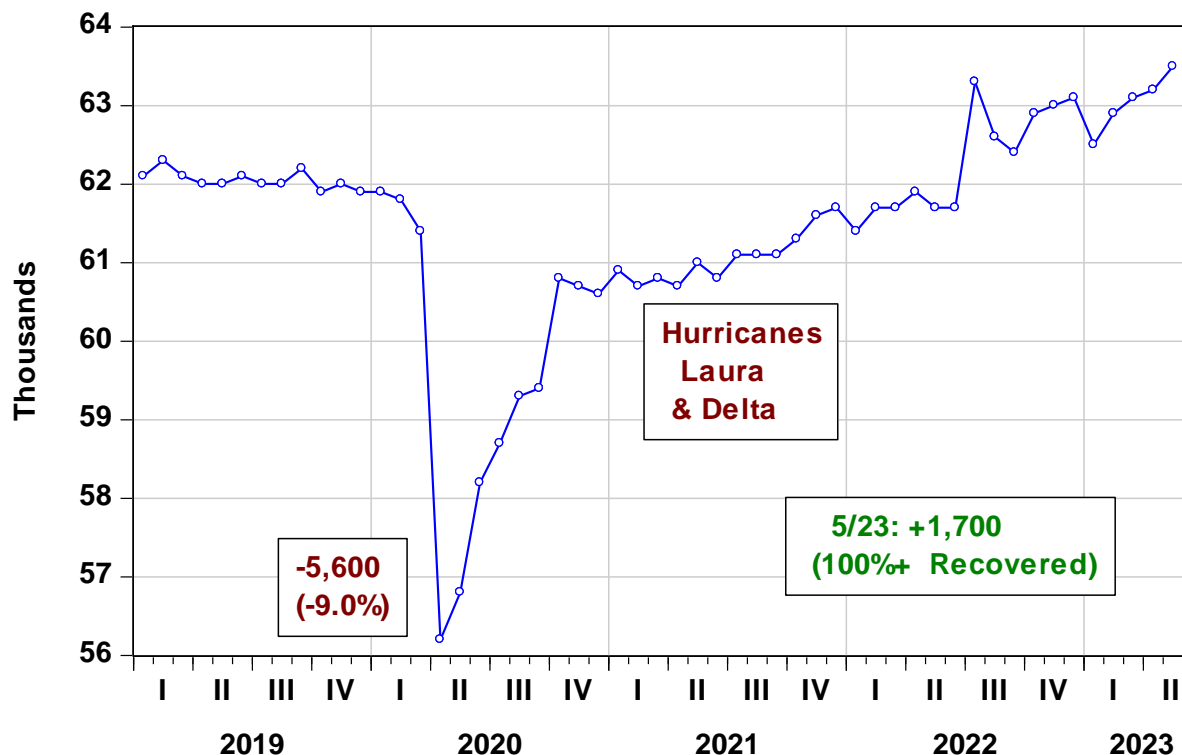
Just outside the borders of this MSA are very large employers with close economic ties to the MSA. **Fort Johnson** (formerly Fort Polk), in Vernon Parish to the west, is the largest military installation in the state, with nearly 15,000 permanent military/civilians on site and another 5,000+ troops rotating through nine months out of the year. This makes the base the largest single employer in Louisiana. **Roy O. Martin** employs just over 900 at two wood processing sites a couple of miles outside of Rapides Parish to the north and south.

Fully Recovered from COVID over a Year

In Figure 49, seasonally adjusted monthly nonfarm employment in the Alexandria MSA is tracked from January 2019 through May 2023. **This MSA has fully recovered the 5,600 jobs that were lost due to the COVID shutdown.** Indeed, the

region has been fully recovered for a year, since it passed the pre-COVID employment level back in July 2022. This recovery occurred despite two taps the region received from Hurricanes Laura and Delta (see the flat part of the graph from October 2020 to June 2022). Since then, the MSA's growth rate has shifted distinctly upwards.

Figure 49
Alexandria MSA Nonfarm Employment (SA)



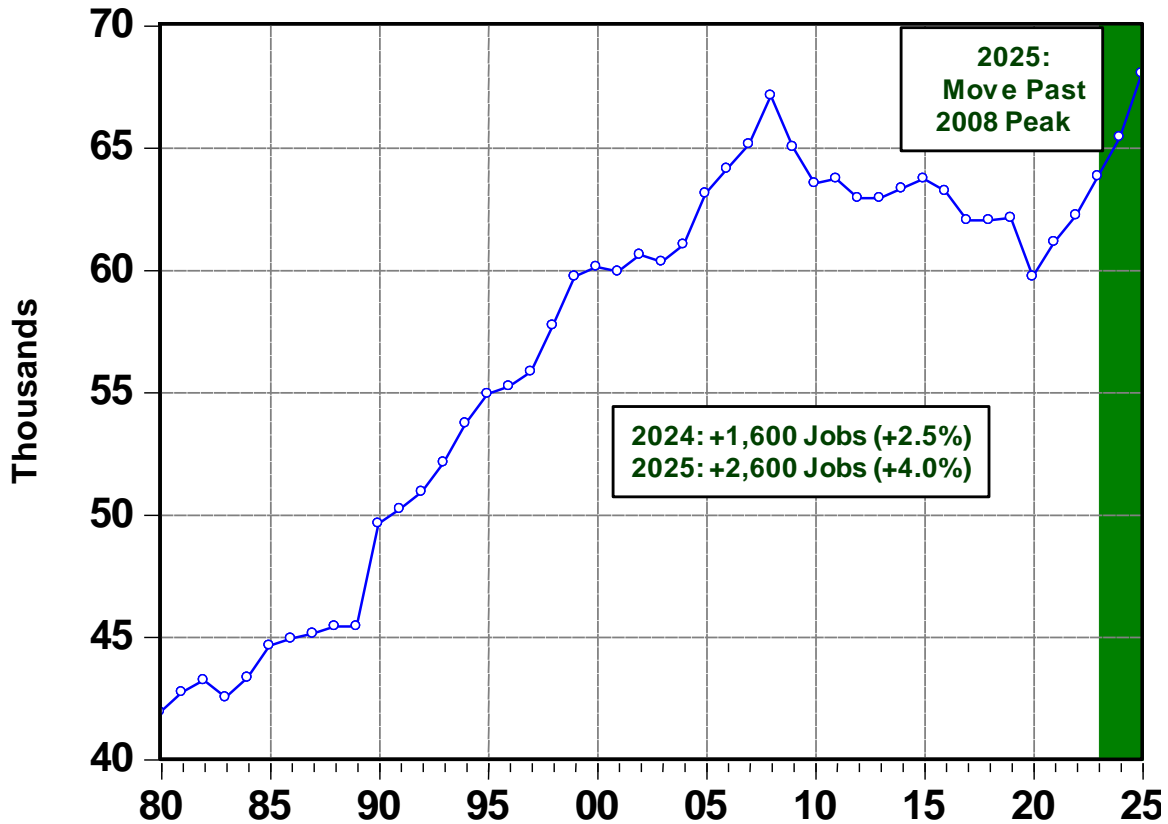
Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Forecast for 2024-25: Fasten Seat Belts in 2025

Figure 50 contains a graph of Alexandria MSA's historical nonfarm employment from 1980 through 2023, plus our forecast for 2024-25. **We are projecting a strong 1,600-job addition in 2024 and a historically strong 2025 of +2,600 jobs (+4%).** In fact, we anticipate that job growth will be so strong in 2025 that this MSA will move past its previous job peak set one and one-half decades ago. Two huge construction projects are under-pinning the optimistic forecast for 2025.

Figure 50

Alexandria MSA Non-Farm Employment Forecast: 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

2025: Two Multi-Billion Dollar Projects

A forecaster must muster a great deal of courage to project a 4% growth year for an MSA the size of Alexandria---especially when a “good” employment growth rate is about 1.5%. The reason for this confidence is there are two multi-billion dollar projects that have been announced for this region, and we are placing a high probability of an FID being issued on both.

About five years ago, the International Maritime Organization (IMO)---a unit of the UN---issued mandates that ocean-going ships must now use a fuel that instead of 4.5% sulfur, must have 0.5% sulfur. Ships cannot dock at most ports in the world unless they meet this mandate. Shipping companies are in the midst

of moving from high-sulfur bunker fuel, which is very dirty, to low-sulfur diesel and/or methanol.

RBN Energy has tabulated in Table 7 the number of orders, by shipping company, for “methanol-ready” ships. There are over 100 orders listed. Readers should pay keen attention to the top company listed with the largest number of ships on order. Maersk Lines has signed a letter of intent for offtake of the methanol to be produced at the **\$1.8 billion methanol plant to be built by SunGas** at the old IP site---now called **Beaver Lake Renewable Energy**. An FID on this project is expected after a FEED study is completed in late summer 2024. Construction would start late 2024. Because of the leverage provided by Maersk, we place a high probability on this project reaching FID.

Table 7

Orders for ‘Methanol-ready’ Vessels		
Ordering Company	Number of Vessels	Vessel Type
Maersk	25	Small, medium and large container ships
Evergreen Marine	24	Large container ships
CMA CGM	24	Large container ships
Cosco Shipping	16	Large container ships
Algoma Central	9	Product tankers, bulk carriers
J. Lauritzen	3	Large bulk carriers
Mitsui	2	Large bulk carriers
Ørsted	2	Service vessels for offshore wind

Source: RBN Energy

In about that same time frame, we are expecting the FEED work to be finished and construction to begin in 2025 on a project we introduced to readers last year. Cleco's **Project Diamond Vault** has now grown to a \$1.5 billion carbon capture and sequester project at Cleco's Madison 3 Brame Energy Center just north of Alexandria. Construction on the plant will take an estimated three years. We also put a high probability on this project reaching FID, especially given the dollars the federal government is investing in CCS projects.

2024: Year of Ucore

A 2.5% employment growth rate is projected for this MSA in 2024, which is well above the “good” 1.5% rate. The generator behind this job boost is the \$75

million **Ucore rare earth element separation and purification facility** planned at England Airpark. Ucore will also install its headquarters here. The firm will bring ores in from the Port of New Orleans, ores than originate in 13 mines in countries friendly to the U.S. Ucore has received an ITEP from the State and has signed a 10-year lease with the Airpark with options to renew. Ucore's product will be used in EVs and wind turbine generators, which mean federal monies or tax credits will be available. Construction is to start in 2024-I on the 80,800 square foot building shown in Figure 51 and Ucore will hire 100 people at an average annual salary \$50,000. We place about a 60% probability on this project reaching FID.

Figure 51

Ucore's Building at England Airpark



Source: England Airpark

iAero is opening a facility at England Airpark. The company will move an aircraft maintenance facility here from Miami. About 60,000 illegal immigrants are held at the ICE facility at the Airpark and are then flown back to their country by iAero. At least two (sometimes 6-7) 737s leave the airport each day on these missions. The company will bring about 30 new jobs and \$4 million in aviation fuel sales to the Airpark.

Alexandria's Under-Belly: Solid, Not Soft

In addition to the three large projects mentioned above, when one examines Alexandria's economic base, it remains very solid. **Cleco** will be selling its Cajun Power business, but that only affects employees that work in Pointe Coupee Parish---outside the MSA. The 1,200 people working for Cleco in central Louisiana are not expected to change. We also are expecting no employment changes for the 1,240 people who work at **P&G** or the 300+ people employed at **Plastipak**.

The multi-faceted **Crest Industries** employs about 800 people in the Alexandria region making steel poles for transmission lines (an industry with a rosy outlook) and providing engineering services. Crest will probably start production at **Avant Organics** in 2024. The firm will produce products that enhance the flavor and fragrance in food and beverage products at its plant at the Central Louisiana Regional Port. Thirty--six jobs will be created. **Union Tank Car**, also at the England Airpark, makes railcars that transport chemicals, food, and agricultural products. Recent relief in steel costs is helping UTC's business. Employment is projected to increase from 325-400 now to 400-450 in 2025.

Just outside the boundary of this MSA are two significant employers. Many of their employees live in the Alexandria area and spend money at the retailers, healthcare facilities, and service companies in Alexandria. **Fort Johnson** (formerly, Fort Polk) with its 8,186 military personnel and 6,631 civilian employees is the largest single employer in the State. Another 4,959 troops cycle through the base each year on training rotations. Major plywood and oriented strand board producer **Roy O. Martin** employs 735 people just north of Alexandria in Chopin and another 175 just south of the city in Oakdale. The company's headquarters is located in Alexandria.

State government employment plays an outsized role in this MSA's economy, primarily because of the presence of three large facilities in the Pineville area. **Pinecrest Supports and Services Center** employs 1,336 people and has an annual budget of \$140 million to work with developmentally-challenged people. **Central State Hospital**, a mental health unit, employs 281 staff with an annual budget of \$42 million. This coming fiscal year, this hospital will move to a new hospital campus on the Pinecrest site. **Central Louisiana Supports and Services Center** is also located in Pineville and employs 197 staff with an annual budget of \$23 million. That is 1,814 jobs (up from 1,762 last year) and \$205 million in spending in this MSA that should remain solid into 2024-25.

While not expanding significantly over 2024-25, these companies are not terminating people either. They form a solid under-belly for the economy of the Alexandria MSA.

Public Construction: England Improvements & Road Lettings

The region will feel an injection of dollars in the form of public construction over 2024-25. England Airpark will spend at least (the 2025 budget is not complete) **\$31 million** on noise mitigation, a runway extension, and a military aircraft cleaning facility. The **ACE (Aviation Career & Education) Initiative** is well underway at the Airpark. The 4-year aviation management degree at LSU-A is now operating. Year 2 will have at least 30 students in the program, up from 22 the prior year. A \$5 million hangar is under construction for the ACE Aviation Center for pilot training and flight simulation. \$3.2 million was allocated from capital outlay this year for engineering on a wide-bodied hangar for maintenance-repair-overhaul (MRO) work. This hangar will be needed for the FAA approved AP mechanic training and certification program offered through the local community college.

Alexandria came out ahead this year in State **road lettings for 2024-25**. This year's figure is \$61.6 million, up from \$49.1 million last year. The top three road projects are:

- \$5.4 million for the Big Creek Bridge replacement
- \$3.9 million for work on LA3169 from LA524 to LA502
- \$3 million for work on LA8 from the Vernon Parish line to LA119

THE HAMMOND MSA

Niagara & North Oaks Add, But SLU??

About 40 miles due east of Baton Rouge is Tangipahoa Parish (see Figure 12) which is the newest and smallest MSA in the state with 48,500 nonfarm employees in 2023. A brief history of the MSA is in Appendix I. MSA data on this MSA only started in 1990, so our review of its employment history is more limited than for the other eight.

Some 22% of this parish's residents earn their income outside of the parish. Downtown New Orleans is a short commute away as are the plants along the Mississippi River, the State Capitol in Baton Rouge, and Slidell to the west. This, plus the lack of underlying basic industries, has turned Tangipahoa Parish into a commuter parish.

Because it is smaller, its economy is in most ways simpler. Its largest city is Hammond, which is a college town, home of **Southeastern Louisiana University** (1,400 employees). In most cities the hospital is the largest employer because the facility employs people 24/7, 365 days a year. This MSA is no different. Its largest employer (aside from the School Board) is **North Oaks Medical Center** (2,623 employees). Combined with SLU, these two players and associated clinics represent almost a fifth of employment in this MSA. **Government employment** (24.1%) is tied with Alexandria in terms of its dominance in the economy. **North Lake Division Evergreen Life Services** (300 employees) provides services to over 200 residents with intellectual and developmental disabilities.

Distribution centers have also found a good home here, as Hammond abuts both north-south and east-west interstate highways. A 920-person **Walmart Distribution Center** is located in Tangipahoa Parish, as is the 375-person **C&S Wholesale Grocers**. A new \$45 million **Medline** distribution center is being built near Hammond that will ultimately bring 450 new jobs. **Scarino Wholesale Foods** is another distributor located in Baptist.

Manufacturing is not as large an element in this MSA (5.3% of employment) as is the case at the state level (7.0%). Manufacturing is dominated by food processing such as the 550-person **Sanderson Farms** poultry processing plant and the 164-person (and growing) **Elmer's Candy** plant. **Intralox** has a 197-person facility (and expanding) manufacturing modular plastic conveyer belts, and **Smitty Supply** of Roseland is a motor oil blending, packaging and

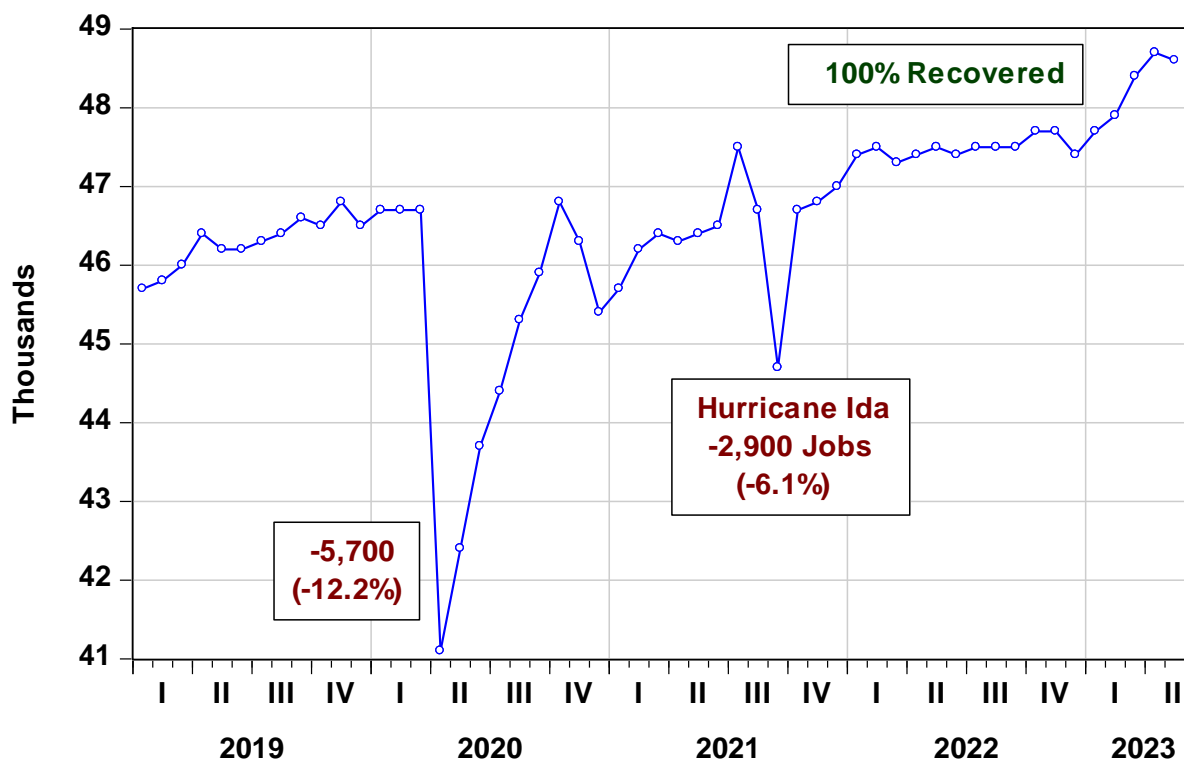
distribution firm that employs 400. **Southland Steel Fabricators** employs almost 680 people at its three units in Amite.

Coming Back from COVID: Fastest Recovery in the State

Figure 52 traces Hammond MSA seasonally adjusted monthly nonfarm employment from January 2019 through May 2023. After losing 12.2% of its jobs (-5,700 jobs) due to the COVID shutdown, **this MSA bounced back faster than any other MSA in the State, fully recovering all lost jobs by October 2020**. Note that the MSA took a sharp hit when Hurricane Ida swept through in September 2021, but again the MSA showed remarkable resilience by taking only one month to retrieve its hurricane job losses. Since then the MSA's employment has moved steadily upwards, actually picking up speed in the past few months of 2023.

Figure 52

Hammond MSA Nonfarm Employment (SA)



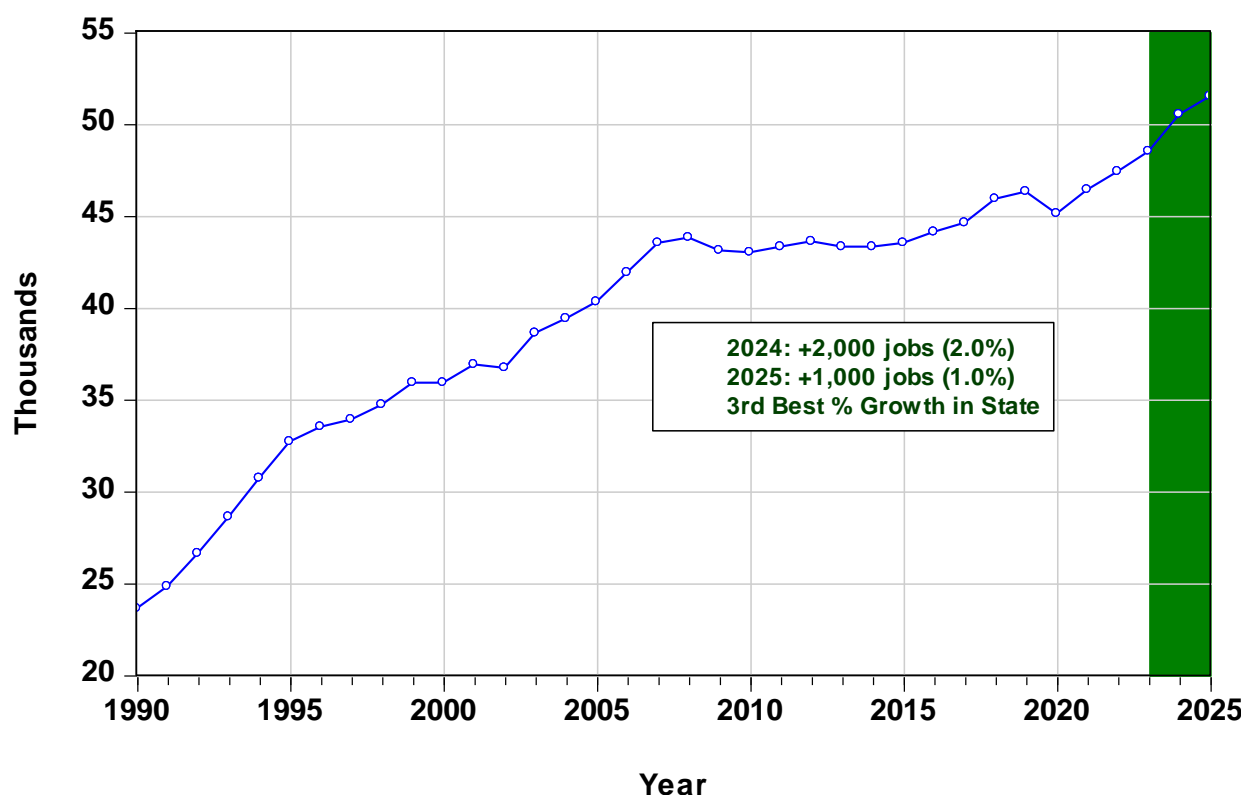
Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Forecast for 2024-25: Robust Growth Ahead

Figure 53 graphs the Hammond MSA's historical nonfarm employment pattern over 1990-2023, along with our forecast for 2024-25. **We are projecting robust growth for the smallest MSA in the State, with 2,000 new jobs in 2024 (+4.1%) and 1,000 new jobs in 2025 (+2%).** In percentage terms, this would make the Hammond MSA the third fastest growing MSA in Louisiana.

Figure 53

Hammond MSA Nonfarm Employment Forecast 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

Niagara & North Oaks Provide Extra Boost to 2024

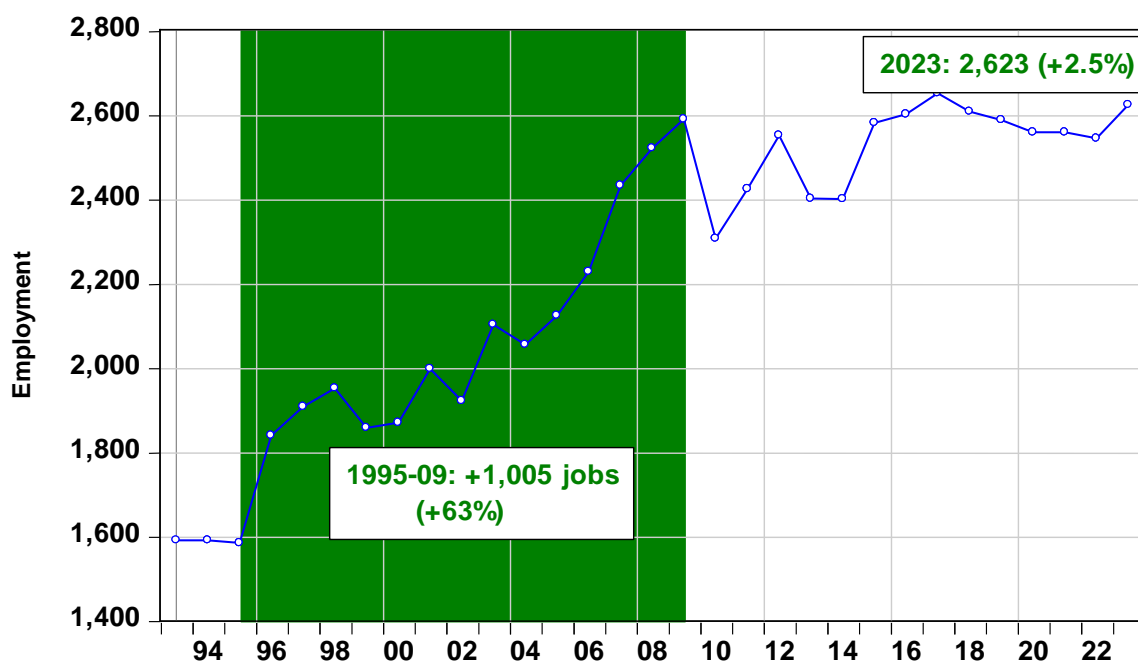
The optimistic outlook for 2024---2% growth is above the norm---is largely based on significant capital investments by one new firm and an expansion at an existing firm. **Niagara Bottling** is the new kid on the block, investing \$165 million in a state-of-the-art 500,000 square foot bottling facility at the Robert exit on I-12. The company will manufacture bottles and caps and distribute them using a heavily robot-driven system. Despite the robot orientation, Niagara will still

employ 70-100 people (at an average annual pay of \$55,000) once the plant is completed in 2024.

The **North Oaks Medical Center**, with 2,623 people remains one of the region's largest employers. As seen in Figure 53, North Oaks enjoyed enviable growth over 1995-2009, adding over 1,000 jobs (+63%). Employment has been fairly stable between 2,400-2,600 jobs since, but the 2.5% bump in 2023 is noteworthy. This is especially so since North Oaks has 283 vacant positions and is in another expansion mode. The company purchased a local building to upgrade its outpatient rehabilitation services (square footage increasing from 7,000 to 37,000 square feet). Further, construction will begin before year end on a \$46 million, 5-story medical office building. In another new development, the Hospital is awaiting approval of a graduate medical education program that will start with 8 residents in 2024, and increase to 56 by 2028.

Figure 54

North Oaks Medical System Employment



Source: North Oaks Medical Center

Both the new **Medline Distribution Center** and the expansion at the existing **Intralox** site were purposely overbuilt for growth. Intralox is finishing up a \$60 million expansion that will add 53 jobs in 2024 and 50 jobs in 2025 to its present

workforce of 197. Once Medline opens its new site it will grow to 150 jobs by 2025, and then add another 100 jobs over the next two years. The huge **Walmart Distribution Center** on the east side of the Parish still maintains a solid workforce of about 960.

Southland Steel Fabricators in Amite employs 453 at its site. The company recently purchased Southland Industrial Coatings (74 jobs) and Southland Grid Structures (150 jobs). **Wayne Sanderson Farms** was recently purchased and is expected to add employees to its 550-person workforce.

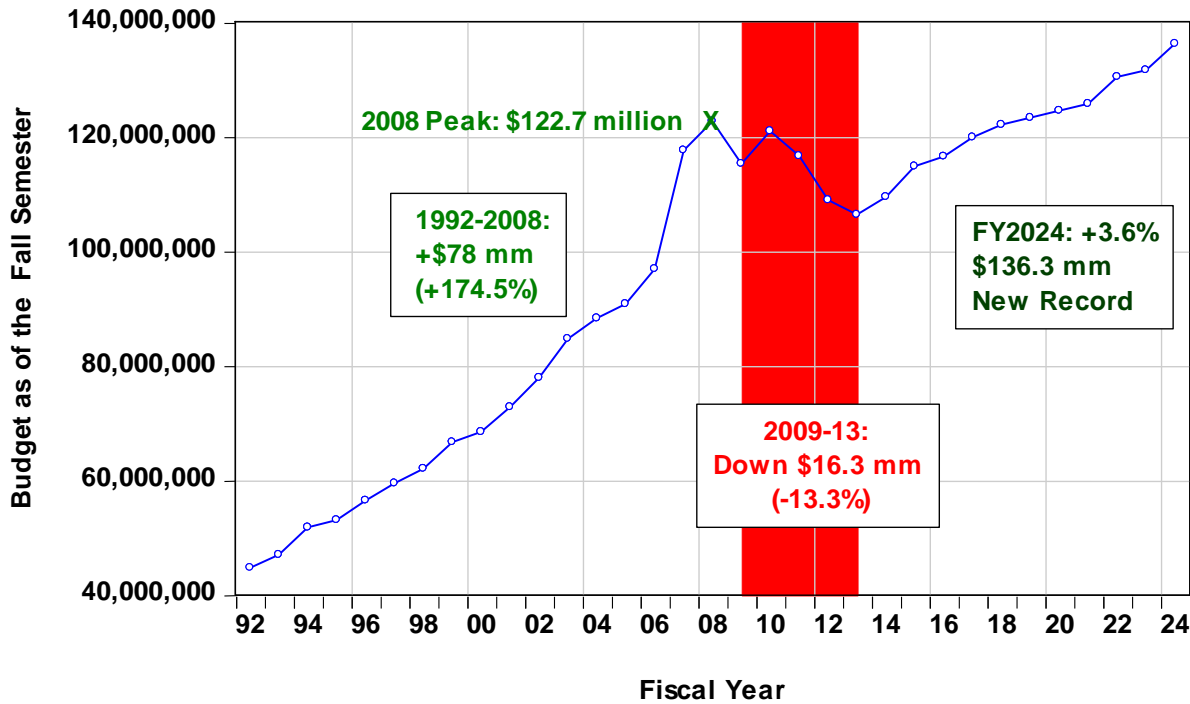
SLU's Impact Over 2024-25???

As mentioned in the introduction to this MSA, the largest city in the Parish---Hammond--- is very much a university town. Southeastern Louisiana University is the third largest employer in the city after the public school system and North Oaks. We share three metrics on the economic contribution of SLU, two of which raise questions about the University's economic impact over the next two years.

The first---**SLU's budget**---contains the positive news. As seen in Figure 55, after a 13.3% decline between FY2008 and FY2013, SLU's budget has increased nicely. By FY2019, the University had fully recovered the 2008-2013 losses and began to set new records. This year's budget will be \$136.3 million (+3.6% up over FY2023), and given the State's budgetary outlook, we expect SLU's budget to stay on this recent growth trend. Most of this budget will be spent in the MSA's economy, which is clearly good news.

Figure 55

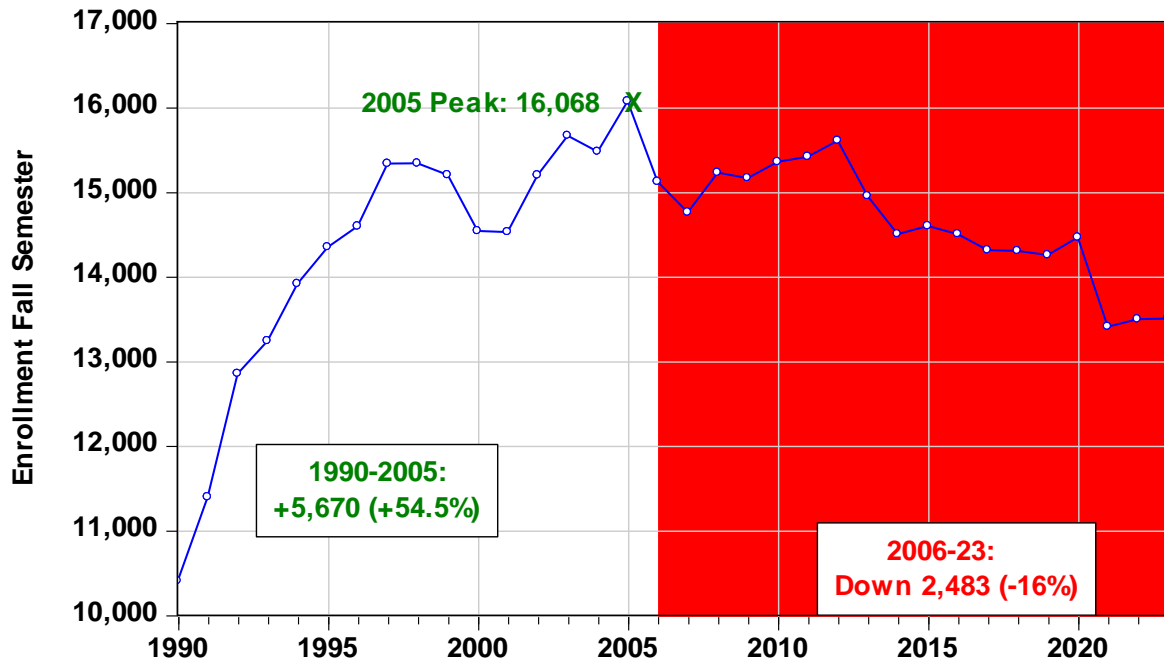
**Southeastern Louisiana University Budget
FY1992 - FY2024**



Source: Office of Finance, SLU & Loren C. Scott & Associates, Inc.

The news from two other matrices is not so good. Like every other university in the University of Louisiana System, SLU has been experiencing enrollment declines over the past few years, as shown in the red highlighted area in Figure 56. Enrollment in fall 2023 is about 2,600 students below the 2005 peak. A compounding factor is the continuation of some virtual classes, which means the students may not be in the community to spend money at restaurants, gasoline stations, and other retailers.

Figure 56
Southeastern Louisiana University Enrollment
Fall 1993 - Fall 2023

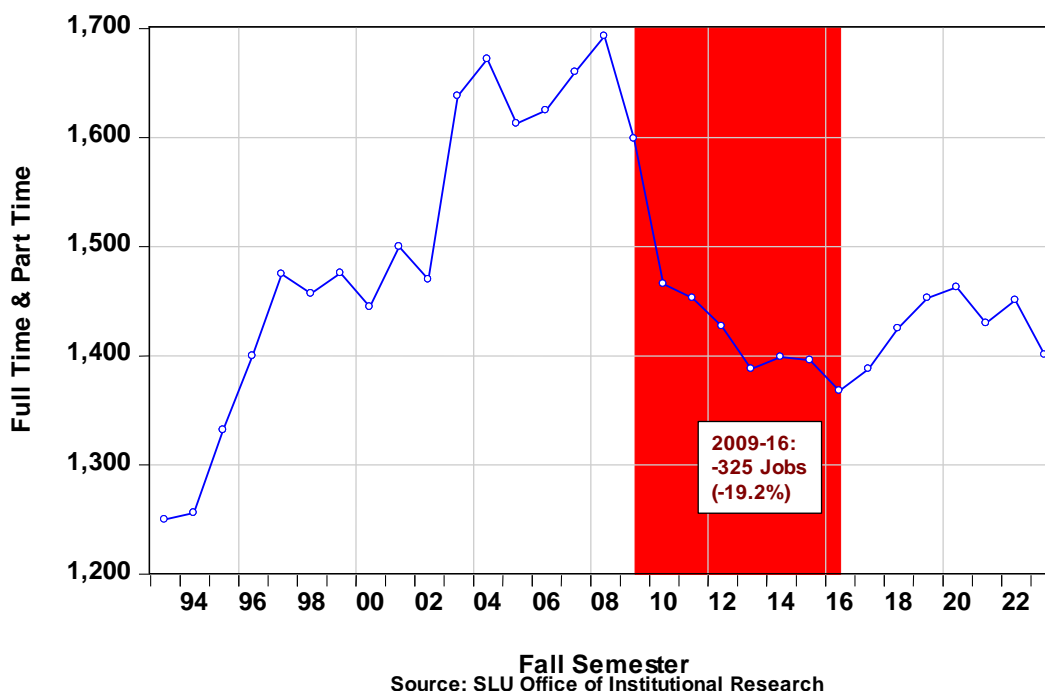


Source: SLU Office of Institutional Research & Loren C. Scott & Associates, Inc.

Declining enrollments are typically accompanied by declining employment at the University. SLU is no exception to this iron law. Employment at SLU fell over 19% between 2008 and 2016. It has since stabilized in the 1,400-1,500 range, though the trend has been generally downward since the turn of the decade. We want to beware of over-emphasizing this point. Readers should carefully note the vertical axis in this graph. Even though employment fell over 19% over 2008-2016, this only amounted to 325 jobs in total--hardly a major hit to the economy. Employment has declined since 2020, but the total job-loss was only 62 jobs, hardly a great concern.

Figure 57

Total Employment Southeastern Louisiana University Fall Semester



Public Construction Adds a Boost

The economy of the Hammond MSA will pick up a slight boost from the public construction arena. **State road lettings** for 2024-25 are \$35.9 million, up almost one-third from last year. The three largest projects for the area are:

- \$7.2 million for work on LA16 from 2nd Street to LA445
- \$6.7 million on LA16 from LA445 to Washington Place
- \$4.5 million for work on the Yellow Water Bridge

Over the next two years the **Coastal Protection and Restoration Authority** will spend over \$5.6 million in the MSA. The biggest project will be \$5 million on the Manchac Landbridge Shoreline Protection Project. Some \$20 million is being spent on the **Dark Fiber Loop**, an underground infrastructure where carriers can put fibers that will open the northern part of the Parish for better internet service.

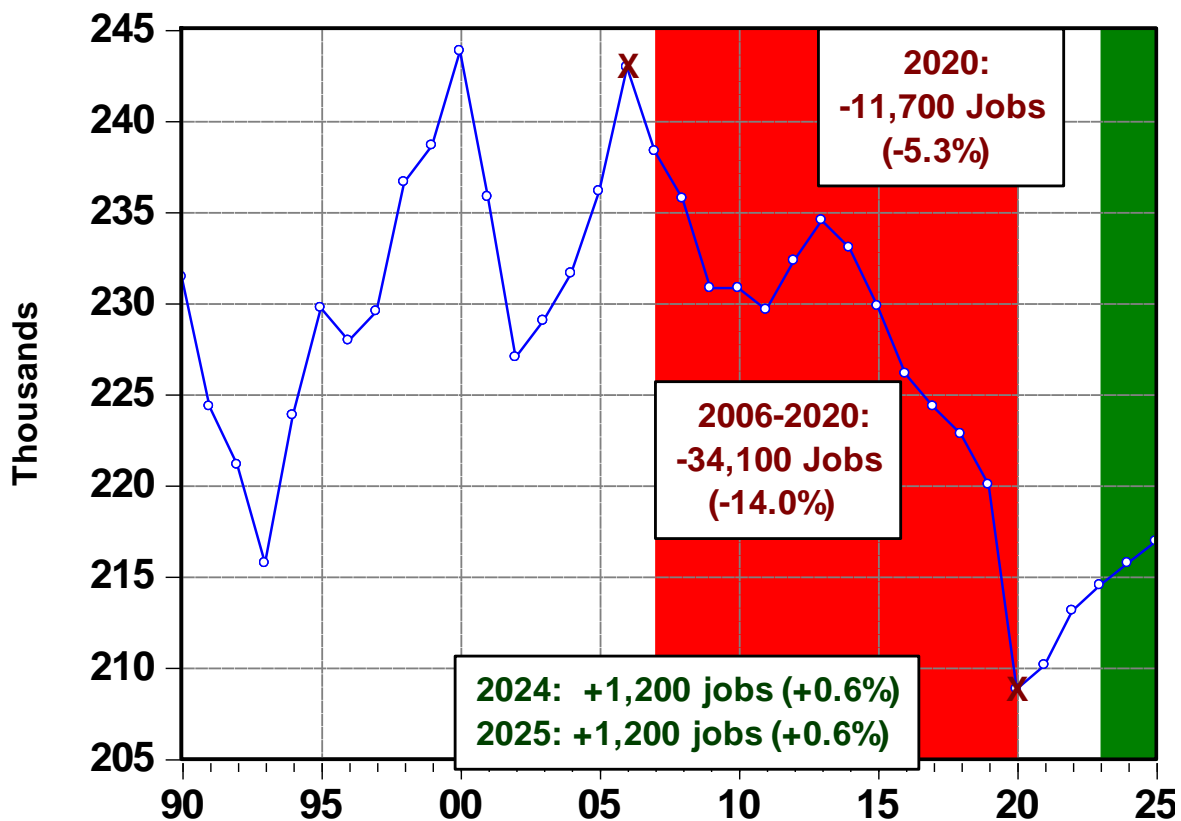
RURAL LOUISIANA

Performance Contractors, Syrah, Louisiana Green

There are 35 of the state's 64 parishes located in the nine MSAs that have been covered to this point. The remaining 29 parishes are designated as “**rural.**” About 11.3% of the state's employment (214,500 jobs) exists in these 29 parishes. Figure 58 shows nonfarm employment in these rural parishes from 1990-2023, along with our forecast to 2024-25. A history of this region can be found in Appendix J.

Figure 58

Non-Farm Employment - Rural Parishes 1990-2025



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

This area of the state was not immune from the effects of the COVID shutdown. The region lost 11,700 jobs in 2020, a 5.3% drop. In percentage terms, this was actually the smallest loss of any region of the State. Note that nonfarm employment in rural Louisiana had been in a decline since 2006----dropping

34,100 jobs over 2006-2020. Population has been moving from the rural areas to the MSAs for some time (all across the U.S.), and we do not expect this trend to let up over our forecast period. For example, of Louisiana's 29 rural parishes, only three experienced population gains between 2010 and 2020---Lincoln, Beauregard, and Jeff Davis---while ten rural parishes found their populations fell by 10% or more.⁴

It is encouraging to note that nonfarm employment has been increasing in rural Louisiana in the past three years. We attribute most of this reversal to resurgence in the lumber industry over the past two years. Significant new capital investments and job additions occurred at **Roy O. Martin, Canfor, YellaWood, International Paper, Hunt Forest Products, Weyerhaeuser, and Interfor Corporation**. In addition, **Syrah Resources** opened the first two phases of its graphite processing plant in Vidalia, adding over 100 jobs.

It is important to note that Figure 57 covers nonfarm employment in these rural parishes. In 2020 (latest data available) there were 30,725 farm workers in Louisiana, and just under \$1.9 billion was earned by farm owners and workers in that year.⁵ While \$1.9 billion is obviously no small number, total personal income in Louisiana was \$236.3 billion.⁶ Farm income was 0.8% of that figure. Farming is still a major part of the rural parish economy.

Not All Ag

There are some non-agricultural outliers (besides Syrah), however. As mentioned in the Alexandria write up, the largest single employer in the state is **Fort Johnson** in Vernon Parish next to the Texas border.

Natchitoches Parish contains a university town, Natchitoches, which is the home of Northwest Louisiana University, but also is the headquarters of the Red River Waterway Commission and enjoys a tip of the Haynesville Shale within its borders. Lincoln Parish also has a large university base with Louisiana Tech located in Ruston. There are few rural parishes along the Louisiana coast (see Figure 12). One is St. Mary Parish which is dominated by industries serving the offshore exploration/production industry.

⁴ www.bea.gov

⁵ www.bea.gov.

⁶ Ibid.

Forecast for 2024-25: Modest Job Recovery Continues

As shown back in Figure 57 we are projecting that job-recovery in the rural parishes in Louisiana that began back in 2021 will continue over the next two years. **We are forecasting 1,200 jobs a year over 2024-25, a 0.6% annual growth rate.** We expect these new jobs to come primarily from non-agricultural based enterprises, though wood will figure prominently in one. We refer to this as a modest job recovery, because expected gains will be offset by some recent, significant layoffs.

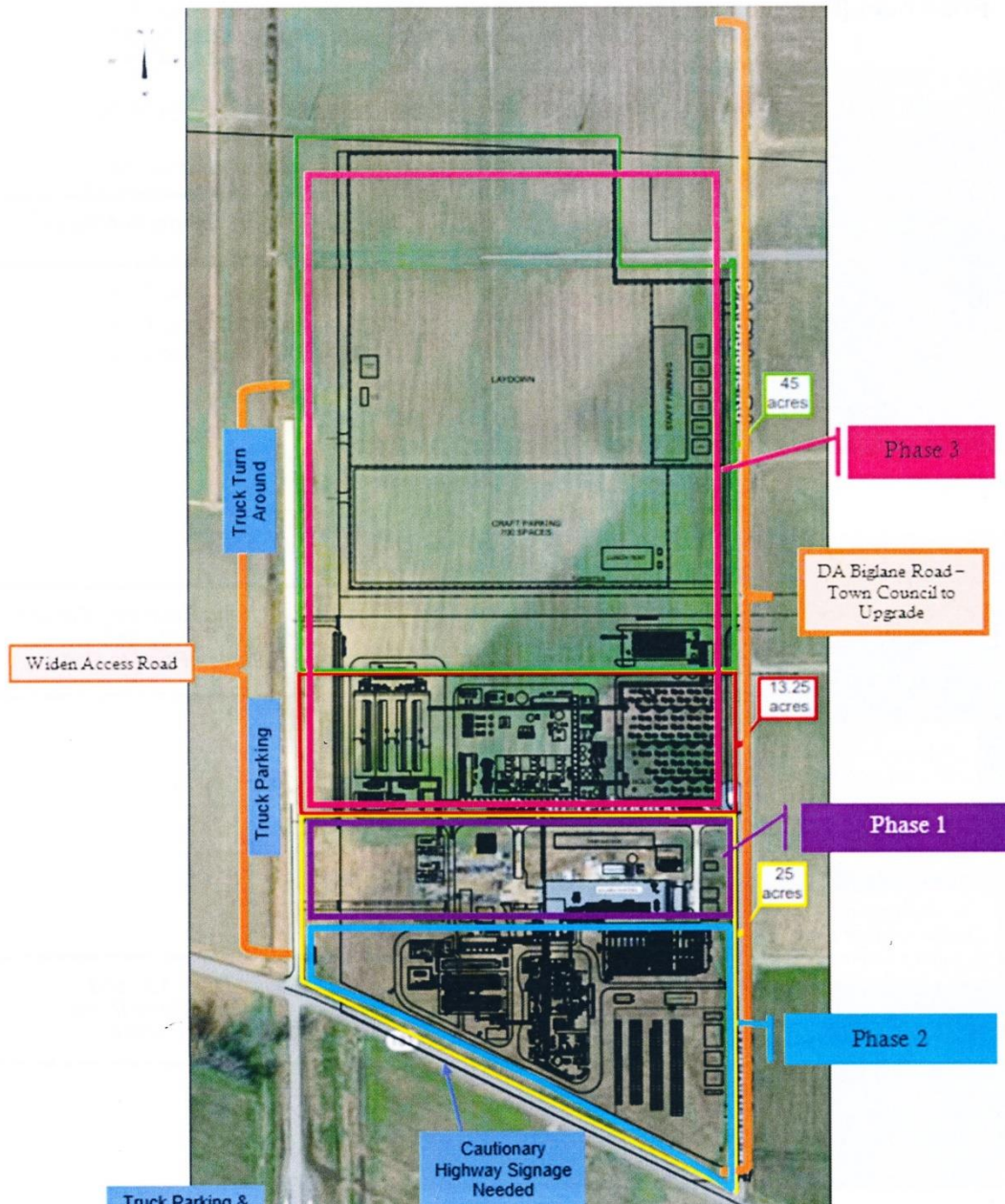
Performance, Syrah, Kumbo, Buc-ee's, LA Green Bring Jobs

Much of the growth projected on the rural parishes will come from non-agricultural-based projects. The biggest by far will come for **Syrah Resources**. Syrah brings raw graphite from a mine in Mozambique to its plant in Vidalia and refines it into graphite that goes into EV batteries. The company is near completion of the \$176 million phase 2 of its project and will employ 98, high-wage employees at the site. Officials are very near issuing an FID on the much bigger \$539.4 million phase 3 (see Figure 59). \$220 million in federal support from the Inflation Adjustment Act has been secured. When completed in 2026 Syrah will add 112 new jobs at the facility. We placed a 95% probability of phase 3 reaching a FID.

Sometime in the latter part of 2024, we are expecting an FID to be issued on the \$2.8 billion **Louisiana Green Fuels Project** at the Port of Columbia in Caldwell Parish. Louisiana Green will manufacture renewable diesel or sustainable aviation fuels out of wood waste, and will use CCS to ultimately store CO2 in salt caverns. An agreement has been signed with SLB to provide the CCS service and provide the FEED work on this part of the project. The Port has received \$15 million from the State to support road, rail, and traffic to the site. A road has been completed to the 327-acre site. An estimated 151 jobs will be created once the plant is built. We estimate there is a better than 50% probability of this project reaching a FID.

The expansion of the lumber industry in rural Louisiana continues with the recent announcement by **YellaWood** of a \$22.5 million expansion at its site in Avoyelles Parish which will be completed near the end of this year. The company is adding a warehouse, a manufacturing facility, an office building, and a truck maintenance shop. This will add 58 jobs to the present workforce. Another \$5.9 million project underway will add another 25 jobs.

Figure 59
Syrah Resources Facility – Vidalia, Louisiana



Source: Syrah Resources

At the opposite end of the State in Franklin, Louisiana, **Kumbo Tire** has announced plans to build a multi-million dollar tire warehouse/distribution center that would employ over 200 people. The buildout is estimated at 2-4 years. Also in Franklin, **Metal Shark Boats** employs 100 people manufacturing coastal patrol

vessels for the navy, pilot boats, and boats to service windfarm manufacturing. The firm wants to add 30 more employees.

Last fall, **Performance Contractors** took over the former McDermott Fabrication Yard near Morgan City. The firm has already ramped up to 1,500 workers to fabricate modular sections for Venture Global's LNG facilities. Performance expects their employment to total 2,500 by 2024.

Back up in the northern part of the State, the highly popular **Buc-ee's** is developing a new \$50 million travel center that will also employ 200 people. In central Louisiana, employment is expected to remain steady at 910 employees at the two **Roy O. Martin** plywood/oriented strand board plants in Chopin and Oakdale. The company is finishing up a \$9.4 million improvement in Chopin.

Beginning of a Solar Boom in Rural Louisiana?

Back in the "basic assumptions" part of this report, it was argued that the new "blue" and "clean" companies planning projects across the State not only want CCS technology, but they also want their electricity sourced from renewable power. For rural Louisiana this may mean significantly more **solar farms** across the State and more often than not those farms will be located in rural parishes.

Two such farms have already been announced. **Lightsource bp** wants to start construction this year on a \$170 million solar farm in St. Landry Parish called Prairie Ronde. It would open in late 2024. **Opdenergy** (a Spanish company) has announced plans for a \$150 million solar farm in Allen Parish near Elizabeth. Called the Elizabeth Solar Project, this facility would have 296,280 modules and generate 125 megawatts of electricity. While many jobs will be created in constructing these two solar farms, very few jobs (5-8) will be created once the farms become operational.

Nice Boost in State Road Lettings

One outcome of the State's recent budget surplus was Legislators voted more money for infrastructure needs across the State. Rural Parishes were beneficiaries of this largess. **State road lettings** in rural parishes jumped from \$515.5 million last year to \$830.1 million for 2024-25, a hefty 61% increase. The top three projects listed are:

- \$41.8 million to improve US90 from LA318 to LA83
- \$29.3 million for work on the US190 UPRR overpass near Opelousas

- \$25 million to replace five overpasses in Lincoln Parish

Two other projects in rural areas of Louisiana were funded via the Infrastructure Act:

- \$11.4 million on the CC Bel Road extension in Allen Parish
- \$10.5 million on the Ouachita River and LA165 multimodal connectivity and safety project in Caldwell Parish

The **Coastal Protection and Restoration Authority** will target two rural parishes in south Louisiana for financial help over 2024-25. St. Mary Parish will receive the most---\$31.8 million---for work on several projects. The two most important are (1) \$9.6 million for the St. Mary Back Lakeside Flood Protection Project, and (2) \$9.5 million for the Lakeside Project Improvement. Assumption Parish will receive \$1 million over two years for the Morganza Upper Basin Feasibility Study.

Rural Louisiana: Not Without Headwinds

Our focus to this point has been on the positive activities in rural Louisiana, but the region has not been without its setbacks. The largest single employer in the State is **Fort Johnson** in Vernon Parish. Fort Johnson's personnel count has declined by a non-trivial amount in the past year. The rotating troop count has dropped from 5,776 to 4,959. These are the troops that rotate in and out of the base over a 9-month period for training. The good news is that permanent jobs at the base are rising, though not quite enough to offset the rotating troops loss. Civilian employment has increased the most, from 6,138 to 6,631, while permanent military personnel increased marginally from 8,137 to 8,186. There has been a delay in the arrival of the 183-person Multi-Role Bridge Company until October 2026.

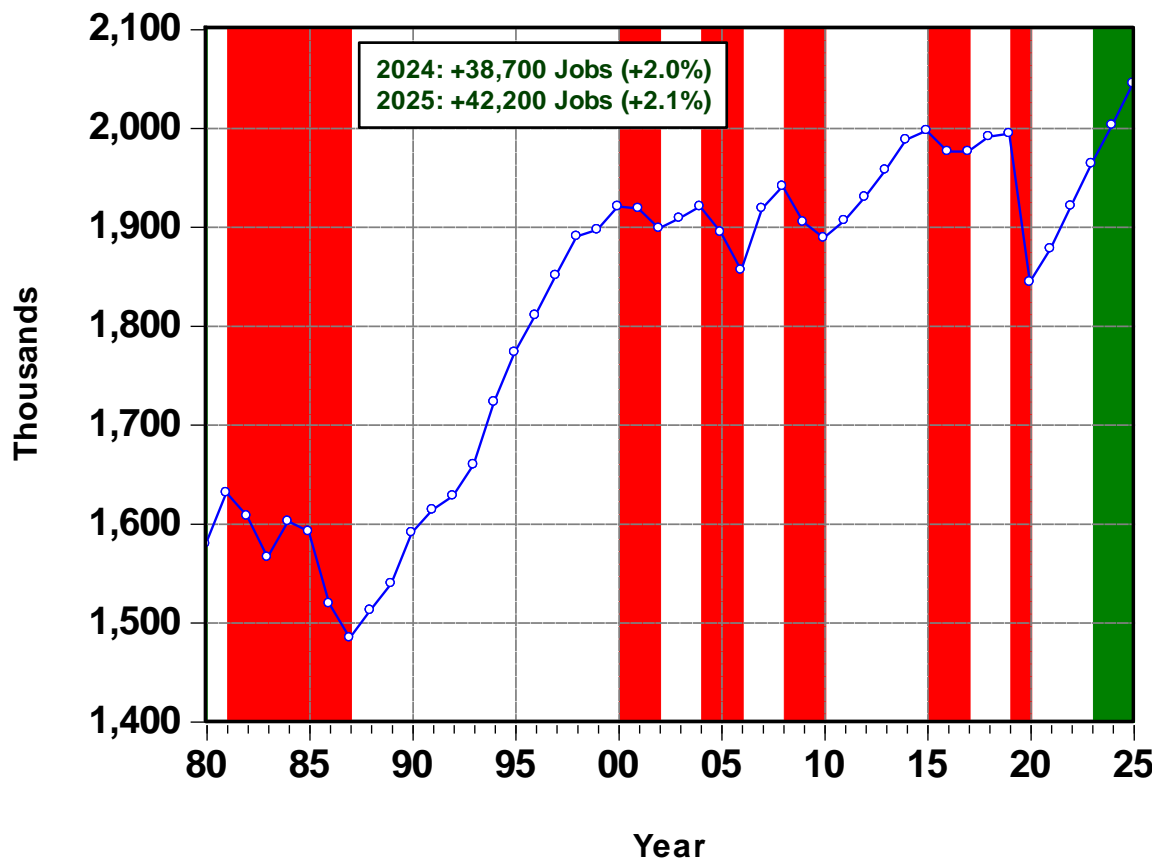
Economic development officials were surprised by the sudden closure of **Ardagh Glass** in Simsboro in Lincoln Parish. The closing of this bottle plant cost 257 jobs. **Ampacet** closed its plastics manufacturing plant in Deridder at a cost of 65 jobs. The **Maximus Call Center** in Bogalusa has laid off 70 people since January 2023.

THE LOUISIANA ECONOMY: 2024-25

In the sections above we described the forecast for the state's nine MSAs and its rural region. Figure 60 adds these forecasts together to get the state total. (Red bars are State recessions.) We are projecting that **the state will add 38,700 jobs in 2024 (+2.0%) and 42,200 jobs in 2025 (+2.1%)**. These are perhaps the most optimistic forecasts we have ever produced for the State---driven as they are by (1) massive industrial construction in the southern tier of the State and (2) by significant recovery efforts from recent natural disasters and the COVID shutdown. If these forecasts are near the mark, then in 2024, Louisiana will break through that 2,000,000 annual employment level for the first time in its history.

Figure 60

Louisiana Non-Farm Employment: Forecast 2024-25



Source: Louisiana Workforce Commission and Loren C. Scott & Associates, Inc.

APPENDIX

Economic History of Louisiana MSAs

APPENDIX A: *History of the New Orleans MSA*

1980-2004: Lead Up to the Hurricanes

The non-farm employment history in the New Orleans MSA from 1980 through 2021 is shown in Figure A-1. Louisiana experienced its longest and deepest recessions over 1981-87 during which the New Orleans MSA lost a stunning 40,400 jobs. This recession was driven by a plummeting oil and gas extraction sector. This MSA's heavy reliance on this industry (20,600 jobs in 1981) led to the heavy direct job losses accompanied by the further multiplier effect of those losses. Newspapers headlined many oil companies and service firms moving operations to Houston. By 1987, New Orleans had only 14,600 people employed in this industry.

The “multiplier effect” was mentioned in that last paragraph. For example, shipbuilding in the region was very energy-focused, so as oil and gas plummeted, this sector took a beating. Many fabricators were also in the same predicament. The result was manufacturing employment dropped from 61,300 workers in 1981 to 41,700 by 1987. Similarly, the MSA's real estate, retail, services, and financial markets endured layoffs through 1987.

Once the dust had cleared from this recession, New Orleans began to grow again until a combination of unusual events sent the region into a short recession (-3,500 jobs) in 1990. First, a period of weak natural gas prices slowed the energy sector even more. Then, the Challenger spacecraft disaster led to fewer flights and fewer external fuel tanks to be built at Martin Marietta in New Orleans East. Then another round of layoffs at Avondale Shipyards initiated another significant reduction in force.

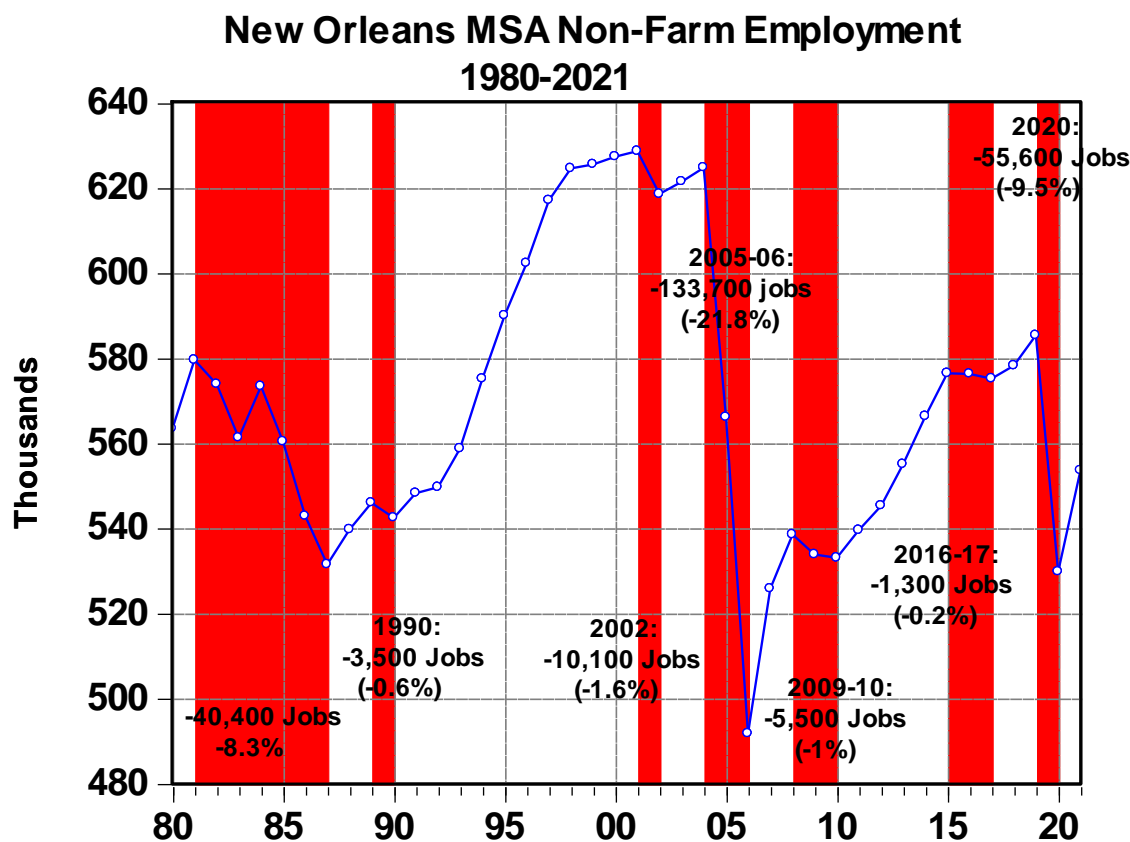
This MSA entered an envious growth period of 2.6% annually from 1994-97. A big driver was the introduction of the gaming industry to the economy. About 3,300 jobs were created at the four new riverboat casinos and the state's only land-based casino opened at a temporary site while construction began on a permanent location on Canal Street.

Growth tapered off over the next three years, before the region experienced the impact of the 2001 national recession (-10,100 jobs). Growth was lackluster over the next two years because high natural gas prices caused shuttering of some ammonia fertilizer plants in the area and led to serious cost issues in the region's large chemical industry. Readers should note that in the six years preceding Hurricanes Katrina and Rita this MSA's economy was moribund.

Katrina & Rita: The Most Profound Events

There is a sense in which this MSA's modern economy can be divided into two distinct parts: pre-Katrina and post-Katrina. It is hard to overstate the magnitude of this calamity on the MSA. Over 2005-06, the effect of Hurricanes Katrina and Rita was to drive employment down by an almost unimaginable 133,700 jobs or 21.8%. As seen in Figure A-1, on an average annual basis these two storms removed three decades of economic growth, plunging the economy back to where it was in 1977.

Figure A-1



Data Source: Bureau of Labor Statistics

Looking at the data on a monthly basis reveals a much uglier picture. The region had lost 177,900 jobs, an astounding 29.5 percent decline, after Rita had hit.

Often times when storms hit, the recovery is rather swift. The economy falls drastically at first, and then rebounds just as quickly as massive federal recovery and private insurance monies flow into the area for the re-build effort. Indeed,

this is the pattern seen in Lake Charles and Pascagoula, Mississippi after the hurricanes.

Not so in New Orleans. As can be observed in Figure A-1, the picture is akin to a “kindergarten L.” Housing issues prevented the V-shaped recovery. Partly this can be traced to the incredible magnitude of the destruction. By one estimate, there were seven times more homes destroyed than in any other natural disaster in our country’s history. Almost 182,000 homes in the New Orleans MSA incurred either severe or major damage, i.e. damage bad enough to render the home uninhabitable.

A real key to the slow recovery was that the homes were rendered uninhabitable due to flood waters. Damage from flood waters is typically not covered unless the owner purchased national flood insurance. Unfortunately, only 26% of these homeowners had flood insurance. Even so, national flood insurance only covered 80 percent of the pre-flood value of the home up to a maximum of \$250,000. Consequently, most homeowners in the area were staring at a major gap in their coverage.

Happily, U.S. taxpayers came to the rescue to cover this gap in coverage in the form of “Road Home” monies to rebuild their homes. Unfortunately, the financial barriers to rebuilding were so severe for some that there are large swaths of New Orleans to the East where people have simply chosen not to return.

Other serious issues prevented a full and fast recovery in the region. Readers were asked earlier to remember the weak economy in the six years preceding these storms. These displaced people had endured public schools in the New Orleans area that were among the worst in the state (if not the nation). Their new location had much better schools for their children. Prior to the storms the economy in New Orleans was stuck in the doldrums. Families transported out of New Orleans to Texas or even other parts of Louisiana, typically found themselves in much more vibrant economies. That meant more, and higher-paying, jobs---a serious deterrent to returning. Finally, the crime rate escalated in New Orleans after the storm, further impeding the desire of dispersed families to return.

Great Recession Precedes Remarkable Growth

Note back in Figure A-1 that the combination of massive amounts of construction spending to rebuild houses, levees, etc., and the Go Zone funding, spurred some growth in the region’s economy in 2007-08. Then the Great

Recession caused the national economy to plunge by 6.1%. This MSA lost 5,500 jobs---a 1.0% decline which was a much more favorable result for New Orleans. In fact, this MSA had the best performance among the state's nine MSA during this national downturn.

In the aftermath of the national recession, the New Orleans MSA rallied with five straight years of solid growth from 2011 to 2015, and by 2011 had recovered all the jobs lost during the recession. What makes this performance especially remarkable is that the growth occurred despite three significant blows to the economy. One was a marked reduction in the Army Corps spending to reinforce the levee system. The real stunner was the 4,500 layoffs at Huntington Avondale Shipyards. Equally bad, the Michoud Assembly Facility reduced its workforce by about 3,000.

Oil & Gas Problems Reappear

In our write up of key drivers in the body of this report readers were shown a picture of oil prices movements since 1980 (Figure 5). In late 2014, the Saudis decided to try to destroy the fracking business in the U.S. by driving oil prices down to under \$30 a barrel at one point. The New Orleans MSA still had a substantial energy base that was harmed by Saudi Arabia's actions. Hornbeck stacked 45 of its 62 boats and terminated 1,000 mariners and 150 onshore workers due to a reduced demand for supply boat services in the Gulf of Mexico. Chevron initiated a temporary reduction in force at its Covington office. Layoffs reverberated across the region as Hexion closed a facility at Norco (-97 jobs), Shell moved 95 people to Houston, and Freeport McMoran dropped 32 jobs.

The Army Corps reduced even further its spending on the levee system (-\$311 million). Adding to woes on the Northshore, Trinity Yachts shut down its site in Madisonville (-60 jobs). Further upriver, Louis Dreyfus shuttered its packaging facility in Gramercy (-49 jobs). Chiquita moved from the Port of New Orleans to Gulfport (-100 longshoremen), and Macy's closed its store in Esplanade Mall (-116 jobs).

There were more positive moves in the MSA to help offset the energy-related losses somewhat so that the MSA suffered a net loss of only 1,300 jobs over 2016-17. For example:

- Construction started on the huge \$11 billion new University Medical Center Hospital to replace the Charity Hospital.

- The new VA Hospital was in final construction.
- Zen-Noh Grain finished its \$150 million dock extension and continuous barge unloading system (+15 jobs).
- In St. John the Baptist Parish, work was completed on the \$66 million Pin Oaks Terminal (+70 jobs).
- TCI Plastics completed its \$36 million logistics facility at the Port of New Orleans (+160 jobs).
- Millennium Galvanizing (a Crest company) opened its new facility in Convent (+65 jobs).
- The A.B. Freeman School of Business at Tulane completed construction of its \$35 million addition.

Back to Growth in 2018-19

Despite the drag from an oil and gas industry that was still in the doldrums, the region began to modestly expand again, adding 8,300 jobs (+1.4%) over 2018-19. The now much lower natural gas prices in the U.S. compared to those in Europe and Asia spurred a strong surge in investments in the petrochemical industry in the region, including:

- Yuhang Chemical started construction of its \$1.9 billion chemical plant.
- Monsanto launched construction on a \$975 million addition to its plant.
- Cornerstone Chemicals continued its \$120 million expansion.
- W.R. Grace completed its \$41 million capital expansion.
- **Noranda Bauxite** finished its \$35 million expansion in 2020.

Major additions at area refineries provided another much-needed boost, such as:

- **Valero** began about \$1.8 billion in construction, including its Diamond Green project.
- **PBF Refinery** in Chalmette began work on \$600 million in enhancements.
- **Shell** refinery began about \$360 million in expansions.
- **Ergon** completed a \$200 million project to add 20 new tanks to its storage farm.
- **Fuji Oil** began construction of its new \$77 million facility.

The region also got a huge new addition to its burgeoning tech sector. **DXC Technology** opened in downtown New Orleans with plans to grow to 2,000 workers.

Influence of COVID

The years 2020-23 are covered in the body of the report.

APPENDIX B: History of the Baton Rouge MSA

Figure B-1 illustrates employment trends in the Baton Rouge MSA over 1980-21. The Department of Labor added 5 parishes to this MSA in 1990 resulting in a notable jump in the employment trend line in Figure B-1. Fortunately, the Baton Rouge MSA was barely touched by the 6-year statewide downturn in the early 80s. That recession was driven heavily by an oil and gas extraction industry being pummeled by a major price drop. This MSA was protected somewhat from these maladies because few extraction firms are located within its boundaries.

The MSA then entered a spectacular period of growth---averaging 7,700 jobs a year--- which lasted for 13 full years. It was primarily a burgeoning chemical industry that fed this fire of growth. In this MSA if the chemical industry expands, so does the industrial contraction side.

A short national recession tapped this region with a 1.1% job loss in 2001. Then the chemical industry---the source of the huge growth in the previous 13 years---ran into headwinds. An increase in the value of the dollar in international trade dinged the industry's foreign sales. Then its major input, natural gas, experienced a serious upward crawl that lasted through 2008. The industry had to respond by looking for ways to cut costs. That meant labor-saving technology, which meant fewer jobs

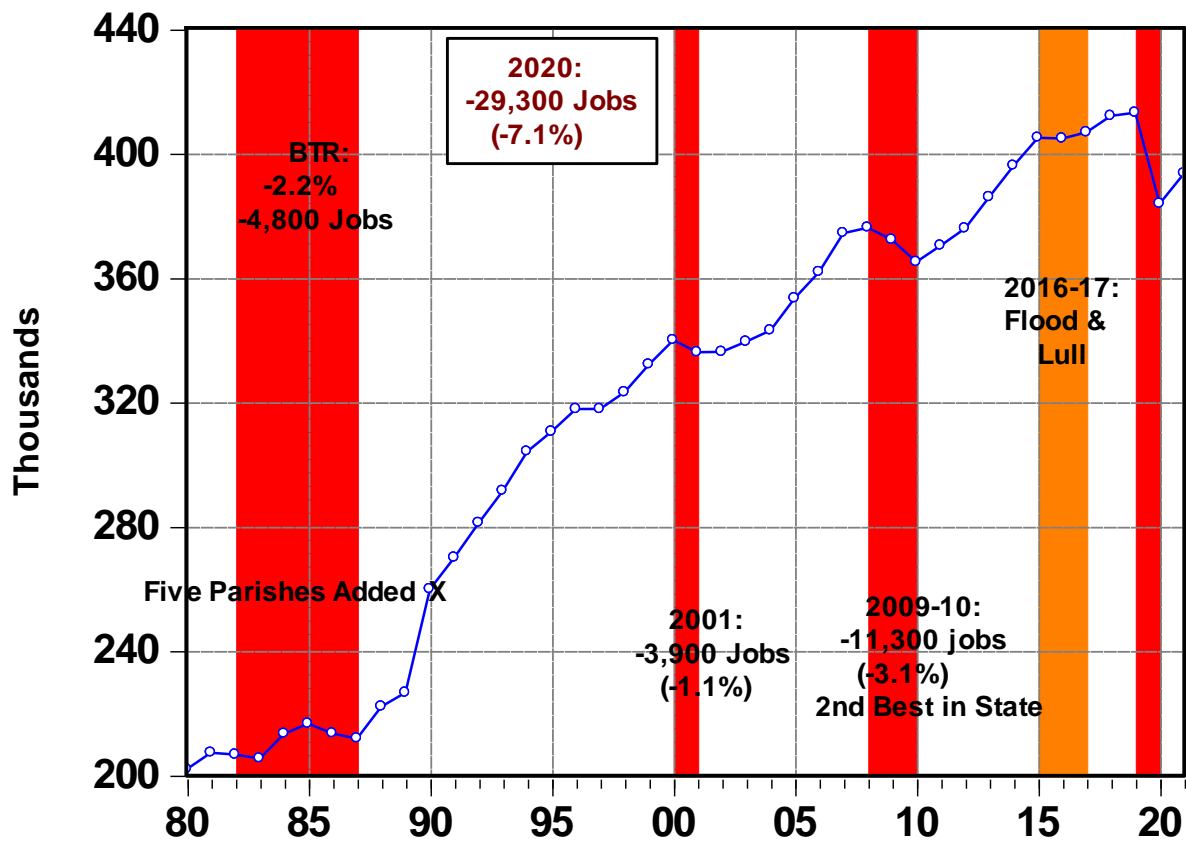
Hurricane Katrina's Impact

When Hurricane Katrina broke the levees and flooded New Orleans, its residents fled mainly to the largest place available that had potential housing. That turned out to be Baton Rouge and nearby parishes. FEMA estimated that 248,386 evacuees came to these communities in just a few hours. Every rental unit in the area was quickly occupied and the demand for housing pushed home prices up 27% overnight. Traffic came to a standstill, and store shelves and gasoline stations were depleted.

Of course, most evacuees eventually left, because it was impossible for the MSA to permanently absorb a quarter of a million people, particularly without enough available jobs. The U.S. Bureau of the Census estimated the area's population had grown by a remarkable 39,921 in one year. As seen in Table B-1, the bulk of that population increase occurred in East Baton Rouge (18,121), Ascension (10,000) and Livingston (9,100) Parishes. As impressive as that growth record was, it was much less than the number of evacuees that had initially come to the region. Communities all around New Orleans saw this same

pattern, whether in Louisiana, Mississippi, or Arkansas. Buttressed by the influx of business associated with the new Katrina evacuees, employment in the MSA spiked upward in 2005 and 2006 (see Figure B-1).

Figure B-1
Baton Rouge MSA Non-Farm Employment
1980-2021



Data Source: Bureau of Labor Statistics

Table B-1
Population Change by Parish
July 2005 – July 2007

Parish	Absolute Change	Percent Change
East Baton Rouge	18,121	4.4%
Ascension	10,000	11.2%
Livingston	9,100	8.5%
West Baton Rouge	1,091	5.1%
Pointe Coupee	564	2.6%
St. Helena	437	4.3%
East Feliciana	276	1.3%
Iberville	272	0.8%
West Feliciana	60	0.4%

Data Source: U.S. Census Bureau

2007-10: Go Zone Incentivizes, Construction and Strong Growth & Then Recession

Note in Figure B-1 that this economy was whipsawed over the next four years. One method the federal government used to help rebuild from the impacts of Katrina was the so-called Go Zone legislation. This immense injection of construction dollars continued this MSA's rapid growth post-Katrina. Go Zone monies were a primary reason the Baton Rouge MSA held up much better than the rest of the country during the Great Recession, when this MSA shed 3.1% of its jobs versus 6.1% at the national level. Among the more serious job losses in the area were:

- **Chase Bank** closed its operations center – terminated 247 people
- **Dow Chemical** closed a facility - terminated 160 people, plus 400 contract workers
- **Excide Batteries** temporarily closed - terminated 132 people
- **Trinity Marine** closed its barge manufacturing facility – terminated 190 people
- **Capital One Bank** closed its call center – terminated 180 people
- **Wells Fargo** closed a call center – terminated 70 people
- **IEM** relocated its headquarters – terminated locally 50 very high-paying jobs

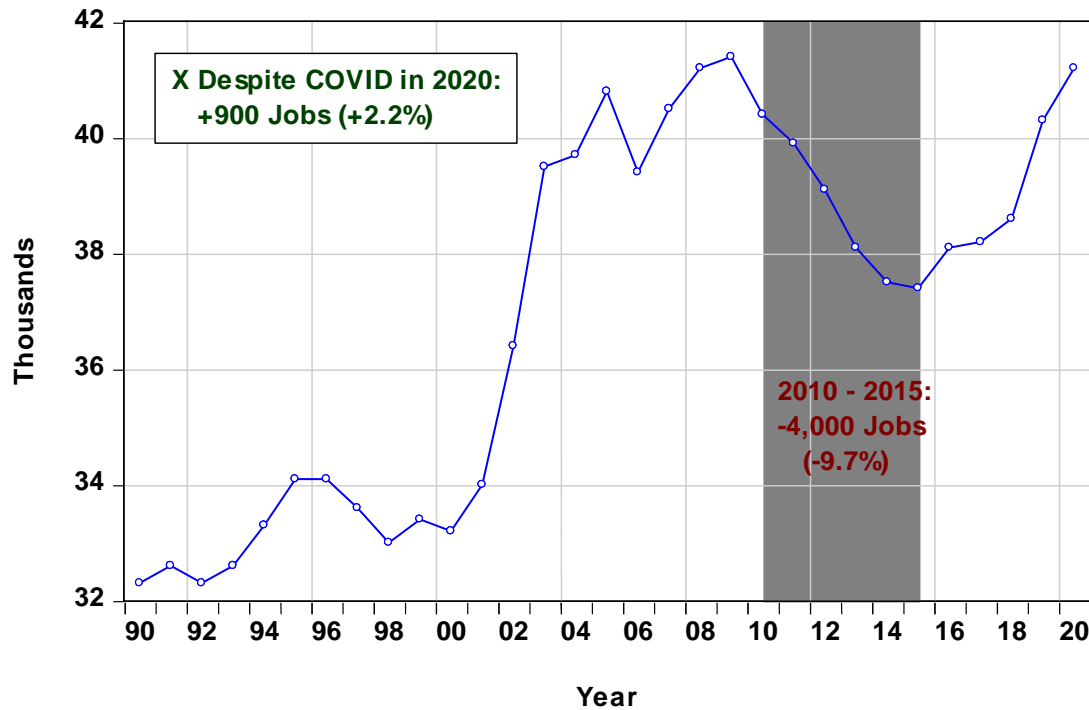
Solid Recovery Restrained by State Government

Note in Figure B-1 that beginning in 2011 the Baton Rouge MSA entered another period of solid growth of about 2% per year. By late 2012 it had begun setting new employment records after the Great Recession impacts. Beginning in 2012 a series of events led to an industrial construction boom that is still impacting the region in the early 2020s. Two things happened simultaneously. First, the fracking revolution resulted in an abundance of natural gas in the U.S. driving this country's natural gas prices below \$3 per MMBtu. Secondly, a dearth of natural gas in Europe and Asia caused their natural gas prices to rise substantially. This created a very wide competitive advantage for U.S. Chemical firms over their competitors in Europe and Asia. Because this price gap was not thought to be temporary, chemical firms began building new operations in the U.S. to take advantage of the lower price of their key input. Suddenly there was \$11.5 billion in new industrial projects in the region, and industrial construction employment began a meteoric climb. So great was this boom that the region's employment grew strongly despite the following:

- Kellogg Distributors terminated 208 people.
- Trinity Marine closed its 288-person facility.
- Albermarle announced it was moving 200 jobs to Kings Mountain, NC.
- 925 call center and distribution center jobs were eliminated, including the Home Depot call center (-400 jobs).

The power of the industrial boom is also illustrated by its ability to overcome a drastic drop in state government as shown in Figure B-2. What caused this drop? State government faced some challenging financial issues during this period as a result of some cuts in the personal income tax rates. Then Governor Jindal chose to solve these deficits by cutting costs instead of raising tax rates. About the only way to cut costs in state government is by reducing the workforce.

Figure B-2
Baton Rouge MSA State Government Employment



Data Source: Bureau of Labor Statistics

Interestingly, state government employment has increased steadily under Governor John Bel Edwards and is now only 200 jobs below the previous peak in 2009 as shown in Figure B-2. It is also instructive to note that state government employment in the Baton Rouge MSA increased by 900 jobs during the 2020 COVID shutdown year, and state government workers got a raise.

The Big “Lull” of 2016-17

Over 2016-17, this MSA entered a 2-year “lull.” Note the orange bar back in in Figure B-1. Baton Rouge was hit with a rainstorm that stalled over the area for two days. The resulting flooding left the MSA's employment flat for two straight years, even with its strong industrial construction base. To put this in perspective consider the data in Table B-2. The first two rows show the rainfall expectations for a 100-year event (14.2 inches) and for a 1,000-year event (21.3 inches) over two days. All four Baton Rouge area communities shown in the next four rows significantly exceeded the 1,000-year event. Even nearby Lafayette nearly matched the 1,000-year event.

Overall, the damaged home count was staggering. FEMA reported an alarming 65,829 homes in just three parishes that were damaged by flood waters. To add to the disaster, many workers were focused on repairing their homes and did not return to work right away. As a result, many businesses closed---both temporarily and permanently---due to flooding. Job losses were recorded in every month from August through December in 2017.

Table B-2
2-Day Rainfall Totals: August 2016

Area	2-Day Rainfall Inches
1,000 Year Event	21.3
100-Year Event	14.2
Watson	31.4
Brownfields	26.8
Denham Springs	26.5
Monticello	24.0
New Iberia	21.5
Lafayette	20.8

Data Source: Advocate Newspaper, August 6, 2017 p. 1

2018-19: Significant Closures & Disappearing Pickups

This MSA's rather anemic growth continued into 2018-19 as well. Two broad factors contributed to this weak employment trend. First, there were some significant closures in the area, including the following:

- Georgia Pacific closed its paper division (-700 jobs).
- Thompson Pipe Group in Zachary closed its facility and moved operations to Texas (-120 jobs).
- BASF shuttered a north Baton Rouge plant (-54 jobs).
- Direct Auto & Life closed its call center (-127 jobs).
- State Farm reduced employment at its operations center (-47 jobs).

Secondly, during this period construction of at least seven major industrial projects that were started earlier in the decade, were completed. On a positive note, each of these projects led to new high-paying, permanent jobs that the MSA did not have before. However, truckloads of construction workers left these construction sites for the last time. These factors are the primary reasons the MSA's employment continued in a lull mode through 2019.

2020-23: The COVID Impact & Recovery

This period is covered in the body of the report

APPENDIX C: History of the Lafayette MSA

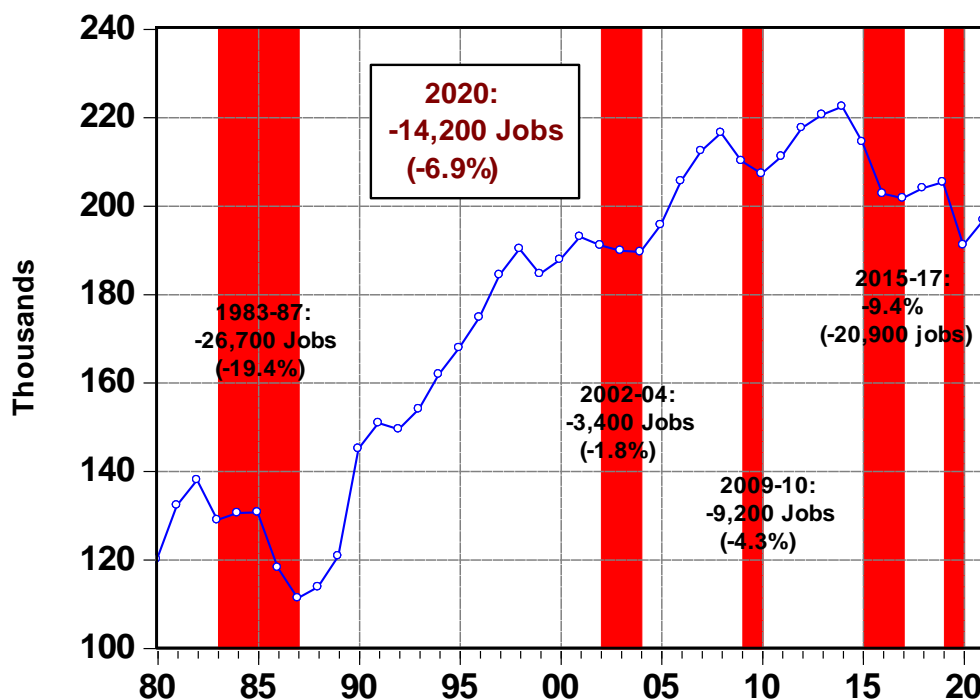
Figure C-1 displays the recent employment history in Lafayette. Readers can see immediately how this area's strong connection to the oil and gas industry has affected its employment. The big oil price decline in the early 80s absolutely creamed this MSA. An almost incomprehensible one fifth of the MSA's jobs vanished, a downturn that not even COVID could match.

Surprisingly, the MSA recovered those losses in only three years. It began with the MSA's first major venture into attracting non-energy related sectors. In the late 1980s, **Fruit-of-the-Loom** constructed very large facilities in the area and became the state's largest manufacturing employer. Fruit-of-the-Loom's impact was so large that by 1994, Lafayette had recovered all its jobs lost in the early 80s.

The energy sector began a series of blows starting with soft gas prices in 1992 that led to a minor employment drop. This blow to the energy sector was somewhat muted by surging employment at Fruit-of-the-Loom.

Figure C-1

Lafayette MSA Non-Farm Employment 1980-2021



Data Source: Bureau of Labor Statistics

However, the Fruit-of-the-Loom boom did not last. When the North American Free Trade Agreement passed, Fruit-of-the-Loom began a round of massive layoffs that ultimately led to full closure of the firm. Remarkably, Lafayette grew right through those layoffs. First, a nice rise in oil and gas prices sent the exploration industry on a hiring spree. Even more importantly in terms of growth and diversification, the MSA gained a new entrant---**Stuller Inc.** Stuller expanded so much that it became the largest jewelry settings manufacturer in the U.S.

The year 1999 was yet another poor energy year for Lafayette. When oil prices fell to under \$10 a barrel, the extraction industry began its usual pattern of layoffs. As seen in Figure C-1, the region lost about 4,300 jobs. This downturn was followed by two pretty good growth years, which is unusual because the rest of the MSAs in the state were being influenced by the national recession. This growth spurt came from three sources:

- **Wal-Mart** opened a large distribution center near Opelousas.
- **Magnolia Distribution Center** opened in Lafayette.
- **Cingular Wireless** call center was attracted to Lafayette, hiring 1,200 employees.

Fruit-of-the-Loom's Martin Mills plant was shuttered in November 2001 (-1,300 jobs), and the national recession was dealing Stuller, Inc. a lick, leading to a loss of 175 employees. In 2003, **Devon Energy** transferred 60 employees out of Lafayette, and **Fleming Company**---a wholesaler supplying the troubled K-Mart--closed its distribution center there as well. All of these factors sent Lafayette into a 3-year decline over 2002-04.

The Hurricane Effects

Those three funk years were followed by four very good years. Non-farm employment rose by an admirable 10,800 jobs or 8.2% in the first two of those years alone. The energy sector took off during this period, with the rig count rising from about 165 to over 201, which meant (1) new exploration jobs, (2) new exploration servicing jobs, and (3) new oilfield-fabrication-associated jobs for the Lafayette area.

However, the impacts of Hurricanes Katrina and Rita were the primary drivers behind this excellent job performance, creating jobs via two different vehicles. First, there was all the work required to repair damage to the **offshore energy infrastructure**. Both on-water and under-water assets were pummeled. On the

surface, a total of 115 offshore platforms were destroyed and another 52 were seriously impaired. Down underwater, pipeline systems were strewn about and damaged. Repairing those damages is the bread and butter of the firms in this region. Fabricators and oilfield service firms salivated over all the repair work on these facilities.

The hurricanes had a second impact on the MSA---the attraction of evacuees---about 34,336 by one estimate. Between July 2005 and July 2007, the **Lafayette MSA population increased by 9,033**---a startling 3.7% increase in only two years.

2007 to 2010: A Roller Coaster Ride

Note in Figure C-1 that this MSA experienced a nice growth bump in the next two years. Lafayette's growth rate began to slow a bit in 2008 as the rebuild in the Gulf wound down, but a spike in oil prices re-energized the offshore exploration industry. A combination of a \$15 million capital expansion that led to 300 more jobs at Acadian Ambulance and Nucomm opened a 500-person call center which helped offset the Gulf repair slowdown.

It seems there is always a downside of the roller coaster hill when it comes to this economy, and the years 2009-10 proved that to be the case. Really high oil prices, like the \$132.61 a barrel in late 2008 rarely last and this time was no exception. In just six months oil prices fell by \$94 a barrel. The statewide rig count fell by 20 rigs and the Lafayette region headed into a 2-year recession that resulted in 9,200 jobs vanishing.

In the middle of this downturn something very odd occurred. In early 2009 oil prices began to rise again and hit a very profitable \$70+ by August 2009. Typically, prices at that level would send the Lafayette roller coaster heading back up the hill, but not this time. The rig count in south Louisiana actually fell even more, and Lafayette continued to go downhill. Certainly, the BP oil spill figured into this peculiar behavior, but so did the attack on the industry by the Obama Administration. While it never came to fruition, the President was constantly pushing for a \$36 billion tax on the oil sector, sending a chill through the industry.

2011-17: Up One Hill, Then Down Again

The roller coaster ride for this MSA continued over 2011-17 with the up again, down again fluctuations in employment. The nice upside occurred in the first four years, as high oil prices did their usual work of sparking this region's

employment. The MSA added almost 3,600 jobs a year over 2011-14, which in percentage terms was one of the best performances in Louisiana.

At the risk of being repetitious, oil prices in excess of \$100 a barrel seem not destined to last. This time the Saudis brought these unusually high prices to an end. The country had been losing worldwide market share to the booming U.S. shale industry, so the country decided to try to drive that industry out of business by pumping large amounts of oil into the market. Oil prices quickly dropped to just under \$28 a barrel, and Lafayette started down the hill again into a 3-year recession that would cost it 20,900 jobs. Among the key losses were:

- **Dynamic Industries** reduced its workforce from 500 to 350.
- **Baker Hughes** closed a division that employed 200 people.
- **Chevron's Shelf Office** was shuttered.
- **Blue Sky Innovations**---a firm providing support to helicopters servicing offshore work shed 58 jobs.
- **Stone Energy** was acquired by Talos Energy (a private equity firm) and the firm was moved to Houston.

2018-19: A Recovery at Last

While growth returned to Lafayette over 2018-19 it could best be described as modest (see Figure C-1). The diversification efforts in the region were paying off as LHC, Waitr and CGI went on hiring binges. However, despite the fact that oil prices had returned to the \$60s lease sales in the Gulf barely moved and the rig count barely nudged upward. The region expanded but at a rather slow pace.

2020-23: COVID Impact & Recovery

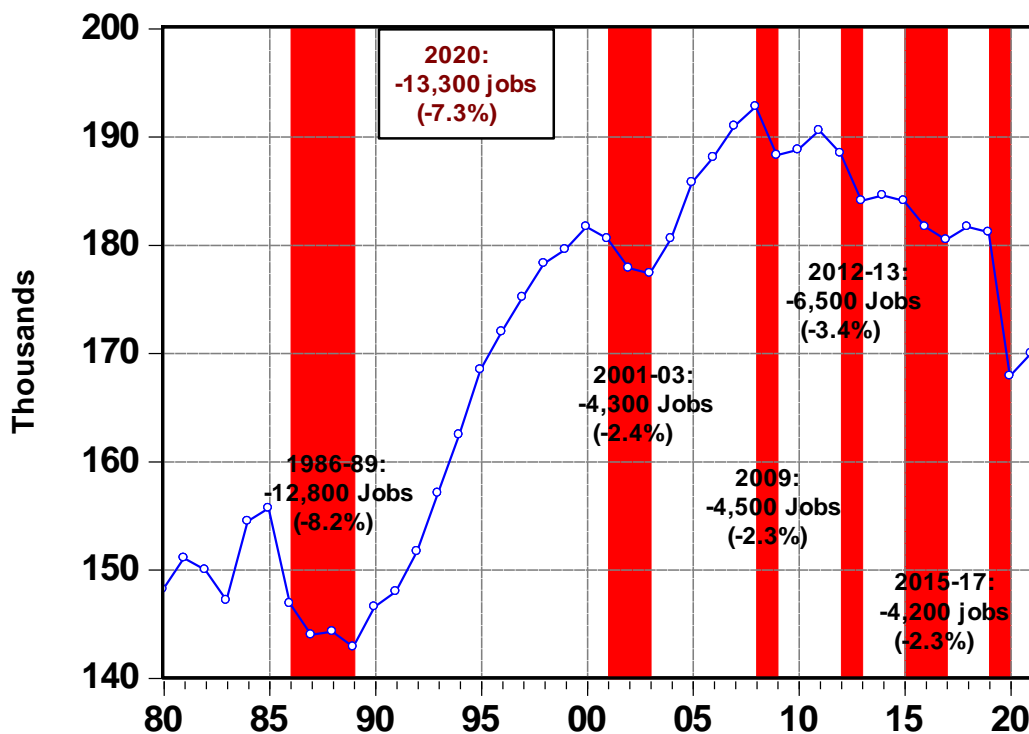
These years are discussed in the body of the report.

APPENDIX D: History of the Shreveport-Bossier MSA

The employment history of this the Shreveport-Bossier MSA over 1980-2021 is shown in Figure D-1. Like most of its sister MSAs, the Shreveport-Bossier region experienced a rather unhappy 1980s. A long and deep recession was laid on the MSA from 1985-89. Some of this decline can be traced to the battered energy sector, but there was a far larger factor involved. The depth and length (this MSA was the last in the state to begin the recovery process) of the recession can be laid in the lap of **AT&T**. The company had a large 7,450-person phone equipment manufacturing facility in Shreveport in 1984. By 1989 that employee count was down to only 1,100, which adding in the negative multiplier effect, delivered a monstrous blow to this region.

Figure D-1

Shreveport-Bossier MSA Non-Farm Employment 1980-2021



Data Source: Bureau of Labor Statistics

Rebound: Casinos Starting 1994

As seen in Figure D-1, that awful period was followed by a prolonged, healthy decade of recovery. Between 1988 and 2000, the MSA added 38,800 jobs (+27%). In 1994, its employment began to rise especially rapidly---by an average of 4,600 jobs a year---fueled by the introduction of **riverboat casinos**. This MSA remains the second most successful casino market in the state, because the casinos draw a huge clientele from the Dallas-Ft. Worth metroplex.

Casinos also came with large **hotels**. Hotels are very labor-intensive operations, so the MSA picked up a significant employment boost here as well. For example:

- Horseshoe Casino built a 25-story, 606-suite hotel.
- Casino Magic operated a 94-room, 94-suite hotel.
- Isle of Capri constructed a 300-suite hotel.

Recession #2: 2002-03

Recessionary pressures fell on this region, causing its second recession over 2001-03. About 3,900 jobs were lost over this three-year period---a non-trivial decline of 2.3%. Given the regions' heavy dependency on durable goods manufacturing, it was no surprise that it had the worst performance in the state. Consider these hits to the region:

- **Avaya Communications** (formerly, Lucent Technologies) closed its Shreveport plant, (-900 jobs).
- **Boeing** closed its facility at the airport (-162).
- **Pennzoil Refinery** cut back from 230 workers to only 85 when it was sold.
- **Precision Response** closed its call center (-250 jobs).
- **General Electric** began transferring 400 positions from its industrial systems plant to Monterrey.
- **Hollywood Casino** reduced its workforce from 2,200 to 1,800.
- **Beaird** went from a 700-employee to a 30-person workforce.

Finally, a mixture of other firms, including **Frymasters**, **Beaird**, and **Exide Technologies** imposed significant layoffs in 2002. That is an imposing list for an MSA of this size. Note that this list shows only the direct job losses, not those of the multiplier effect.

2004-2008: Breaking New Records

Once past that recession, the MSA entered a new period of record breaking employment years. Over 2004-09, the MSA added an impressive 3,200 jobs a

year. At the outset, it was the durable goods sector that led the charge back. Note the following:

- **General Motors** was a key company in this recovery. GM opened its new facility, adding 600 workers (total of 3,600). In 2007, employee retirement buyouts lowered employment back down to 2,153.
- **Eakin Company** acquired Beaird and bumped employment from 30 to about 570.
- **Frymaster** roared back at an all-time high employment level of 600+ employees.
- **Steelscape** (now **Ternium**) opened at the Port of Caddo-Bossier with 240 new jobs.

The Haynesville Rush

Note in Figure D-1 that this MSA---this durable goods dependent MSA---grew right through the first year of the Great Recession (2008). The U.S. economy lost 6.1 % of its jobs over 2008-09. The Shreveport-Bossier MSA lost only 2.3 % and it only lost jobs in one year---the only MSA in Louisiana to pull that off. How was this possible?

The most important recession-offsetting factor during 2008-09 was the massive amount of money from the **Haynesville Shale** exploration over 2008-09. There was an enormous injection of \$3.5 billion in 2008 and \$7 billion in 2009 into this economy.

A nice reference point as to the importance of this monetary injection is shown in local government sales tax collections, which are illustrated for four northwest Haynesville parishes in Table D-1. To put these numbers in perspective data are provided on the rate of sales tax collections during the previous short recession in 2001. All of these parishes experienced an expected decline in collections (we were unable to get the earlier data for Bossier Parish) as in any recessionary environment. Even in the face of a much longer, and much deeper Great

Recession over 2008-09 (it was called the Great Recession for a reason), sales tax collection in these parishes not only rose, but they rose spectacularly. For example:

- Red River Parish: +205.1%
- DeSoto Parish: + 82.2%

Table D-1
Sales Tax Collections in Selected North Louisiana Parishes

Red River	
2001	-3.1%
2008	71.1%
2009	205.1%
DeSoto	
2001	-0.8%
2008	3.6%
2009	82.2%
Caddo	
2001	-0.8%
2008	7.0%
2009	1.4%
Bossier	
2002	NA
2008	4.1%
2009	5.5%

Data Source: Author's Survey of Parish Finance Offices

Property taxes reflected the same pattern as seen in Table D-2. Property taxes increased at historically high rates in all five parishes despite the intensity of the Great Depression. Further, the data in the last two columns confirms that almost all of that growth was energy related. Note especially the huge increase in Desoto and Red River Parishes.

Table D-2
Property Tax Collections in 5 Haynesville Shale-Impacted Parishes:
2005 Versus 2013

Parish	Property Taxes 2005	Property Taxes 2013	% Energy- Related 2005	% Energy- Related 2013
Desoto	\$22,395,351	\$78,432,531	18.9%	62.4%
Red River	\$3,549,617	\$21,927,425	3.6%	47.8%
Webster	\$15,728,690	\$25,342,948	17.1%	26.0%
Bossier	\$52,449,881	\$97,054,727	8.5%	16.1%
Caddo	\$158,347,601	\$230,350,740	2.8%	10.5%

Data Source: Louisiana Tax Commission

While the Haynesville Play development was an overwhelming factor in this MSA's 2008 performance, it would be a gross error to omit the influence of the awarding of the **Global Strike Command** to Barksdale Air Force Base. The GSC brought 900 new jobs to Barksdale. Barksdale gained another 700 positions for flight training and the reopening of a weapons storage area. Barksdale was an important factor in the unexpected 2008-09 performance of this MSA.

The large gains from the Haynesville Shale activity and the additions at Barksdale were especially important given the recession-related hits the rest of the MSA's economy was taking. Five firms--- **General Motors, Capital One Bank, Verizon, Beaird Industries, and Georgia Pacific**---combined together to terminate 2,730 people from their facilities. That is quite a blow for the Haynesville and Barksdale to overcome.

2009-2017: Not the Picture You Want

Basically, since 2008, the good news has stopped for this region of the state. As seen in Figure D-1, this region has been in a downward slide that began in 2009. There have been one or two years of growth since 2009, but by 2019---11 years later---the MSA was 11,600 jobs below its 2008 peak, a decline of 6%.

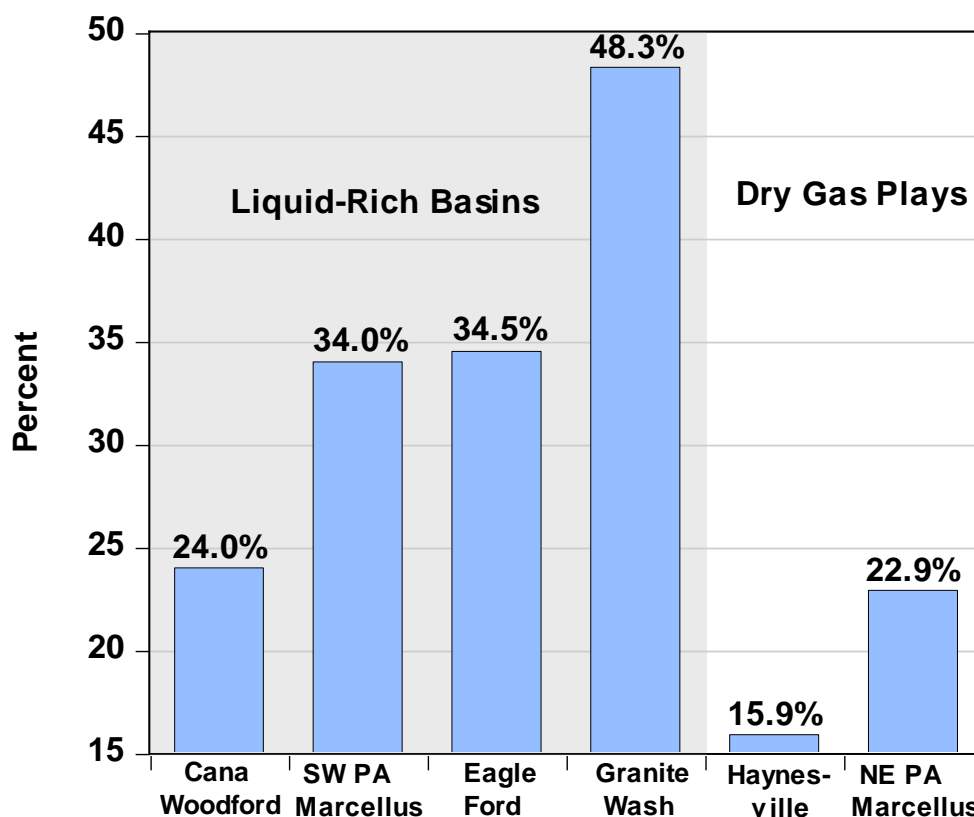
The slide can be traced to several factors. First, the **GM plant** closed in August 2012, costing the region 800 high-paying jobs. This is a great site to offer a

potential new entrant to the area, but only one rather small player has been found for the site to date.

A much bigger factor in the slide was the radical reduction in activity in the **Haynesville Shale**. The rig count in the Play tells the story, going from a peak of 142 rigs in April 2010, to only 23 in July 2013, a striking 84% decline. Rig activity continued to fall into the high teens until about 2020.

Figure D-2

Rate of Return on Equity - 2010



Data Source: Credit Suisse

What caused the Haynesville to fall from grace? Basically, the answer is it could not compete with the “wetter,” cheaper plays in the U.S. This is vividly shown in Figure D-2 which shows the rate of return on equity (ROE) on the various plays in the country. The ROE in the Haynesville is far lower than in the other plays.

There are two reasons for this poor competitive position. First, the wells in the Haynesville Play are very deep, so it costs more to drill a typical well (\$9.5 million per well) versus in the Eagle Ford or Marcellus Plays (\$6 million). Even more

importantly, the Haynesville Shale is a "dry" play, meaning drillers only harvest natural gas from the well. The Eagle Ford, Marcellus, Bakken, and Permian are "wet." Exploration companies hit both natural gas and the more favorably priced oil. Those are competitive disadvantages the Haynesville could simply not overcome.

A significant reduction in forces at **Barksdale AFB** also contributed to the negative employment trend in the MSA. The troop count at the base declined from 8,655 in 2012 to 6,609, driven by the loss of the 24-plane A-10C Wing in 2013.

Associated with all these reductions was obviously a reduction in spending in the MSA that contributed to the region's poor job performance over 2012-17.

Two other important closures added to the problem:

- **Libbey Glass** reduced its workforce by 200 in early 2013.
- **Express Jet** closed its 250-person maintenance facility at the Shreveport Airport.

Finally, it was during this period that Native American-run casinos began to open in Oklahoma near the Dallas-Ft. Worth metroplex. That bled off a goodly number of clients from the casinos in Shreveport and Bossier City. Note in Table D-3 that this competition reduced employment at MSA casinos by **1,468 jobs** between 2014-I and 2019-IV. The trends in Table D-3 leave little reason for hope that this situation might improve.

Table D-3
Shreveport-Bossier Gaming Employment: 2014-I to 2019-4

	14Q1	19Q4	Change: 14Q1 to 19Q4
DiamondJack	653	396	(257)
Sam's	1,086	702	(384)
Horseshoe	1,212	1,052	(160)
Margaritaville	1,070	1,051	(19)
Boomtown	626	453	(173)
El Dorado	1,187	888	(299)
TOTAL CASINO	5,834	4,542	(1,292)
Harrah's	364	188	(176)

Data Source: Louisiana Gaming Control Board

2018-19: The Slide Stops

Fortunately, this MSA's employment slide halted in 2018-19, as seen back in Figure D-1. The MSA picked up only 700 jobs over those two years, but at least the bloodletting had stopped. A loss of 245 jobs in the MSA's gaming sector and a drop of 263 military/civilian slots at Barksdale somewhat stymied growth.

Three key factors helped mitigate the decline. **Ochsner Healthcare** formed a partnership with the **LSU Health Sciences Center** in 2019 that almost immediately created 1,000 new jobs in Caddo Parish alone. The **Cyber Research Center** is a new, exciting, growing component of this region's economy, with 1,400 people employed at its three centers. At last, at least one new tenant was found for the old GM site. **Glovis America** is a subsidiary of Hyundai and brought 156 jobs to the community.

2020-23: The COVID Impact & Recovery

This period is covered in the body of the report

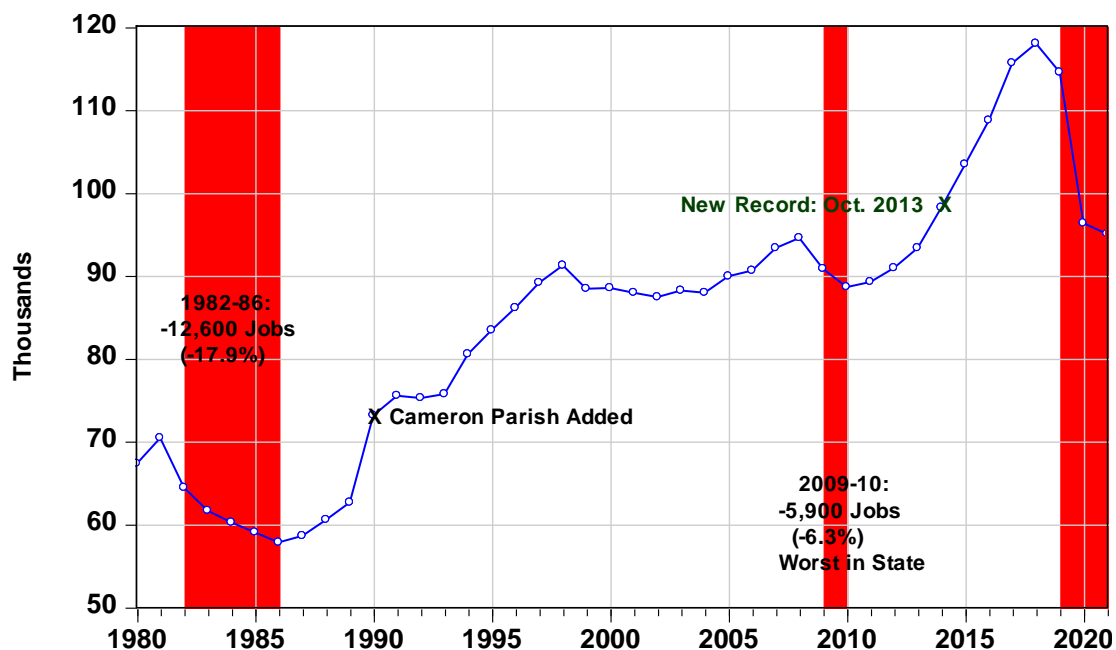
APPENDIX E: History of the Lake Charles MSA

Figure E-1 depicts the employment history in this MSA over 1980-21. Like the rest of the state, Lake Charles was hammered by the recession of the early 80s. An unfortunate swing in the value of the dollar cost this region's chemical industry dearly in sales. The loss of 12,600 jobs (-17.9%) over 1982-86 was actually worse in percentage terms than the hit the region took from the COVID shutdown. As always happens, when the chemical industry suffers, it takes the industrial construction sector down with it.

At the same time, the Reagan administration fully deregulated the price of crude oil in the early 1980s. The practical effect of this move was that several marginal refineries found it impossible to remain competitive and shut down. Plummetering two of the largest, highest-wage industries in the region sent the area into a deep and prolonged recession.

Figure E-1

Lake Charles MSA Non-Farm Employment 1980-2021



Data Source: Bureau of Labor Statistics

Fortunately, in 1987, Lake Charles landed a huge new player at Chennault Airpark--- **Boeing Aircraft**. Boeing's 2,000 new jobs enabled this MSA to be the first in the state to start to recover from the early 80s recession. Boeing refurbished K-135 transport airplanes for the Air Force. Further help came from a sudden drop in the exchange value of the dollar. This made U.S. chemicals more competitive in foreign markets and revived the local chemical industry

Note in Figure E-1 that this economy's employment went sideways over 1991-93. This weak performance was due primarily to the closure of Boeings facility at Chennault in 1992. Those three poor years were followed by five excellent ones, fueled by the following:

- Major new capital projects were initiated in the area, especially combined expansions by Citgo and Conoco/Pennzoil that totaled \$1.6 billion.
- Boeing was replaced at Chennault Airpark by Northrop Grumman--- a 1,900-job facility that took 707s, stripped them down, and installed the Joint System Target Attack Radar System (JSTARS) in them.
- Starting in 1994 riverboat casinos came to Lake Charles with their very labor-intensive operations.

A Decade of Stagnation

From 1999-2009 this MSA essentially entered a decade of stagnation (see Figure E-1). A number of important events led to this stagnation. By far the most important contributor to the downturn was, once again, deterioration in the chemical industry market. This time the culprit was unusually high natural gas prices (see Figure 7 in the main text). Faced with a huge jump in the price of its major input, the industry entered a serious cost-cutting mode. Capital expansion projects were put on hold and maintenance/repair work was delayed as much as was safely feasible. This meant fewer industrial construction jobs as well.

At Chennault Airpark, Northrop Grumman was finishing its JSTARS contract. The firm began handling fewer aircraft and consequently began terminating workers. NG changed to doing maintenance, repair, and overhaul (MRO) work on the JSTARS aircraft, and its workforce plummeted to 350. NG's losses were partially offset by the attraction of EADS, but EADS ultimately sold to Aeroframe Services reducing that workforce to only 160.

A combination of 9/11 and the national recession hammered the tourism industry and led to significant layoffs at area casinos. Xspedius moved its headquarters office in Lake Charles to St. Louis.

Hurricane Rita Effect

In 2005, the Lake Charles area was hit by a monstrous hurricane named Rita. Despite projections (including ours) that the damage inflicted would lead to serious job losses, employment in this MSA actually rose slightly over 2005-06 (+2,700 jobs) with the larger growth in the year of the hurricane---2005.

An estimated 47,384 homes were damaged by the hurricane, but, unlike when Katrina hit New Orleans, of this total only 2,284 incurred severe damage and another 6,673 incurred major damage. This was good news because residents could return to the Lake Charles area fairly quickly. Luckily, there was virtually no flood water damage in Lake Charles proper, though there was in Cameron Parish. Regular homeowner's insurance was available to repair the damage, which tremendously aided in the recovery speed. Importantly, most housing remained intact in Lake Charles so staffing was not as difficult a problem as in New Orleans.

The large and very exposed hangars at Chennault Airpark had about \$40 million in damages but survived the storm. Both firms continued operations. The Port of Lake Charles experience about \$40 million in wind damage and initially had no power but there was no flooding at the Port. In short order shallow water vessels were able to access the port.

Of course, most of the petrochemical industry is outside and exposed to the weather. Three refineries in the area were damaged and shut down temporarily: (1) Citgo (324,000 b/d); (2) ConocoPhillips (239,400 b/d), and (3) Calcasieu (30,000 b/d). To the surprise of some---given the intensity of the storm---all three were up and operational within three months.

The two Harrah's riverboat casinos were badly damaged by the hurricane. The owner of L'Auberge du Lac---Pinnacle Entertainment---purchased the licenses of both of the badly damaged Harrah's riverboat casinos and returned one license to the Gaming Control Commission and moved the other license to Baton Rouge. Rita laid only minor damage on the two Isle of Capri-owned casinos and the L'Auberge du Lac, so by November 2005, they were reopened.

Generally speaking, the other sectors of the Lake Charles economy recovered fairly quickly from the storm. Within just one month, all of the **public schools** in

the MSA had reopened, and virtually all hotel room space was back to normal by the end of 2006. Within four months, all hospitals in the MSA except one in Cameron Parish were fully operational, and the Lake Charles Regional Airport began operating at an even higher level than pre-Rita.

Construction associated with the storm recovery continued well into 2007, lifting this MSA to a new employment record (see Figure E-1). That storm-related construction boost eventually came to an end, putting a bit of a damper on 2008 employment growth.

Hammered by the Great Recession

Lake Charles was the hardest hit by the Great Recession among the nine MSAs in the state. Employment did not begin to decline until February 2009, but when it started down it did so with a vengeance. Lake Charles lost 6,100 jobs (-6.5%) over 2009-10, a worse performance than the national economy.

Several events ushered in this decline, including:

- Pinnacle announced that it was stopping construction on the Sugarcane Bay Casino and was turning in that license to the Gaming Control Board.
- Petrochemical firms in the area seriously cut back on capital projects. There was an almost 3,000-job decline in contractor jobs at area plants over 2007-10.
- FedEx and US Airways idled many of their jets due to the poor global economy, so Aeroframe, which maintained those aircraft, had to reduce its workforce from 475 to 250.
- **Citgo** closed its 192-person lube plant.

2012: The Beginning of the Industrial Boom

A quick look back at Figure E-1 will reveal why the Lake Charles MSA was labeled one of the fastest growing MSAs in the nation. Starting with mild growth in 2011, the region entered an almost decade long boom of outstanding growth. The MSA even grew in 2013, despite the fact that a major employer---Dynamic Industries---effectively shut down its 500-person operation.

In these initial years of the boom, several pieces of good news were at work:

- A whopping \$5.6 billion worth of work began on the first two “trains” at Cheniere’s new LNG export terminal.
- Turnover work at petrochemical firms rose from \$350 million in 2010 to over \$800 million in 2012.

- Lake Area Industrial Alliance (LAIA) surveys indicated direct (non-contract) employment in petrochemical firms jumped by 793 employees over 2010-12 and contract employment rose a whopping 1,817 jobs over that same time period.
- Work began on a \$176 million expansion at Sasol.
- Ground-breaking took place on the \$500 million Golden Nugget Casino.
- Shaw Modular Solutions opened its new 300-worker facility.
- IFG started construction on phase I of a new \$59.5 million grain elevator.
- Aeroframe added employees as one of its key customers---FedEx---began to fly more planes.

2014-18: The Real Boom Begins

In 2014, evidence began to show a massive employment boom in this MSA. Employment in Figure E-1 really spiked over the next five years. In 2014, employment in the Lake Charles MSA set a record for the first time since 2008, and in 2015 the MSA's employment passed the magical 100,000 mark for the first time. The MSA moved past Houma to fourth place among the largest MSAs in the state. For five straight years, Lake Charles was the fastest growing (in percentage terms) MSA in the state, adding 26,800 jobs and expanding by a stunning 5.4% a year. It was a record unmatched by any we have seen in four decades of watching the Louisiana economy.

This growth spike was spurred by a phenomenal increase in capital spending in the petrochemical sector of the Lake Charles MSA economy. The overall story is detailed in Table E-1. An unprecedented \$109.9 billion in industrial announcements occurred between 2012 and 2019, and \$48.1 billion were already underway or completed.

Table E-1
Lake Charles MSA Industrial Announcements: 2012 – 2019
(Billions of Dollars)

Completed or Underway:	\$48.1
Potential:	\$61.8

Data Source: Greater Baton Rouge Industrial Alliance

By 2019, the project list was as follows:

- Cheniere Energy began construction on the largest single capital investment project in Louisiana's history---a \$20 billion, 6-train LNG export plant called Sabine Pass LNG. Once complete, 431 people will be employed at this facility earning an average of \$100,000 a year.
- Sasol began work on a \$12.9 billion ethane cracker and derivatives complex. Sasol added 700 Sasol jobs (at \$88,000 yearly) and 358 contractor jobs with this new complex, and its headquarters and R&D facilities are now in Lake Charles.
- Construction was started in August 2014 on Sempra's \$10 billion Cameron LNG project---a 3-train facility. Expected employment is 190 jobs at \$80,000 a year.
- Axiall and Lotte Chemical began construction of a \$3 billion suite of facilities that will be a world-scale ethane cracker and ethylene derivatives plant. The plant housed 215 permanent employees once completed in 2019.
- Lotte moved its headquarters to Lake Charles (+50 jobs).
- Entergy built two large electric power projects for this area---(1) a \$187 million transmission project, and (2) a new \$872 million power plant with transmission interconnections in Westlake.
- Westlake Chemicals built a \$350 million ethylene expansion at its Petro 1 plant.
- Matheson Tri-Gas constructed a \$130 million state-of-the-art air separation unit to supply gas to Sasol.
- Indorama Ventures finished a \$175 million renovation of a dormant ethane cracker at the old OxyChem site.
- Advanced Refining Technologies---a joint venture between WR Grace and Chevron---built a \$135 million residue hydro-processing catalyst production plant and additional aluminum capacity at the Grace plant.
- Dongsung Finetee spent \$5 million on a new cryogenic insulation manufacturing plant.

From this impressive list, one can see why the employment line back in Figure E-1 shot straight up over 2013-18. In fact, a USA Today piece indicated that over 2013-18 Lake Charles was the fastest growing MSA in the nation.

The 2019 Slowdown

The news did not continue in a real rosy fashion as the MSA entered 2019, as seen back in Figure E-1. In 2019, employment declined in this MSA by about 3%

or 3,500 jobs. This reversal in fortunes was actually expected by the region. In the voluminous aforementioned list of projects, many were completed by 2018. That means thousands of pickups left the construction site, not to return the next day. Fortunately, the completed plants came with a large number of permanent new, high-wage employees. Thus, the MSA entered a construction lull, waiting for the “potential” projects in Table E-1 to trigger an FID and bring those pickups back.

2020-23: Impacts of COVID & Recovery

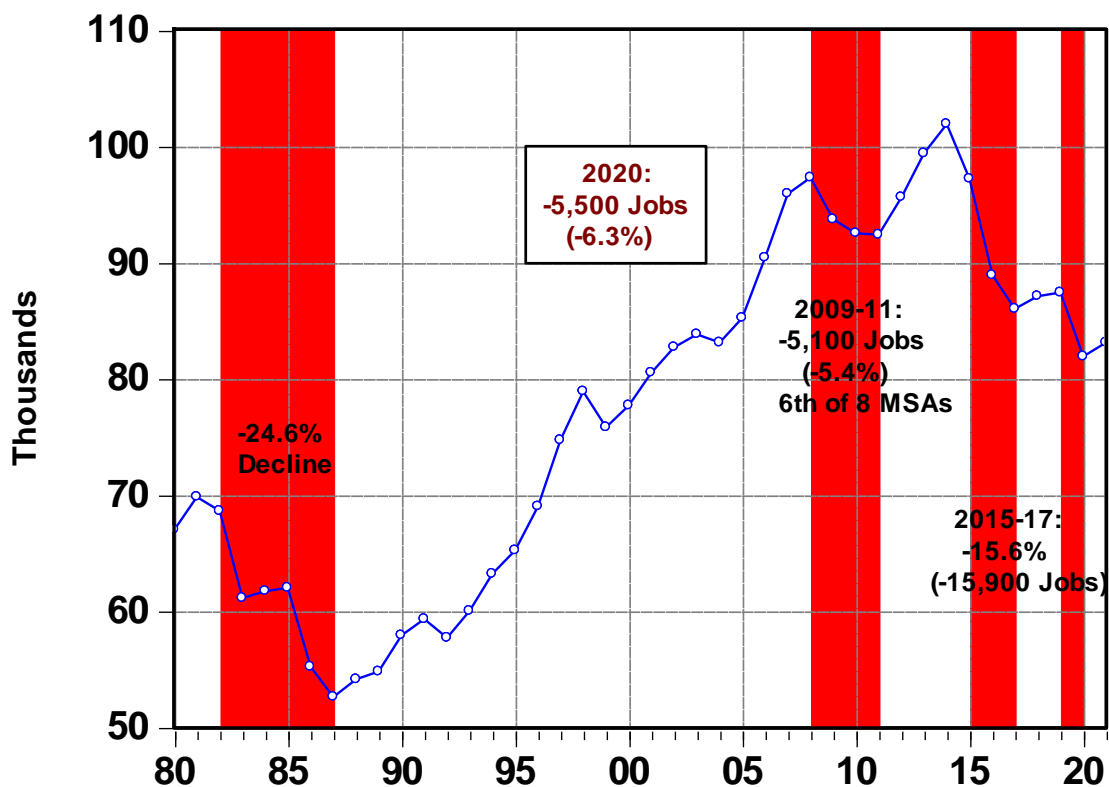
These years are covered in the body of the report.

APPENDIX F: History of the Houma MSA Economy

In Figure F-1 we show the non-farm employment history of this MSA over 1980-2021. There is a lot of movement in this chart, some of it pretty extreme. Recall that this is the most energy dependent MSA in the state. That means when oil and/or natural gas prices change, this economy gets whipsawed. It only takes a glance at Figure F-1 to see this.

Figure F-1

Houma MSA Non-Farm Employment 1980-2021



Data Source: Bureau of Labor Statistics

The first huge red bar in Figure F-1 occurred after one of the greatest bull runs for any MSA in Louisiana history. While not shown in its entirety in the graph, from 1975-81, the Houma MSA enjoyed an envious period of rapid growth in response to oil prices that peaked at \$37.50 a barrel for Louisiana crude in 1981 (\$113.86 a barrel in today's prices). That ride to the top of the roller coaster led almost inevitably to a long and deep slide starting in 1982. By the time the MSA reached bottom in 1987, it had lost a stunning 24.6% of its jobs. An estimated

17,200 jobs vanished over six years. Every business imaginable in the MSA suffered major losses. It would be 1997---- a full decade---before those jobs were recovered.

As happens when you get to the bottom of a roller coaster hill, there is another one to climb. Note in Figure F-1 that in 1988 employment in the Houma MSA began to rise again. A modest recovery in oil and natural gas prices (see Figures 5 and 7 in the body of the text) spurred the beginnings of the run up the next hill. Exploration activity in Louisiana had been moving southward across the state since the 1950s, indeed, heading further and further offshore in the Gulf. Houma's geographic location on the coast made it the perfect locale for servicing that offshore industry.

Unlike a typical roller coaster, the recovery did not occur in a straight line, however, because those energy price changes---however small, still delivered a blow to the region. Note in Figure F-1 that in 1992 the MSA lost 1,500 jobs when natural gas prices declined due to low demand in unusually warm winters. Also, in 1999 when oil prices fell, the MSA lost 3,100 jobs. Interestingly, Houma was untouched by the 9/11 U.S. recession, adding 5,000 new jobs while others were losing them.

Just as on a roller coaster, the drops in Figure F-1 have been getting smaller. That is because the energy companies began running much tighter financial ships than in the late 70s, a discipline that was strongly imposed on the industry by the financial markets. Historically, the extraction industry reenters the oil patch once energy prices reach sustained highs. That changed in 2004, when the oil patch did not respond to higher oil prices. Sadly, there was little change in the rig count, resulting in Houma being the worst performing MSA in the state in 2004.

We believe this poor response resulted from industry fears generated by "legacy" lawsuits, in this case the Corbello lawsuit. The Corbello case alleged that drilling impaired ground water supplies, but the case did not require the plaintiff to spend the award to repair any damages. After a successful lobbying campaign, Act 1166 corrected this problem and now requires these repairs to be made with monies awarded to the plaintiff. Since the monies awarded could no longer be "pocketed" by the plaintiff, the number of similar lawsuits against extraction companies significantly declined.

However, these legacy lawsuit fears continued with the Terrebonne Parish School Board v Castex case. Here, the School Board sued to require the oil company to backfill canals that were dredged years ago. This caused a panic given the thousands of miles of these Louisiana canals. Fortunately, the Louisiana Supreme Court over-ruled this judgment and said the firms cannot be required to backfill a canal unless it was specified in the original drilling contract. In addition, a designated “reasonable footprint” will be initially established and the landowner may sue only if it is excessive and not reasonable to the drilling activity. Despite the 2006 reforms several legacy lawsuits are still active and the rig count on land in south Louisiana is moribund.

2005-07: Hurricanes Generate Positive Effects

Hurricanes Katrina and Rita actually sparked the Houma MSA. Note the spike in the employment line in Figure F-1 over 2005-07. Houma picked up 12,400 jobs over these three years, an impressive 5% per year, making it by far the fastest growing area of the state. This injection of activity was so large that Houma moved past Lake Charles to become the fifth largest MSA in the state. Unfortunately, recent events have caused that ranking improvement to be reversed.

Three key factors drove this performance. First, Houma experienced a large influx of evacuees from hurricane-ravaged New Orleans. Houma, at 58 miles, is the closest MSA to New Orleans. As such, in the first two weeks after Katrina, this MSA’s population exploded with an additional 62,810 people. Only the Baton Rouge MSA drew more. These gains of necessity were short-lived, because there were not enough jobs or living accommodations for the evacuees. As a result, the Houma MSA population increased by 3,449 people or about 1.7% between July 2005 and July 2007, which is about equal to its historical growth rate. Some evacuees did stay, benefitting local retailers, real estate firms, and service providers in the area.

Secondly, this MSA includes many fabricating and repair/maintenance firms that benefitted from the Katrina and Rita related storms by rebuilding the offshore energy infrastructure. Finally, as seen in Figures 5 and 7 in the main text, both oil and natural gas prices started to climb markedly over these three years. The oil patch entered a boom period and pulled this energy dependent MSA with it.

2008-09: Obama Energy Policies versus High Oil Prices

A review of Figures F-1 shows that 2008 started out well for Houma as oil prices climbed to a high of \$132.61 a barrel in September 2008. Then the price of oil began a rapid decline, falling about \$94 in the next six months. Beginning in April 2009, oil prices began to rise again and were at a very profitable \$46.72 by May 2009. Throughout all of 2013 and the first half of 2014, oil prices continued to rise.

The response in the Houma MSA over these two years pretty much mimics that of the Lafayette MSA. Despite these very profitable energy prices, the Houma MSA was the first MSA in the state to begin losing jobs during the Great Recession, dropping 4,800 jobs (-4.9%). Like Lafayette, this MSA had never lost jobs during a period of relatively high energy prices. We believe the reason for this poor performance mirrors a similar weak performance in nearby Lafayette: the chilling effect of President Obama's proposed new taxes on the extraction industry. In addition to the extraction firms cutting back, fabricators were shedding workers as well because of their close ties to the exploration sector.

2011: Mistaken Expectations about BP Spill Effects

The performance of the Houma economy in 2011 was a huge surprise to those of us who watch this economy carefully. We were expecting major job losses for the area. And for good reason: the press reported that 11 deep-water drill ships left the Gulf, and activity at Port Fourchon dropped 35-40% below pre-spill levels. How could that not translate into a major decline in employment in the MSA?

What was not anticipated was the massive amount of money that BP spent for the cleanup effort and to pay out on claims for losses due to the spill. In short order, BP shelled out \$132.1 million in claims in Terrebonne Parish (about 3.1% of Parish personal income) and \$81 million in claims in Lafourche Parish (about 2.1% of Parish personal income)---a huge influx of money into the economy. All of BP's huge expenditures and its payouts were enough to overcome the exploration industry's slowdown and cause a modest 100-job loss in 2011 instead of the much bigger job loss expected.

2012-14: Return to Record-Setting Employment

The next three years were very good years for the Houma MSA with the addition of 8,700 jobs or an enviable growth rate of 3.1% a year---exceeded only by the booming Lake Charles and Baton Rouge MSAs. In 2013, the Houma MSA began to set new employment records, and crossed that magical 100,000 employment mark for the very first time. High oil prices were spurring a surge in activity in the

Gulf, which meant Port Fourchon was flush with activity. Edison Chouest opened a huge new (LaShip) shipyard with 1,200 employees, and Gulf Island Fabricators added several hundred workers.

2015-17: Another Oil Price Bust

A scan of the oil price trends in Figure 8 in the main text will convince a reader that high oil prices never seem to stick around. At the end of 2014, the Saudis felt it was time to try to squash the shale industry in the U.S. That country pumped a large amount of oil into the market, driving the price to under \$30 a barrel in one month. The impact on the Houma MSA was predictable. Over 2015-17, Houma lost 15,800 jobs, a staggering 16.1% decline.

The bloodbath was not confined solely to those directly involved in drilling and production. Several companies in the region felt that blow, including:

- Chett Morrison's employment dropped from 515 to 320.
- Edison Chouest's employment at LaShip declined from over 1,000 down to 500. One hundred of the company's 250 ships were stacked and its mariners were working about half the time as before the collapse.
- Offshore Specialty Fabricators had layoffs (-67 jobs).
- Baker Hughes closed its wireline facility (-50 jobs).
- Hercules Offshore shed 50 workers.
- National Oilwell Varco closed its facility in Houma (- 80 jobs).
- CCHI Aviation in Galliano closed its facility shedding 74 pilots, mechanics, and support staff.

2018-19: A Few Baby Steps Forward

For the next two years, the Houma MSA began to take baby steps towards recovery. Oil prices crept up into the \$60 range---plenty high for profitable drilling in the Gulf. The MSA added 700 jobs a year over 2018-19, which is not great, but at least the bloodbath seemed to be over.

It was not.

2020-23: COVID Effects & Recovery

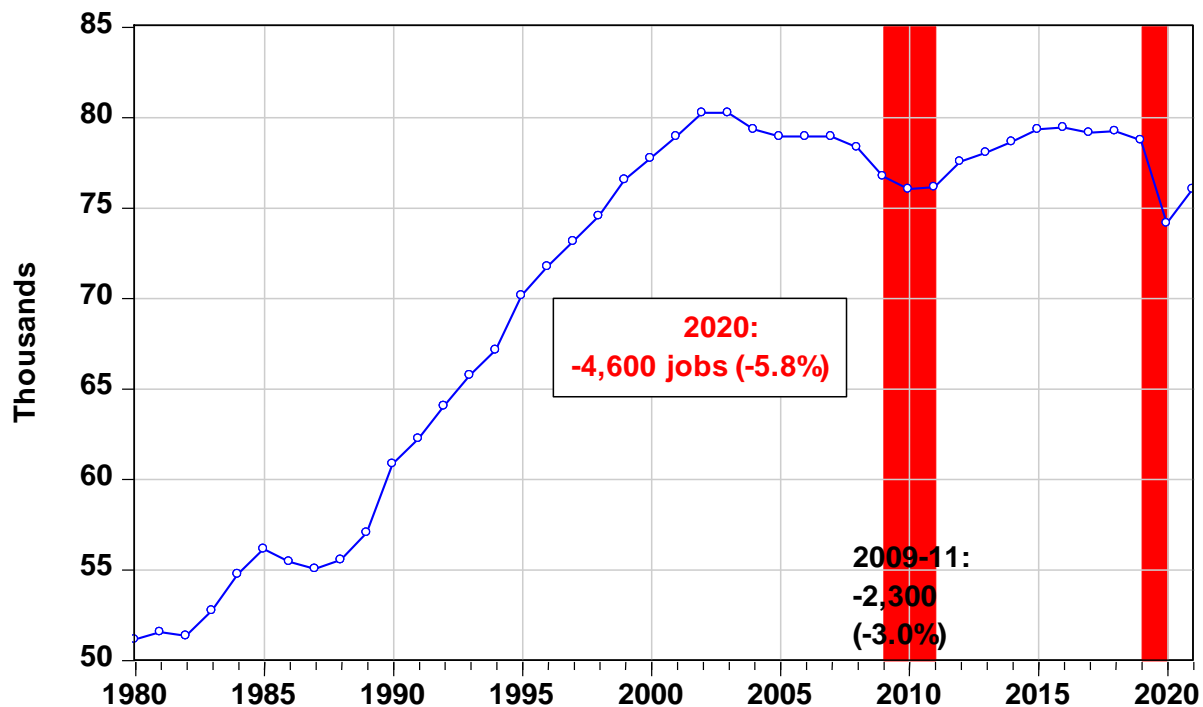
These years are covered in the main body of the text.

APPENDIX G: History of the Monroe MSA

A history of the Monroe MSA economy is depicted in Figure G-1 for the period from 1980 through 2021. Unlike most of the larger MSAs in the state Monroe went through the terrible statewide recession in the early 80s relatively unscathed. Only in 1986 and 1987 did the MSA post job losses. But in view of the 9% statewide job loss, this MSA's 2% decline was quite modest. That recession was caused by very big hits to the extraction industry and the chemical industry, two sectors that are largely absent in the Northeast corner of the state.

It took only two years for Monroe to recover the 80's recession job losses. The region began to grow again in 1988 and a year later was setting new employment records. The MSA entered an impressive 14-year stretch of growth. It was impressive growth indeed, with over a third of the years showing 2.5% job increases or more.

Figure G-1
Monroe MSA Non Farm Employment
1980-2021



Data Source: Bureau of Labor Statistics

Monroe MSA residents now look back on that 14-year period wistfully. Nothing comparable has been seen since. After peaking in 2002-03, the region began a slide that lasted all the way through 2011---basically a decade of decline. It should be noted that the decline was mild in terms of total job losses---4,200 jobs or a total 5.2 % decline. During the "Great Recession" the MSA lost 2,300 jobs, a decline of 3.0% ---less than half that of the U.S. decline.

What caused this unfortunate recessionary period? The economy experienced an extraordinary number of major firm closures without any new firms to take their place. Among the closures were:

- Pilgrim's Pride closed a chicken processing plant in Union Parish (-1,500 jobs).
- State Farm Insurance closed its claim office (-1,100+ jobs).
- Guide Corporation shuttered its facility (-650 jobs).
- International Paper closed its paper mill (-550 jobs).
- Accent Marketing lost a major client and reduced workers at its call center (-340 jobs).
- Holsum Bakery closed its facility (-50 jobs).
- Shaw closed a pipe fabrication plant (-202 jobs).
- Coca Cola closed its bottling plant (-85 Jobs).
- Graphic Packaging engaged in workforce reductions.

It was the equivalent of one major closure a year for nine years. In one sense it is amazing that the region was only down 4,200 jobs over this period.

2012-15: Modest Growth Returns

When Monroe finally returned to a job-growth mode it did so with a sparkling 1,000 job jump in 2012. Growth continued through 2016, but at a much more modest rate. Indeed, employment did not expand enough to return Monroe to its previous 2002 peak. Good news came from a number of different sources including:

- CenturyLink (now Lumen) was ravenous in its acquisition efforts and steadily added jobs.
- Foster Farms reopened the Pilgrim's Pride plant and now employs about 1,200.
- Gardner Denver Thomas relocated operations in Wisconsin to the Monroe area, and now employs about 250.

- Graphic Packaging committed heavily to the area when it brought in new equipment to increase productivity of its workforce.
- Angus Chemical invested about \$100 million in its plant, improving productivity and retaining 174 jobs.

2016-19: A Flat Period

As seen back in Figure G-1, this MSA's record was flat to falling for the next four years from 2016 through 2019. Wingspan Portfolio Advisors closed at the cost of 400 jobs, and then CenturyLink began slowly lowering its job count. With the exception of the strongly emerging Vantage Health Plan and the revitalizations associated with the Ochsner/LSU health Science Center Partnership, there were virtually no new entrants to this economy.

2020-23: Effects of COVID & Recovery

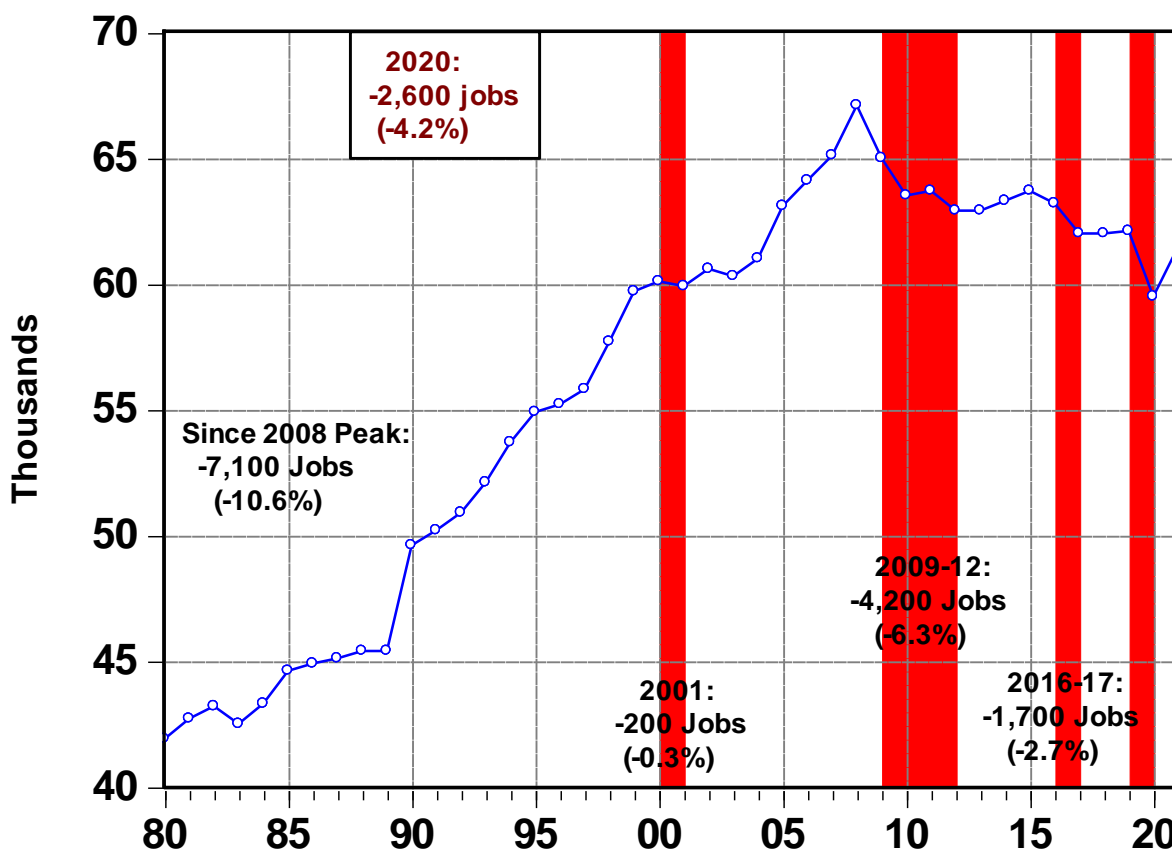
These years are covered in the body of the text.

APPENDIX H: A History of the Alexandria MSA

Figure H-1 tracks the employment history of the Alexandria economy from 1980 through 2021. Note that there was a slight bump upwards in 1990 when the U.S. Bureau of Economic Analysis revised the employment statistics only back to that year to take into account the addition of Grant Parish to this MSA.

Figure H-1

Alexandria MSA Non-Farm Employment 1980-2021



Data Source: Bureau of Labor Statistics

Perhaps the most impressive thing about this graph is that Alexandria enjoyed almost 30 years without a meaningful recession from 1980 through 2008. While the state was enduring a horrific recession in the early 80s, Alexandria lost jobs in only one year and that loss was only 700 jobs. The post-9/11 national recession in 2001 barely tapped Alexandria, causing a loss of only 200 jobs, hardly a significant decline. The Alexandria MSA was the second-least impacted among

the state's nine MSAs. The MSA has a relatively high government-base and low manufacturing base, a combination that tends to isolate an area from the most harmful effects of national downturns.

Better Growth Post 1990

Alexandria's growth rate actually picked up starting in 1990. Two very significant events were behind this improving rate. Huge construction monies were pumped into the local economy when **I-49 was being constructed** through the heart of the city. It would be hard to underestimate the impact of this spending on an MSA of this size.

The second event was initially a scary prospect---the closure of England Air Force Base. Civic and governmental leaders turned this event---which could have cost the region a decade of job growth---into an economic development asset by converting the area into an industrial park/retirement village. **England Industrial Airpark** is now almost totally reoccupied. Several businesses have moved to the site, and the regional airport has been relocated there. A new, 150-person **Immigration and Customs Transfer** facility was opened at the Airpark in the summer of 2014 and serves as a domestic transportation hub for moving detainees. In 1996-97 one of England's newest and largest tenants---J.B. Hunt Trucking---closed creating a slight slowdown.

The Alexandria economy kind of sputtered in the first three years after the 9/11 recession. But that was followed by four very good years. In fact, it was one of the best performances in the state during that time. Employment spiked by 6,100, a strong 2.5% annually, fueled by six nice economic wins:

- Cleco Rodemacher plant (\$1 billion+) was constructed, generating 1,700 construction jobs.
- Union Tank Car spent \$132 million on its new facility adding 670 permanent jobs.
- England Airpark made sizeable capital expenditures.
- The federal prison at Pollock doubled in size.

Even more stimulus came from just outside the MSA's boundaries.

- To the east in Avoyelles Parish, Paragon Casino spent \$100 million on a new addition.

- Roy O. Martin built a new \$60 million oriented strand board facility in Oakdale close to the southern border of the MSA.
- Fort Polk had a major capital spending program underway.

Not all the news was good. Parta Systems closed its 110-person pharmaceutical parts manufacturing plant, an important loss for a community of this size.

2009-19: A Shrinking Economy

Sadly, 2008 was this MSA's last good year. By the end of 2021, the MSA's employment was 7,100 jobs below the 2008 peak, a drop of 10.6%. Between 2009 and 2019---an 11-year period---Alexandria experienced only three growth years, and those were very modest ones. As clearly seen in Figure H-1 the Great Recession dealt the economy its biggest blow during this period. Alexandria's employment dropped for three full years (versus two for the national economy) and its job losses totaled 4,200 jobs or -6.3%.

Several firms in the Alexandria MSA were pounded by this recession.

- Louisiana Hardwood in Lemoyen halted its second shift.
- International Paper shut its container board plant, terminating 230 people.
- Upon completion of the \$1 billion+ Cleco Rodemacher plant in 2009, 1,700 construction jobs disappeared.
- Star-Tech dismissed 300 people.
- Dresser Industries closed its facility, costing the MSA 364 jobs.

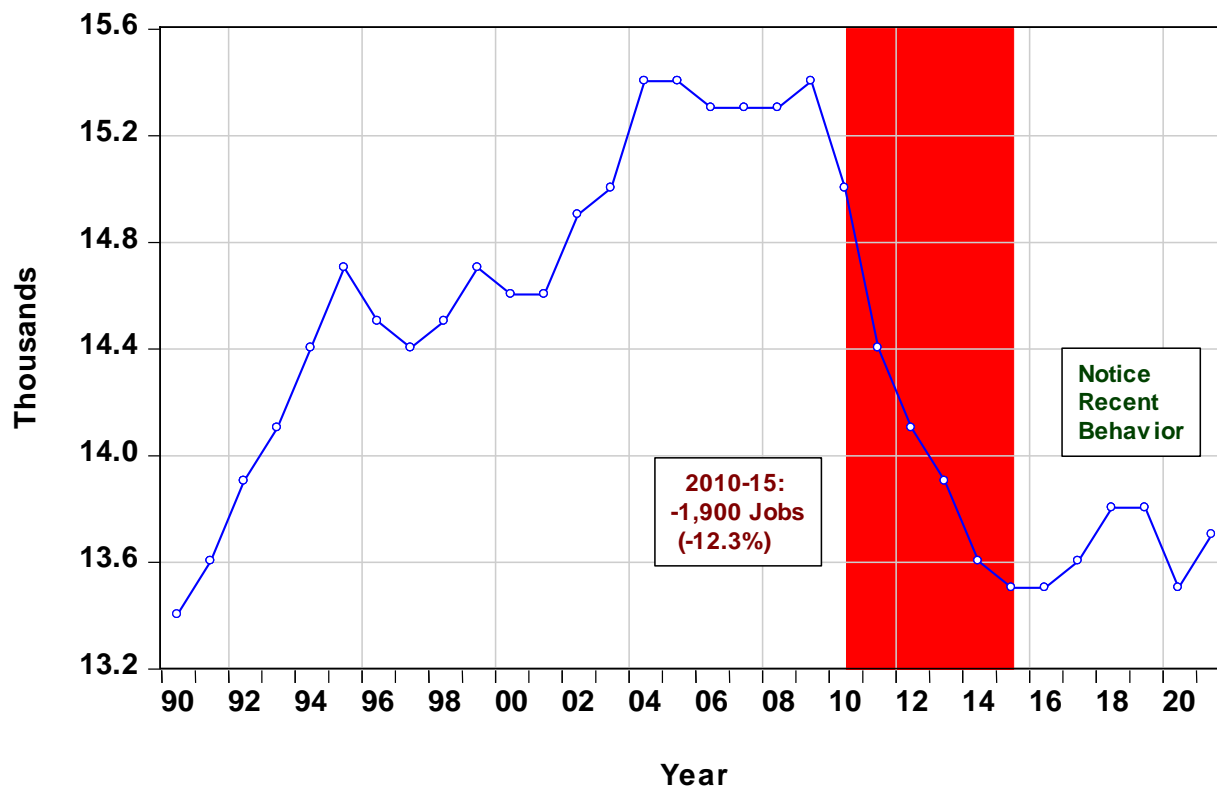
A recession is hard on durable goods manufacturers like **Union Tank Car**. After 2008, orders for UTC tank cars plummeted and UTC's employment fell by 400 jobs (down from a 670 peak). As an indicator of economic sensitivity, before the Great Recession about 60,000 rail cars were idled; by early 2009 this number was up to 540,000.

The one positive thing going for the economy was a new 46,000 square foot, class II casino opened by the Jena Indian Tribe in February 2014 that employed 300 people.

There was another key problem sector for Alexandria during this period. Typically having a large government base adds an element of insulation to an economy from recessionary swings, but not when budget cuts are the order of the day. **Government employment in the MSA declined by a total of 1,900 jobs (-12.3%)** in the six years between 2010 and 2015 (see Figure H-2). That alone was enough to drag down an economy of this size. The good news, as seen in Figure

H-2 is that in the last six years, government employment has been flat to rising slightly---no longer a drag on the economy.

Figure H-2
Alexandria MSA Government Employment



Data Source: Bureau of Labor Statistics

On the bright side, **Cleco** helped lead the way to modest job growth in 2018 with the initiation of its \$130 million “Start” technology project. This multi-year project brought 100 new, high-wage, IT workers to Alexandria. While Start was an important job producer, it was not near enough to mitigate the layoffs tabulated above. Also, Cleco donated \$6 million to the Louisiana Department of Economic Development to invest in economic development projects to increase jobs in their service territories.

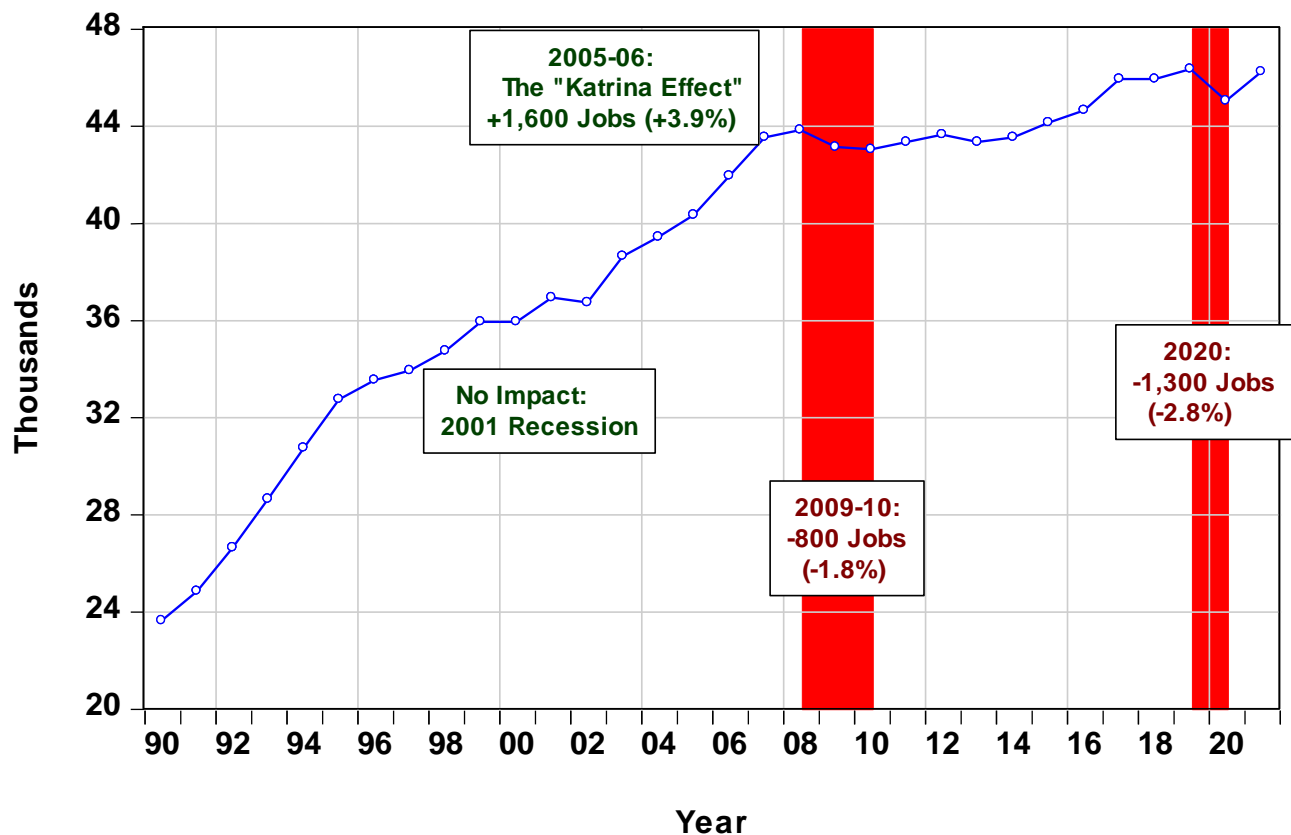
2020-23: Effects of COVID & Recovery

These years are covered in the main body of this report.

APPENDIX I: History of the Hammond MSA

Figure I-1 traces the history of this MSA from 1990 through 2017. Because it is so new, data on this MSA are not available pre-1990. The Hammond MSA has been through three distinct periods---(1) the 1990-2007 period of solid upward growth, (2) a recession over 2009-10 associated with the Great Recession, and (3) eleven years of relative stagnation from 2011-21, including a dip associated with the COVID shutdown.

Figure I-1
Hammond MSA Employment
1990-2021



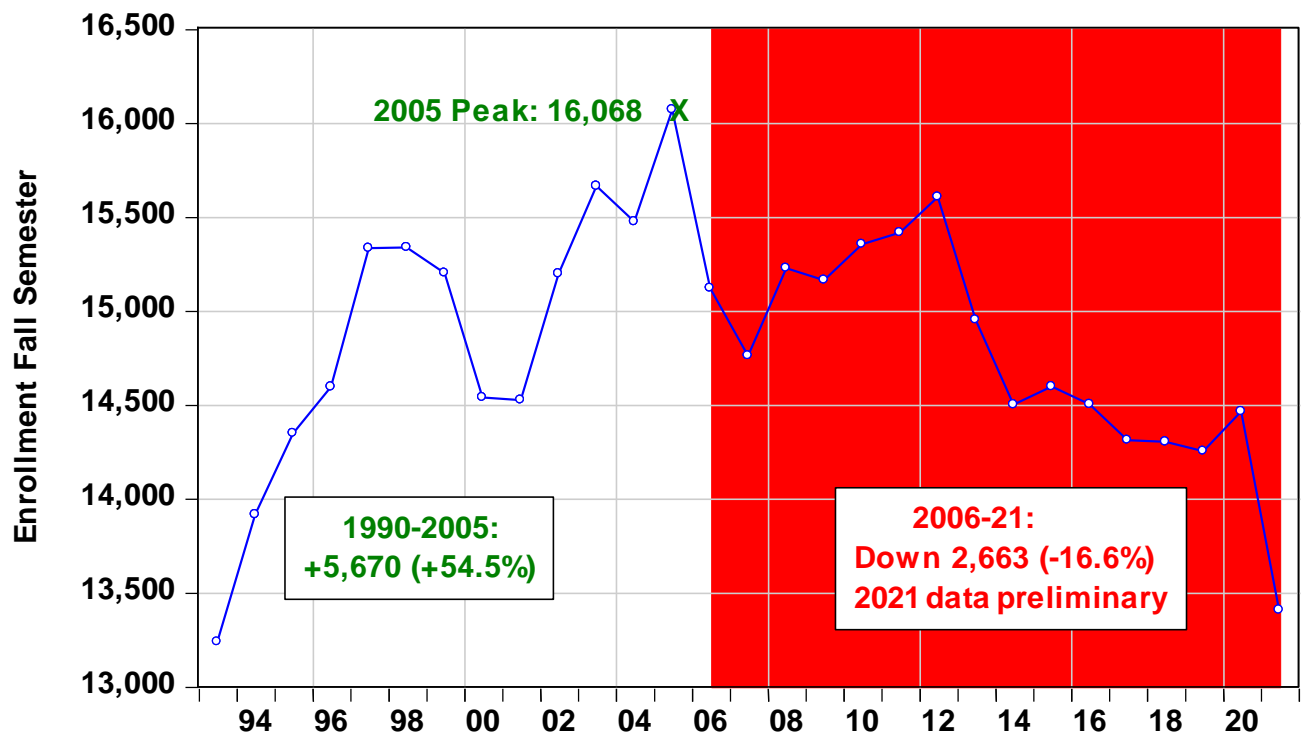
Data Source: Bureau of Labor Statistics

SLU 's Heavy Influence

What is behind these three movements in the Hammond MSA's employment? The key is to note that there are two major players that dominate this economy--Southeastern Louisiana University (SLU) and North Oaks Medical System. SLU is

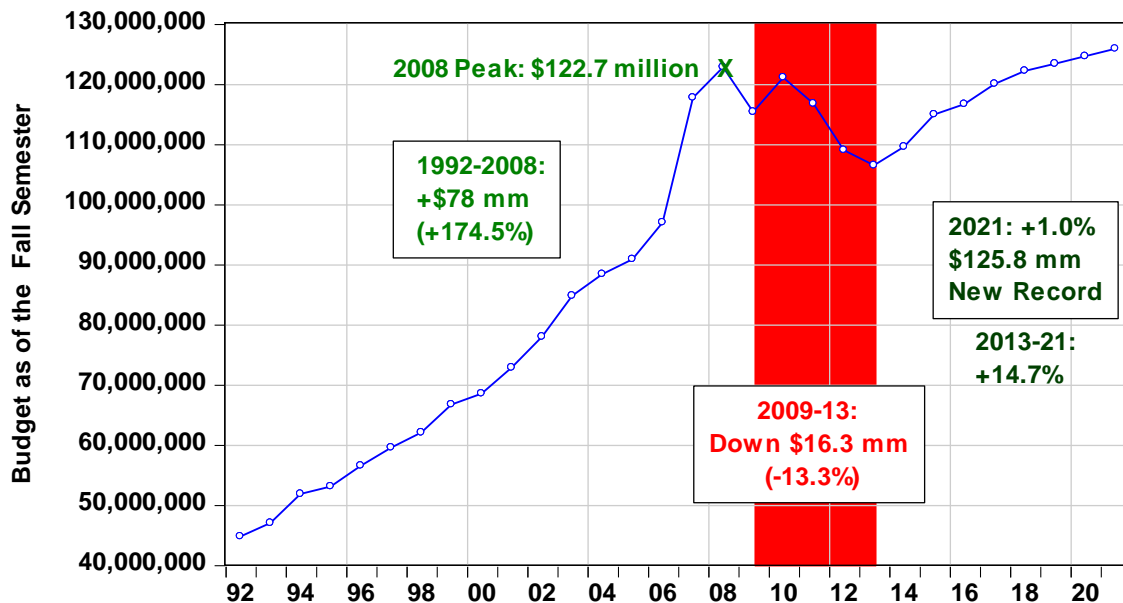
located in Hammond, which makes this city a university town much like Lafayette. **SLU** is a very large employer at 1,429 faculty and staff. The university brings significant spending power to the community because it attracts nearly ten times more students (13,405) than faculty/staff to the region (see Figure I-2).

Figure I-2
Southeastern Louisiana University Enrollment
Fall 1993 - Fall 2021



Data Source: SLU Office of Institutional Research & Assessment

Figure I-3
Southeastern Louisiana University Budget
Fall 1992 - Fall 2021



Data Source: John Paul Domiano, Budget Director, SLU

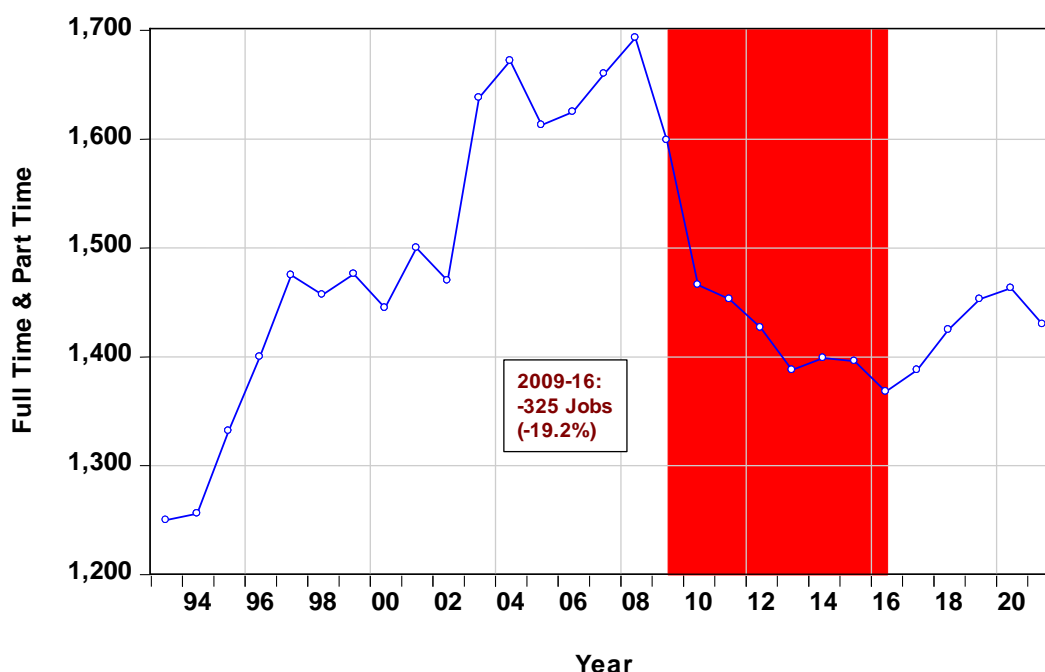
Figure I-3 tracks SLU's budget over time since 1992. Readers will note the relatively high correlation between what happens at SLU, whether enrollments or budget, and what happens to overall employment in the MSA. The powerful influence that SLU has on this MSA is seen when comparing the MSA employment data in Figure I-1 with SLU's enrollment data in Figure I-2 and the university's budget data in Figure I-3. When the university's budget (+174.5%) and enrollment (+54.5%) exploded in the 90s and early 2000s, that mega increase correlated with steady gains in employment in the MSA. Similarly, when things flattened out at the university so did the MSA's employment. The years of budgetary declines (-13.3%) over 2009-2013 track the very flat employment period in Figure I-1. The enrolment reduction shown in Figure I-2 meant fewer students to spend money in the MSA, contributing further to the flat period in Figure I-1.

While enrollment trends and actual employment trends at the university (see Figure I-4) have not supported employment growth overall in this region recently, there has been a period of significant recovery in SLU's budget, of about 14.7% since 2013, enabling the university to fully recover all the losses

between 2009 and 2013. That budgetary infusion has helped promote some of the very modest growth in employment in the MSA the last five years.

. **Figure I-4**

Total Employment Southeastern Louisiana University Fall Semester



Data Source: SLU Office of Institutional Research & Assessment

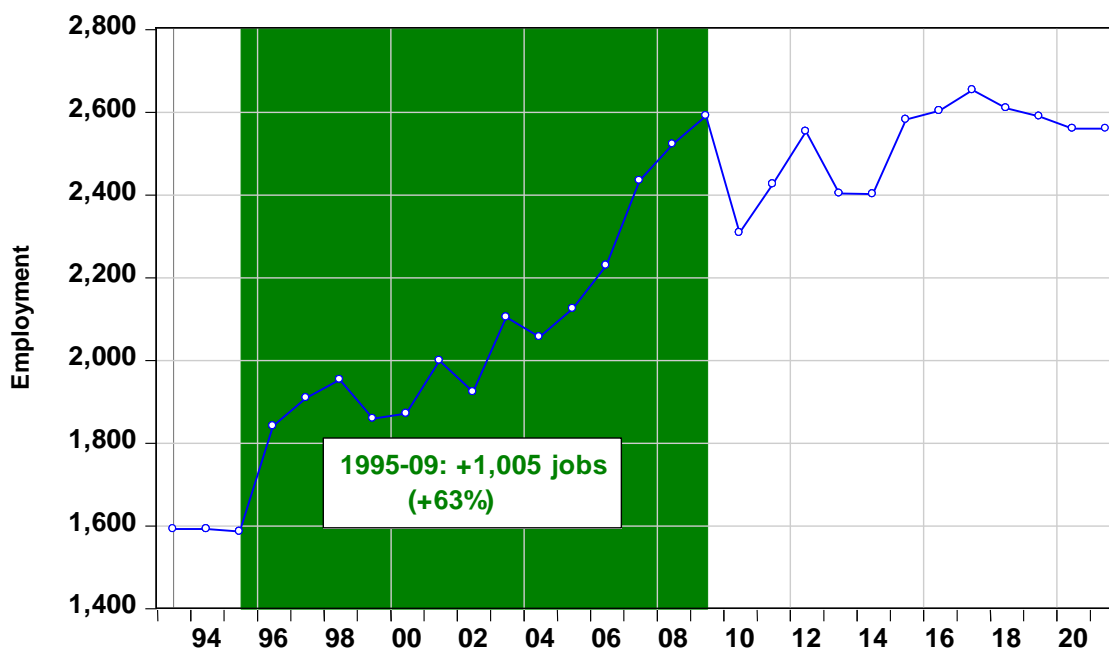
Healthcare Employment Also Mirrors the MSA

The second major player in this MSA is the **North Oaks Medical System**. As was the case with SLU, trends in this large system are highly correlated with trends in overall employment in the MSA. The history of employment at North Oaks is shown in Figure I-5. Just as with total employment in the MSA, North Oak's employment grew rapidly (+63%) over 1995-2009, adding over 1,000 jobs.

Since then, employment at North Oaks has been essentially flat, settling in at about 2,600 employees. This correlates almost perfectly with the rather lethargic trend in the MSA's employment during that same period. The hospital's problem recently can be traced back to Governor Edwards' Medicaid expansion program. The expansion caused the hospital's percent of Medicaid patients to double, a patient load on which hospital is paid only 38 cents on the dollar of costs. The absence of a medical education element at the hospital and the

absence of a “rural” designation results in the hospital receiving only the lowest per diem reimbursements.

Figure I-5
North Oaks Medical System Employment



Data Source: North Oaks Medical System Human Resources Division

To sum up, what happens to employment in this MSA depends largely on what happens at SLU and North Oaks. Over time, other additions or departures from this economy may move the needle a little around the trends in these two systems, but by and large, they drive the economy.

2017: A Variation from the SLU & North Oaks Trends

In the paragraph above it was mentioned that sometimes there are additions/deductions that move the needle a bit round the SLU/North Oaks trend line. The year 2017 is just such a year as seen back in Figure I-1. The MSA gained 1,300 jobs that year. The MSA's small manufacturing and distribution centers added an unusual spark to the region. These included the following:

- Smitty Supply made some significant investments.
- Intralox initiated capital and employment expansions.

- The Walmart Distribution Center added 70 jobs.
- Southern Foods added 206 jobs through expansion and the relocation of its Brown's Dairy milk processing facility to Hammond.

Recessions Mean Little Here

There is one characteristic of this MSA that it shares with the Alexandria MSA---national recessions ding this economy very little. As seen back in Figure I-1, Hammond actually grew through the short U.S. recession in 1990 and also during the 2001 recession. The MSAs employment did fall modestly (-1.8%) during the Great Recession, but at less than a third of the rate of decline nationally.

Like its sister MSA, Alexandria, in central Louisiana, there is a heavy governmental influence in the Hammond MSA (SLU) and a virtual absence of durable goods manufacturing. The latter tends to get creamed during recessions while the governmental sector is only lightly tagged. Too, the huge North Oaks healthcare system is another sector that typically holds up well even during recessionary times. This is clearly seen in North Oaks' employment line in Figure I-5.

2020-23: COVID Effects & Recovery

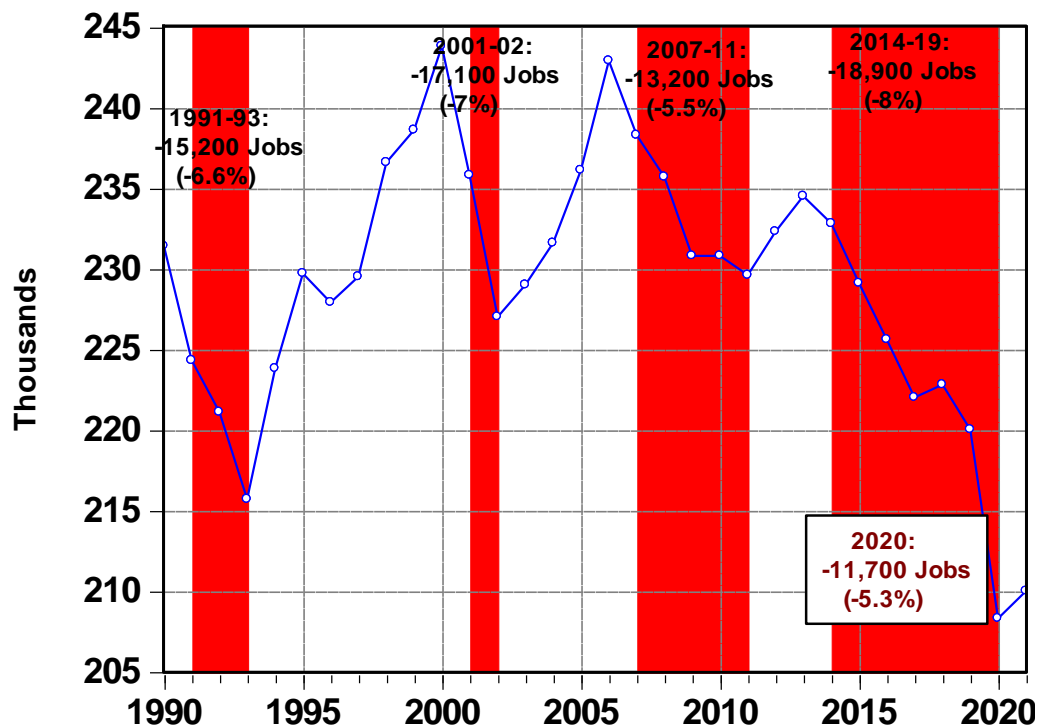
These years are discussed in the body of the report.

APPENDIX J: History of Louisiana's Rural Parishes

Figure J-1 tracks the history of nonfarm employment in Louisiana's rural parishes from 1990 through 2021. These parishes are shown in Figure 11 of the body of the report as the parishes in white. Over the past three decades employment in this region has only varied over a range from a low of 210,000 to a high of 243,800 (it may appear to be more, but the Y axis does not start at zero).

Figure J-1

Non-Farm Employment - Rural Parishes 1990-2021



Data Source: Bureau of Labor Statistics

Recessions Do Matter to Rural Louisiana

Unlike the Hammond and Alexandria MSAs, the economies of the rural parishes do feel the brunt of national recessions as seen in Figure J-1. In fact, these parishes tend to feel the recessions even more than usual. Note that the very short national recession in 1990 resulted in a 3-year employment decline in the rural parishes that was quite deep (-6.6%). Similarly, the short national recession in 2001, was two years long, and deep (-7%) in rural Louisiana. Whereas, the

Great Recession lasted 18 months long at the national level, rural Louisiana employment declined for four full years.

A key reason for this hypersensitivity to recessionary influences is that recessions hit the housing industry particularly hard. When the economy is bad, the last thing people think about is buying a home. Rural Louisiana is well-populated with logging and sawmill companies, especially in central and north Louisiana. A classic case of this phenomenon was the bursting of the housing bubble that led to the great recession. Note what happened in rural Louisiana:

- Weyerhaeuser Corporation reduced its workforce at its facilities in Lincoln, Bienville, and Winn Parishes (-224).
- Boise Cascade laid off workers at its plywood veneer plant in Allen Parish (-130).
- Hunt Forest Products temporarily closed its Natalbany facility in Tangipahoa Parish.

Not all the news from the Great Recession was bad for rural Louisiana, mainly because of the influence of the energy sector. Down on the coast, St. Mary Parish was booming due to the large sums of money flowing into the parish for cleanup work from the BP oil spill and claims payments made to businesses and individuals as a result of the spill. This period also coincided with the boom in the Haynesville Shale in northwest Louisiana, which powered a flourishing Red River Parish.

2011-12: +5,000 Jobs

Rural Louisiana did not bounce back fully from the hit of the Great Recession. In the two years of 2011-12 the region added back about 5,000 jobs, still well below the pre-recession peak in 2006. There were several nice economic wins for the rural parishes over these two years, including:

- In Richland Parish, Conagra built a 2-phase sweet potato processing plant adding several hundred jobs.
- General Dynamics opened a 600-person call center in Bogalusa.
- Metal Shark Boats in Jeanerette won a \$192 million contract with the Coast Guard to construct 500 patrol boats (+100 jobs).

- In Ruston, Mortgage Contracting Services added 90 employees.
- In Urania, German Pellets GmbH began construction on the world's largest wood pellets manufacturing plant (+150 jobs).
- Universal Plant Services built a \$3.9 million, 95-person welding, fabrication, and equipment overhaul and repair plant in LaSalle Parish.

Back to 1991: the 2014-19 Decline

The period from 2014 to 2019 were recession-free years at the national level, but not so for rural Louisiana. Note in Figure J-1 that these 29 parishes lost a shattering 8% of its jobs or 18,900 jobs in total. There was only one slight growth year among these six years.

Partly this decline was driven by problems at individual firms across these parishes. For example:

- German Pellets GmbH plant in LaSalle Parish went into bankruptcy.
- Fruit-of-the-Loom closed its Vidalia plant (-167 jobs).
- Life Care Specialty Hospital in Ruston closed (-167 jobs).

Shipyards in these rural parishes in south Louisiana took it on the chin as well. Bollinger Shipyards in the Amelia and Morgan City areas cut their employment from 700 to 350, and shipyards and fabricators in St. Mary Parish also initiated cutbacks. All of these shipyards began to look beyond work for offshore oil exploration/production to other sectors like government, brown water vessels and research ships.

Red River Parish, which enjoyed such a spark from the Haynesville Shale boom, went into a tailspin as the rig count in that play dropped from 142 to fewer than 20 rigs. St. Mary Parish had benefitted mightily from high oil prices, but now felt the brunt of prices below \$30 a barrel.

All of these factors contributed to the funk rural Louisiana has been in since 2014.

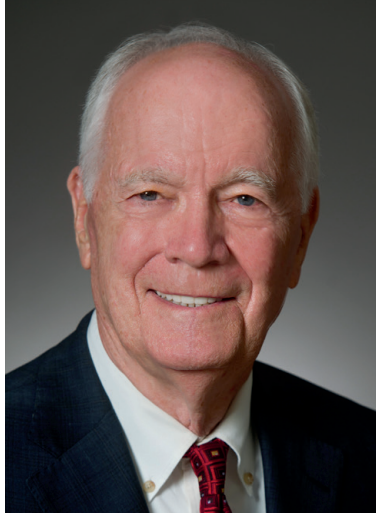
Underlying It All: Population Out-Migration

A quick peek back at Figure J-1 reveals that rural Louisiana has basically been in a downward slide since 2006. Generally speaking, we expect this to continue because of the underlying problem of out-migration of population from these parishes. For example, of Louisiana's 29 rural parishes only three experienced population gains between 2010 and 2020---Lincoln, Beauregard, and Jeff Davis--while ten rural parishes found their populations fell by 10% or more.⁷ We expect this out-migration to continue over the foreseeable future.

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These years are covered in the main body of the text.

⁷ www.bea.gov



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Dr. Scott is the President of Loren C. Scott & Associates, Inc., a 42-year old economic consulting firm that currently conducts impact studies, policy analyses, and litigation support for various size private/public companies and governmental bodies. The firm's clients span diverse industries and have included national firms such as BP, Capital One Financial, Entergy, ExxonMobil, J.P. Morgan Chase, Nucor, Sasol, Chesapeake Energy. A frequent public speaker, Dr. Scott gives 50-70 speeches a year across the country on the state of the economy.

Dr. Scott is an energy specialist on the National Business Economic Issues Council. NBEIC is a 52-member council, which meets quarterly to collaborate on issues of state, national, and international interest. The group includes experts who cover international trade, Washington economic policy, retail trade, trucking, steel, chemicals, etc.

He has been interviewed on CNBC, MSNBC, and Bloomberg TV, in addition to several local TV stations, and his work has been cited in such publications as the *Wall Street Journal*, *Forbes*, the *Los Angeles Times*, the *New York Times*, *USA Today*, the *Moscow Times*, and the *Financial Times*, to name a few.

His career started at Louisiana State University in 1969 where he spent 33 years, rising through the ranks from assistant professor to the prestigious Freeport McMoran Endowed Chair of Economics and the Director of the Division of Economic Development and Forecasting. Over the thirteen-year period from 1983-96, he was the chairman of the LSU Economics Department. During that time, the Department's ranking among the 3,000 economics departments in the U.S. rose from 101st to 38th. He is presently Professor Emeritus at LSU. He received seven awards at LSU for outstanding classroom teaching and authored numerous peer reviewed publications.



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